GEOTECHNICAL INVESTIGATION

PROPOSED CHURCH TRAINING CENTER

APN 780-330-004

SWC AVENUE 54 & VAN BUREN STREET

THERMAL AREA

RIVERSIDE COUNTY, CALIFORNIA

-Prepared By-

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Project No. 544-21005
21-02-087

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Subject: Geotechnical Investigation

Project: Proposed Church Training Center
APN 780-330-004
SWC Avenue 54 & Van Buren Street
Thermal Area Riverside County, California

Sladden Engineering is pleased to present the results of the geotechnical investigation performed for the new church training center to be constructed on the property located on the southwest corner of Avenue 54 and Van Buren Street (APN 780-330-004) in the Thermal area of Riverside County, California. Our services were completed in accordance with our revised proposal for geotechnical engineering services dated December 17, 2020 and your authorization to proceed with the work. The purpose of our investigation was to explore the subsurface conditions at the site in order to provide recommendations for foundation design and the design of the various site improvements. Evaluation of environmental issues and hazardous wastes was not included within the scope of services provided.

The opinions, recommendations and design criteria presented in this report are based on our field exploration program, laboratory testing and engineering analyses. Based on the results of our investigation, it is our professional opinion that the proposed project should be feasible from a geotechnical perspective provided that the recommendations presented in this report are implemented in design and carried out through construction.

We appreciate the opportunity to provide service to you on this project. If you have any questions regarding this report, please contact the undersigned.

Respectfully submitted,
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GEOTECHNICAL INVESTIGATION
PROPOSED CHURCH TRAINING CENTER
APN 780-330-004
SWC AVENUE 54 & VAN BUREN STREET
THERMAL AREA RIVERSIDE COUNTY, CALIFORNIA

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## INTRODUCTION

This report presents the results of the geotechnical investigation performed by Sladden Engineering (Sladden) for the new church training center to be constructed on the property located on the southwest corner of Avenue 54 and Van Buren Street (APN 780-330-004) in the Thermal area of Riverside County, California. The subject site is located at approximately 33.6551 degrees north latitude and 116.1999 degrees west longitude. The approximate location of the site is indicated on the Site Location Map (Figure 1).

Our investigation was conducted in order to evaluate the engineering properties of the subsurface materials, to evaluate their *in-situ* characteristics, and to provide engineering recommendations and design criteria for site preparation, foundation design and the design of various site improvements. This study also includes a review of published and unpublished geotechnical and geological literature regarding seismicity at and near the subject site.

## PROJECT DESCRIPTION

Based on the provided site plan (CVE, 2020), it is our understanding that the proposed project will consist of constructing a new church training center on the subject property. The new estate will consist of a maintenance shop, offices, classrooms and dorm rooms, a dining facility, a distribution center, a church media area and open space/ future parking areas. Concrete flatwork, landscape areas and various other associated site improvements are also anticipated for the project. For our analyses we expect that the proposed new structures will consist of relatively lightweight wood-frame structures supported on conventional shallow spread footings or post-tensioned slabs.

Sladden anticipates that grading will be limited to minor cuts and fills in order to accomplish the desired pad elevation and provide adequate gradients for site drainage. This does not include the removal and re-compaction of the primary foundation bearing soil within the building envelopes. Upon completion of precise grading plans, Sladden should be retained in order to ensure that the recommendations presented within in this report are incorporated into the design of the proposed project.

Structural foundation loads were not available at the time of this report. Based on our experience with relatively lightweight structures, we expect that isolated column loads will be less than 30 kips and continuous wall loads will be less than 3.0 kips per linear foot. If these assumed loads vary significantly from the actual loads, we should be consulted to verify the applicability of the recommendations provided.

## SCOPE OF SERVICES

The purpose of our investigation was to determine specific engineering characteristics of the surface and near surface soil in order to develop foundation design criteria and recommendations for site preparation. Exploration of the site was achieved by advancing seven (7) exploratory boreholes and six (6) percolation test holes to depths between approximately 5 to 51 feet below the existing ground surface (bgs). Specifically, our site characterization consisted of the following tasks:

- Site reconnaissance to assess the existing surface conditions on and adjacent to the site.
- Advancing seven (7) exploratory boreholes and six (6) percolation test holes to depths between approximately 5 to 51 feet bgs in order to characterize the subsurface soil conditions. Representative samples of the soil were classified in the field and retained for laboratory testing and engineering analyses.
- Performing laboratory testing on selected samples to evaluate their engineering characteristics.
- Reviewing geologic literature and discussing geologic hazards.
- Performing site-specific ground motion analyses for the subject property.
- Performing engineering analyses to develop recommendations for foundation design and site preparation.
- The preparation of this report summarizing our work at the site.

## SITE CONDITIONS

The project site is located on the southwest corner of Avenue 54 and Van Buren Street in the Thermal area of Riverside County, California. The site is formally identified by the County of Riverside as APN 780-330-004 and occupies approximately 10.0 acres. At the time of our investigation, a cross was located near the northeast corner of the property and a storage container was located near the eastern portion of the site. The remaining areas of the subject site were undeveloped. The project site is near the elevation of the adjacent properties and streets. Generally, the site is bounded by agricultural property to the, west and south, on the north by Avenue 54 and on the east by Van Buren Street.

Based on our review of the Indio 7.5-Minute Quadrangle Map (USGS, 2018) and Google Earth (2021), the site is situated at an approximate elevation of 75 feet below mean sea level (MSL).

No natural ponding of water or surface seeps were observed at or near the site during our investigation. Site drainage appears to be controlled via sheet flow and surface infiltration. Regional drainage is provided by the Whitewater River located approximately 3.0 miles to the northeast of the site.

## GEOLOGIC SETTING

The project site is located within the Colorado Desert Physiographic Province (also referred to as the Salton Trough) that is characterized as a northwest-southeast trending structural depression extending from the Gulf of California to the Banning Pass. The Salton Trough is dominated by several northwest trending faults, most notably the San Andreas Fault system. The Salton Trough is bounded by the Santa Rosa – San Jacinto Mountains on the southwest, the San Bernardino Mountains on the north, the Little San Bernardino - Chocolate – Orocopia Mountains on the east and extends through the Imperial Valley into the Gulf of California on the south.

A relatively thick sequence (20,000 feet) of sediment has been deposited in the Coachella Valley portion of the Salton Trough from Miocene to present times. These sediments are predominately terrestrial in nature with some lacustrian (lake) and minor marine deposits. The major contributor of these sediments has been the Colorado River. The mountains surrounding the Coachella Valley are composed primarily of Precambrian metamorphic and Mesozoic "granitic" rock.

The Salton Trough is an internally draining area with no readily available outlet to Gulf of California and with portions well below sea level (-253' msl). The region is intermittently blocked from the Gulf of California by the damming effects of the Colorado River delta (current elevation +30'msl). Between about 300AD and 1600 AD (to 1700) the Salton Trough has been inundated by the River's water, forming ancient Lake Cahuilla (max. elevation +58' msl). Since that time the floor of the Trough has been repeatedly flooded with other "fresh" water lakes (1849, 1861, and 1891), the most recent and historically long lived being the current Salton Sea (1905). The sole outlet for these waters is evaporation, leaving behind vast amounts of terrestrial sediment materials and evaporite minerals.

The site has been mapped by Rogers (1965) to be immediately underlain by undifferentiated Quaternary-age lake deposits (Ql) and alluvium (Qal). The regional geologic setting for the site vicinity is presented on the Regional Geologic Map (Figure 2).

## SUBSURFACE CONDITIONS

The subsurface conditions at the site were investigated by drilling seven (7) exploratory bore holes and six (6) percolation test holes to depths between approximately 5.0 and 51.5 feet bgs. The approximate locations of the bore holes and test holes are illustrated on the Exploration Location Plan (Figure 3). The bore holes and test holes were advanced using a truck mounted Mobile B-61 drill rig equipped with 8-inch outside diameter hollow stem augers. A representative of Sladden was on-site to log the materials encountered and retrieve samples for laboratory testing and engineering analyses.

During our field investigation, artificial fill/disturbed soil was encountered throughout the site to a depth of generally less than two (2) feet bgs. Artificial fill/disturbed soil consisted generally of olive brown, dry to slightly moist, fine-grained silty sand (SM). Native earth materials were encountered underlying fill/disturbed soil. Native earth materials consisted primarily of silty sand (SM), sandy silt (ML), clay (CL) and poorly-graded sand (SP). Generally, granular horizons appeared olive brown, dry to wet, loose to medium dense and fine-grained. Cohesive layers appeared olive brown, medium stiff to hard, slightly moist to wet and exhibited low to high plasticity characteristics.

The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and tests of the field samples. The final logs are included in Appendix A of this report. The stratification lines represent the approximate boundaries between soil types although the transitions may be gradual and variable across the site.

Groundwater was encountered at a depth of approximately 19.5 feet bgs for BH-1 and BH-2. As such, it is our opinion that groundwater should not be a factor during the construction of the proposed project.

## SEISMICITY AND FAULTING

The southwestern United States is a tectonically active and structurally complex region, dominated by northwest trending dextral faults. The faults of the region are often part of complex fault systems, composed of numerous subparallel faults which splay or step from main fault traces. Strong seismic shaking could be produced by any of these faults during the design life of the proposed project.

We consider the most significant geologic hazard to the project to be the potential for moderate to strong seismic shaking that is likely to occur during the design life of the project. The proposed project is located in the highly seismic Southern California region within the influence of several fault systems that are considered to be active or potentially active. An active fault is defined by the State of California as a "sufficiently active and well defined fault" that has exhibited surface displacement within the Holocene epoch (about the last 11,000 years). A potentially active fault is defined by the State as a fault with a history of movement within Pleistocene time (between 11,000 and 1.6 million years ago).

As previously stated, the site has been subjected to strong seismic shaking related to active faults that traverse through the region. Some of the more significant seismic events near the subject site within recent times include: M6.0 North Palm Springs (1986), M6.1 Joshua Tree (1992), M7.3 Landers (1992), M6.2 Big Bear (1992), M7.1 Hector Mine (1999), and M7.1 Ridgecrest (2019).

Table 1 lists the closest known potentially active faults that was generated in part using the EQFAULT computer program (Blake, 2000), as modified using the fault parameters from The Revised 2002 California Probabilistic Seismic Hazard Maps (Cao et al, 2003), Southern Earthquake Data Center (SCEDC, 2020) and the Quaternary Fault and Fold Database of the United States (USGS, 2020a). This table does not identify the probability of reactivation or the on-site effects from earthquakes occurring on any of the other faults in the region.

**TABLE 1**
**CLOSEST KNOWN ACTIVE FAULTS**

| Fault Name | Distance (Km) | Maximum Event |
|---|---|---|
| San Andreas - Coachella | 7.2 | 7.2 |
| San Andreas - Southern | 7.2 | 7.2 |
| San Jacinto - Anza | 33.5 | 7.2 |
| San Jacinto - Coyote Creek | 36.0 | 6.8 |
| Burnt Mountain | 36.3 | 6.4 |
| Eureka Peak | 37.0 | 6.5 |
| San Andreas – San Bernardino | 39.6 | 7.5 |

## SITE SPECIFIC GROUND MOTION PARAMETERS

Sladden has reviewed the 2019 California Building Code (CBC) and ASCE7-16 and developed site specific ground motion parameters for the subject site. The project Seismic Design Maps and site-specific ground motion parameters are summarized in the following table and included within Appendix C. The project Structural Engineer should verify that all design parameters provided are applicable for the subject project.

**TABLE 2**
**GROUND MOTION PARAMETERS**

| | |
|---|---|
| Latitude / Longitude | 33.6551/ -116.1999 |
| Risk Category | II |
| Site Class | D |
| Code Reference Documents | ASCE 7-16; Chapter 11 & 21 |

| Description | Type | Map Based | Site-Specific |
|---|---|---|---|
| $MCE_R$ Ground Motion (0.2 second period) | $S_S$ | 1.710 | --- |
| $MCE_R$ Ground Motion (1.0 second period) | $S_1$ | 0.707 | --- |
| Site-Modified Spectral Acceleration Value | $S_{MS}$ | 1.710 | **1.866** |
| Site-Modified Spectral Acceleration Value | $S_{M1}$ | null | **1.657** |
| Numeric Seismic Design Value at 0.2 second SA | $S_{DS}$ | 1.140 | **1.244** |
| Numeric Seismic Design Value at 1.0 second SA | $S_{D1}$ | null | **1.105** |
| Site Amplification Factor at 0.2 second | $F_a$ | 1 | **1** |
| Site Amplification Factor at 1.0 second | $F_v$ | null | **2.5** |
| Site Peak Ground Acceleration | $PGA_M$ | 0.819 | **0.724** |

## GEOLOGIC HAZARDS

The subject site is located in an active seismic zone and will likely experience strong seismic shaking during the design life of the proposed project. In general, the intensity of ground shaking will depend on several factors including: the distance to the earthquake focus, the earthquake magnitude, the response characteristics of the underlying materials, and the quality and type of construction. Geologic hazards and their relationship to the site are discussed below.

I. Surface Rupture. Surface rupture is expected to occur along preexisting, known active fault traces. However, surface rupture could potentially splay or step from known active faults or rupture along unidentified traces. Based on our review of Rogers (1965), Jennings (1994), RCPR (2021) and CDOC (2021) known faults are not mapped on or projecting towards the site. In addition, no signs of active surface faulting were observed during our review of non-stereo digitized photographs of the site and site vicinity (Google Earth, 2021). Finally, no signs of active surface fault rupture or secondary seismic effects (lateral spreading, lurching etc.) were identified during our field investigation. Therefore, it is our opinion that risks associated with primary surface ground rupture should be considered "low".

II. Ground Shaking. The site has been subjected to past ground shaking by faults that traverse through the region. Strong seismic shaking from nearby active faults is expected to produce strong seismic shaking during the design life of the proposed project. Based on site-specific ground motion parameters developed for the property (Appendix C), the site modified peak ground acceleration (PGAm) is estimated to be 0.724g.

III. Liquefaction. Liquefaction is the process in which loose, saturated granular soil loses strength as a result of cyclic loading. The strength loss is a result of a decrease in granular sand volume and a positive increase in pore pressures. Generally, liquefaction can occur if all of the following conditions apply; liquefaction-susceptible soil, groundwater within a depth of 50 feet or less, and strong seismic shaking.

According to the County of Riverside, the site is situated within a "High" liquefaction potential zone (RCPR, 2021) Based on our review of historic groundwater maps of the site vicinity (~10 feet bgs; CVCWD, 1975), and our experience in the project vicinity, risks associated with liquefaction and liquefaction related hazards should be considered in design.

We have performed seismic settlement calculations utilizing a magnitude of 7.45 (USGS, 2021) and site-specific peak ground acceleration of 0.724g (PGAm). Historic high and anticipated high groundwater depths were determined to be approximately 20 feet bgs (CVCWD, 1975). The seismic settlement calculations are included within Appendix D. Calculations indicate potential total seismic settlements of up to 5.53 inches and 5.46 inches for BH-1 and BH-2, respectively. The potential seismically related differential settlements are expected to be less than an inch. Based upon the general uniformity of the soil and groundwater conditions underlying the site, we expect the maximum differential settlement to occur over a horizontal distance of approximately 200 feet. Accordingly, risks associated with seismic settlement should be considered in the design of the new structures.

IV. Tsunamis and Seiches. Because the site is situated at an inland location and is not immediately adjacent to any impounded bodies of water, risks associated with tsunamis and seiches are considered "negligible".

V. Slope Failure, Landsliding, Rock Falls. No signs of slope instability in the form of landslides, rock falls, earthflows or slumps were observed at or near the subject site. The site is situated on relatively flat ground and not immediately adjacent to any slopes or hillsides. As such, risks associated with slope instability should be considered "negligible".

VI. Expansive Soil. Generally, the near surface soil consists of fine-grained sand (SP). Based on the results of our laboratory testing (EI = 23), the materials underlying the site are considered to have a "low" expansion potential.

VII. Static Settlement. Static settlement resulting from the anticipated foundation loads should be tolerable provided that the recommendations included in this report are considered in foundation design and construction. The ultimate static settlement is expected to be less than 1 inch when using the recommended allowable bearing pressures. As a practical matter, differential static settlement between footings can be assumed as one-half of the total settlement.

VIII. Subsidence. Land subsidence can occur in valleys where aquifer systems have been subjected to extensive groundwater pumping, such that groundwater pumping exceeds groundwater recharge. Generally, pore water reduction can result in a rearrangement of skeletal grains and could result in elastic (recoverable) or inelastic (unrecoverable) deformation of an aquifer system.

Although recent investigations have documented significant subsidence within the Coachella Valley (USGS, 2007), no fissures or other surficial evidence of subsidence were observed at the subject site. With the exception of isolated tension zones typically manifested on the ground surface as fissures and/or ground cracks, subsidence related to groundwater depletion is generally areal in nature with limited differential settlement over short distances such as across individual buildings.

The Coachella Valley Water District has publicly acknowledged regional subsidence throughout the southern portion of the Coachella Valley and has indicated a commitment to groundwater replenishment programs that are intended to limit future subsidence. At this time, subsidence is considered a regional problem requiring regional mitigation not specific to the project vicinity.

IX. Debris Flows. Debris flows are viscous flows consisting of poorly sorted mixtures of sediment and water and are generally initiated on slopes steeper than approximately six horizontal to one vertical (6H:1V) (Boggs, 2001). Based on the flat nature of the site and the composition of the surface soil, we judge that risks associated with debris flows should be considered "negligible".

X. Flooding and Erosion. No signs of flooding or erosion were observed during our field investigation. However, risks associated with flooding and erosion should be evaluated and mitigated by the project design Civil Engineer.

## CONCLUSIONS

Based on the results of our investigation, it is our professional opinion that the project should be feasible from a geotechnical perspective provided that the recommendations provided in this report are incorporated into design and carried out through construction. The main geotechnical concerns are the presence of loose native surface soil throughout the subject site and the potential seismic settlements.

Some of the near surface soil underlying the site is considered loose, potentially compressible and not suitable for support of shallow foundations or concrete slabs in the existing condition. Because of the somewhat loose and potentially compressible condition of some of the near surface soil, remedial grading including over-excavation and re-compaction is recommended for the proposed new building and foundation areas. We recommend that remedial grading within the proposed new building areas include over-excavation and re-compaction of the primary foundation bearing soil. Specific recommendations for site preparation are presented in the Earthwork and Grading section of this report.

Caving did occur to varying degrees within each of our exploratory bores and the surface soil may be susceptible to caving within deeper excavations. All excavations should be constructed in accordance with the normal CalOSHA excavation criteria. On the basis of our observations of the materials encountered, we anticipate that the subsoil will conform to that described by CalOSHA as Type C. Soil conditions should be verified in the field by a "Competent person" employed by the Contractor.

The following recommendations present more detailed design criteria that have been developed on the basis of our field and laboratory investigation.

## EARTHWORK AND GRADING

All earthwork including excavation, backfill and preparation of the primary foundation and/or slab bearing soil should be performed in accordance with the geotechnical recommendations presented in this report and portions of the local regulatory requirements, as applicable. All earthwork should be performed under the observation and testing of a qualified soil engineer. The following geotechnical engineering recommendations for the proposed project are based on observations from the field investigation program, laboratory testing and geotechnical engineering analyses.

a. Stripping. Areas to be graded should be cleared of any existing structures, utilities, vegetation, associated root systems, and debris. All areas scheduled to receive fill should be cleared of old fills and any irreducible matter. The strippings should be removed off site or stockpiled for later use in landscape areas. Voids left by obstructions should be properly backfilled in accordance with the compaction recommendations of this report.

b. Preparation of the Building Areas. In order to achieve a firm and unyielding bearing surface, we recommend overexcavation and recompaction throughout the building area. All native low density near surface soil should be removed to a depth of at least 4 feet below existing grade or 4 feet below the bottom of the footings, whichever is deeper. Remedial grading should extend laterally, a minimum of five feet beyond the building perimeter. The native soil by over excavation should be scarified, moisture conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction prior to fill placement. Testing of the native soil within the excavation bottoms should be performed during grading to verify adequacy. Once cleaned of unsuitable material, the previously removed soil may be replaced as engineered fill soil.

d. Compaction: Soil to be used as engineered fill should be free of organic material, debris, and other deleterious substances, and should not contain irreducible matter greater than three inches in maximum dimension. All fill and backfill materials should be placed in thin lifts, not exceeding six inches in a loose condition. If import fill is required, the material should be of a low to non-expansive nature and should meet the following criteria:

| | |
|---|---|
| Plastic Index | Less than 12 |
| Liquid Limit | Less than 35 |
| Percent Soil Passing #200 Sieve | Between 15% and 35% |
| Maximum Aggregate Size | 3 inches |

The fill and backfill should be compacted with acceptable compaction equipment to at least 90 percent relative compaction. The bottom of the excavation should be observed by a representative of Sladden Engineering prior to fill placement. Compaction testing should be performed on all lifts in order to ensure proper placement of the fill materials. Table 3 provides a summary of the excavation and compaction recommendations.

**TABLE 3**
**SUMMARY OF RECOMMENDATIONS**

| | |
|---|---|
| *Remedial Grading | Over-excavation and re-compaction within the building envelope and extending laterally for 5 feet beyond the building limits and to a minimum of 4 feet below existing grade or 4 feet below the bottom of the footings, whichever is deeper. |
| Native / Import Engineered Fill | Place in thin lifts not exceeding 6 inches in a loose condition, at near optimum moisture content and compact to a minimum of 90 percent relative compaction. |
| Asphalt Concrete Sections | Compact the top 12 inches to at least 95 percent compaction at near optimum moisture content. |

*Actual depth may vary and should be determined by a representative of Sladden Engineering in the field during construction.

d. Shrinkage and Subsidence: Volumetric shrinkage of the material that is excavated and replaced as controlled compacted fill should be anticipated. We estimate that this shrinkage should be between 15 and 25 percent. Subsidence of the surfaces that are scarified and compacted should be between 1 tenth and 3 tenths of a foot. This will vary depending upon the type of equipment used, the moisture content of the soil at the time of grading and the actual degree of compaction attained.

## CONVENTIONAL SHALLOW SPREAD FOOTINGS

Conventional spread footings may be utilized for building support, provided the estimated seismic related settlements of approximately 1.0 inch over a horizontal distance of approximately 200 feet can be adequately mitigated in design. All footings should be founded upon properly compacted engineered fill soil and should have a minimum embedment depth of 12 inches measured from the lowest adjacent finished grade. Continuous and isolated footings should have minimum widths of 12 inches and 24 inches, respectively. Continuous and isolated footings placed on compact engineered fill soil may be designed using allowable (net) bearing pressures of 1800 and 2000 pounds per square foot (psf), respectively. The allowable bearing pressures apply to combined dead and sustained live loads. Allowable increases of 200 psf for each additional 1 foot of width and 250 psf for each additional 6 inches of depth may be used, if desired. The maximum allowable bearing pressure should be 3000 psf.

The allowable bearing pressure may be increased by one-third when considering transient live loads, including seismic and wind forces. All footings should be reinforced in accordance with the project structural engineer's recommendations.

Lateral load resistance for the spread footings will be developed by passive soil pressure against the sides of the footings below grade and by friction acting at the base of the concrete footings bearing on compacted fill. An allowable passive pressure of 250 psf per foot of depth may be used for design purposes. An allowable coefficient of friction 0.40 may be used for dead and sustained live loads to compute the frictional resistance of footings placed directly on compacted fill. Under seismic and wind loading conditions, the passive pressure and frictional resistance may be increased by one-third.

All footing excavations should be observed by a representative of Sladden Engineering to verify adequate embedment depths prior to the placement of forms, reinforcement or concrete. The excavations should be trimmed neat, level and square. All loose, disturbed, sloughed or moisture-softened soil and/or any construction debris should be removed prior to concrete placement.

## POST-TENSIONED SLABS

Post-tensioned slabs may be considered for the proposed structures in order to mitigate potential liquefaction related differential settlements. We have evaluated the on-site soil for construction of post-tensioned foundation systems in general accordance with design specifications of the Post Tensioning Institute. Post-tensioned slabs should be designed to be rigid and capable of spanning areas of non-uniform support and meet the following criteria:

1. Bearing Capacity = 1500 psf
2. Potential Liquefaction Induced Differential Settlement = 1.0 inch (over a horizontal distance of 200 feet)
3. Coefficient of Friction = 0.40

## SLABS-ON-GRADE

In order to provide uniform and adequate support, concrete slabs-on-grade must be placed on properly compacted engineered fill soil as outlined in the previous sections of this report. The slab subgrade should remain near optimum moisture content and should not be permitted to dry prior to concrete placement. Slab subgrade should be firm and unyielding. Disturbed soil should be removed and replaced with engineered fill soil compacted to a minimum of 90 percent relative compaction.

Slab thickness and reinforcement should be determined by the Structural Engineer. In order to accommodate potential seismic settlements, we recommend a minimum slab thickness of 5.0 inches and minimum reinforcement of #4 bars at 24 inches on center in both directions. All slab reinforcement should be supported on concrete chairs to ensure that reinforcement is placed at slab mid-height. Final floor slab design and reinforcement should be determined by the Structural Engineer.

Slabs with moisture sensitive surfaces should be underlain with a moisture vapor retarder consisting of a polyvinyl chloride membrane such as 10-mil visqueen, or equivalent. All laps within the membrane should be sealed and at least 2 inches of clean sand should be placed over the membrane to promote uniform curing of the concrete. To reduce the potential for punctures, the membrane should be placed on a pad surface that has been graded smooth without any sharp protrusions. If a smooth surface can not be achieved by grading, consideration should be given to placing a 1-inch thick leveling course of sand across the pad surface prior to placement of the membrane.

## RETAINING WALLS

Minor retaining walls may be required to accomplish the proposed construction. Cantilever retaining walls may be designed using "active" pressures. Active pressures may be estimated using an equivalent fluid weight of 35 pcf for gently sloping (less than 3H:1V) native backfill soil acting in a triangular pressure distribution with free-draining backfill conditions. For steeper slopes, an active equivalent fluid pressure of 55 pcf should be used. "At Rest" pressures should be utilized for restrained walls. At rest pressures may be estimated using an equivalent fluid weight of 55 pcf for native backfill soil with level free-draining backfill conditions. At rest pressures should be increased to 75 pcf for sloped backfill conditions.

According to the 2016 CBC, seismic loads should be considered in the design of earth retaining walls greater than 6 feet in height that will be relied upon for structural support. Seismic forces may be estimated using a uniform loading equivalent to 15H psf where H is the height of the wall in feet for cantilever walls and 20H psf for restrained walls.

We recommend that a back drain system be provided behind all retaining walls or that the walls be designed for full hydrostatic pressures. The back drains should consist of a heavy walled, four inch diameter, perforated pipe sloped to drain to outlets by gravity, and of clean, free-draining, three-quarter to one and one-half inch crushed rock or gravel. The crushed rock or gravel should extend to within one foot of the surface. The upper one foot should be backfilled with compacted, fine-grained soil to exclude surface water. A Mirafi 140N (or equivalent) filter cloth should be placed between the on-site native material and the drain rock.

We recommend that the ground surface behind retaining walls be sloped to drain. Under no circumstances should the surface water be diverted into back drains. Where migration of moisture through walls would be detrimental, the walls should be waterproofed.

## PRELIMINARY PAVEMENT DESIGN

Asphalt concrete pavements should be designed in accordance with Topic 608 of the Caltrans Highway Design Manual based on R-Value and Traffic Index. An R-Value of 40 was assumed to develop the following preliminary pavement sections. On-site and any imported soil should be tested for R-Value after grading. Actual R-Value of subgrade soil should be consistent with the pavement design. For Pavement design, a Traffic Index (TI) of 5.0 was used for the light duty pavements. We assumed Asphalt Concrete (AC) over Class II Aggregate Base (AB). The preliminary flexible pavement design is as follows:

| RECOMMENDED ASPHALT PAVEMENT SECTION LAYER THICKNESS | |
|---|---|
| **Pavement Material** | **Recommended Thickness** |
| | **TI = 5.0** |
| Asphalt Concrete Surface Course | 3.0 inches |
| Class II Aggregate Base Course | 6.0 inches |
| Compacted Subgrade Soil | 12.0 inches |

Asphalt concrete should conform to Sections 203 and 302 of the latest edition of the Standard Specifications for Public Works Construction ("Greenbook"). Class II aggregate base should conform to Section 26 of the Caltrans Standard Specifications, latest edition. The aggregate base course should be compacted to at least 95 percent of the maximum dry density as determined by ASTM Method D 1557.

We expect that concrete pavement may also be considered for on-site pavement areas. A concrete pavement section of 5.0 inches of Portland Cement Concrete (PCC) on 4.0 inches of base material on compacted native soil should be adequate for the on-site concrete pavement limited to automobile light truck traffic. In areas where heavy truck traffic is expected, the concrete pavement section should be increased to 6.0 inches of PCC on 4.0 inches of base material on compacted native soil. Properly spaced and constructed control joints including expansion joints and contraction joints should be incorporated into concrete pavement design to accommodate temperature and shrinkage related cracking. Joint spacing and joint patterns should be established based upon Portland Cement Association (PCA) and American Concrete Institute (ACI) guidelines.

## CORROSION SERIES

The soluble sulfate concentrations of the surface soil were determined to be 2000 parts per million (ppm). The soil is considered to have a "moderate" corrosion potential with respect to concrete. The use of Type V cement and special sulfate resistant concrete mixes will likely be necessary. The soluble sulfate content of the surface soil should be reevaluated after grading and appropriate concrete mix designs should be established based upon post-grading test results.

The pH levels of the surface soil was 8.7. Based on soluble chloride concentration testing (170 ppm) the soil is considered to have a "low" corrosion potential with respect to normal grade steel. The minimum resistivity of the surface soil was found to be 900 ohm-cm, which suggests the site soil is considered to have a "severe" corrosion potential with respect to ferrous metal installations. A corrosion expert should be consulted regarding appropriate corrosion protection measures for corrosion sensitive installations.

## UTILITY TRENCH BACKFILL

All utility trench backfill should be compacted to a minimum of 90 percent relative compaction. Trench backfill materials should be placed in lifts no greater than six inches in a loose condition, moisture conditioned (or air-dried) as necessary to achieve near optimum moisture content, and mechanically compacted to a minimum of 90 percent relative compaction. A representative of the project soil engineer should test the backfill to verify adequate compaction.

## EXTERIOR CONCRETE FLATWORK

In order to provide uniform support and minimize settlement related cracking of concrete flatwork, the subgrade soil within concrete flatwork areas should be compacted to a minimum of 90 percent relative compaction. A representative of the project geotechnical consultant should observe and verify the density and moisture content of the soil prior to concrete placement.

## DRAINAGE

All final grades should be provided with positive gradients away from foundations to provide rapid removal of surface water runoff to an adequate discharge point. No water should be allowed to be pond on or immediately adjacent to foundation elements. In order to reduce water infiltration into the subgrade soil, surface water should be directed away from building foundations to an adequate discharge point. Subgrade drainage should be evaluated upon completion of the precise grading plans and in the field during grading.

## LIMITATIONS

The findings and recommendations presented in this report are based upon an interpolation of the soil conditions between the exploratory bore locations and extrapolation of these conditions throughout the proposed building areas. Should conditions encountered during grading appear different than those indicated in this report, this office should be notified.

The use of this report by other parties or for other projects is not authorized. The recommendations of this report are contingent upon monitoring of the grading operation by a representative of Sladden Engineering. All recommendations are considered to be tentative pending our review of the grading operation and additional testing, if indicated. If others are employed to perform any soil testing, this office should be notified prior to such testing in order to coordinate any required site visits by our representative and to assure indemnification of Sladden Engineering.

We recommend that a pre-job conference be held on the site prior to the initiation of site grading. The purpose of this meeting will be to ensure a complete understanding of the recommendations presented in this report as they apply to the actual grading performed.

## ADDITIONAL SERVICES

Once completed, final project plans and specifications should be reviewed by use prior to construction to confirm that the full intent of the recommendations presented herein have been applied to design and construction. Following review of plans and specifications, observation should be performed by the Soil Engineer during construction to document that foundation elements are founded on/or extend into the properly compacted soil, and that suitable backfill soil is placed upon competent materials and properly compacted at the recommended moisture content.

Tests and observations should be performed during grading by the Soil Engineer or his representative in order to verify that the grading is being performed in accordance with the project specifications. Field density testing shall be performed in accordance with acceptable ASTM test methods. The minimum acceptable degree of compaction should be 90 percent for engineered fill soil and 95 percent for Class II aggregate base as obtained by ASTM Test Method D1557. Where testing indicates insufficient density, additional compactive effort shall be applied until retesting indicates satisfactory compaction.

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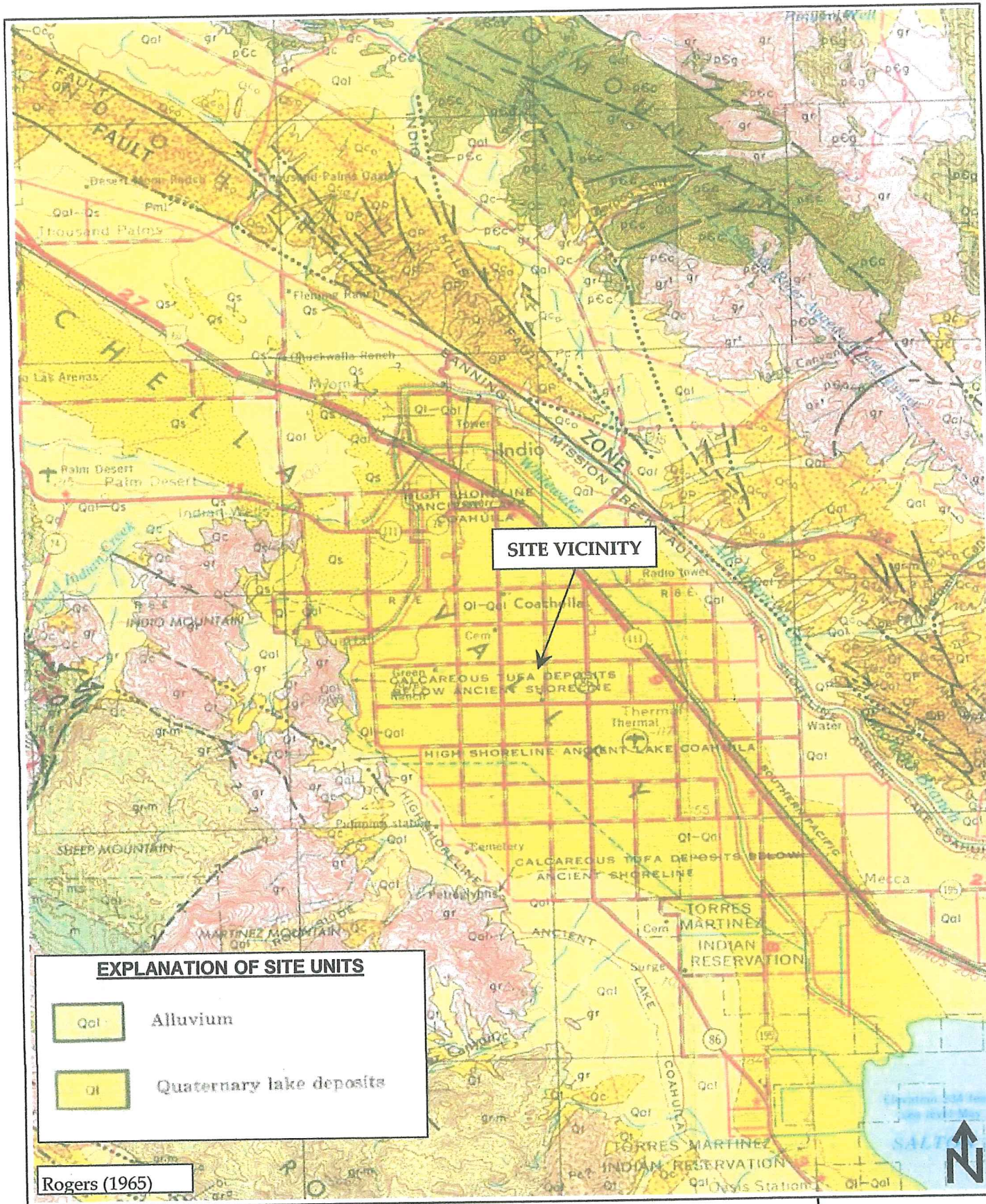
**FIGURES**

SITE LOCATION MAP
REGIONAL GEOLOGIC MAP
EXPLORATION LOCATION PLAN


USGS (2018)

| | | |
|---|---|---|
| Sladden Engineering | SITE LOCATION MAP | FIGURE 1 |
| | Project Number: 544-21005 | |
| | Report Number: 21-02-087 | |
| | Date: February 16, 2021 | |

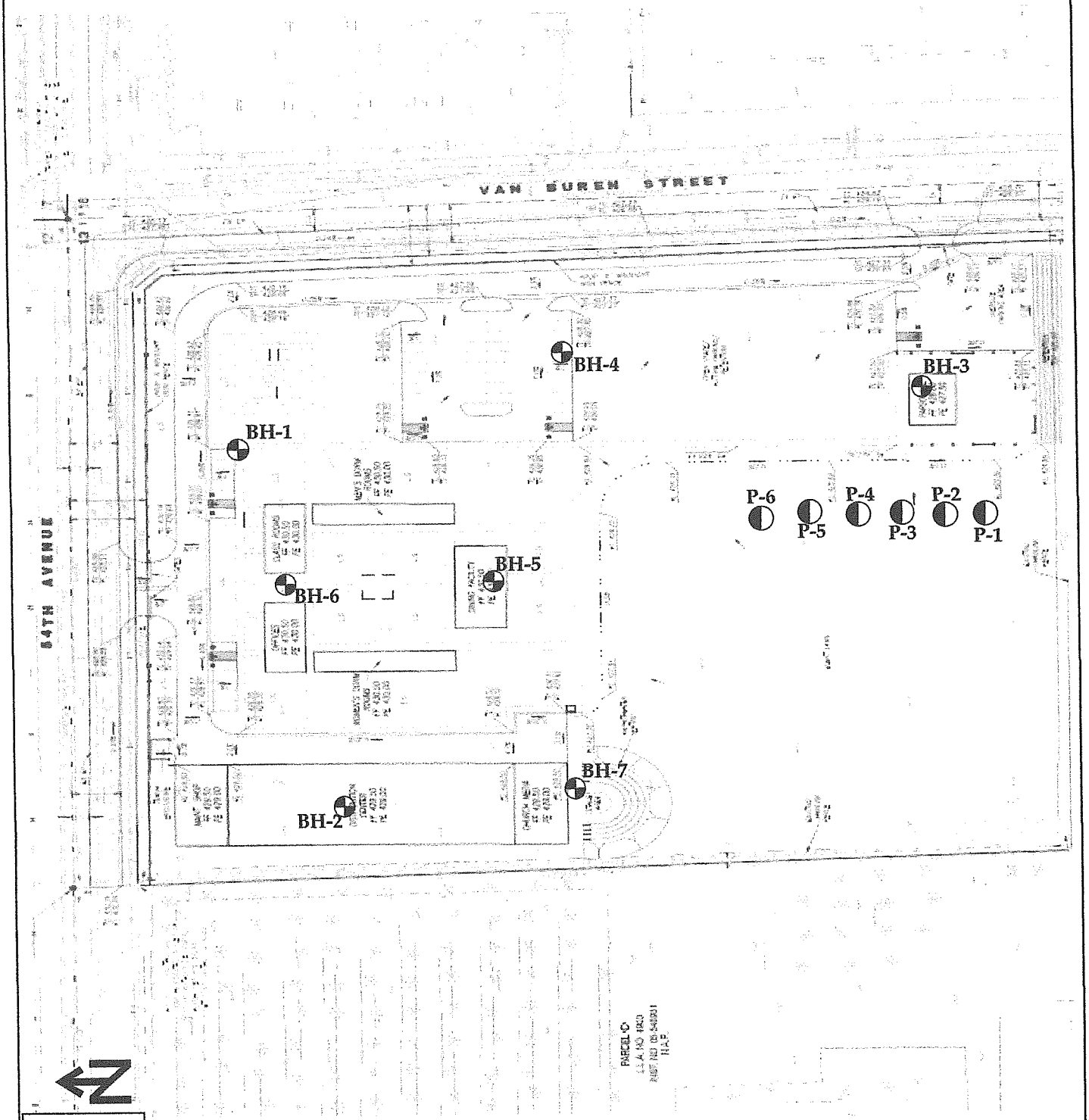



| | | |
|---|---|---|
| Sladden Engineering | REGIONAL GEOLOGIC MAP | FIGURE 2 |
| | Project Number: 544-21005 | |
| | Report Number: 21-02-087 | |
| | Date: February 16, 2021 | |

LEGEND

BH-7 Approximate Borehole Location

P-6 Approximate Percolation Location




CVE (2021)

Sladden Engineering

# EXPLORATION LOCATION PLAN

FIGURE 3

| | |
|---|---|
| Project Number: | 544-21005 |
| Report Number: | 21-02-087 |
| Date: | February 16, 2021 |

**APPENDIX A**

FIELD EXPLORATION

## APPENDIX A

## FIELD EXPLORATION

For our field investigation seven (7) exploratory boreholes and six (6) percolation test holes were excavated on January 19, 2021 utilizing a truck mounted hollow stem auger rig (Mobile B-61). In addition, two (2) exploratory test pits were excavated utilizing a track mounted John Deere 30 excavator. Continuous logs of the materials encountered were made by a representative of Sladden Engineering. Materials encountered in the boreholes were classified in accordance with the Unified Soil Classification System which is presented in this appendix.

Representative undisturbed samples were obtained within our borings by driving a thin-walled steel penetration sampler (California split spoon sampler) or a Standard Penetration Test (SPT) sampler with a 140 pound automatic-trip hammer dropping approximately 30 inches (ASTM D1586). The number of blows required to drive the samplers 18 inches was recorded in 6-inch increments and blowcounts are indicated on the boring logs.

The California samplers are 3.0 inches in diameter, carrying brass sample rings having inner diameters of 2.5 inches. The standard penetration samplers are 2.0 inches in diameter with an inner diameter of 1.5 inches. Undisturbed samples were removed from the sampler and placed in moisture sealed containers in order to preserve the natural soil moisture content. Bulk samples were obtained from the excavation spoils and samples were then transported to our laboratory for further observations and testing.

## UNIFIED SOIL CLASSIFICATION SYSTEM

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

## EXPLANATION OF BORE LOG SYMBOLS


California Split-spoon Sample


Unrecovered Sample


Standard Penetration Test Sample


Groundwater depth

Note: The stratification lines on the borelogs represent the approximate boundaries between the soil types; the transitions may be gradual.

# SLADDEN ENGINEERING

## BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | BH-1 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | 5/9/16 | 1 | 23 | 32.2 | 1.1 | 99.0 | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, very stiff, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 11/15/17 | | | 31.3 | 1.2 | 103.5 | 6 | | Silty Sand (SM); olive brown, dry to slightly moist, medium dense, fine-grained (Ql-Qal). |
| | 4/4/4 | | | 30.3 | 4.5 | | 10 | | Silty Sand (SM); olive brown, slightly moist, loose, fine-grained (Ql-Qal). |
| | 8/12/16 | | | 19.9 | 11.4 | 111.6 | 16 | | Silty Sand (SM); olive brown, slightly moist, medium dense, fine-grained (Ql-Qal). |
| | 2/3/3 | | | 77.8 | 32.4 | | 20 | | Sandy Clay (CL); olive brown, wet, medium stiff, medium to high plasticity (Ql-Qal). |
| | 5/8/8 | | | 41.9 | 25.8 | 104.2 | 26 | | Silty Sand (SM); olive brown, wet, loose, fine-grained (Ql-Qal). |
| | 4/7/8 | | | 23.5 | 25.6 | | 30 | | Silty Sand (SM); olive brown, wet, medium dense, fine-grained (Ql-Qal). |
| | 5/8/8 | | | 51.5 | 28.0 | 94.6 | 36 | | Sandy Silt (ML); olive brown, wet, stiff, medium to high plasticity with clay (Ql-Qal). |
| | 4/4/6 | | | 88.5 | 35.1 | | 40 | | Sandy Clay (CH); olive brown, wet, stiff, medium to high plasticity (Ql-Qal). |
| | 5/6/7 | | | 66.2 | 32.5 | | 46 | | Sandy Silt (ML); olive brown, wet, stiff, medium to high plasticity with clay (Ql-Qal). |
| | 5/6/6 | | | 41.1 | 29.1 | | 50 | | Silty Sand (SM); olive brown, wet, medium dense, fine-grained (Ql-Qal). |

Completion Notes:
Terminated at ~ 51.5 Feet bgs
Groundwater Encountered at ~ 19.5 Feet bgs
No Bedrock Encountered

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | BH-2 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 3/4/5 | | | 56.5 | 6.3 | | 6 | | Sandy Silt (ML); olive brown, slightly moist, stiff, low to medium plasticity w/ clay (Ql-Qal). |
| | 8/13/16 | | | 63.9 | 13.0 | 102.9 | 10 | | Sandy Silt (ML); olive brown, moist, very stiff, low to medium plasticity w/ clay (Ql-Qal). |
| | 5/8/9 | | | 11.1 | 13.8 | | 16 | | Sand (SP); olive brown, moist, medium dense, fine-grained (Ql-Qal). |
| | 5/6/7 | | | 84.3 | 30.3 | 94.2 | 20 | | Sandy Clay (CL); olive brown, wet, medium stiff, medium to high plasticity (Ql-Qal). |
| | 3/6/7 | | | 93.7 | 31.2 | | 26 | | Sandy Clay (CL); olive brown, wet, stiff, medium to high plasticity (Ql-Qal). |
| | 5/8/8 | | | 36.9 | 23.9 | 103.4 | 30 | | Silty Sand (SM); olive brown, wet, loose, fine-grained (Ql-Qal). |
| | 4/5/6 | | | 47.2 | 26.6 | | 36 | | Silty Sand (SM); olive brown, wet, medium dense, fine-grained (Ql-Qal). |
| | 5/7/7 | | | 36.5 | 24.0 | 103.3 | 40 | | Silty Sand (SM); olive brown, wet, loose, fine-grained (Ql-Qal). |
| | 6/8/7 | | | 16.8 | 23.3 | | 46 | | Silty Sand (SM); olive brown, wet, medium dense, fine-grained (Ql-Qal). |
| | 5/7/8 | | | 9.2 | 23.6 | | 50 | | Sand (SP); olive brown, moist, medium dense, fine-grained (Ql-Qal). |

Completion Notes:
Terminated at ~ 51.5 Feet bgs
Groundwater Encountered at ~ 19.5 Feet bgs
No Bedrock Encountered

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

SLADDEN ENGINEERING

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | BH-3 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 6/7/10 | | | 52.6 | 8.5 | 94.3 | 6 | | Sandy Silt (ML); olive brown, slightly moist to moist, stiff, low to medium plasticity w/ clay (Ql-Qal). |
| | 3/5/6 | | | 53.4 | 11.6 | | 10 | | Sandy Silt (ML); olive brown, moist, stiff, low to medium plasticity w/ clay (Ql-Qal). |
| | 9/13/18 | | | 22.2 | 13.8 | 103.9 | 16 | | Silty Sand (SM); olive brown, moist, medium dense, fine-grained (Ql-Qal). |
| | | | | | | | | | Terminated at ~ 16.5 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | BH-4 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 5/6/8 | | | 40.0 | 7.2 | 100.1 | 6 | | Silty Sand (SM); olive brown, moist, loose, fine-grained (Ql-Qal). |
| | 4/5/7 | | | 32.4 | 5.7 | | 10 | | Silty Sand (SM); olive brown, moist, medium dense, fine-grained (Ql-Qal). |
| | | | | | | | 12 | | Terminated at ~ 11.5 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered |

Completion Notes:

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**SLADDEN ENGINEERING**

# BORE LOG

| | | | |
|---|---|---|---|
| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
| Elevation: | -75 Ft (MSL) | Boring No: | BH-5 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 5/5/5 | | | 36.9 | 2.6 | | 6 | | Silty Sand (SM); olive brown, slightly moist, loose, fine-grained (Ql-Qal). |
| | 4/6/8 | | | 85.9 | 25.7 | 94.2 | 10 | | Sandy Clay (CL); olive brown, very moist to wet, stiff, medium to high plasticity (Ql-Qal). |
| | 4/8/13 | | | 49.8 | 24.2 | | 16 | | Silty Sand (SM); olive brown, very moist to wet, medium dense, fine-grained (Ql-Qal). |
| | 3/5/6 | | | 87.4 | 34.8 | 89.3 | 20 | | Sandy Clay (CL); olive brown, wet, medium stiff, medium to high plasticity (Ql-Qal). |
| | | | | | | | 22 | | Terminated at ~ 21.5 Feet bgs<br>Groundwater Encountered at ~ 18.5 Feet bgs.<br>No Bedrock Encountered |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | BH-6 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 4/6/8 | | | 36.8 | 3.5 | | 4 | | Silty Sand (SM); olive brown, slightly moist, medium dense, fine-grained (Ql-Qal). |
| | 5/6/9 | | | 93.0 | 34.2 | 82.3 | 10 | | Sandy Clay (CL); olive brown, very moist to wet, stiff, medium to high plasticity (Ql-Qal). |
| | 3/7/11 | | | 13.5 | 16.9 | | 16 | | Silty Sand (SM); olive brown, moist, medium dense, fine-grained (Ql-Qal). |
| | 3/6/9 | | | 82.1 | 33.8 | 90.5 | 20 | | Sandy Clay (CL); olive brown, wet, stiff, medium to high plasticity (Ql-Qal). |
| | | | | | | | 22 | | Terminated at ~ 21.5 Feet bgs<br>Groundwater Encountered at ~ 18.5 Feet bgs.<br>No Bedrock Encountered |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | BH-7 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | 3/5/6 | | | 53.6 | 5.4 | | 5 | | Sandy Silt (ML); olive brown, slightly moist, stiff, low to medium plasticity w/ clay (Ql-Qal). |
| | 3/5/7 | | | 89.0 | 31.1 | 87.9 | 10 | | Sandy Clay (CL); olive brown, very moist to wet, medium stiff, medium to high plasticity (Ql-Qal). |
| | 6/9/10 | | | 21.6 | 18.8 | | 15 | | Silty Sand (SM); olive brown, very moist, medium dense, fine-grained (Ql-Qal). |
| | | | | | | | | | Terminated at ~ 16.5 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

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**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | P-1 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | | | | | | | 4 | | Silty Sand (SM); olive brown, dry to slightly moist, fine-grained (Ql-Qal). |
| | | | | | | | 6 | | Terminated at ~ 5.0 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered<br>Borehole Cased with Perforated Pipe for Percolation Testing. |
| | | | | | | | 8 | | |
| | | | | | | | 10 | | |
| | | | | | | | 12 | | |
| | | | | | | | 14 | | |
| | | | | | | | 16 | | |
| | | | | | | | 18 | | |
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| | | | | | | | 50 | | |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | P-2 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | | | | | | | 2 | | |
| | | | | | | | 4 | | Silty Sand (SM); olive brown, dry to slightly moist, fine-grained (Ql-Qal). |
| | | | | | | | 6 | | Terminated at ~ 5.0 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered<br>Borehole Cased with Perforated Pipe for Percolation Testing. |
| | | | | | | | 8 | | |
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| | | | | | | | 46 | | |
| | | | | | | | 48 | | |
| | | | | | | | 50 | | |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | P-3 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | | | | | | | 4 | | Silty Sand (SM); olive brown, dry to slightly moist, fine-grained (Ql-Qal). |
| | | | | | | | 6 | | Terminated at ~ 5.0 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered<br>Borehole Cased with Perforated Pipe for Percolation Testing. |
| | | | | | | | 8 | | |
| | | | | | | | 10 | | |
| | | | | | | | 12 | | |
| | | | | | | | 14 | | |
| | | | | | | | 16 | | |
| | | | | | | | 18 | | |
| | | | | | | | 20 | | |
| | | | | | | | 22 | | |
| | | | | | | | 24 | | |
| | | | | | | | 26 | | |
| | | | | | | | 28 | | |
| | | | | | | | 30 | | |
| | | | | | | | 32 | | |
| | | | | | | | 34 | | |
| | | | | | | | 36 | | |
| | | | | | | | 38 | | |
| | | | | | | | 40 | | |
| | | | | | | | 42 | | |
| | | | | | | | 44 | | |
| | | | | | | | 46 | | |
| | | | | | | | 48 | | |
| | | | | | | | 50 | | |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**SLADDEN ENGINEERING**

# BORE LOG

| | | | |
|---|---|---|---|
| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
| Elevation: | -75 Ft (MSL) | Boring No: | P-4 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | | | | | | | 4 | | Silty Sand (SM); olive brown, dry to slightly moist, fine-grained (Ql-Qal). |
| | | | | | | | 6 | | Terminated at ~ 5.0 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered<br>Borehole Cased with Perforated Pipe for Percolation Testing. |
| | | | | | | | 8 | | |
| | | | | | | | 10 | | |
| | | | | | | | 12 | | |
| | | | | | | | 14 | | |
| | | | | | | | 16 | | |
| | | | | | | | 18 | | |
| | | | | | | | 20 | | |
| | | | | | | | 22 | | |
| | | | | | | | 24 | | |
| | | | | | | | 26 | | |
| | | | | | | | 28 | | |
| | | | | | | | 30 | | |
| | | | | | | | 32 | | |
| | | | | | | | 34 | | |
| | | | | | | | 36 | | |
| | | | | | | | 38 | | |
| | | | | | | | 40 | | |
| | | | | | | | 42 | | |
| | | | | | | | 44 | | |
| | | | | | | | 46 | | |
| | | | | | | | 48 | | |
| | | | | | | | 50 | | |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

**SLADDEN ENGINEERING**

# BORE LOG

| | | | |
|---|---|---|---|
| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
| Elevation: | -75 Ft (MSL) | Boring No: | P-5 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | | | | | | | 4 | | Silty Sand (SM); olive brown, dry to slightly moist, fine-grained (Ql-Qal). |
| | | | | | | | 6 | | Terminated at ~ 5.0 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered<br>Borehole Cased with Perforated Pipe for Percolation Testing. |
| | | | | | | | 8 | | |
| | | | | | | | 10 | | |
| | | | | | | | 12 | | |
| | | | | | | | 14 | | |
| | | | | | | | 16 | | |
| | | | | | | | 18 | | |
| | | | | | | | 20 | | |
| | | | | | | | 22 | | |
| | | | | | | | 24 | | |
| | | | | | | | 26 | | |
| | | | | | | | 28 | | |
| | | | | | | | 30 | | |
| | | | | | | | 32 | | |
| | | | | | | | 34 | | |
| | | | | | | | 36 | | |
| | | | | | | | 38 | | |
| | | | | | | | 40 | | |
| | | | | | | | 42 | | |
| | | | | | | | 44 | | |
| | | | | | | | 46 | | |
| | | | | | | | 48 | | |
| | | | | | | | 50 | | |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

| | | | |
|---|---|---|---|
| Project No: | 544-21005 | Page | 12 |
| Report No: | 21-02-087 | | |

**SLADDEN ENGINEERING**

# BORE LOG

| Drill Rig: | Mobile B-61 | Date Drilled: | 1/19/2021 |
|---|---|---|---|
| Elevation: | -75 Ft (MSL) | Boring No: | P-6 |

| Sample | Blow Counts | Bulk Sample | Expansion Index | % Minus #200 | % Moisture | Dry Density | Depth (Feet) | Graphic Lithology | Description |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0–2 | | Sandy Silt (ML); olive brown, dry to slightly moist, low to medium plasticity w/ clay (Fill/Disturbed). |
| | | | | | | | 2–4 | | Silty Sand (SM); olive brown, dry to slightly moist, fine-grained (Ql-Qal). |
| | | | | | | | 4–50 | | Terminated at ~ 5.0 Feet bgs<br>No Groundwater or Seepage Encountered.<br>No Bedrock Encountered<br>Borehole Cased with Perforated Pipe for Percolation Testing. |

Completion Notes:

PROPOSED NEW TRAINING CENTER
APN 780-330-004

Project No: 544-21005
Report No: 21-02-087

**APPENDIX B**

LABORATORY TESTING

## APPENDIX B

## LABORATORY TESTING

Representative bulk and relatively undisturbed soil samples were obtained in the field and returned to our laboratory for additional observations and testing. Laboratory testing was generally performed in two phases. The first phase consisted of testing in order to determine the compaction of the existing natural soil and the general engineering classifications of the soils underlying the site. This testing was performed in order to estimate the engineering characteristics of the soil and to serve as a basis for selecting samples for the second phase of testing. The second phase consisted of soil mechanics testing. This testing including consolidation, shear strength and expansion testing was performed in order to provide a means of developing specific design recommendations based on the mechanical properties of the soil.

## CLASSIFICATION AND COMPACTION TESTING

**Unit Weight and Moisture Content Determinations:** Each undisturbed sample was weighed and measured in order to determine its unit weight. A small portion of each sample was then subjected to testing in order to determine its moisture content. This was used in order to determine the dry density of the soil in its natural condition. The results of this testing are shown on the Boring Logs.

**Maximum Density-Optimum Moisture Determinations:** Representative soil types were selected for maximum density determinations. This testing was performed in accordance with the ASTM Standard D1557-91, Test Method A. Graphic representations of the results of this testing are presented in this appendix. The maximum densities are compared to the field densities of the soil in order to determine the existing relative compaction to the soil.

**Classification Testing:** Soil samples were selected for classification testing. This testing consists of mechanical grain size analyses. This provides information for developing classifications for the soil in accordance with the Unified Soil Classification System which is presented in the preceding appendix. This classification system categorizes the soil into groups having similar engineering characteristics. The results of this testing is very useful in detecting variations in the soil and in selecting samples for further testing.

## SOIL MECHANIC'S TESTING

**Expansion Testing:** One (1) bulk sample was selected for Expansion testing. Expansion testing was performed in accordance with the UBC Standard 18-2. This testing consists of remolding 4-inch diameter by 1-inch thick test specimens to a moisture content and dry density corresponding to approximately 50 percent saturation. The samples are subjected to a surcharge of 144 pounds per square foot and allowed to reach equilibrium. At that point the specimens are inundated with distilled water. The linear expansion is then measured until complete.

**Direct Shear Testing:** One (1) bulk sample was selected for Direct Shear testing. This test measures the shear strength of the soil under various normal pressures and is used to develop parameters for foundation design and lateral design. Tests were performed using a recompacted test specimen that was saturated prior to tests. Tests were performed using a strain controlled test apparatus with normal pressures ranging from 800 to 2300 pounds per square foot.

**Consolidation/Hydro-Collapse Testing:** One (1) relatively undisturbed samples were selected for consolidation testing. For this test, a one-inch thick test specimen was subjected to vertical loads varying from 575 psf to 11520 psf applied progressively. The consolidation at each load increment was recorded prior to placement of each subsequent load.

**Corrosion Series Testing:** The soluble sulfate concentrations of the surface soil were determined in accordance with California Test Method Number (CA) 417. The pH and Minimum Resistivity were determined in accordance with CA 643. The soluble chloride concentrations were determined in accordance with CA 422.

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# Maximum Density/Optimum Moisture

ASTM D698/D1557

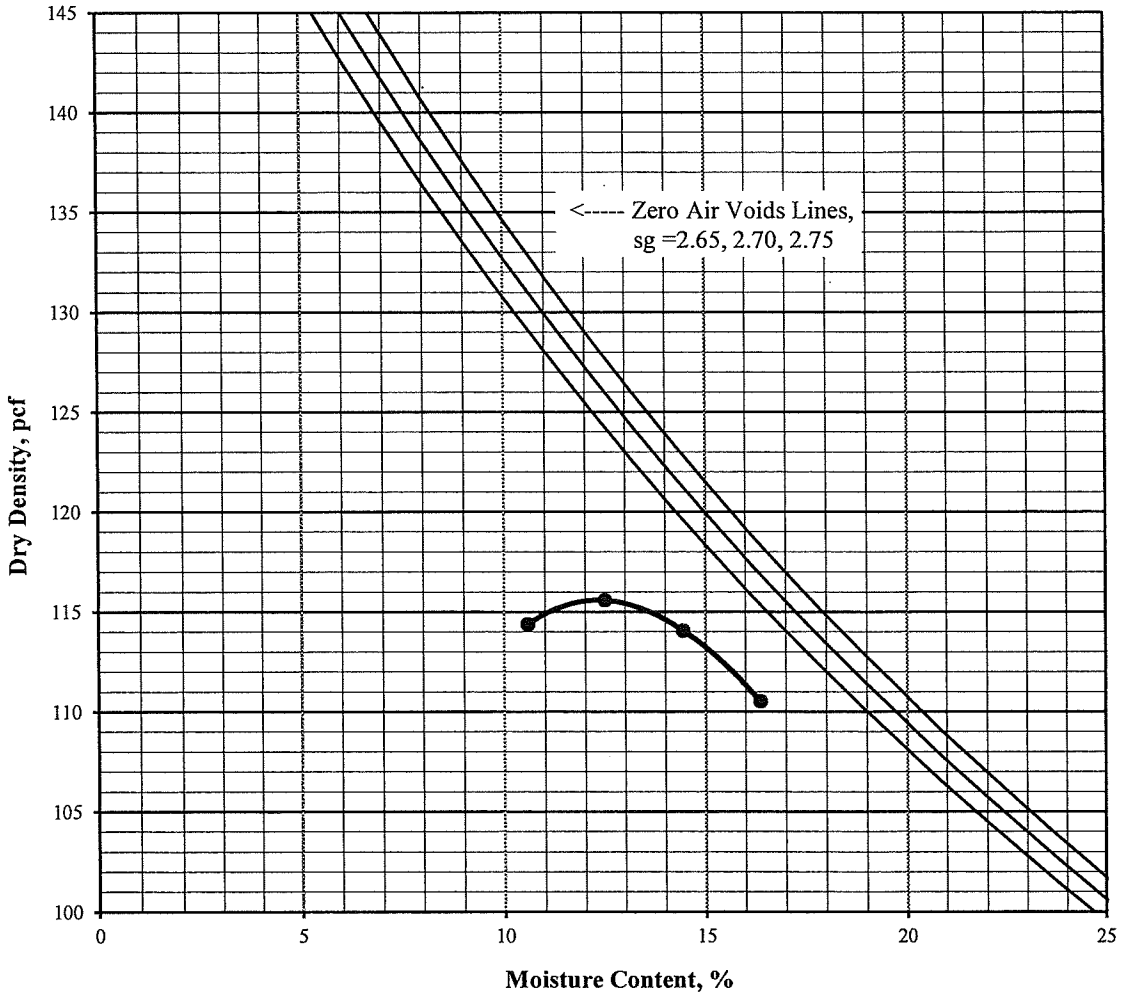
Project Number: 544-21005
Project Name: SWC Avenue 54 & Van Buren Street
Lab ID Number: LN6-21032
Sample Location: BH-1 Bulk 1 @ 0-5'
Description: Olive Brown Sandy Silt (ML)

February 9, 2021

ASTM D-1557 A
Rammer Type: Machine

**Maximum Density: 116 pcf**
**Optimum Moisture: 13%**

| Sieve Size | % Retained |
|---|---|
| 3/4" | |
| 3/8" | |
| #4 | 0.0 |



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## Expansion Index

ASTM D 4829

Job Number: 544-21005 February 9, 2021

Job Name: SWC Avenue 54 & Van Buren Street

Lab ID Number: LN6-21032

Sample ID: BH-1 Bulk 1 @ 0-5'

Soil Description: Olive Brown Sandy Silt (ML)

| | |
|---|---|
| Wt of Soil + Ring: | 557.0 |
| Weight of Ring: | 194.9 |
| Wt of Wet Soil: | 362.1 |
| Percent Moisture: | 10.9% |
| Sample Height, in | 0.95 |
| Wet Density, pcf: | 115.9 |
| Dry Denstiy, pcf: | 104.5 |

| | |
|---|---|
| **% Saturation:** | 48.0 |

**Expansion** **Rack # 3**

| | | |
|---|---|---|
| Date/Time | 2/5/2021 | 1:20 PM |
| Initial Reading | 0.0000 | |
| Final Reading | 0.0227 | |

**Expansion Index** **23**

(Final - Initial) x 1000

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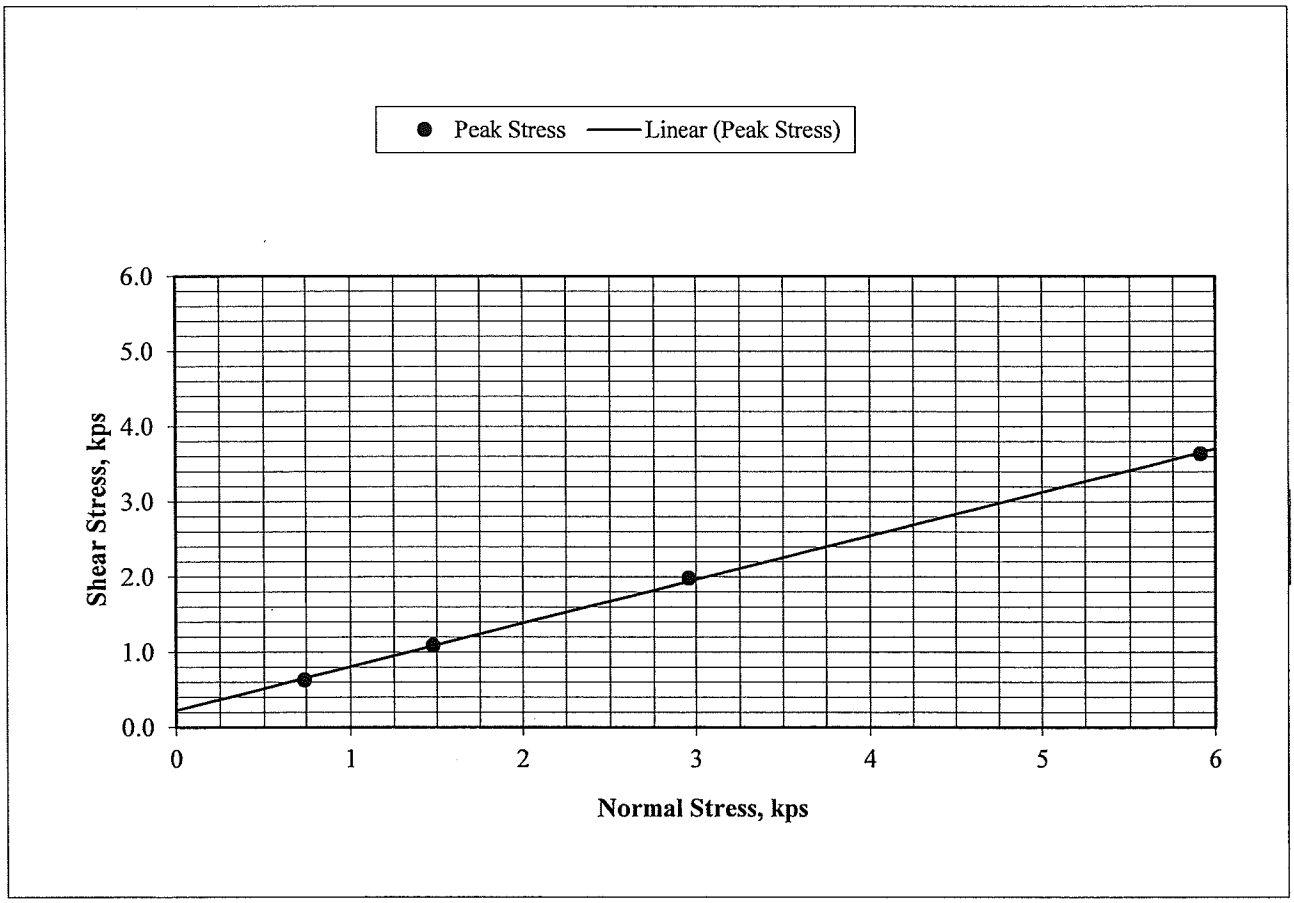
**Direct Shear** ASTM D 3080-04
(modified for unconsolidated condition)

| | | | |
|---|---|---|---|
| Job Number: | 544-21005 | | February 9, 2021 |
| Job Name | SWC Avenue 54 & Van Buren Street | | Initial Dry Density: 104.0 pcf |
| Lab ID No. | LN6-21032 | | Initial Mosture Content: 13.1 % |
| Sample ID | BH-1 Bulk 1 @ 0-5' | | Peak Friction Angle (Ø): 30° |
| Classification | Olive Brown Sandy Silt (ML) | | Cohesion (c): 230 psf |
| Sample Type | Remolded @ 90% of Maximum Density | | |

| Test Results | 1 | 2 | 3 | 4 | Average |
|---|---|---|---|---|---|
| Moisture Content, % | 23.1 | 23.1 | 23.1 | 23.1 | 23.1 |
| Saturation, % | 100.7 | 100.7 | 100.7 | 100.7 | 100.7 |
| Normal Stress, kps | 0.739 | 1.479 | 2.958 | 5.916 | |
| Peak Stress, kps | 0.632 | 1.090 | 1.984 | 3.641 | |



Job Number: 544-21005
Job Name: SWC Avenue 54 & Van Buren Street
Date: 2/9/2021

| Moisture Adjustment | | Remolded Shear Weight | |
|---|---|---|---|
| Wt of Soil: | 1,000 | Max Dry Density: | 116.0 |
| Moist As Is: | 2.2 | Optimum Moisture: | 13.0 |
| Moist Wanted: | 13.0 | | |
| ml of Water to Add: | 105.7 | Wt Soil per Ring, g: | 141.9 |

**UBC**

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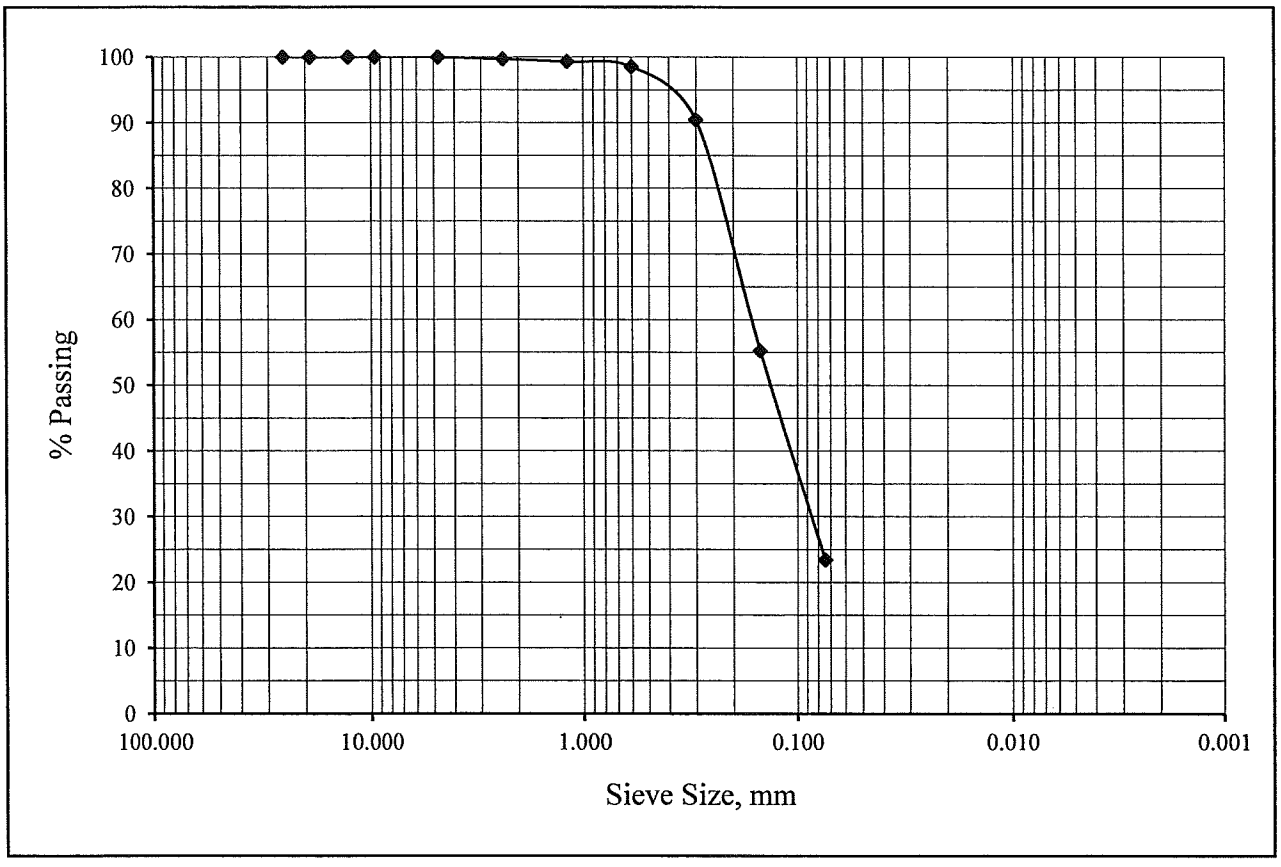
## Gradation

ASTM C117 & C136

Project Number: 544-21005 February 9, 2021
Project Name: SWC Avenue 54 & Van Buren Street
Lab ID Number: LN6-21032
Sample ID: BH-1 S-7 @ 30' Soil Classification: SM

| Sieve Size, in | Sieve Size, mm | Percent Passing |
|---|---|---|
| 1" | 25.4 | 100.0 |
| 3/4" | 19.1 | 100.0 |
| 1/2" | 12.7 | 100.0 |
| 3/8" | 9.53 | 100.0 |
| #4 | 4.75 | 100.0 |
| #8 | 2.36 | 99.7 |
| #16 | 1.18 | 99.3 |
| #30 | 0.60 | 98.6 |
| #50 | 0.30 | 90.5 |
| #100 | 0.15 | 55.3 |
| #200 | 0.074 | 23.5 |



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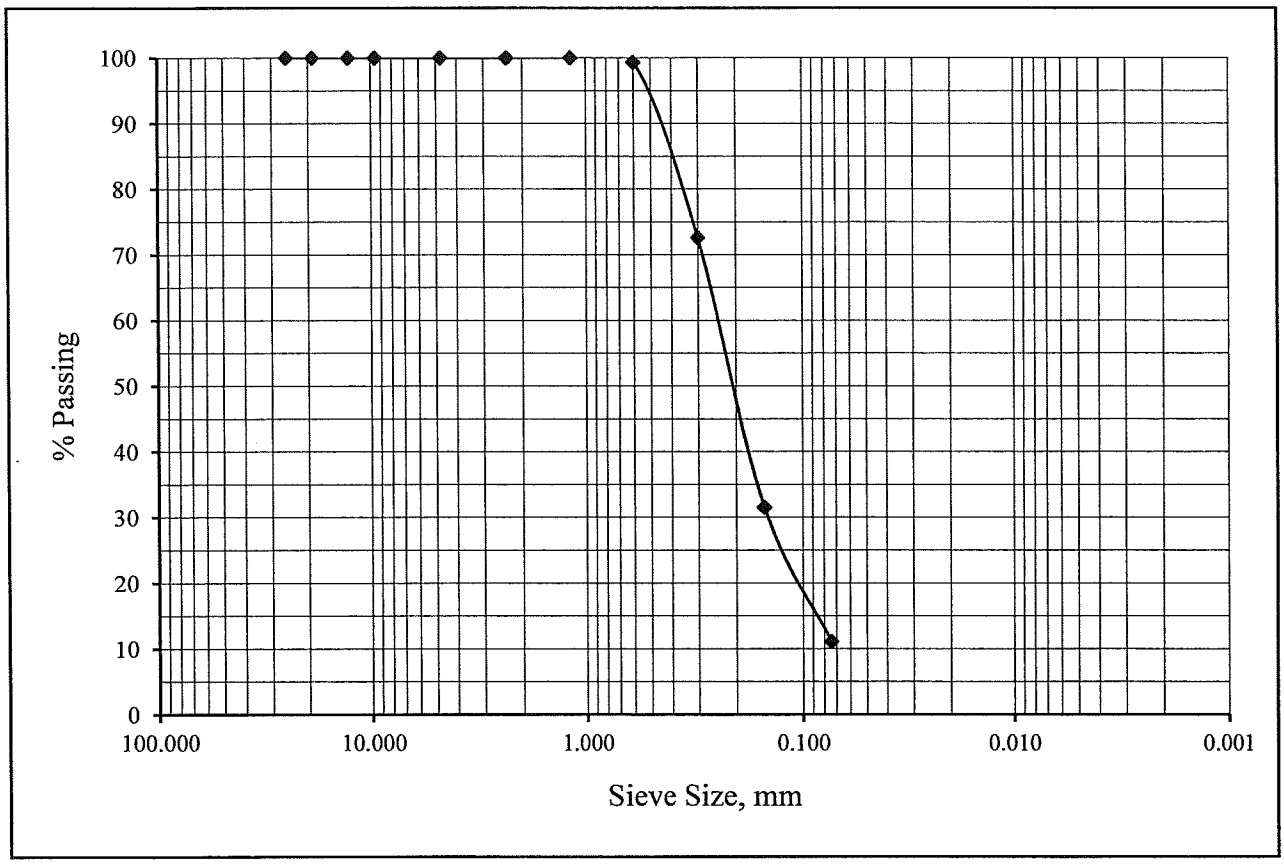
## Gradation

ASTM C117 & C136

Project Number: 544-21005 February 9, 2021
Project Name: SWC Avenue 54 & Van Buren Street
Lab ID Number: LN6-21032
Sample ID: BH-2 S-3 @ 15' Soil Classification: SP-SM

| Sieve Size, in | Sieve Size, mm | Percent Passing |
|---|---|---|
| 1" | 25.4 | 100.0 |
| 3/4" | 19.1 | 100.0 |
| 1/2" | 12.7 | 100.0 |
| 3/8" | 9.53 | 100.0 |
| #4 | 4.75 | 100.0 |
| #8 | 2.36 | 100.0 |
| #16 | 1.18 | 100.0 |
| #30 | 0.60 | 99.3 |
| #50 | 0.30 | 72.6 |
| #100 | 0.15 | 31.5 |
| #200 | 0.074 | 11.1 |



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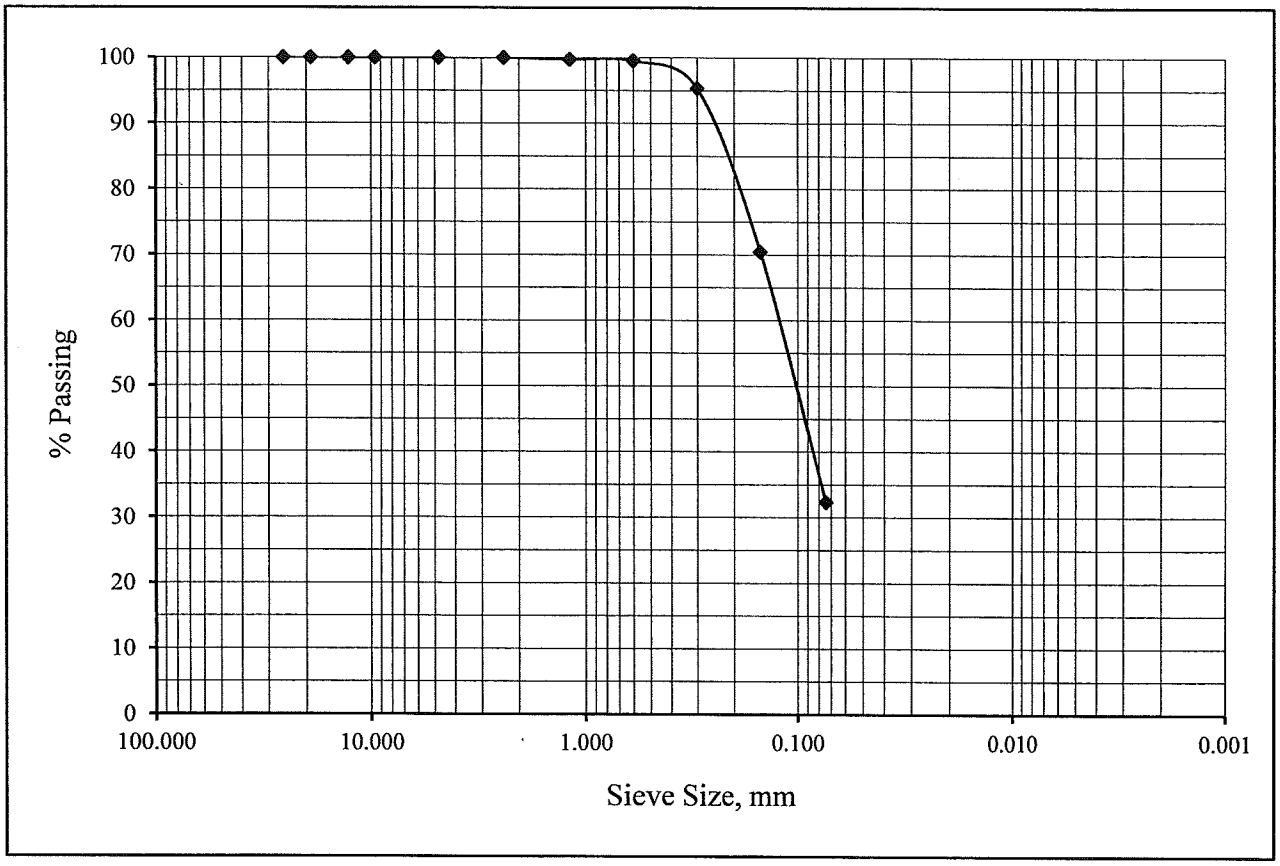
## Gradation

ASTM C117 & C136

Project Number: 544-21005 February 9, 2021
Project Name: SWC Avenue 54 & Van Buren Street
Lab ID Number: LN6-21032
Sample ID: BH-4 S-2 @ 10' Soil Classification: SM

| Sieve Size, in | Sieve Size, mm | Percent Passing |
|---|---|---|
| 1" | 25.4 | 100.0 |
| 3/4" | 19.1 | 100.0 |
| 1/2" | 12.7 | 100.0 |
| 3/8" | 9.53 | 100.0 |
| #4 | 4.75 | 100.0 |
| #8 | 2.36 | 100.0 |
| #16 | 1.18 | 99.7 |
| #30 | 0.60 | 99.5 |
| #50 | 0.30 | 95.4 |
| #100 | 0.15 | 70.5 |
| #200 | 0.074 | 32.4 |



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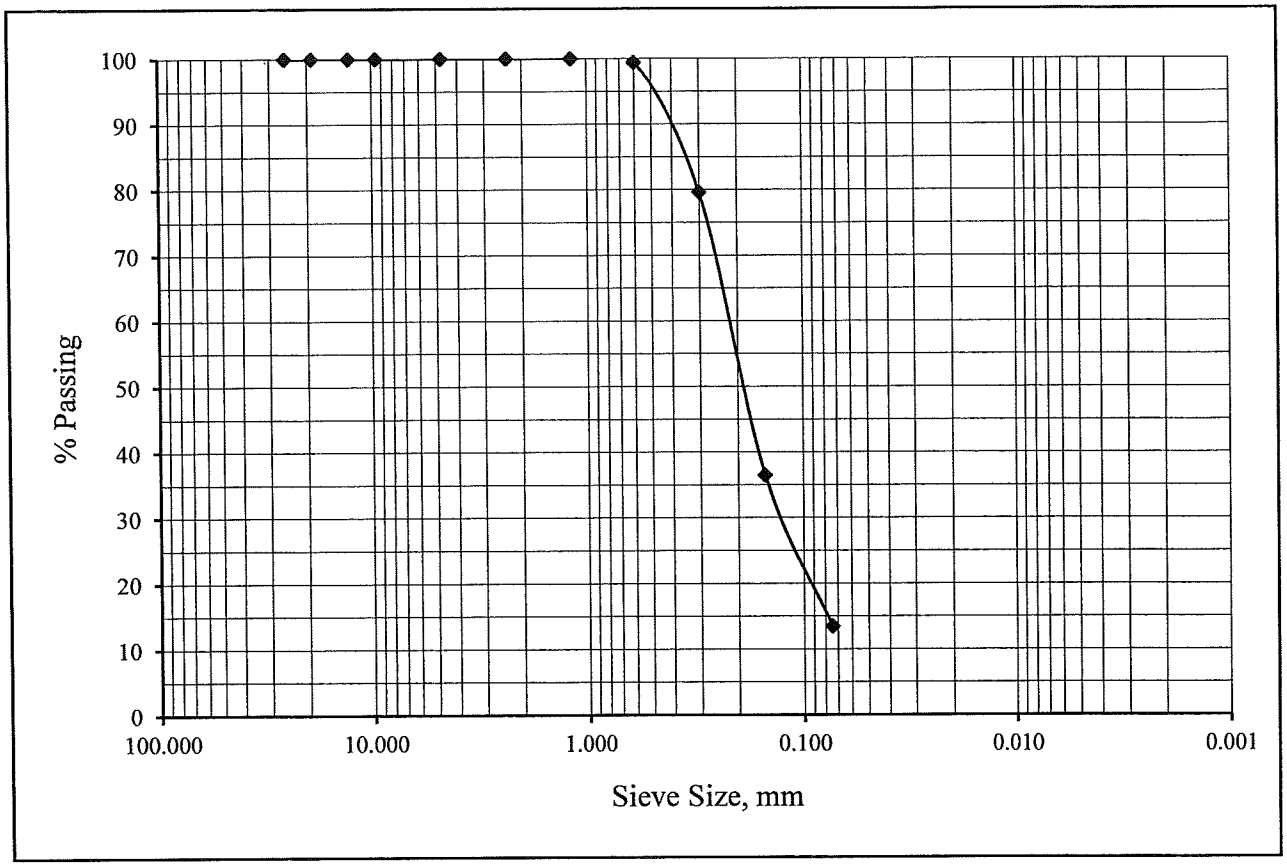
## Gradation

ASTM C117 & C136

Project Number: 544-21005 February 9, 2021
Project Name: SWC Avenue 54 & Van Buren Street
Lab ID Number: LN6-21032
Sample ID: BH-6 S-3 @ 15' Soil Classification: SM

| Sieve Size, in | Sieve Size, mm | Percent Passing |
|---|---|---|
| 1" | 25.4 | 100.0 |
| 3/4" | 19.1 | 100.0 |
| 1/2" | 12.7 | 100.0 |
| 3/8" | 9.53 | 100.0 |
| #4 | 4.75 | 100.0 |
| #8 | 2.36 | 100.0 |
| #16 | 1.18 | 100.0 |
| #30 | 0.60 | 99.4 |
| #50 | 0.30 | 79.6 |
| #100 | 0.15 | 36.5 |
| #200 | 0.074 | 13.5 |



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## One Dimensional Consolidation

ASTM D2435 & D5333

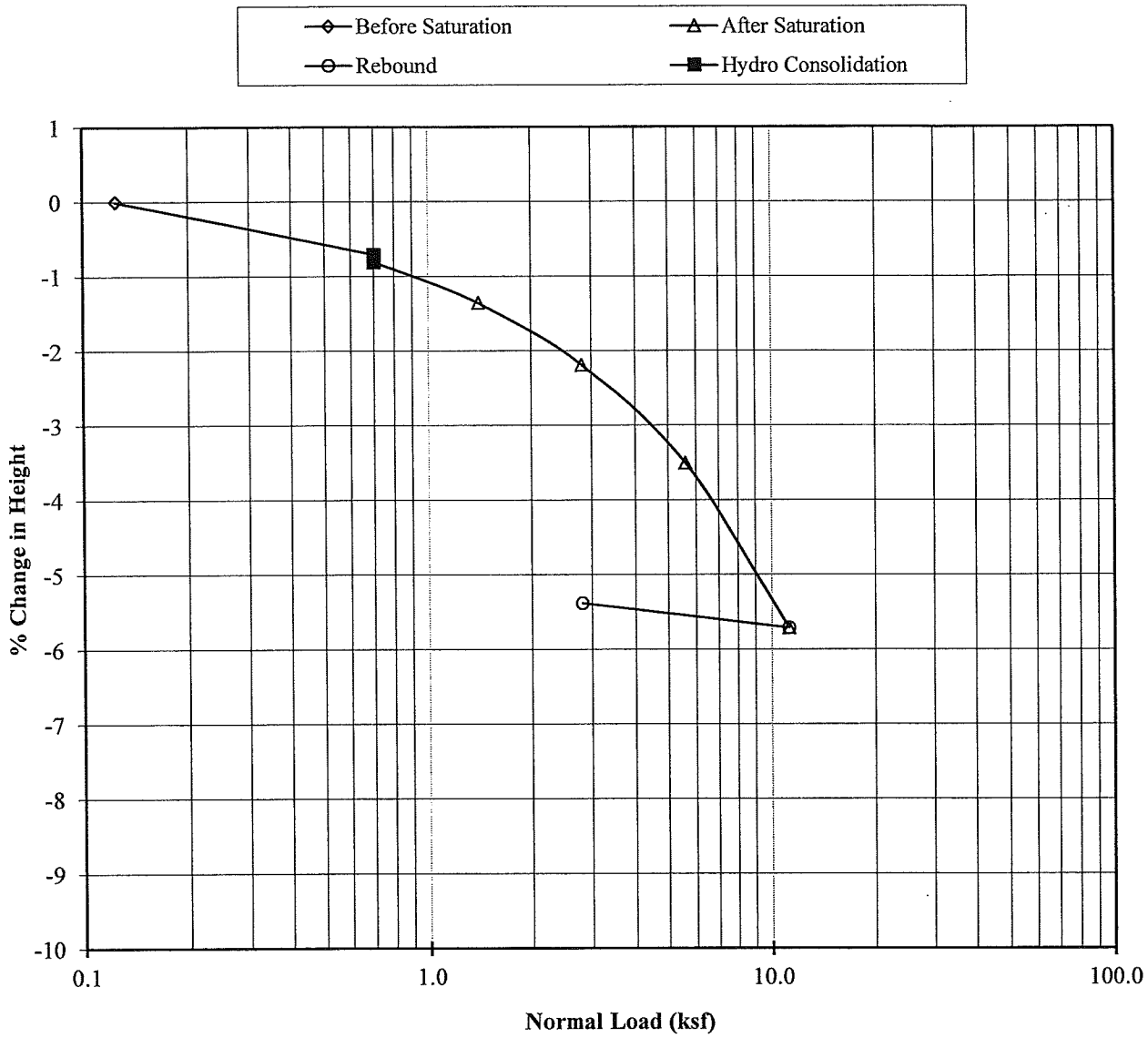
Job Number: 544-21005
Job Name: SWC Avenue 54 & Van Buren Street

February 9, 2021

Lab ID Number: LN6-21032
Sample ID: BH-3 R-1 @ 5'
Soil Description: Dark Brown Sandy Silt (ML)

| | |
|---|---|
| Initial Dry Density, pcf: | 93.6 |
| Initial Moisture, %: | 8.5 |
| Initial Void Ratio: | 0.781 |
| Specific Gravity: | 2.67 |

**% Change in Height vs Normal Presssure Diagram**



# Sladden Engineering

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## One Dimensional Consolidation

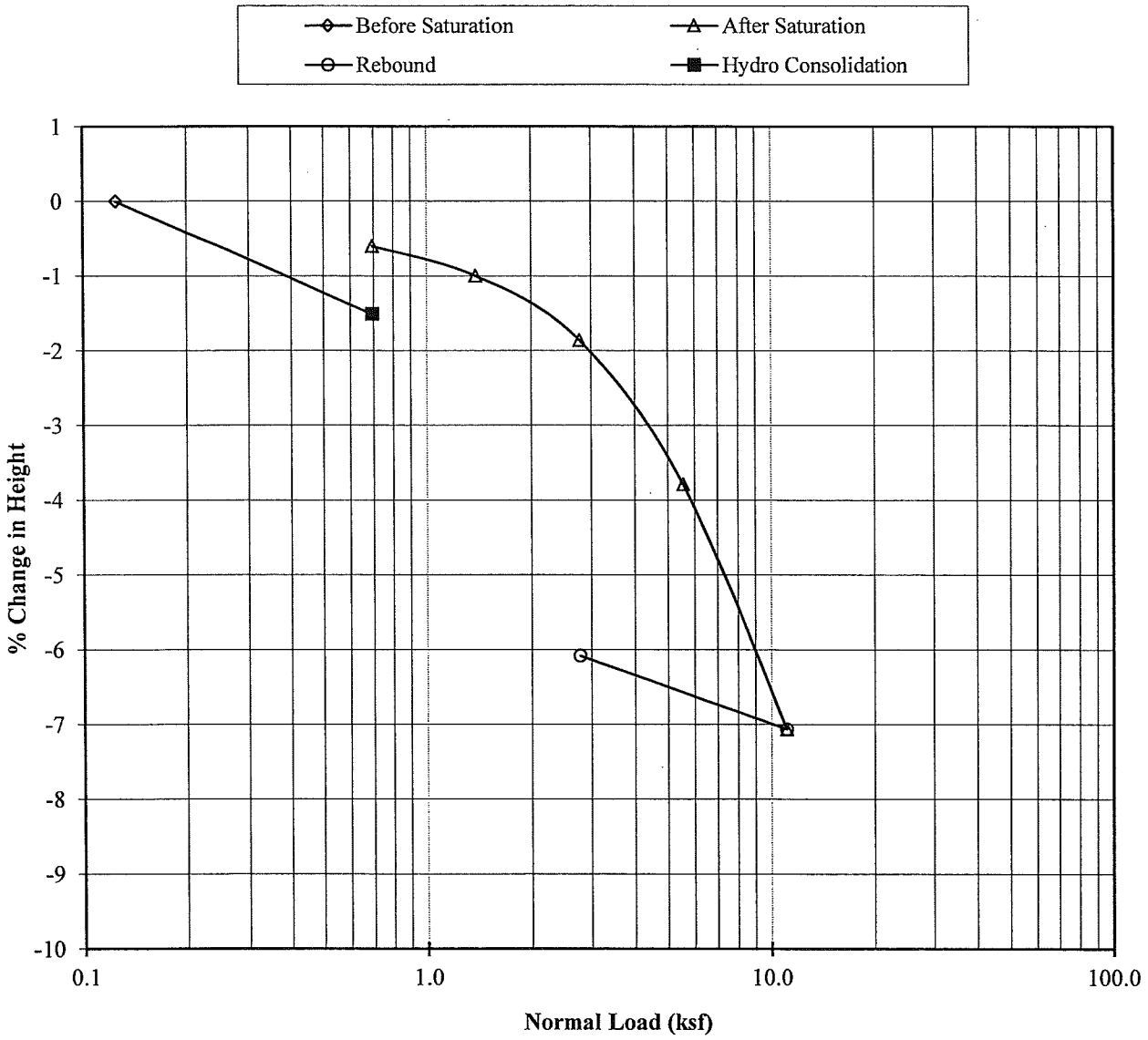
ASTM D2435 & D5333

Job Number: 544-21005 February 9, 2021
Job Name: SWC Avenue 54 & Van Buren Street

Lab ID Number: LN6-21032
Sample ID: BH-5 R-2 @ 10'
Soil Description: Olive Brown Clay (CL)

| | |
|---|---|
| Initial Dry Density, pcf: | 94.9 |
| Initial Moisture, %: | 25.7 |
| Initial Void Ratio: | 0.757 |
| Specific Gravity: | 2.67 |

**% Change in Height vs Normal Presssure Diagram**



# Sladden Engineering

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45090 Golf Center Pkwy, Suite F, Indio, CA 92201 (760) 863-0713 Fax (760) 863-0847
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863


Date: February 9, 2021

Account No.: 544-21005

Customer: Jordan Outreach Ministries

Location: APN 780-330-004, SWC Avenue 54 & Van Buren Street, Thermal Area

## Analytical Report

---

Corrosion Series

| | pH per CA 643 | Soluble Sulfates per CA 417 ppm | Soluble Chloride per CA 422 ppm | Min. Resistivity per CA 643 ohm-cm |
|---|---|---|---|---|
| BH-1 @ 0-5' | 8.7 | 2000 | 170 | 900 |

**APPENDIX C**

SEISMIC HAZARD ANALYSIS (SHA)

**Project:** APN 780-330-004
**Project Number:** 544-21005
**Client:** Jordan Outreach Ministries
**Site Lat/Long:** 33.6551/ -116.1999
**Controlling Seismic Source:** Southern San Andreas

| REFERENCE | NOTATION | VALUE |
|---|---|---|
| Site Class | C, D, D default, or E | D measured |
| Site Class D - Table 11.4-1 | $F_a$ | 1.0 |
| Site Class D - 21.3(ii) | $F_v$ | 2.5 |
| $0.2*(S_{D1}/S_{DS})$ | $T_0$ | 0.141 |
| $S_{D1}/S_{DS}$ | $T_S$ | 0.703 |
| Fundamental Period (12.8.2) | T | Period |
| Seismic Design Maps or Fig 22-14 | $T_L$ | 8 |
| Equation 11.4-4 - $2/3*S_{M1}$ | $S_{D1}$ | 0.8013* |
| Equation 11.4-2 - $F_V*S_1$ | $S_{M1}$ | 1.2019* |

| REFERENCE | NOTATION | VALUE |
|---|---|---|
| Fv (Table 11.4-2)[Used for General Spectrum] | $F_v$ | 1.7 |
| Design Maps | $S_s$ | 1.710 |
| Design Maps | $S_1$ | 0.707 |
| Equation 11.4-1 - $F_A*S_S$ | $S_{MS}$ | 1.710* |
| Equation 11.4-3 - $2/3*S_{MS}$ | $S_{DS}$ | 1.14* |
| Design Maps | PGA | 0.745 |
| Table 11.8-1 | $F_{PGA}$ | 1.1 |
| Equation 11.8-1 - $F_{PGA}$*PGA | $PGA_M$ | 0.82* |
| Section 21.5.3 | 80% of $PGA_M$ | 0.656 |
| Design Maps | $C_{RS}$ | 0.891 |
| Design Maps | $C_{R1}$ | 0.878 |

**RISK COEFFICIENT**

| | | |
|---|---|---|
| Cr - At Perods <=0.2, Cr=$C_{RS}$ | $C_{RS}$ | 0.891 |
| Cr - At Periods >=1.0, Cr=$C_{R1}$ | $C_{R1}$ | 0.878 |

Cr - At Periods between 0.2 and 1.0 use trendline formula to complete

| Period | Cr |
|---|---|
| 0.200 | 0.891 |
| 0.300 | 0.889 |
| 0.400 | 0.888 |
| 0.500 | 0.886 |
| 0.600 | 0.885 |
| 0.680 | 0.883 |
| 1.000 | 0.878 |

* **Code based design value.** See accompanying data for Site Specific Design values.

Mapped values from https://seismicmaps.org/

Sladden Engineering

**PROBABILISTIC SPECTRA[1]**
**2% in 50 year Exceedence**

Project No: 544-21005

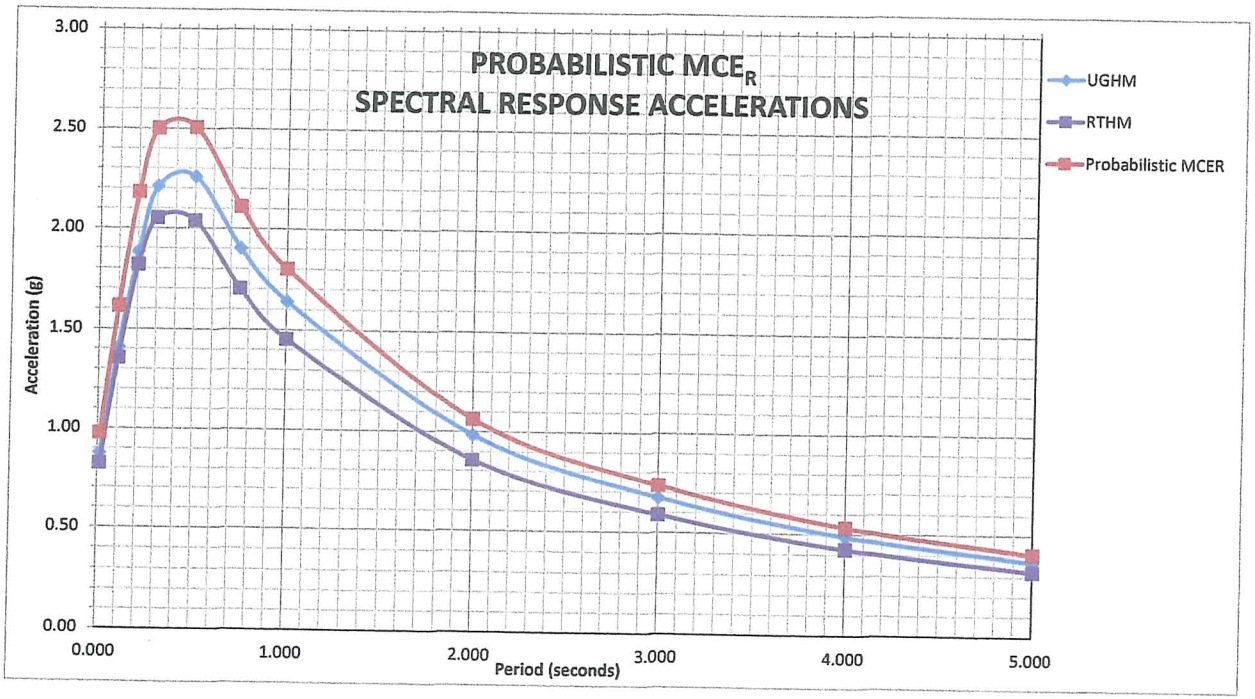
| Period | UGHM | RTHM | Max Directional Scale Factor[2] | Probabilistic MCE |
|---|---|---|---|---|
| 0.010 | 0.874 | 0.820 | 1.19 | 0.976 |
| 0.100 | 1.408 | 1.354 | 1.19 | 1.611 |
| 0.200 | 1.881 | 1.817 | 1.20 | 2.180 |
| 0.300 | 2.208 | 2.050 | 1.22 | 2.501 |
| 0.500 | 2.257 | 2.037 | 1.23 | 2.506 |
| 0.750 | 1.902 | 1.702 | 1.24 | 2.110 |
| 1.000 | 1.638 | 1.452 | 1.24 | 1.800 |
| 2.000 | 0.981 | 0.856 | 1.24 | 1.061 |
| 3.000 | 0.673 | 0.588 | 1.25 | 0.735 |
| 4.000 | 0.486 | 0.425 | 1.25 | 0.531 |
| 5.000 | 0.369 | 0.323 | 1.26 | 0.407 |

Probabilistic PGA: 0.874

Is Probabilistic $Sa_{(max)} < 1.2F_a$? NO

[1] Data Sources:
https://earthquake.usgs.gov/hazards/interactive/
https://earthquake.usgs.gov/designmaps/rtgm/

[2] Shahi-Baker RotD100/RotD50 Factors (2014)




Sladden Engineering

## DETERMINISTIC SPECTRUM

**Largest Amplitudes of Ground Motions Considering All Sources Calculated using Weighted Mean of Attenuation Equations[1]**

**Controlling Source: Southern San Andreas**

Is Probabilistic $Sa_{(max)}$<1.2Fa? NO

| Period | Deterministic PSa Median + 1.σ for 5% Damping | Max Directional Scale Factor[2] | Deterministic MCE | Section 21.2.2 Scaling Factor Applied |
|---|---|---|---|---|
| 0.010 | 0.724 | 1.19 | 0.861 | 0.861 |
| 0.020 | 0.727 | 1.19 | 0.865 | 0.865 |
| 0.030 | 0.738 | 1.19 | 0.878 | 0.878 |
| 0.050 | 0.782 | 1.19 | 0.930 | 0.930 |
| 0.075 | 0.933 | 1.19 | 1.110 | 1.110 |
| 0.100 | 1.106 | 1.19 | 1.316 | 1.316 |
| 0.150 | 1.356 | 1.20 | 1.628 | 1.628 |
| 0.200 | 1.520 | 1.20 | 1.824 | 1.824 |
| 0.250 | 1.637 | 1.21 | 1.981 | 1.981 |
| 0.300 | 1.700 | 1.22 | 2.074 | 2.074 |
| 0.400 | 1.724 | 1.23 | 2.121 | 2.121 |
| 0.500 | 1.674 | 1.23 | 2.059 | 2.059 |
| 0.750 | 1.366 | 1.24 | 1.694 | 1.694 |
| 1.000 | 1.156 | 1.24 | 1.433 | 1.433 |
| 1.500 | 0.838 | 1.24 | 1.039 | 1.039 |
| 2.000 | 0.641 | 1.24 | 0.795 | 0.795 |
| 3.000 | 0.442 | 1.25 | 0.552 | 0.552 |
| 4.000 | 0.311 | 1.25 | 0.389 | 0.389 |
| 5.000 | 0.231 | 1.26 | 0.291 | 0.291 |

Project No: 544-21005

Is Determinstic $Sa_{(max)}$<1.5*Fa? NO

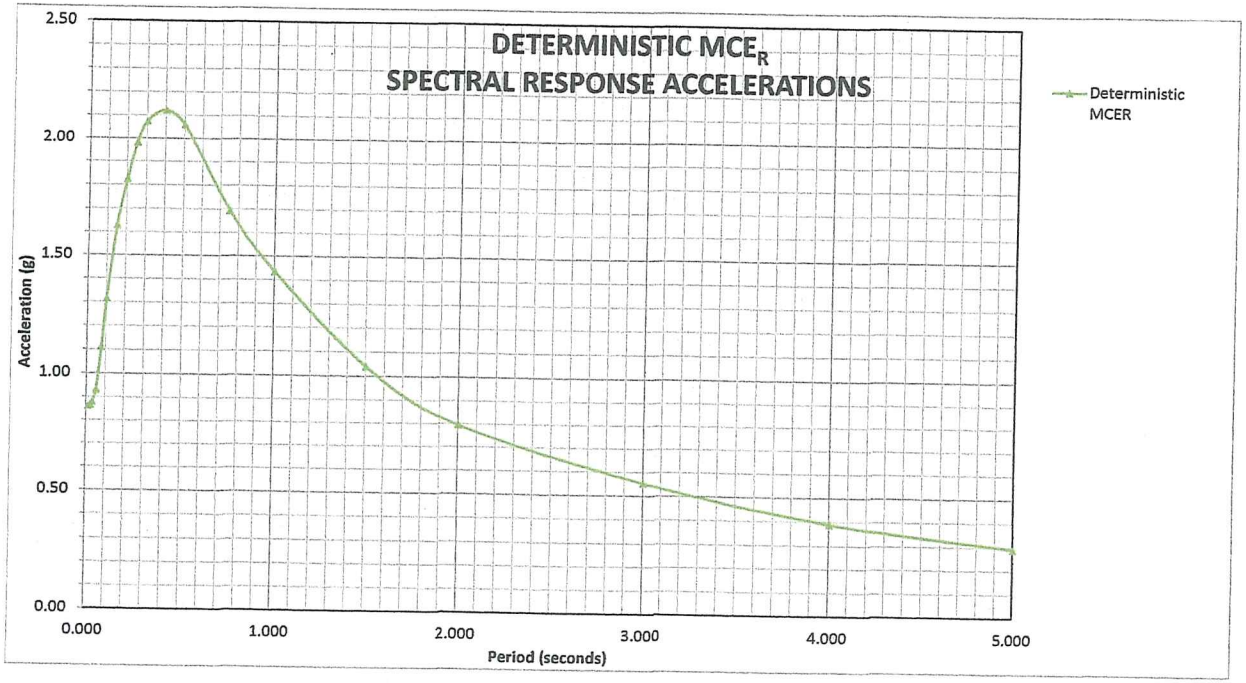
Section 21.2.2 Scaling Factor: N/A

Deterministic PGA: 0.724

Is Deterministic PGA >=$F_{PGA}$*0.5? YES

[1] NGAWest 2 GMPE worksheet and Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3) - Time Dependent Model

[2] Shahi-Baker RotD100/RotD50 Factors (2014)




Sladden Engineering

## SITE SPECIFIC SPECTRA

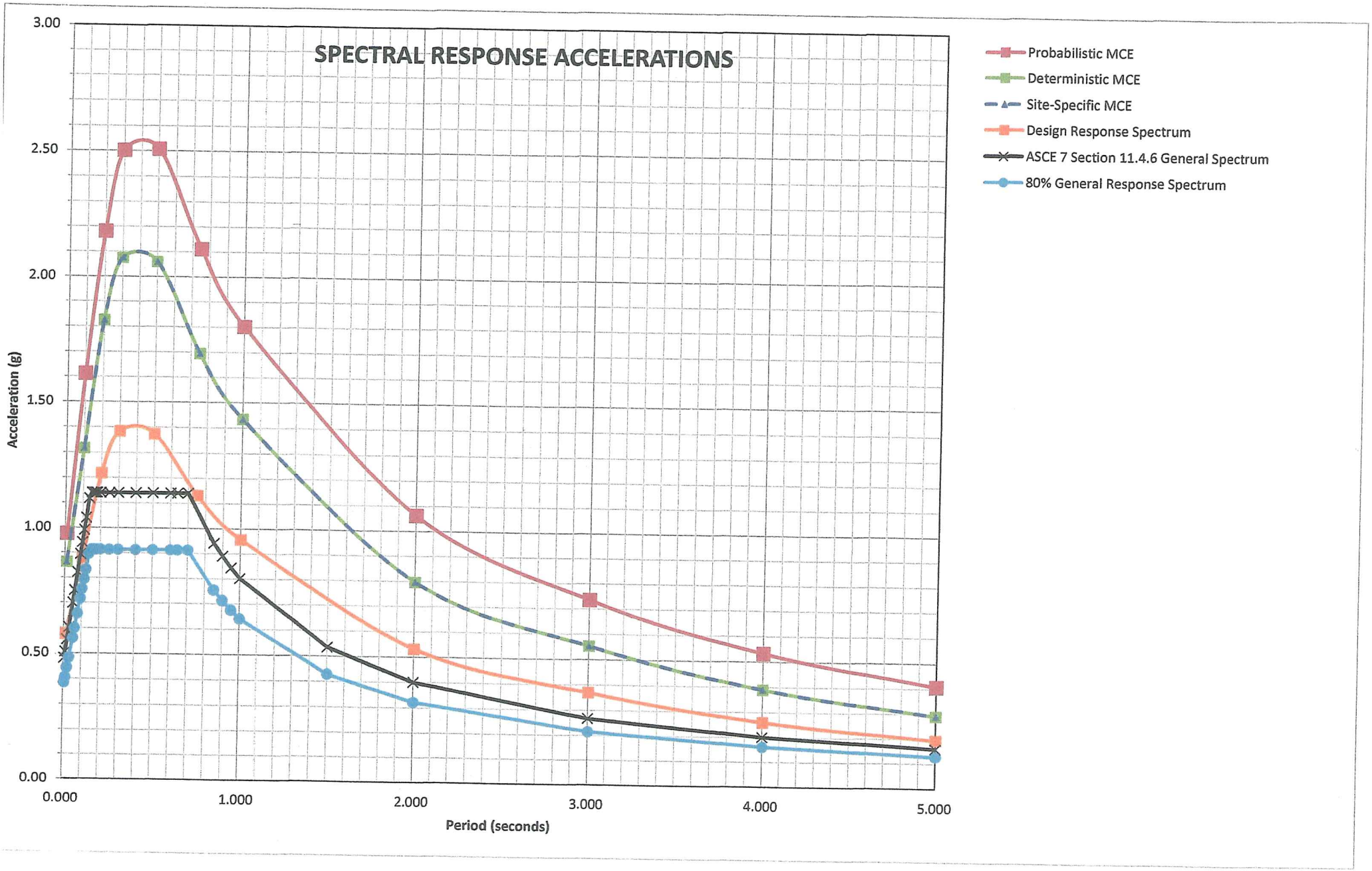
| Period | Probabilistic MCE | Deterministic MCE | Site-Specific MCE | Design Response Spectrum (Sa) |
|---|---|---|---|---|
| 0.010 | 0.976 | 0.861 | 0.861 | 0.574 |
| 0.100 | 1.611 | 1.316 | 1.316 | 0.877 |
| 0.200 | 2.180 | 1.824 | 1.824 | 1.216 |
| 0.300 | 2.501 | 2.074 | 2.074 | 1.383 |
| 0.500 | 2.506 | 2.059 | 2.059 | 1.372 |
| 0.750 | 2.110 | 1.694 | 1.694 | 1.130 |
| 1.000 | 1.800 | 1.433 | 1.433 | 0.956 |
| 2.000 | 1.061 | 0.795 | 0.795 | 0.530 |
| 3.000 | 0.735 | 0.552 | 0.552 | 0.368 |
| 4.000 | 0.531 | 0.389 | 0.389 | 0.259 |
| 5.000 | 0.407 | 0.291 | 0.291 | 0.194 |

**ASCE 7-16: Section 21.4**
**Site Specific**

| | Calculated Value | Design Value |
|---|---|---|
| **SDS:** | 1.244 | 1.244 |
| **SD1:** | 1.105 | 1.105 |
| **SMS:** | 1.866 | 1.866 |
| **SM1:** | 1.657 | 1.657 |
| **Site Specific PGAm:** | 0.724 | 0.724 |
| **Site Class:** | D measured | |

**Seismic Design Category - Short*** D
**Seismic Design Category - 1s*** D
* Risk Categories I, II, or III

| Period | ASCE 7 SECTION 11.4.6 General Spectrum | 80% General Response Spectrum |
|---|---|---|
| 0.005 | 0.480 | 0.384 |
| 0.010 | 0.505 | 0.404 |
| 0.020 | 0.553 | 0.443 |
| 0.030 | 0.602 | 0.482 |
| 0.050 | 0.699 | 0.559 |
| 0.060 | 0.748 | 0.598 |
| 0.075 | 0.821 | 0.657 |
| 0.090 | 0.894 | 0.715 |
| 0.100 | 0.943 | 0.754 |
| 0.110 | 0.991 | 0.793 |
| 0.120 | 1.040 | 0.832 |
| 0.136 | 1.118 | 0.894 |
| 0.150 | 1.140 | 0.912 |
| 0.160 | 1.140 | 0.912 |
| 0.170 | 1.140 | 0.912 |
| 0.180 | 1.140 | 0.912 |
| 0.200 | 1.140 | 0.912 |
| 0.250 | 1.140 | 0.912 |
| 0.300 | 1.140 | 0.912 |
| 0.400 | 1.140 | 0.912 |
| 0.500 | 1.140 | 0.912 |
| 0.600 | 1.140 | 0.912 |
| 0.640 | 1.140 | 0.912 |
| 0.700 | 1.140 | 0.912 |
| 0.850 | 0.943 | 0.754 |
| 0.900 | 0.890 | 0.712 |
| 0.950 | 0.843 | 0.675 |
| 1.000 | 0.801 | 0.641 |
| 1.500 | 0.534 | 0.427 |
| 2.000 | 0.401 | 0.321 |
| 3.000 | 0.267 | 0.214 |
| 4.000 | 0.200 | 0.160 |
| 5.000 | 0.160 | 0.128 |


SPECTRAL RESPONSE ACCELERATIONS
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Acceleration (g)
0.000
1.000
2.000
3.000
4.000
5.000
Period (seconds)
Probabilistic MCE
Deterministic MCE
Site-Specific MCE
Design Response Spectrum
ASCE 7 Section 11.4.6 General Spectrum
80% General Response Spectrum

# APPENDIX D

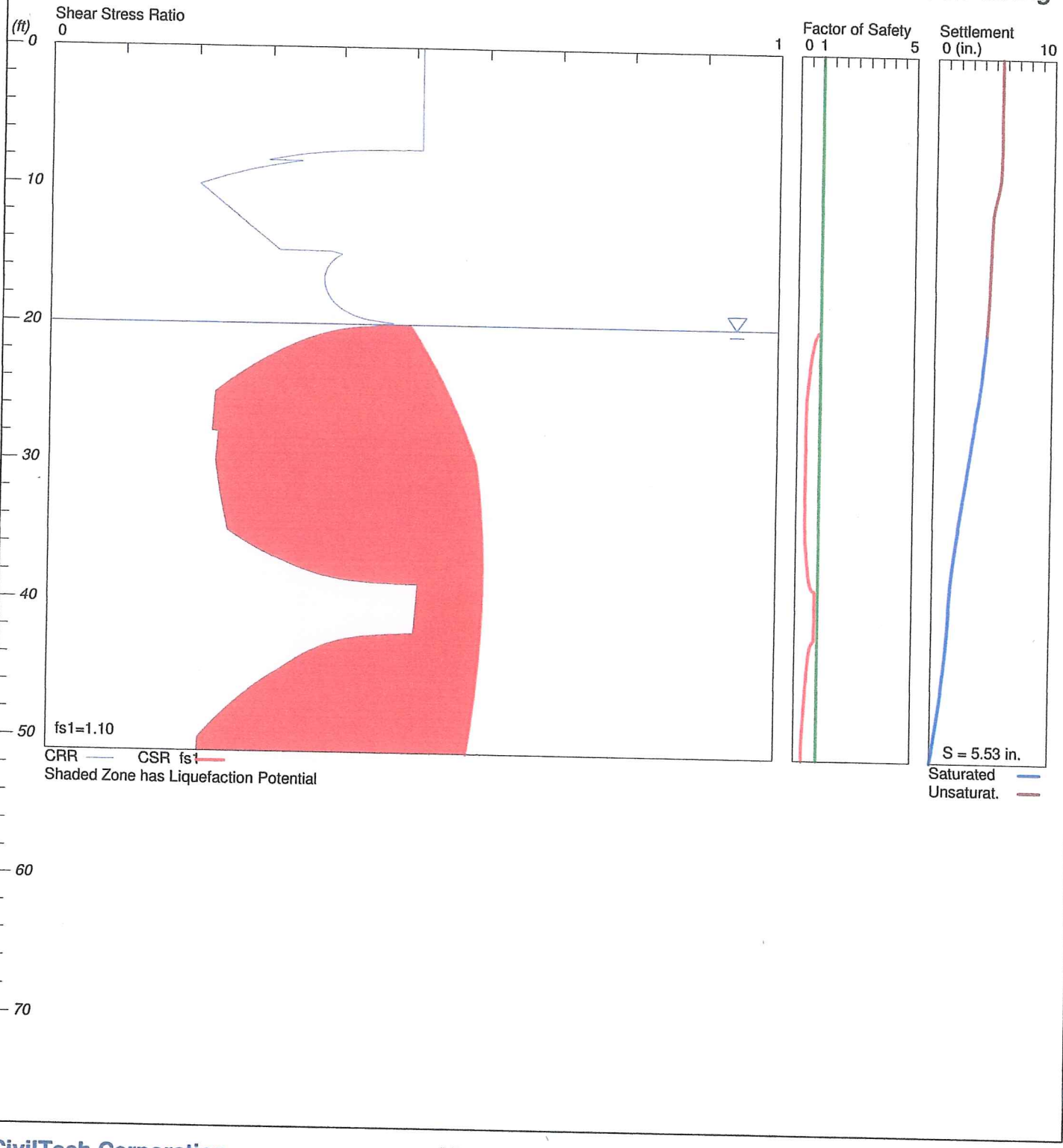
LIQUEFACTION ANALYSIS

# Liquefaction Analysis

## 544-21005

***Hole No.=BH-1  Water Depth=20 ft  Surface Elev.=-75***

***Magnitude=7.45***
***Acceleration=0.724g***



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LIQUEFACTION ANALYSIS SUMMARY



**********
**********

Font: Courier New, Regular, Size 8 is recommended for this report.
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Input File Name: C:\Users\jminor\Documents\Liquefy5\544-21005 BH-1.liq
Title: 544-21005
Subtitle: APN 780-330-004

Surface Elev.=-75
Hole No.=BH-1
Depth of Hole= 51.00 ft
Water Table during Earthquake= 20.00 ft
Water Table during In-Situ Testing= 19.50 ft
Max. Acceleration= 0.72 g
Earthquake Magnitude= 7.45

Input Data:
Surface Elev.=-75
Hole No.=BH-1
Depth of Hole=51.00 ft
Water Table during Earthquake= 20.00 ft
Water Table during In-Situ Testing= 19.50 ft
Max. Acceleration=0.72 g
Earthquake Magnitude=7.45
No-Liquefiable Soils: Based on Analysis

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 = 1.25
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1.1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*

* Recommended Options

In-Situ Test Data:

| Depth | SPT | gamma | Fines |
|---|---|---|---|

| ft | | pcf | % |
|---|---|---|---|
| 0.00 | 16.66 | 100.10 | 32.20 |
| 2.00 | 16.66 | 100.10 | 32.20 |
| 5.00 | 21.33 | 100.10 | 31.30 |
| 10.00 | 8.00 | 100.10 | 30.30 |
| 15.00 | 18.66 | 124.40 | 19.90 |
| 20.00 | 6.00 | 124.40 | NoLiq |
| 25.00 | 10.66 | 131.20 | 41.90 |
| 30.00 | 15.00 | 131.20 | 23.50 |
| 35.00 | 10.66 | 121.10 | 51.50 |
| 40.00 | 10.00 | 121.10 | NoLiq |
| 45.00 | 13.00 | 121.10 | 66.20 |
| 50.00 | 12.00 | 121.10 | 41.10 |

Output Results:

Settlement of Saturated Sands=4.39 in.
Settlement of Unsaturated Sands=1.13 in.
Total Settlement of Saturated and Unsaturated Sands=5.53 in.
Differential Settlement=2.764 to 3.648 in.

| Depth ft | CRRm | CSRfs | F.S. | S_sat. in. | S_dry in. | S_all in. |
|---|---|---|---|---|---|---|
| 0.00 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.05 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.10 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.15 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.20 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.25 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.30 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.35 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.40 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.45 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.50 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.55 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.60 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.65 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.70 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.75 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.80 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.85 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.90 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 0.95 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.00 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.05 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.10 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.15 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.20 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.25 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.30 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.35 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.40 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.45 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.50 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.53 |
| 1.55 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.60 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.65 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.70 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.75 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.80 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.85 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.90 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 1.95 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.00 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.05 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.10 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.15 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.20 | 0.51 | 0.52 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.25 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.30 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.35 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.40 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.45 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.50 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.55 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.60 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.65 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.70 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.75 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.80 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.85 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.90 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 2.95 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 3.00 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 3.05 | 0.51 | 0.51 | 5.00 | 4.39 | 1.13 | 5.52 |
| 3.10 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.15 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.20 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.25 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.30 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.35 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.40 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.45 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.50 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.55 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.60 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.65 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.70 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.75 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.80 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.85 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.90 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 3.95 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.00 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.05 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.10 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.15 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.20 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.25 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.30 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.52 |
| 4.35 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.40 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.45 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.50 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.55 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.60 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.65 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.70 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.75 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.80 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.85 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.90 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 4.95 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.00 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.05 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.10 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.15 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.20 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.25 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.30 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.35 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.40 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.45 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.50 | 0.51 | 0.51 | 5.00 | 4.39 | 1.12 | 5.51 |
| 5.55 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.60 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.65 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.70 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.75 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.80 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.85 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.90 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 5.95 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.00 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.05 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.10 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.15 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.20 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6.25 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.30 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.35 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.40 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.51 |
| 6.45 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.50 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.55 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.60 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.65 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.70 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.75 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.80 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.85 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.90 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 6.95 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 7.00 | 0.51 | 0.51 | 5.00 | 4.39 | 1.11 | 5.50 |
| 7.05 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.10 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.15 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.20 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.25 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.30 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.35 | 0.51 | 0.51 | 5.00 | 4.39 | 1.10 | 5.50 |
| 7.40 | 0.44 | 0.51 | 5.00 | 4.39 | 1.10 | 5.49 |
| 7.45 | 0.41 | 0.51 | 5.00 | 4.39 | 1.10 | 5.49 |
| 7.50 | 0.39 | 0.51 | 5.00 | 4.39 | 1.10 | 5.49 |
| 7.55 | 0.38 | 0.51 | 5.00 | 4.39 | 1.10 | 5.49 |
| 7.60 | 0.37 | 0.51 | 5.00 | 4.39 | 1.10 | 5.49 |
| 7.65 | 0.36 | 0.51 | 5.00 | 4.39 | 1.09 | 5.49 |
| 7.70 | 0.35 | 0.51 | 5.00 | 4.39 | 1.09 | 5.49 |
| 7.75 | 0.34 | 0.51 | 5.00 | 4.39 | 1.09 | 5.49 |
| 7.80 | 0.34 | 0.51 | 5.00 | 4.39 | 1.09 | 5.49 |
| 7.85 | 0.33 | 0.51 | 5.00 | 4.39 | 1.09 | 5.48 |
| 7.90 | 0.33 | 0.51 | 5.00 | 4.39 | 1.09 | 5.48 |
| 7.95 | 0.32 | 0.51 | 5.00 | 4.39 | 1.09 | 5.48 |
| 8.00 | 0.31 | 0.51 | 5.00 | 4.39 | 1.08 | 5.48 |
| 8.05 | 0.31 | 0.51 | 5.00 | 4.39 | 1.08 | 5.48 |
| 8.10 | 0.30 | 0.51 | 5.00 | 4.39 | 1.08 | 5.47 |
| 8.15 | 0.30 | 0.51 | 5.00 | 4.39 | 1.08 | 5.47 |
| 8.20 | 0.29 | 0.51 | 5.00 | 4.39 | 1.07 | 5.47 |
| 8.25 | 0.34 | 0.51 | 5.00 | 4.39 | 1.07 | 5.47 |
| 8.30 | 0.33 | 0.51 | 5.00 | 4.39 | 1.07 | 5.46 |
| 8.35 | 0.33 | 0.51 | 5.00 | 4.39 | 1.07 | 5.46 |
| 8.40 | 0.32 | 0.51 | 5.00 | 4.39 | 1.06 | 5.46 |
| 8.45 | 0.32 | 0.51 | 5.00 | 4.39 | 1.06 | 5.46 |
| 8.50 | 0.31 | 0.51 | 5.00 | 4.39 | 1.06 | 5.45 |
| 8.55 | 0.30 | 0.51 | 5.00 | 4.39 | 1.06 | 5.45 |
| 8.60 | 0.30 | 0.51 | 5.00 | 4.39 | 1.05 | 5.45 |
| 8.65 | 0.29 | 0.51 | 5.00 | 4.39 | 1.05 | 5.44 |
| 8.70 | 0.29 | 0.51 | 5.00 | 4.39 | 1.04 | 5.44 |

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|---|---|---|---|---|---|---|
| 8.75 | 0.28 | 0.51 | 5.00 | 4.39 | 1.04 | 5.43 |
| 8.80 | 0.28 | 0.51 | 5.00 | 4.39 | 1.03 | 5.43 |
| 8.85 | 0.28 | 0.51 | 5.00 | 4.39 | 1.03 | 5.42 |
| 8.90 | 0.27 | 0.51 | 5.00 | 4.39 | 1.02 | 5.42 |
| 8.95 | 0.27 | 0.51 | 5.00 | 4.39 | 1.02 | 5.41 |
| 9.00 | 0.26 | 0.51 | 5.00 | 4.39 | 1.01 | 5.40 |
| 9.05 | 0.26 | 0.51 | 5.00 | 4.39 | 1.00 | 5.39 |
| 9.10 | 0.26 | 0.51 | 5.00 | 4.39 | 0.99 | 5.38 |
| 9.15 | 0.25 | 0.51 | 5.00 | 4.39 | 0.98 | 5.37 |
| 9.20 | 0.25 | 0.51 | 5.00 | 4.39 | 0.97 | 5.36 |
| 9.25 | 0.25 | 0.51 | 5.00 | 4.39 | 0.96 | 5.35 |
| 9.30 | 0.24 | 0.51 | 5.00 | 4.39 | 0.95 | 5.34 |
| 9.35 | 0.24 | 0.51 | 5.00 | 4.39 | 0.93 | 5.33 |
| 9.40 | 0.24 | 0.51 | 5.00 | 4.39 | 0.92 | 5.32 |
| 9.45 | 0.23 | 0.51 | 5.00 | 4.39 | 0.91 | 5.31 |
| 9.50 | 0.23 | 0.51 | 5.00 | 4.39 | 0.90 | 5.30 |
| 9.55 | 0.23 | 0.51 | 5.00 | 4.39 | 0.89 | 5.28 |
| 9.60 | 0.22 | 0.51 | 5.00 | 4.39 | 0.88 | 5.27 |
| 9.65 | 0.22 | 0.51 | 5.00 | 4.39 | 0.86 | 5.26 |
| 9.70 | 0.22 | 0.51 | 5.00 | 4.39 | 0.85 | 5.25 |
| 9.75 | 0.22 | 0.51 | 5.00 | 4.39 | 0.84 | 5.24 |
| 9.80 | 0.21 | 0.51 | 5.00 | 4.39 | 0.83 | 5.22 |
| 9.85 | 0.21 | 0.51 | 5.00 | 4.39 | 0.81 | 5.21 |
| 9.90 | 0.21 | 0.51 | 5.00 | 4.39 | 0.80 | 5.20 |
| 9.95 | 0.20 | 0.51 | 5.00 | 4.39 | 0.79 | 5.18 |
| 10.00 | 0.20 | 0.51 | 5.00 | 4.39 | 0.77 | 5.17 |
| 10.05 | 0.20 | 0.51 | 5.00 | 4.39 | 0.76 | 5.16 |
| 10.10 | 0.20 | 0.51 | 5.00 | 4.39 | 0.75 | 5.14 |
| 10.15 | 0.21 | 0.51 | 5.00 | 4.39 | 0.73 | 5.13 |
| 10.20 | 0.21 | 0.51 | 5.00 | 4.39 | 0.72 | 5.12 |
| 10.25 | 0.21 | 0.51 | 5.00 | 4.39 | 0.71 | 5.10 |
| 10.30 | 0.21 | 0.51 | 5.00 | 4.39 | 0.69 | 5.09 |
| 10.35 | 0.21 | 0.51 | 5.00 | 4.39 | 0.68 | 5.08 |
| 10.40 | 0.21 | 0.51 | 5.00 | 4.39 | 0.67 | 5.06 |
| 10.45 | 0.21 | 0.51 | 5.00 | 4.39 | 0.66 | 5.05 |
| 10.50 | 0.21 | 0.50 | 5.00 | 4.39 | 0.64 | 5.04 |
| 10.55 | 0.22 | 0.50 | 5.00 | 4.39 | 0.63 | 5.02 |
| 10.60 | 0.22 | 0.50 | 5.00 | 4.39 | 0.62 | 5.01 |
| 10.65 | 0.22 | 0.50 | 5.00 | 4.39 | 0.60 | 5.00 |
| 10.70 | 0.22 | 0.50 | 5.00 | 4.39 | 0.59 | 4.99 |
| 10.75 | 0.22 | 0.50 | 5.00 | 4.39 | 0.58 | 4.97 |
| 10.80 | 0.22 | 0.50 | 5.00 | 4.39 | 0.57 | 4.96 |
| 10.85 | 0.22 | 0.50 | 5.00 | 4.39 | 0.55 | 4.95 |
| 10.90 | 0.22 | 0.50 | 5.00 | 4.39 | 0.54 | 4.94 |
| 10.95 | 0.22 | 0.50 | 5.00 | 4.39 | 0.53 | 4.93 |
| 11.00 | 0.23 | 0.50 | 5.00 | 4.39 | 0.52 | 4.91 |
| 11.05 | 0.23 | 0.50 | 5.00 | 4.39 | 0.51 | 4.90 |
| 11.10 | 0.23 | 0.50 | 5.00 | 4.39 | 0.49 | 4.89 |
| 11.15 | 0.23 | 0.50 | 5.00 | 4.39 | 0.48 | 4.88 |
| 11.20 | 0.23 | 0.50 | 5.00 | 4.39 | 0.47 | 4.87 |

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|---|---|---|---|---|---|---|
| 11.25 | 0.23 | 0.50 | 5.00 | 4.39 | 0.46 | 4.85 |
| 11.30 | 0.23 | 0.50 | 5.00 | 4.39 | 0.45 | 4.84 |
| 11.35 | 0.23 | 0.50 | 5.00 | 4.39 | 0.44 | 4.83 |
| 11.40 | 0.23 | 0.50 | 5.00 | 4.39 | 0.43 | 4.83 |
| 11.45 | 0.24 | 0.50 | 5.00 | 4.39 | 0.43 | 4.83 |
| 11.50 | 0.24 | 0.50 | 5.00 | 4.39 | 0.43 | 4.82 |
| 11.55 | 0.24 | 0.50 | 5.00 | 4.39 | 0.43 | 4.82 |
| 11.60 | 0.24 | 0.50 | 5.00 | 4.39 | 0.42 | 4.82 |
| 11.65 | 0.24 | 0.50 | 5.00 | 4.39 | 0.42 | 4.82 |
| 11.70 | 0.24 | 0.50 | 5.00 | 4.39 | 0.42 | 4.81 |
| 11.75 | 0.24 | 0.50 | 5.00 | 4.39 | 0.42 | 4.81 |
| 11.80 | 0.24 | 0.50 | 5.00 | 4.39 | 0.42 | 4.81 |
| 11.85 | 0.24 | 0.50 | 5.00 | 4.39 | 0.41 | 4.81 |
| 11.90 | 0.25 | 0.50 | 5.00 | 4.39 | 0.41 | 4.81 |
| 11.95 | 0.25 | 0.50 | 5.00 | 4.39 | 0.41 | 4.80 |
| 12.00 | 0.25 | 0.50 | 5.00 | 4.39 | 0.41 | 4.80 |
| 12.05 | 0.25 | 0.50 | 5.00 | 4.39 | 0.40 | 4.80 |
| 12.10 | 0.25 | 0.50 | 5.00 | 4.39 | 0.40 | 4.80 |
| 12.15 | 0.25 | 0.50 | 5.00 | 4.39 | 0.40 | 4.79 |
| 12.20 | 0.25 | 0.50 | 5.00 | 4.39 | 0.40 | 4.79 |
| 12.25 | 0.25 | 0.50 | 5.00 | 4.39 | 0.40 | 4.79 |
| 12.30 | 0.25 | 0.50 | 5.00 | 4.39 | 0.39 | 4.79 |
| 12.35 | 0.26 | 0.50 | 5.00 | 4.39 | 0.39 | 4.79 |
| 12.40 | 0.26 | 0.50 | 5.00 | 4.39 | 0.39 | 4.78 |
| 12.45 | 0.26 | 0.50 | 5.00 | 4.39 | 0.39 | 4.78 |
| 12.50 | 0.26 | 0.50 | 5.00 | 4.39 | 0.38 | 4.78 |
| 12.55 | 0.26 | 0.50 | 5.00 | 4.39 | 0.38 | 4.78 |
| 12.60 | 0.26 | 0.50 | 5.00 | 4.39 | 0.38 | 4.77 |
| 12.65 | 0.26 | 0.50 | 5.00 | 4.39 | 0.38 | 4.77 |
| 12.70 | 0.26 | 0.50 | 5.00 | 4.39 | 0.38 | 4.77 |
| 12.75 | 0.26 | 0.50 | 5.00 | 4.39 | 0.37 | 4.77 |
| 12.80 | 0.27 | 0.50 | 5.00 | 4.39 | 0.37 | 4.77 |
| 12.85 | 0.27 | 0.50 | 5.00 | 4.39 | 0.37 | 4.76 |
| 12.90 | 0.27 | 0.50 | 5.00 | 4.39 | 0.37 | 4.76 |
| 12.95 | 0.27 | 0.50 | 5.00 | 4.39 | 0.36 | 4.76 |
| 13.00 | 0.27 | 0.50 | 5.00 | 4.39 | 0.36 | 4.76 |
| 13.05 | 0.27 | 0.50 | 5.00 | 4.39 | 0.36 | 4.75 |
| 13.10 | 0.27 | 0.50 | 5.00 | 4.39 | 0.36 | 4.75 |
| 13.15 | 0.27 | 0.50 | 5.00 | 4.39 | 0.36 | 4.75 |
| 13.20 | 0.28 | 0.50 | 5.00 | 4.39 | 0.35 | 4.75 |
| 13.25 | 0.28 | 0.50 | 5.00 | 4.39 | 0.35 | 4.75 |
| 13.30 | 0.28 | 0.50 | 5.00 | 4.39 | 0.35 | 4.74 |
| 13.35 | 0.28 | 0.50 | 5.00 | 4.39 | 0.35 | 4.74 |
| 13.40 | 0.28 | 0.50 | 5.00 | 4.39 | 0.34 | 4.74 |
| 13.45 | 0.28 | 0.50 | 5.00 | 4.39 | 0.34 | 4.74 |
| 13.50 | 0.28 | 0.50 | 5.00 | 4.39 | 0.34 | 4.73 |
| 13.55 | 0.28 | 0.50 | 5.00 | 4.39 | 0.34 | 4.73 |
| 13.60 | 0.28 | 0.50 | 5.00 | 4.39 | 0.34 | 4.73 |
| 13.65 | 0.29 | 0.50 | 5.00 | 4.39 | 0.33 | 4.73 |
| 13.70 | 0.29 | 0.50 | 5.00 | 4.39 | 0.33 | 4.73 |

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|---|---|---|---|---|---|---|
| 13.75 | 0.29 | 0.50 | 5.00 | 4.39 | 0.33 | 4.72 |
| 13.80 | 0.29 | 0.50 | 5.00 | 4.39 | 0.33 | 4.72 |
| 13.85 | 0.29 | 0.50 | 5.00 | 4.39 | 0.32 | 4.72 |
| 13.90 | 0.29 | 0.50 | 5.00 | 4.39 | 0.32 | 4.72 |
| 13.95 | 0.29 | 0.50 | 5.00 | 4.39 | 0.32 | 4.71 |
| 14.00 | 0.29 | 0.50 | 5.00 | 4.39 | 0.32 | 4.71 |
| 14.05 | 0.29 | 0.50 | 5.00 | 4.39 | 0.32 | 4.71 |
| 14.10 | 0.30 | 0.50 | 5.00 | 4.39 | 0.31 | 4.71 |
| 14.15 | 0.30 | 0.50 | 5.00 | 4.39 | 0.31 | 4.71 |
| 14.20 | 0.30 | 0.50 | 5.00 | 4.39 | 0.31 | 4.70 |
| 14.25 | 0.30 | 0.50 | 5.00 | 4.39 | 0.31 | 4.70 |
| 14.30 | 0.30 | 0.50 | 5.00 | 4.39 | 0.30 | 4.70 |
| 14.35 | 0.30 | 0.50 | 5.00 | 4.39 | 0.30 | 4.70 |
| 14.40 | 0.30 | 0.50 | 5.00 | 4.39 | 0.30 | 4.69 |
| 14.45 | 0.30 | 0.50 | 5.00 | 4.39 | 0.30 | 4.69 |
| 14.50 | 0.31 | 0.50 | 5.00 | 4.39 | 0.29 | 4.69 |
| 14.55 | 0.31 | 0.50 | 5.00 | 4.39 | 0.29 | 4.69 |
| 14.60 | 0.31 | 0.50 | 5.00 | 4.39 | 0.29 | 4.69 |
| 14.65 | 0.31 | 0.50 | 5.00 | 4.39 | 0.29 | 4.68 |
| 14.70 | 0.31 | 0.50 | 5.00 | 4.39 | 0.29 | 4.68 |
| 14.75 | 0.31 | 0.50 | 5.00 | 4.39 | 0.28 | 4.68 |
| 14.80 | 0.38 | 0.50 | 5.00 | 4.39 | 0.28 | 4.68 |
| 14.85 | 0.39 | 0.50 | 5.00 | 4.39 | 0.28 | 4.67 |
| 14.90 | 0.39 | 0.50 | 5.00 | 4.39 | 0.28 | 4.67 |
| 14.95 | 0.40 | 0.50 | 5.00 | 4.39 | 0.28 | 4.67 |
| 15.00 | 0.40 | 0.50 | 5.00 | 4.39 | 0.27 | 4.67 |
| 15.05 | 0.40 | 0.50 | 5.00 | 4.39 | 0.27 | 4.67 |
| 15.10 | 0.40 | 0.50 | 5.00 | 4.39 | 0.27 | 4.67 |
| 15.15 | 0.39 | 0.50 | 5.00 | 4.39 | 0.27 | 4.66 |
| 15.20 | 0.39 | 0.50 | 5.00 | 4.39 | 0.27 | 4.66 |
| 15.25 | 0.39 | 0.50 | 5.00 | 4.39 | 0.27 | 4.66 |
| 15.30 | 0.39 | 0.50 | 5.00 | 4.39 | 0.26 | 4.66 |
| 15.35 | 0.39 | 0.50 | 5.00 | 4.39 | 0.26 | 4.66 |
| 15.40 | 0.39 | 0.50 | 5.00 | 4.39 | 0.26 | 4.65 |
| 15.45 | 0.39 | 0.50 | 5.00 | 4.39 | 0.26 | 4.65 |
| 15.50 | 0.39 | 0.50 | 5.00 | 4.39 | 0.26 | 4.65 |
| 15.55 | 0.38 | 0.50 | 5.00 | 4.39 | 0.25 | 4.65 |
| 15.60 | 0.38 | 0.50 | 5.00 | 4.39 | 0.25 | 4.65 |
| 15.65 | 0.38 | 0.50 | 5.00 | 4.39 | 0.25 | 4.64 |
| 15.70 | 0.38 | 0.50 | 5.00 | 4.39 | 0.25 | 4.64 |
| 15.75 | 0.38 | 0.50 | 5.00 | 4.39 | 0.25 | 4.64 |
| 15.80 | 0.38 | 0.50 | 5.00 | 4.39 | 0.24 | 4.64 |
| 15.85 | 0.38 | 0.50 | 5.00 | 4.39 | 0.24 | 4.64 |
| 15.90 | 0.38 | 0.50 | 5.00 | 4.39 | 0.24 | 4.63 |
| 15.95 | 0.38 | 0.50 | 5.00 | 4.39 | 0.24 | 4.63 |
| 16.00 | 0.38 | 0.50 | 5.00 | 4.39 | 0.23 | 4.63 |
| 16.05 | 0.38 | 0.50 | 5.00 | 4.39 | 0.23 | 4.63 |
| 16.10 | 0.38 | 0.50 | 5.00 | 4.39 | 0.23 | 4.63 |
| 16.15 | 0.38 | 0.50 | 5.00 | 4.39 | 0.23 | 4.62 |
| 16.20 | 0.38 | 0.50 | 5.00 | 4.39 | 0.23 | 4.62 |

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|---|---|---|---|---|---|---|
| 16.25 | 0.38 | 0.50 | 5.00 | 4.39 | 0.22 | 4.62 |
| 16.30 | 0.38 | 0.50 | 5.00 | 4.39 | 0.22 | 4.62 |
| 16.35 | 0.38 | 0.50 | 5.00 | 4.39 | 0.22 | 4.61 |
| 16.40 | 0.38 | 0.50 | 5.00 | 4.39 | 0.22 | 4.61 |
| 16.45 | 0.37 | 0.50 | 5.00 | 4.39 | 0.21 | 4.61 |
| 16.50 | 0.37 | 0.50 | 5.00 | 4.39 | 0.21 | 4.61 |
| 16.55 | 0.37 | 0.50 | 5.00 | 4.39 | 0.21 | 4.60 |
| 16.60 | 0.37 | 0.50 | 5.00 | 4.39 | 0.21 | 4.60 |
| 16.65 | 0.37 | 0.50 | 5.00 | 4.39 | 0.20 | 4.60 |
| 16.70 | 0.37 | 0.50 | 5.00 | 4.39 | 0.20 | 4.60 |
| 16.75 | 0.37 | 0.50 | 5.00 | 4.39 | 0.20 | 4.59 |
| 16.80 | 0.37 | 0.50 | 5.00 | 4.39 | 0.20 | 4.59 |
| 16.85 | 0.37 | 0.50 | 5.00 | 4.39 | 0.19 | 4.59 |
| 16.90 | 0.37 | 0.50 | 5.00 | 4.39 | 0.19 | 4.59 |
| 16.95 | 0.37 | 0.50 | 5.00 | 4.39 | 0.19 | 4.58 |
| 17.00 | 0.37 | 0.50 | 5.00 | 4.39 | 0.19 | 4.58 |
| 17.05 | 0.37 | 0.50 | 5.00 | 4.39 | 0.18 | 4.58 |
| 17.10 | 0.37 | 0.50 | 5.00 | 4.39 | 0.18 | 4.58 |
| 17.15 | 0.37 | 0.50 | 5.00 | 4.39 | 0.18 | 4.57 |
| 17.20 | 0.37 | 0.50 | 5.00 | 4.39 | 0.18 | 4.57 |
| 17.25 | 0.37 | 0.50 | 5.00 | 4.39 | 0.17 | 4.57 |
| 17.30 | 0.38 | 0.50 | 5.00 | 4.39 | 0.17 | 4.57 |
| 17.35 | 0.38 | 0.50 | 5.00 | 4.39 | 0.17 | 4.56 |
| 17.40 | 0.38 | 0.50 | 5.00 | 4.39 | 0.17 | 4.56 |
| 17.45 | 0.38 | 0.50 | 5.00 | 4.39 | 0.16 | 4.56 |
| 17.50 | 0.38 | 0.50 | 5.00 | 4.39 | 0.16 | 4.55 |
| 17.55 | 0.38 | 0.50 | 5.00 | 4.39 | 0.16 | 4.55 |
| 17.60 | 0.38 | 0.50 | 5.00 | 4.39 | 0.15 | 4.55 |
| 17.65 | 0.38 | 0.50 | 5.00 | 4.39 | 0.15 | 4.55 |
| 17.70 | 0.38 | 0.50 | 5.00 | 4.39 | 0.15 | 4.54 |
| 17.75 | 0.38 | 0.50 | 5.00 | 4.39 | 0.15 | 4.54 |
| 17.80 | 0.38 | 0.50 | 5.00 | 4.39 | 0.14 | 4.54 |
| 17.85 | 0.38 | 0.50 | 5.00 | 4.39 | 0.14 | 4.53 |
| 17.90 | 0.38 | 0.50 | 5.00 | 4.39 | 0.14 | 4.53 |
| 17.95 | 0.38 | 0.50 | 5.00 | 4.39 | 0.13 | 4.53 |
| 18.00 | 0.38 | 0.50 | 5.00 | 4.39 | 0.13 | 4.53 |
| 18.05 | 0.38 | 0.50 | 5.00 | 4.39 | 0.13 | 4.52 |
| 18.10 | 0.38 | 0.50 | 5.00 | 4.39 | 0.12 | 4.52 |
| 18.15 | 0.38 | 0.50 | 5.00 | 4.39 | 0.12 | 4.52 |
| 18.20 | 0.38 | 0.50 | 5.00 | 4.39 | 0.12 | 4.51 |
| 18.25 | 0.38 | 0.50 | 5.00 | 4.39 | 0.12 | 4.51 |
| 18.30 | 0.39 | 0.50 | 5.00 | 4.39 | 0.11 | 4.51 |
| 18.35 | 0.39 | 0.50 | 5.00 | 4.39 | 0.11 | 4.50 |
| 18.40 | 0.39 | 0.50 | 5.00 | 4.39 | 0.11 | 4.50 |
| 18.45 | 0.39 | 0.50 | 5.00 | 4.39 | 0.10 | 4.50 |
| 18.50 | 0.39 | 0.50 | 5.00 | 4.39 | 0.10 | 4.49 |
| 18.55 | 0.39 | 0.50 | 5.00 | 4.39 | 0.10 | 4.49 |
| 18.60 | 0.39 | 0.50 | 5.00 | 4.39 | 0.09 | 4.49 |
| 18.65 | 0.39 | 0.50 | 5.00 | 4.39 | 0.09 | 4.48 |
| 18.70 | 0.39 | 0.50 | 5.00 | 4.39 | 0.09 | 4.48 |

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|---|---|---|---|---|---|---|
| 18.75 | 0.39 | 0.50 | 5.00 | 4.39 | 0.08 | 4.48 |
| 18.80 | 0.40 | 0.49 | 5.00 | 4.39 | 0.08 | 4.47 |
| 18.85 | 0.40 | 0.49 | 5.00 | 4.39 | 0.08 | 4.47 |
| 18.90 | 0.40 | 0.49 | 5.00 | 4.39 | 0.07 | 4.47 |
| 18.95 | 0.40 | 0.49 | 5.00 | 4.39 | 0.07 | 4.46 |
| 19.00 | 0.40 | 0.49 | 5.00 | 4.39 | 0.07 | 4.46 |
| 19.05 | 0.40 | 0.49 | 5.00 | 4.39 | 0.06 | 4.46 |
| 19.10 | 0.41 | 0.49 | 5.00 | 4.39 | 0.06 | 4.45 |
| 19.15 | 0.41 | 0.49 | 5.00 | 4.39 | 0.06 | 4.45 |
| 19.20 | 0.41 | 0.49 | 5.00 | 4.39 | 0.05 | 4.45 |
| 19.25 | 0.41 | 0.49 | 5.00 | 4.39 | 0.05 | 4.44 |
| 19.30 | 0.41 | 0.49 | 5.00 | 4.39 | 0.05 | 4.44 |
| 19.35 | 0.42 | 0.49 | 5.00 | 4.39 | 0.04 | 4.44 |
| 19.40 | 0.42 | 0.49 | 5.00 | 4.39 | 0.04 | 4.43 |
| 19.45 | 0.42 | 0.49 | 5.00 | 4.39 | 0.04 | 4.43 |
| 19.50 | 0.42 | 0.49 | 5.00 | 4.39 | 0.03 | 4.43 |
| 19.55 | 0.43 | 0.49 | 5.00 | 4.39 | 0.03 | 4.42 |
| 19.60 | 0.43 | 0.49 | 5.00 | 4.39 | 0.02 | 4.42 |
| 19.65 | 0.44 | 0.49 | 5.00 | 4.39 | 0.02 | 4.42 |
| 19.70 | 0.44 | 0.49 | 5.00 | 4.39 | 0.02 | 4.41 |
| 19.75 | 0.45 | 0.49 | 5.00 | 4.39 | 0.01 | 4.41 |
| 19.80 | 0.45 | 0.49 | 5.00 | 4.39 | 0.01 | 4.41 |
| 19.85 | 0.46 | 0.49 | 5.00 | 4.39 | 0.01 | 4.40 |
| 19.90 | 0.47 | 0.49 | 5.00 | 4.39 | 0.00 | 4.40 |
| 19.95 | 0.47 | 0.49 | 5.00 | 4.39 | 0.00 | 4.39 |
| 20.00 | 0.44 | 0.49 | 5.00 | 4.39 | 0.00 | 4.39 |
| 20.05 | 0.45 | 0.49 | 0.91* | 4.39 | 0.00 | 4.39 |
| 20.10 | 0.45 | 0.49 | 0.91* | 4.39 | 0.00 | 4.39 |
| 20.15 | 0.44 | 0.49 | 0.88* | 4.39 | 0.00 | 4.39 |
| 20.20 | 0.43 | 0.50 | 0.86* | 4.39 | 0.00 | 4.39 |
| 20.25 | 0.42 | 0.50 | 0.84* | 4.38 | 0.00 | 4.38 |
| 20.30 | 0.41 | 0.50 | 0.83* | 4.38 | 0.00 | 4.38 |
| 20.35 | 0.40 | 0.50 | 0.81* | 4.37 | 0.00 | 4.37 |
| 20.40 | 0.40 | 0.50 | 0.80* | 4.37 | 0.00 | 4.37 |
| 20.45 | 0.39 | 0.50 | 0.79* | 4.36 | 0.00 | 4.36 |
| 20.50 | 0.39 | 0.50 | 0.78* | 4.36 | 0.00 | 4.36 |
| 20.55 | 0.38 | 0.50 | 0.77* | 4.35 | 0.00 | 4.35 |
| 20.60 | 0.38 | 0.50 | 0.76* | 4.35 | 0.00 | 4.35 |
| 20.65 | 0.38 | 0.50 | 0.75* | 4.34 | 0.00 | 4.34 |
| 20.70 | 0.37 | 0.50 | 0.74* | 4.34 | 0.00 | 4.34 |
| 20.75 | 0.37 | 0.50 | 0.74* | 4.33 | 0.00 | 4.33 |
| 20.80 | 0.37 | 0.50 | 0.73* | 4.33 | 0.00 | 4.33 |
| 20.85 | 0.36 | 0.50 | 0.72* | 4.32 | 0.00 | 4.32 |
| 20.90 | 0.36 | 0.50 | 0.72* | 4.31 | 0.00 | 4.31 |
| 20.95 | 0.36 | 0.50 | 0.71* | 4.31 | 0.00 | 4.31 |
| 21.00 | 0.36 | 0.51 | 0.70* | 4.30 | 0.00 | 4.30 |
| 21.05 | 0.35 | 0.51 | 0.70* | 4.30 | 0.00 | 4.30 |
| 21.10 | 0.35 | 0.51 | 0.69* | 4.29 | 0.00 | 4.29 |
| 21.15 | 0.35 | 0.51 | 0.69* | 4.28 | 0.00 | 4.28 |
| 21.20 | 0.35 | 0.51 | 0.68* | 4.28 | 0.00 | 4.28 |

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|---|---|---|---|---|---|---|
| 21.25 | 0.34 | 0.51 | 0.67* | 4.27 | 0.00 | 4.27 |
| 21.30 | 0.34 | 0.51 | 0.67* | 4.27 | 0.00 | 4.27 |
| 21.35 | 0.34 | 0.51 | 0.66* | 4.26 | 0.00 | 4.26 |
| 21.40 | 0.34 | 0.51 | 0.66* | 4.25 | 0.00 | 4.25 |
| 21.45 | 0.33 | 0.51 | 0.65* | 4.25 | 0.00 | 4.25 |
| 21.50 | 0.33 | 0.51 | 0.65* | 4.24 | 0.00 | 4.24 |
| 21.55 | 0.33 | 0.51 | 0.64* | 4.24 | 0.00 | 4.24 |
| 21.60 | 0.33 | 0.51 | 0.64* | 4.23 | 0.00 | 4.23 |
| 21.65 | 0.33 | 0.51 | 0.63* | 4.22 | 0.00 | 4.22 |
| 21.70 | 0.32 | 0.51 | 0.63* | 4.22 | 0.00 | 4.22 |
| 21.75 | 0.32 | 0.51 | 0.63* | 4.21 | 0.00 | 4.21 |
| 21.80 | 0.32 | 0.51 | 0.62* | 4.20 | 0.00 | 4.20 |
| 21.85 | 0.32 | 0.52 | 0.62* | 4.20 | 0.00 | 4.20 |
| 21.90 | 0.32 | 0.52 | 0.61* | 4.19 | 0.00 | 4.19 |
| 21.95 | 0.31 | 0.52 | 0.61* | 4.18 | 0.00 | 4.18 |
| 22.00 | 0.31 | 0.52 | 0.60* | 4.18 | 0.00 | 4.18 |
| 22.05 | 0.31 | 0.52 | 0.60* | 4.17 | 0.00 | 4.17 |
| 22.10 | 0.31 | 0.52 | 0.59* | 4.16 | 0.00 | 4.16 |
| 22.15 | 0.31 | 0.52 | 0.59* | 4.16 | 0.00 | 4.16 |
| 22.20 | 0.30 | 0.52 | 0.59* | 4.15 | 0.00 | 4.15 |
| 22.25 | 0.30 | 0.52 | 0.58* | 4.14 | 0.00 | 4.14 |
| 22.30 | 0.30 | 0.52 | 0.58* | 4.14 | 0.00 | 4.14 |
| 22.35 | 0.30 | 0.52 | 0.57* | 4.13 | 0.00 | 4.13 |
| 22.40 | 0.30 | 0.52 | 0.57* | 4.12 | 0.00 | 4.12 |
| 22.45 | 0.30 | 0.52 | 0.57* | 4.12 | 0.00 | 4.12 |
| 22.50 | 0.29 | 0.52 | 0.56* | 4.11 | 0.00 | 4.11 |
| 22.55 | 0.29 | 0.52 | 0.56* | 4.10 | 0.00 | 4.10 |
| 22.60 | 0.29 | 0.52 | 0.56* | 4.10 | 0.00 | 4.10 |
| 22.65 | 0.29 | 0.52 | 0.55* | 4.09 | 0.00 | 4.09 |
| 22.70 | 0.29 | 0.52 | 0.55* | 4.08 | 0.00 | 4.08 |
| 22.75 | 0.29 | 0.53 | 0.55* | 4.07 | 0.00 | 4.07 |
| 22.80 | 0.28 | 0.53 | 0.54* | 4.07 | 0.00 | 4.07 |
| 22.85 | 0.28 | 0.53 | 0.54* | 4.06 | 0.00 | 4.06 |
| 22.90 | 0.28 | 0.53 | 0.53* | 4.05 | 0.00 | 4.05 |
| 22.95 | 0.28 | 0.53 | 0.53* | 4.05 | 0.00 | 4.05 |
| 23.00 | 0.28 | 0.53 | 0.53* | 4.04 | 0.00 | 4.04 |
| 23.05 | 0.28 | 0.53 | 0.52* | 4.03 | 0.00 | 4.03 |
| 23.10 | 0.28 | 0.53 | 0.52* | 4.02 | 0.00 | 4.02 |
| 23.15 | 0.27 | 0.53 | 0.52* | 4.02 | 0.00 | 4.02 |
| 23.20 | 0.27 | 0.53 | 0.51* | 4.01 | 0.00 | 4.01 |
| 23.25 | 0.27 | 0.53 | 0.51* | 4.00 | 0.00 | 4.00 |
| 23.30 | 0.27 | 0.53 | 0.51* | 3.99 | 0.00 | 3.99 |
| 23.35 | 0.27 | 0.53 | 0.50* | 3.99 | 0.00 | 3.99 |
| 23.40 | 0.27 | 0.53 | 0.50* | 3.98 | 0.00 | 3.98 |
| 23.45 | 0.27 | 0.53 | 0.50* | 3.97 | 0.00 | 3.97 |
| 23.50 | 0.26 | 0.53 | 0.50* | 3.96 | 0.00 | 3.96 |
| 23.55 | 0.26 | 0.53 | 0.49* | 3.96 | 0.00 | 3.96 |
| 23.60 | 0.26 | 0.53 | 0.49* | 3.95 | 0.00 | 3.95 |
| 23.65 | 0.26 | 0.53 | 0.49* | 3.94 | 0.00 | 3.94 |
| 23.70 | 0.26 | 0.53 | 0.48* | 3.93 | 0.00 | 3.93 |

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|---|---|---|---|---|---|---|
| 23.75 | 0.26 | 0.54 | 0.48* | 3.92 | 0.00 | 3.92 |
| 23.80 | 0.26 | 0.54 | 0.48* | 3.92 | 0.00 | 3.92 |
| 23.85 | 0.25 | 0.54 | 0.47* | 3.91 | 0.00 | 3.91 |
| 23.90 | 0.25 | 0.54 | 0.47* | 3.90 | 0.00 | 3.90 |
| 23.95 | 0.25 | 0.54 | 0.47* | 3.89 | 0.00 | 3.89 |
| 24.00 | 0.25 | 0.54 | 0.47* | 3.88 | 0.00 | 3.88 |
| 24.05 | 0.25 | 0.54 | 0.46* | 3.88 | 0.00 | 3.88 |
| 24.10 | 0.25 | 0.54 | 0.46* | 3.87 | 0.00 | 3.87 |
| 24.15 | 0.25 | 0.54 | 0.46* | 3.86 | 0.00 | 3.86 |
| 24.20 | 0.25 | 0.54 | 0.46* | 3.85 | 0.00 | 3.85 |
| 24.25 | 0.24 | 0.54 | 0.45* | 3.84 | 0.00 | 3.84 |
| 24.30 | 0.24 | 0.54 | 0.45* | 3.84 | 0.00 | 3.84 |
| 24.35 | 0.24 | 0.54 | 0.45* | 3.83 | 0.00 | 3.83 |
| 24.40 | 0.24 | 0.54 | 0.44* | 3.82 | 0.00 | 3.82 |
| 24.45 | 0.24 | 0.54 | 0.44* | 3.81 | 0.00 | 3.81 |
| 24.50 | 0.24 | 0.54 | 0.44* | 3.80 | 0.00 | 3.80 |
| 24.55 | 0.24 | 0.54 | 0.44* | 3.79 | 0.00 | 3.79 |
| 24.60 | 0.24 | 0.54 | 0.43* | 3.79 | 0.00 | 3.79 |
| 24.65 | 0.23 | 0.54 | 0.43* | 3.78 | 0.00 | 3.78 |
| 24.70 | 0.23 | 0.54 | 0.43* | 3.77 | 0.00 | 3.77 |
| 24.75 | 0.23 | 0.55 | 0.43* | 3.76 | 0.00 | 3.76 |
| 24.80 | 0.23 | 0.55 | 0.42* | 3.75 | 0.00 | 3.75 |
| 24.85 | 0.23 | 0.55 | 0.42* | 3.74 | 0.00 | 3.74 |
| 24.90 | 0.23 | 0.55 | 0.42* | 3.73 | 0.00 | 3.73 |
| 24.95 | 0.23 | 0.55 | 0.42* | 3.72 | 0.00 | 3.72 |
| 25.00 | 0.23 | 0.55 | 0.41* | 3.72 | 0.00 | 3.72 |
| 25.05 | 0.23 | 0.55 | 0.41* | 3.71 | 0.00 | 3.71 |
| 25.10 | 0.23 | 0.55 | 0.41* | 3.70 | 0.00 | 3.70 |
| 25.15 | 0.23 | 0.55 | 0.41* | 3.69 | 0.00 | 3.69 |
| 25.20 | 0.23 | 0.55 | 0.41* | 3.68 | 0.00 | 3.68 |
| 25.25 | 0.23 | 0.55 | 0.41* | 3.67 | 0.00 | 3.67 |
| 25.30 | 0.23 | 0.55 | 0.41* | 3.66 | 0.00 | 3.66 |
| 25.35 | 0.23 | 0.55 | 0.41* | 3.65 | 0.00 | 3.65 |
| 25.40 | 0.23 | 0.55 | 0.41* | 3.65 | 0.00 | 3.65 |
| 25.45 | 0.23 | 0.55 | 0.41* | 3.64 | 0.00 | 3.64 |
| 25.50 | 0.23 | 0.55 | 0.41* | 3.63 | 0.00 | 3.63 |
| 25.55 | 0.23 | 0.55 | 0.41* | 3.62 | 0.00 | 3.62 |
| 25.60 | 0.23 | 0.55 | 0.41* | 3.61 | 0.00 | 3.61 |
| 25.65 | 0.23 | 0.55 | 0.41* | 3.60 | 0.00 | 3.60 |
| 25.70 | 0.23 | 0.55 | 0.41* | 3.59 | 0.00 | 3.59 |
| 25.75 | 0.23 | 0.55 | 0.41* | 3.58 | 0.00 | 3.58 |
| 25.80 | 0.23 | 0.55 | 0.41* | 3.58 | 0.00 | 3.58 |
| 25.85 | 0.23 | 0.55 | 0.41* | 3.57 | 0.00 | 3.57 |
| 25.90 | 0.23 | 0.56 | 0.41* | 3.56 | 0.00 | 3.56 |
| 25.95 | 0.23 | 0.56 | 0.41* | 3.55 | 0.00 | 3.55 |
| 26.00 | 0.23 | 0.56 | 0.40* | 3.54 | 0.00 | 3.54 |
| 26.05 | 0.22 | 0.56 | 0.40* | 3.53 | 0.00 | 3.53 |
| 26.10 | 0.22 | 0.56 | 0.40* | 3.52 | 0.00 | 3.52 |
| 26.15 | 0.22 | 0.56 | 0.40* | 3.51 | 0.00 | 3.51 |
| 26.20 | 0.22 | 0.56 | 0.40* | 3.50 | 0.00 | 3.50 |

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|---|---|---|---|---|---|---|
| 26.25 | 0.22 | 0.56 | 0.40* | 3.50 | 0.00 | 3.50 |
| 26.30 | 0.22 | 0.56 | 0.40* | 3.49 | 0.00 | 3.49 |
| 26.35 | 0.22 | 0.56 | 0.40* | 3.48 | 0.00 | 3.48 |
| 26.40 | 0.22 | 0.56 | 0.40* | 3.47 | 0.00 | 3.47 |
| 26.45 | 0.22 | 0.56 | 0.40* | 3.46 | 0.00 | 3.46 |
| 26.50 | 0.22 | 0.56 | 0.40* | 3.45 | 0.00 | 3.45 |
| 26.55 | 0.22 | 0.56 | 0.40* | 3.44 | 0.00 | 3.44 |
| 26.60 | 0.22 | 0.56 | 0.40* | 3.43 | 0.00 | 3.43 |
| 26.65 | 0.22 | 0.56 | 0.40* | 3.42 | 0.00 | 3.42 |
| 26.70 | 0.22 | 0.56 | 0.40* | 3.42 | 0.00 | 3.42 |
| 26.75 | 0.22 | 0.56 | 0.40* | 3.41 | 0.00 | 3.41 |
| 26.80 | 0.22 | 0.56 | 0.40* | 3.40 | 0.00 | 3.40 |
| 26.85 | 0.22 | 0.56 | 0.40* | 3.39 | 0.00 | 3.39 |
| 26.90 | 0.22 | 0.56 | 0.40* | 3.38 | 0.00 | 3.38 |
| 26.95 | 0.22 | 0.56 | 0.40* | 3.37 | 0.00 | 3.37 |
| 27.00 | 0.22 | 0.56 | 0.40* | 3.36 | 0.00 | 3.36 |
| 27.05 | 0.22 | 0.56 | 0.40* | 3.35 | 0.00 | 3.35 |
| 27.10 | 0.22 | 0.57 | 0.40* | 3.34 | 0.00 | 3.34 |
| 27.15 | 0.22 | 0.57 | 0.39* | 3.34 | 0.00 | 3.34 |
| 27.20 | 0.22 | 0.57 | 0.39* | 3.33 | 0.00 | 3.33 |
| 27.25 | 0.22 | 0.57 | 0.39* | 3.32 | 0.00 | 3.32 |
| 27.30 | 0.22 | 0.57 | 0.39* | 3.31 | 0.00 | 3.31 |
| 27.35 | 0.22 | 0.57 | 0.39* | 3.30 | 0.00 | 3.30 |
| 27.40 | 0.22 | 0.57 | 0.39* | 3.29 | 0.00 | 3.29 |
| 27.45 | 0.22 | 0.57 | 0.39* | 3.28 | 0.00 | 3.28 |
| 27.50 | 0.22 | 0.57 | 0.39* | 3.27 | 0.00 | 3.27 |
| 27.55 | 0.22 | 0.57 | 0.39* | 3.26 | 0.00 | 3.26 |
| 27.60 | 0.22 | 0.57 | 0.39* | 3.26 | 0.00 | 3.26 |
| 27.65 | 0.22 | 0.57 | 0.39* | 3.25 | 0.00 | 3.25 |
| 27.70 | 0.22 | 0.57 | 0.39* | 3.24 | 0.00 | 3.24 |
| 27.75 | 0.22 | 0.57 | 0.39* | 3.23 | 0.00 | 3.23 |
| 27.80 | 0.22 | 0.57 | 0.39* | 3.22 | 0.00 | 3.22 |
| 27.85 | 0.22 | 0.57 | 0.39* | 3.21 | 0.00 | 3.21 |
| 27.90 | 0.23 | 0.57 | 0.40* | 3.20 | 0.00 | 3.20 |
| 27.95 | 0.23 | 0.57 | 0.40* | 3.19 | 0.00 | 3.19 |
| 28.00 | 0.23 | 0.57 | 0.40* | 3.18 | 0.00 | 3.18 |
| 28.05 | 0.23 | 0.57 | 0.40* | 3.18 | 0.00 | 3.18 |
| 28.10 | 0.23 | 0.57 | 0.40* | 3.17 | 0.00 | 3.17 |
| 28.15 | 0.23 | 0.57 | 0.40* | 3.16 | 0.00 | 3.16 |
| 28.20 | 0.23 | 0.57 | 0.40* | 3.15 | 0.00 | 3.15 |
| 28.25 | 0.23 | 0.57 | 0.40* | 3.14 | 0.00 | 3.14 |
| 28.30 | 0.23 | 0.57 | 0.40* | 3.13 | 0.00 | 3.13 |
| 28.35 | 0.23 | 0.57 | 0.40* | 3.12 | 0.00 | 3.12 |
| 28.40 | 0.23 | 0.58 | 0.40* | 3.12 | 0.00 | 3.12 |
| 28.45 | 0.23 | 0.58 | 0.40* | 3.11 | 0.00 | 3.11 |
| 28.50 | 0.23 | 0.58 | 0.40* | 3.10 | 0.00 | 3.10 |
| 28.55 | 0.23 | 0.58 | 0.40* | 3.09 | 0.00 | 3.09 |
| 28.60 | 0.23 | 0.58 | 0.40* | 3.08 | 0.00 | 3.08 |
| 28.65 | 0.23 | 0.58 | 0.40* | 3.07 | 0.00 | 3.07 |
| 28.70 | 0.23 | 0.58 | 0.40* | 3.06 | 0.00 | 3.06 |

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|---|---|---|---|---|---|---|
| 28.75 | 0.23 | 0.58 | 0.40* | 3.05 | 0.00 | 3.05 |
| 28.80 | 0.23 | 0.58 | 0.40* | 3.05 | 0.00 | 3.05 |
| 28.85 | 0.23 | 0.58 | 0.40* | 3.04 | 0.00 | 3.04 |
| 28.90 | 0.23 | 0.58 | 0.40* | 3.03 | 0.00 | 3.03 |
| 28.95 | 0.23 | 0.58 | 0.40* | 3.02 | 0.00 | 3.02 |
| 29.00 | 0.23 | 0.58 | 0.40* | 3.01 | 0.00 | 3.01 |
| 29.05 | 0.23 | 0.58 | 0.40* | 3.00 | 0.00 | 3.00 |
| 29.10 | 0.23 | 0.58 | 0.40* | 2.99 | 0.00 | 2.99 |
| 29.15 | 0.23 | 0.58 | 0.39* | 2.98 | 0.00 | 2.98 |
| 29.20 | 0.23 | 0.58 | 0.39* | 2.98 | 0.00 | 2.98 |
| 29.25 | 0.23 | 0.58 | 0.39* | 2.97 | 0.00 | 2.97 |
| 29.30 | 0.23 | 0.58 | 0.39* | 2.96 | 0.00 | 2.96 |
| 29.35 | 0.23 | 0.58 | 0.39* | 2.95 | 0.00 | 2.95 |
| 29.40 | 0.23 | 0.58 | 0.39* | 2.94 | 0.00 | 2.94 |
| 29.45 | 0.23 | 0.58 | 0.39* | 2.93 | 0.00 | 2.93 |
| 29.50 | 0.23 | 0.58 | 0.39* | 2.92 | 0.00 | 2.92 |
| 29.55 | 0.23 | 0.58 | 0.39* | 2.91 | 0.00 | 2.91 |
| 29.60 | 0.23 | 0.58 | 0.39* | 2.91 | 0.00 | 2.91 |
| 29.65 | 0.23 | 0.58 | 0.39* | 2.90 | 0.00 | 2.90 |
| 29.70 | 0.23 | 0.58 | 0.39* | 2.89 | 0.00 | 2.89 |
| 29.75 | 0.23 | 0.58 | 0.39* | 2.88 | 0.00 | 2.88 |
| 29.80 | 0.23 | 0.58 | 0.39* | 2.87 | 0.00 | 2.87 |
| 29.85 | 0.23 | 0.59 | 0.39* | 2.86 | 0.00 | 2.86 |
| 29.90 | 0.23 | 0.59 | 0.39* | 2.85 | 0.00 | 2.85 |
| 29.95 | 0.23 | 0.59 | 0.39* | 2.84 | 0.00 | 2.84 |
| 30.00 | 0.23 | 0.59 | 0.39* | 2.84 | 0.00 | 2.84 |
| 30.05 | 0.23 | 0.59 | 0.39* | 2.83 | 0.00 | 2.83 |
| 30.10 | 0.23 | 0.59 | 0.39* | 2.82 | 0.00 | 2.82 |
| 30.15 | 0.23 | 0.59 | 0.39* | 2.81 | 0.00 | 2.81 |
| 30.20 | 0.23 | 0.59 | 0.39* | 2.80 | 0.00 | 2.80 |
| 30.25 | 0.23 | 0.59 | 0.39* | 2.79 | 0.00 | 2.79 |
| 30.30 | 0.23 | 0.59 | 0.39* | 2.78 | 0.00 | 2.78 |
| 30.35 | 0.23 | 0.59 | 0.39* | 2.77 | 0.00 | 2.77 |
| 30.40 | 0.23 | 0.59 | 0.39* | 2.77 | 0.00 | 2.77 |
| 30.45 | 0.23 | 0.59 | 0.39* | 2.76 | 0.00 | 2.76 |
| 30.50 | 0.23 | 0.59 | 0.39* | 2.75 | 0.00 | 2.75 |
| 30.55 | 0.23 | 0.59 | 0.39* | 2.74 | 0.00 | 2.74 |
| 30.60 | 0.23 | 0.59 | 0.39* | 2.73 | 0.00 | 2.73 |
| 30.65 | 0.23 | 0.59 | 0.39* | 2.72 | 0.00 | 2.72 |
| 30.70 | 0.23 | 0.59 | 0.39* | 2.71 | 0.00 | 2.71 |
| 30.75 | 0.23 | 0.59 | 0.39* | 2.71 | 0.00 | 2.71 |
| 30.80 | 0.23 | 0.59 | 0.39* | 2.70 | 0.00 | 2.70 |
| 30.85 | 0.23 | 0.59 | 0.39* | 2.69 | 0.00 | 2.69 |
| 30.90 | 0.23 | 0.59 | 0.39* | 2.68 | 0.00 | 2.68 |
| 30.95 | 0.23 | 0.59 | 0.39* | 2.67 | 0.00 | 2.67 |
| 31.00 | 0.23 | 0.59 | 0.39* | 2.66 | 0.00 | 2.66 |
| 31.05 | 0.23 | 0.59 | 0.39* | 2.65 | 0.00 | 2.65 |
| 31.10 | 0.23 | 0.59 | 0.39* | 2.64 | 0.00 | 2.64 |
| 31.15 | 0.23 | 0.59 | 0.39* | 2.64 | 0.00 | 2.64 |
| 31.20 | 0.23 | 0.59 | 0.39* | 2.63 | 0.00 | 2.63 |

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|---|---|---|---|---|---|---|
| 31.25 | 0.23 | 0.59 | 0.39* | 2.62 | 0.00 | 2.62 |
| 31.30 | 0.23 | 0.59 | 0.39* | 2.61 | 0.00 | 2.61 |
| 31.35 | 0.23 | 0.59 | 0.39* | 2.60 | 0.00 | 2.60 |
| 31.40 | 0.23 | 0.59 | 0.39* | 2.59 | 0.00 | 2.59 |
| 31.45 | 0.23 | 0.59 | 0.39* | 2.58 | 0.00 | 2.58 |
| 31.50 | 0.23 | 0.59 | 0.39* | 2.57 | 0.00 | 2.57 |
| 31.55 | 0.23 | 0.59 | 0.39* | 2.57 | 0.00 | 2.57 |
| 31.60 | 0.23 | 0.59 | 0.39* | 2.56 | 0.00 | 2.56 |
| 31.65 | 0.23 | 0.59 | 0.39* | 2.55 | 0.00 | 2.55 |
| 31.70 | 0.23 | 0.59 | 0.39* | 2.54 | 0.00 | 2.54 |
| 31.75 | 0.23 | 0.59 | 0.39* | 2.53 | 0.00 | 2.53 |
| 31.80 | 0.23 | 0.59 | 0.39* | 2.52 | 0.00 | 2.52 |
| 31.85 | 0.23 | 0.59 | 0.39* | 2.51 | 0.00 | 2.51 |
| 31.90 | 0.23 | 0.59 | 0.39* | 2.51 | 0.00 | 2.51 |
| 31.95 | 0.23 | 0.59 | 0.39* | 2.50 | 0.00 | 2.50 |
| 32.00 | 0.23 | 0.59 | 0.40* | 2.49 | 0.00 | 2.49 |
| 32.05 | 0.23 | 0.59 | 0.40* | 2.48 | 0.00 | 2.48 |
| 32.10 | 0.23 | 0.59 | 0.40* | 2.47 | 0.00 | 2.47 |
| 32.15 | 0.23 | 0.59 | 0.40* | 2.46 | 0.00 | 2.46 |
| 32.20 | 0.23 | 0.59 | 0.40* | 2.45 | 0.00 | 2.45 |
| 32.25 | 0.23 | 0.59 | 0.40* | 2.45 | 0.00 | 2.45 |
| 32.30 | 0.23 | 0.59 | 0.40* | 2.44 | 0.00 | 2.44 |
| 32.35 | 0.23 | 0.59 | 0.40* | 2.43 | 0.00 | 2.43 |
| 32.40 | 0.23 | 0.59 | 0.40* | 2.42 | 0.00 | 2.42 |
| 32.45 | 0.24 | 0.59 | 0.40* | 2.41 | 0.00 | 2.41 |
| 32.50 | 0.24 | 0.59 | 0.40* | 2.40 | 0.00 | 2.40 |
| 32.55 | 0.24 | 0.59 | 0.40* | 2.39 | 0.00 | 2.39 |
| 32.60 | 0.24 | 0.59 | 0.40* | 2.39 | 0.00 | 2.39 |
| 32.65 | 0.24 | 0.59 | 0.40* | 2.38 | 0.00 | 2.38 |
| 32.70 | 0.24 | 0.59 | 0.40* | 2.37 | 0.00 | 2.37 |
| 32.75 | 0.24 | 0.59 | 0.40* | 2.36 | 0.00 | 2.36 |
| 32.80 | 0.24 | 0.59 | 0.40* | 2.35 | 0.00 | 2.35 |
| 32.85 | 0.24 | 0.59 | 0.40* | 2.34 | 0.00 | 2.34 |
| 32.90 | 0.24 | 0.59 | 0.40* | 2.34 | 0.00 | 2.34 |
| 32.95 | 0.24 | 0.59 | 0.40* | 2.33 | 0.00 | 2.33 |
| 33.00 | 0.24 | 0.59 | 0.40* | 2.32 | 0.00 | 2.32 |
| 33.05 | 0.24 | 0.59 | 0.40* | 2.31 | 0.00 | 2.31 |
| 33.10 | 0.24 | 0.59 | 0.40* | 2.30 | 0.00 | 2.30 |
| 33.15 | 0.24 | 0.59 | 0.40* | 2.29 | 0.00 | 2.29 |
| 33.20 | 0.24 | 0.59 | 0.40* | 2.28 | 0.00 | 2.28 |
| 33.25 | 0.24 | 0.59 | 0.40* | 2.28 | 0.00 | 2.28 |
| 33.30 | 0.24 | 0.59 | 0.40* | 2.27 | 0.00 | 2.27 |
| 33.35 | 0.24 | 0.59 | 0.40* | 2.26 | 0.00 | 2.26 |
| 33.40 | 0.24 | 0.59 | 0.40* | 2.25 | 0.00 | 2.25 |
| 33.45 | 0.24 | 0.59 | 0.40* | 2.24 | 0.00 | 2.24 |
| 33.50 | 0.24 | 0.59 | 0.40* | 2.23 | 0.00 | 2.23 |
| 33.55 | 0.24 | 0.59 | 0.40* | 2.23 | 0.00 | 2.23 |
| 33.60 | 0.24 | 0.59 | 0.40* | 2.22 | 0.00 | 2.22 |
| 33.65 | 0.24 | 0.59 | 0.40* | 2.21 | 0.00 | 2.21 |
| 33.70 | 0.24 | 0.59 | 0.40* | 2.20 | 0.00 | 2.20 |

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|---|---|---|---|---|---|---|
| 33.75 | 0.24 | 0.59 | 0.40* | 2.19 | 0.00 | 2.19 |
| 33.80 | 0.24 | 0.59 | 0.40* | 2.18 | 0.00 | 2.18 |
| 33.85 | 0.24 | 0.59 | 0.40* | 2.17 | 0.00 | 2.17 |
| 33.90 | 0.24 | 0.59 | 0.40* | 2.17 | 0.00 | 2.17 |
| 33.95 | 0.24 | 0.59 | 0.41* | 2.16 | 0.00 | 2.16 |
| 34.00 | 0.24 | 0.59 | 0.41* | 2.15 | 0.00 | 2.15 |
| 34.05 | 0.24 | 0.59 | 0.41* | 2.14 | 0.00 | 2.14 |
| 34.10 | 0.24 | 0.59 | 0.41* | 2.13 | 0.00 | 2.13 |
| 34.15 | 0.24 | 0.59 | 0.41* | 2.12 | 0.00 | 2.12 |
| 34.20 | 0.24 | 0.59 | 0.41* | 2.12 | 0.00 | 2.12 |
| 34.25 | 0.24 | 0.59 | 0.41* | 2.11 | 0.00 | 2.11 |
| 34.30 | 0.24 | 0.59 | 0.41* | 2.10 | 0.00 | 2.10 |
| 34.35 | 0.24 | 0.59 | 0.41* | 2.09 | 0.00 | 2.09 |
| 34.40 | 0.24 | 0.59 | 0.41* | 2.08 | 0.00 | 2.08 |
| 34.45 | 0.24 | 0.59 | 0.41* | 2.07 | 0.00 | 2.07 |
| 34.50 | 0.24 | 0.59 | 0.41* | 2.07 | 0.00 | 2.07 |
| 34.55 | 0.24 | 0.59 | 0.41* | 2.06 | 0.00 | 2.06 |
| 34.60 | 0.24 | 0.60 | 0.41* | 2.05 | 0.00 | 2.05 |
| 34.65 | 0.24 | 0.60 | 0.41* | 2.04 | 0.00 | 2.04 |
| 34.70 | 0.24 | 0.60 | 0.41* | 2.03 | 0.00 | 2.03 |
| 34.75 | 0.24 | 0.60 | 0.41* | 2.03 | 0.00 | 2.03 |
| 34.80 | 0.24 | 0.60 | 0.41* | 2.02 | 0.00 | 2.02 |
| 34.85 | 0.24 | 0.60 | 0.41* | 2.01 | 0.00 | 2.01 |
| 34.90 | 0.24 | 0.60 | 0.41* | 2.00 | 0.00 | 2.00 |
| 34.95 | 0.25 | 0.60 | 0.41* | 1.99 | 0.00 | 1.99 |
| 35.00 | 0.25 | 0.60 | 0.41* | 1.98 | 0.00 | 1.98 |
| 35.05 | 0.25 | 0.60 | 0.41* | 1.98 | 0.00 | 1.98 |
| 35.10 | 0.25 | 0.60 | 0.42* | 1.97 | 0.00 | 1.97 |
| 35.15 | 0.25 | 0.60 | 0.42* | 1.96 | 0.00 | 1.96 |
| 35.20 | 0.25 | 0.60 | 0.42* | 1.95 | 0.00 | 1.95 |
| 35.25 | 0.25 | 0.60 | 0.42* | 1.94 | 0.00 | 1.94 |
| 35.30 | 0.25 | 0.60 | 0.43* | 1.94 | 0.00 | 1.94 |
| 35.35 | 0.26 | 0.60 | 0.43* | 1.93 | 0.00 | 1.93 |
| 35.40 | 0.26 | 0.60 | 0.43* | 1.92 | 0.00 | 1.92 |
| 35.45 | 0.26 | 0.60 | 0.43* | 1.91 | 0.00 | 1.91 |
| 35.50 | 0.26 | 0.60 | 0.44* | 1.90 | 0.00 | 1.90 |
| 35.55 | 0.26 | 0.60 | 0.44* | 1.90 | 0.00 | 1.90 |
| 35.60 | 0.26 | 0.60 | 0.44* | 1.89 | 0.00 | 1.89 |
| 35.65 | 0.26 | 0.60 | 0.44* | 1.88 | 0.00 | 1.88 |
| 35.70 | 0.27 | 0.60 | 0.45* | 1.87 | 0.00 | 1.87 |
| 35.75 | 0.27 | 0.60 | 0.45* | 1.86 | 0.00 | 1.86 |
| 35.80 | 0.27 | 0.60 | 0.45* | 1.86 | 0.00 | 1.86 |
| 35.85 | 0.27 | 0.60 | 0.45* | 1.85 | 0.00 | 1.85 |
| 35.90 | 0.27 | 0.60 | 0.46* | 1.84 | 0.00 | 1.84 |
| 35.95 | 0.27 | 0.60 | 0.46* | 1.83 | 0.00 | 1.83 |
| 36.00 | 0.28 | 0.60 | 0.46* | 1.83 | 0.00 | 1.83 |
| 36.05 | 0.28 | 0.60 | 0.46* | 1.82 | 0.00 | 1.82 |
| 36.10 | 0.28 | 0.60 | 0.47* | 1.81 | 0.00 | 1.81 |
| 36.15 | 0.28 | 0.60 | 0.47* | 1.80 | 0.00 | 1.80 |
| 36.20 | 0.28 | 0.60 | 0.47* | 1.80 | 0.00 | 1.80 |

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|---|---|---|---|---|---|---|
| 36.25 | 0.28 | 0.60 | 0.48* | 1.79 | 0.00 | 1.79 |
| 36.30 | 0.29 | 0.60 | 0.48* | 1.78 | 0.00 | 1.78 |
| 36.35 | 0.29 | 0.60 | 0.48* | 1.78 | 0.00 | 1.78 |
| 36.40 | 0.29 | 0.60 | 0.48* | 1.77 | 0.00 | 1.77 |
| 36.45 | 0.29 | 0.60 | 0.49* | 1.76 | 0.00 | 1.76 |
| 36.50 | 0.29 | 0.60 | 0.49* | 1.75 | 0.00 | 1.75 |
| 36.55 | 0.29 | 0.60 | 0.49* | 1.75 | 0.00 | 1.75 |
| 36.60 | 0.30 | 0.60 | 0.50* | 1.74 | 0.00 | 1.74 |
| 36.65 | 0.30 | 0.60 | 0.50* | 1.73 | 0.00 | 1.73 |
| 36.70 | 0.30 | 0.60 | 0.50* | 1.73 | 0.00 | 1.73 |
| 36.75 | 0.30 | 0.60 | 0.51* | 1.72 | 0.00 | 1.72 |
| 36.80 | 0.30 | 0.60 | 0.51* | 1.71 | 0.00 | 1.71 |
| 36.85 | 0.31 | 0.60 | 0.51* | 1.71 | 0.00 | 1.71 |
| 36.90 | 0.31 | 0.60 | 0.52* | 1.70 | 0.00 | 1.70 |
| 36.95 | 0.31 | 0.60 | 0.52* | 1.69 | 0.00 | 1.69 |
| 37.00 | 0.31 | 0.60 | 0.53* | 1.69 | 0.00 | 1.69 |
| 37.05 | 0.32 | 0.60 | 0.53* | 1.68 | 0.00 | 1.68 |
| 37.10 | 0.32 | 0.60 | 0.53* | 1.67 | 0.00 | 1.67 |
| 37.15 | 0.32 | 0.60 | 0.54* | 1.67 | 0.00 | 1.67 |
| 37.20 | 0.32 | 0.60 | 0.54* | 1.66 | 0.00 | 1.66 |
| 37.25 | 0.32 | 0.60 | 0.54* | 1.65 | 0.00 | 1.65 |
| 37.30 | 0.33 | 0.60 | 0.55* | 1.65 | 0.00 | 1.65 |
| 37.35 | 0.33 | 0.60 | 0.55* | 1.64 | 0.00 | 1.64 |
| 37.40 | 0.33 | 0.60 | 0.56* | 1.63 | 0.00 | 1.63 |
| 37.45 | 0.33 | 0.60 | 0.56* | 1.63 | 0.00 | 1.63 |
| 37.50 | 0.34 | 0.60 | 0.56* | 1.62 | 0.00 | 1.62 |
| 37.55 | 0.34 | 0.60 | 0.57* | 1.62 | 0.00 | 1.62 |
| 37.60 | 0.34 | 0.60 | 0.57* | 1.61 | 0.00 | 1.61 |
| 37.65 | 0.34 | 0.60 | 0.58* | 1.60 | 0.00 | 1.60 |
| 37.70 | 0.35 | 0.60 | 0.58* | 1.60 | 0.00 | 1.60 |
| 37.75 | 0.35 | 0.60 | 0.59* | 1.59 | 0.00 | 1.59 |
| 37.80 | 0.35 | 0.60 | 0.59* | 1.59 | 0.00 | 1.59 |
| 37.85 | 0.36 | 0.60 | 0.60* | 1.58 | 0.00 | 1.58 |
| 37.90 | 0.36 | 0.60 | 0.60* | 1.57 | 0.00 | 1.57 |
| 37.95 | 0.36 | 0.60 | 0.61* | 1.57 | 0.00 | 1.57 |
| 38.00 | 0.37 | 0.60 | 0.61* | 1.56 | 0.00 | 1.56 |
| 38.05 | 0.37 | 0.60 | 0.62* | 1.56 | 0.00 | 1.56 |
| 38.10 | 0.37 | 0.60 | 0.62* | 1.55 | 0.00 | 1.55 |
| 38.15 | 0.38 | 0.60 | 0.63* | 1.55 | 0.00 | 1.55 |
| 38.20 | 0.38 | 0.60 | 0.64* | 1.54 | 0.00 | 1.54 |
| 38.25 | 0.38 | 0.60 | 0.64* | 1.53 | 0.00 | 1.53 |
| 38.30 | 0.39 | 0.60 | 0.65* | 1.53 | 0.00 | 1.53 |
| 38.35 | 0.39 | 0.60 | 0.66* | 1.52 | 0.00 | 1.52 |
| 38.40 | 0.40 | 0.60 | 0.67* | 1.52 | 0.00 | 1.52 |
| 38.45 | 0.41 | 0.60 | 0.68* | 1.51 | 0.00 | 1.51 |
| 38.50 | 0.42 | 0.60 | 0.70* | 1.51 | 0.00 | 1.51 |
| 38.55 | 0.42 | 0.60 | 0.71* | 1.50 | 0.00 | 1.50 |
| 38.60 | 0.44 | 0.60 | 0.73* | 1.50 | 0.00 | 1.50 |
| 38.65 | 0.45 | 0.60 | 0.76* | 1.50 | 0.00 | 1.50 |
| 38.70 | 0.48 | 0.60 | 0.80* | 1.49 | 0.00 | 1.49 |

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|---|---|---|---|---|---|---|
| 38.75 | 0.51 | 0.60 | 0.85* | 1.49 | 0.00 | 1.49 |
| 38.80 | 0.51 | 0.60 | 0.85* | 1.48 | 0.00 | 1.48 |
| 38.85 | 0.51 | 0.60 | 0.85* | 1.48 | 0.00 | 1.48 |
| 38.90 | 0.51 | 0.60 | 0.85* | 1.47 | 0.00 | 1.47 |
| 38.95 | 0.51 | 0.60 | 0.85* | 1.47 | 0.00 | 1.47 |
| 39.00 | 0.51 | 0.60 | 0.85* | 1.46 | 0.00 | 1.46 |
| 39.05 | 0.51 | 0.60 | 0.85* | 1.46 | 0.00 | 1.46 |
| 39.10 | 0.51 | 0.60 | 0.85* | 1.46 | 0.00 | 1.46 |
| 39.15 | 0.51 | 0.60 | 0.85* | 1.45 | 0.00 | 1.45 |
| 39.20 | 0.51 | 0.60 | 0.85* | 1.45 | 0.00 | 1.45 |
| 39.25 | 0.51 | 0.60 | 0.85* | 1.45 | 0.00 | 1.45 |
| 39.30 | 0.51 | 0.60 | 0.85* | 1.44 | 0.00 | 1.44 |
| 39.35 | 0.51 | 0.60 | 0.85* | 1.44 | 0.00 | 1.44 |
| 39.40 | 0.51 | 0.60 | 0.85* | 1.44 | 0.00 | 1.44 |
| 39.45 | 0.51 | 0.60 | 0.85* | 1.43 | 0.00 | 1.43 |
| 39.50 | 0.51 | 0.60 | 0.85* | 1.43 | 0.00 | 1.43 |
| 39.55 | 0.51 | 0.60 | 0.85* | 1.43 | 0.00 | 1.43 |
| 39.60 | 0.51 | 0.60 | 0.85* | 1.42 | 0.00 | 1.42 |
| 39.65 | 0.51 | 0.60 | 0.85* | 1.42 | 0.00 | 1.42 |
| 39.70 | 0.51 | 0.60 | 0.85* | 1.42 | 0.00 | 1.42 |
| 39.75 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 39.80 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 39.85 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 39.90 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 39.95 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 40.00 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 40.05 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 40.10 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 40.15 | 0.51 | 0.60 | 0.85* | 1.41 | 0.00 | 1.41 |
| 40.20 | 0.51 | 0.60 | 0.85* | 1.40 | 0.00 | 1.40 |
| 40.25 | 0.51 | 0.60 | 0.85* | 1.40 | 0.00 | 1.40 |
| 40.30 | 0.51 | 0.60 | 0.85* | 1.40 | 0.00 | 1.40 |
| 40.35 | 0.51 | 0.60 | 0.85* | 1.40 | 0.00 | 1.40 |
| 40.40 | 0.51 | 0.60 | 0.85* | 1.40 | 0.00 | 1.40 |
| 40.45 | 0.51 | 0.60 | 0.85* | 1.39 | 0.00 | 1.39 |
| 40.50 | 0.51 | 0.60 | 0.85* | 1.39 | 0.00 | 1.39 |
| 40.55 | 0.51 | 0.60 | 0.85* | 1.39 | 0.00 | 1.39 |
| 40.60 | 0.51 | 0.60 | 0.85* | 1.38 | 0.00 | 1.38 |
| 40.65 | 0.51 | 0.60 | 0.85* | 1.38 | 0.00 | 1.38 |
| 40.70 | 0.51 | 0.60 | 0.85* | 1.38 | 0.00 | 1.38 |
| 40.75 | 0.51 | 0.60 | 0.85* | 1.38 | 0.00 | 1.38 |
| 40.80 | 0.51 | 0.60 | 0.85* | 1.37 | 0.00 | 1.37 |
| 40.85 | 0.51 | 0.60 | 0.85* | 1.37 | 0.00 | 1.37 |
| 40.90 | 0.51 | 0.60 | 0.85* | 1.37 | 0.00 | 1.37 |
| 40.95 | 0.51 | 0.60 | 0.85* | 1.36 | 0.00 | 1.36 |
| 41.00 | 0.51 | 0.60 | 0.85* | 1.36 | 0.00 | 1.36 |
| 41.05 | 0.51 | 0.60 | 0.85* | 1.36 | 0.00 | 1.36 |
| 41.10 | 0.51 | 0.60 | 0.85* | 1.35 | 0.00 | 1.35 |
| 41.15 | 0.51 | 0.60 | 0.85* | 1.35 | 0.00 | 1.35 |
| 41.20 | 0.51 | 0.60 | 0.85* | 1.35 | 0.00 | 1.35 |

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|---|---|---|---|---|---|---|
| 41.25 | 0.51 | 0.60 | 0.85* | 1.34 | 0.00 | 1.34 |
| 41.30 | 0.51 | 0.60 | 0.85* | 1.34 | 0.00 | 1.34 |
| 41.35 | 0.51 | 0.60 | 0.85* | 1.34 | 0.00 | 1.34 |
| 41.40 | 0.51 | 0.60 | 0.85* | 1.33 | 0.00 | 1.33 |
| 41.45 | 0.50 | 0.60 | 0.85* | 1.33 | 0.00 | 1.33 |
| 41.50 | 0.50 | 0.60 | 0.85* | 1.33 | 0.00 | 1.33 |
| 41.55 | 0.50 | 0.60 | 0.85* | 1.32 | 0.00 | 1.32 |
| 41.60 | 0.50 | 0.60 | 0.85* | 1.32 | 0.00 | 1.32 |
| 41.65 | 0.50 | 0.60 | 0.85* | 1.32 | 0.00 | 1.32 |
| 41.70 | 0.50 | 0.60 | 0.85* | 1.31 | 0.00 | 1.31 |
| 41.75 | 0.50 | 0.60 | 0.85* | 1.31 | 0.00 | 1.31 |
| 41.80 | 0.50 | 0.60 | 0.85* | 1.30 | 0.00 | 1.30 |
| 41.85 | 0.50 | 0.60 | 0.85* | 1.30 | 0.00 | 1.30 |
| 41.90 | 0.50 | 0.60 | 0.85* | 1.30 | 0.00 | 1.30 |
| 41.95 | 0.50 | 0.60 | 0.85* | 1.29 | 0.00 | 1.29 |
| 42.00 | 0.50 | 0.60 | 0.85* | 1.29 | 0.00 | 1.29 |
| 42.05 | 0.50 | 0.60 | 0.85* | 1.28 | 0.00 | 1.28 |
| 42.10 | 0.50 | 0.60 | 0.85* | 1.28 | 0.00 | 1.28 |
| 42.15 | 0.50 | 0.60 | 0.85* | 1.28 | 0.00 | 1.28 |
| 42.20 | 0.50 | 0.60 | 0.85* | 1.27 | 0.00 | 1.27 |
| 42.25 | 0.50 | 0.60 | 0.85* | 1.27 | 0.00 | 1.27 |
| 42.30 | 0.50 | 0.59 | 0.85* | 1.26 | 0.00 | 1.26 |
| 42.35 | 0.49 | 0.59 | 0.82* | 1.26 | 0.00 | 1.26 |
| 42.40 | 0.47 | 0.59 | 0.79* | 1.25 | 0.00 | 1.25 |
| 42.45 | 0.45 | 0.59 | 0.76* | 1.25 | 0.00 | 1.25 |
| 42.50 | 0.44 | 0.59 | 0.75* | 1.24 | 0.00 | 1.24 |
| 42.55 | 0.44 | 0.59 | 0.73* | 1.24 | 0.00 | 1.24 |
| 42.60 | 0.43 | 0.59 | 0.72* | 1.24 | 0.00 | 1.24 |
| 42.65 | 0.42 | 0.59 | 0.71* | 1.23 | 0.00 | 1.23 |
| 42.70 | 0.42 | 0.59 | 0.70* | 1.23 | 0.00 | 1.23 |
| 42.75 | 0.41 | 0.59 | 0.69* | 1.22 | 0.00 | 1.22 |
| 42.80 | 0.41 | 0.59 | 0.68* | 1.22 | 0.00 | 1.22 |
| 42.85 | 0.40 | 0.59 | 0.68* | 1.21 | 0.00 | 1.21 |
| 42.90 | 0.40 | 0.59 | 0.67* | 1.21 | 0.00 | 1.21 |
| 42.95 | 0.39 | 0.59 | 0.66* | 1.20 | 0.00 | 1.20 |
| 43.00 | 0.39 | 0.59 | 0.66* | 1.20 | 0.00 | 1.20 |
| 43.05 | 0.39 | 0.59 | 0.65* | 1.19 | 0.00 | 1.19 |
| 43.10 | 0.39 | 0.59 | 0.65* | 1.19 | 0.00 | 1.19 |
| 43.15 | 0.38 | 0.59 | 0.64* | 1.18 | 0.00 | 1.18 |
| 43.20 | 0.38 | 0.59 | 0.64* | 1.18 | 0.00 | 1.18 |
| 43.25 | 0.38 | 0.59 | 0.64* | 1.17 | 0.00 | 1.17 |
| 43.30 | 0.37 | 0.59 | 0.63* | 1.17 | 0.00 | 1.17 |
| 43.35 | 0.37 | 0.59 | 0.63* | 1.16 | 0.00 | 1.16 |
| 43.40 | 0.37 | 0.59 | 0.62* | 1.16 | 0.00 | 1.16 |
| 43.45 | 0.37 | 0.59 | 0.62* | 1.15 | 0.00 | 1.15 |
| 43.50 | 0.37 | 0.59 | 0.62* | 1.14 | 0.00 | 1.14 |
| 43.55 | 0.36 | 0.59 | 0.61* | 1.14 | 0.00 | 1.14 |
| 43.60 | 0.36 | 0.59 | 0.61* | 1.13 | 0.00 | 1.13 |
| 43.65 | 0.36 | 0.59 | 0.61* | 1.13 | 0.00 | 1.13 |
| 43.70 | 0.36 | 0.59 | 0.60* | 1.12 | 0.00 | 1.12 |

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|---|---|---|---|---|---|---|
| 43.75 | 0.36 | 0.59 | 0.60* | 1.12 | 0.00 | 1.12 |
| 43.80 | 0.35 | 0.59 | 0.60* | 1.11 | 0.00 | 1.11 |
| 43.85 | 0.35 | 0.59 | 0.59* | 1.11 | 0.00 | 1.11 |
| 43.90 | 0.35 | 0.59 | 0.59* | 1.10 | 0.00 | 1.10 |
| 43.95 | 0.35 | 0.59 | 0.59* | 1.09 | 0.00 | 1.09 |
| 44.00 | 0.35 | 0.59 | 0.59* | 1.09 | 0.00 | 1.09 |
| 44.05 | 0.35 | 0.59 | 0.58* | 1.08 | 0.00 | 1.08 |
| 44.10 | 0.34 | 0.59 | 0.58* | 1.08 | 0.00 | 1.08 |
| 44.15 | 0.34 | 0.59 | 0.58* | 1.07 | 0.00 | 1.07 |
| 44.20 | 0.34 | 0.59 | 0.58* | 1.06 | 0.00 | 1.06 |
| 44.25 | 0.34 | 0.59 | 0.57* | 1.06 | 0.00 | 1.06 |
| 44.30 | 0.34 | 0.59 | 0.57* | 1.05 | 0.00 | 1.05 |
| 44.35 | 0.34 | 0.59 | 0.57* | 1.05 | 0.00 | 1.05 |
| 44.40 | 0.33 | 0.59 | 0.57* | 1.04 | 0.00 | 1.04 |
| 44.45 | 0.33 | 0.59 | 0.56* | 1.03 | 0.00 | 1.03 |
| 44.50 | 0.33 | 0.59 | 0.56* | 1.03 | 0.00 | 1.03 |
| 44.55 | 0.33 | 0.59 | 0.56* | 1.02 | 0.00 | 1.02 |
| 44.60 | 0.33 | 0.59 | 0.56* | 1.02 | 0.00 | 1.02 |
| 44.65 | 0.33 | 0.59 | 0.55* | 1.01 | 0.00 | 1.01 |
| 44.70 | 0.33 | 0.59 | 0.55* | 1.00 | 0.00 | 1.00 |
| 44.75 | 0.32 | 0.59 | 0.55* | 1.00 | 0.00 | 1.00 |
| 44.80 | 0.32 | 0.59 | 0.55* | 0.99 | 0.00 | 0.99 |
| 44.85 | 0.32 | 0.59 | 0.54* | 0.98 | 0.00 | 0.98 |
| 44.90 | 0.32 | 0.59 | 0.54* | 0.98 | 0.00 | 0.98 |
| 44.95 | 0.32 | 0.59 | 0.54* | 0.97 | 0.00 | 0.97 |
| 45.00 | 0.32 | 0.59 | 0.54* | 0.96 | 0.00 | 0.96 |
| 45.05 | 0.32 | 0.59 | 0.54* | 0.96 | 0.00 | 0.96 |
| 45.10 | 0.31 | 0.59 | 0.53* | 0.95 | 0.00 | 0.95 |
| 45.15 | 0.31 | 0.59 | 0.53* | 0.95 | 0.00 | 0.95 |
| 45.20 | 0.31 | 0.59 | 0.53* | 0.94 | 0.00 | 0.94 |
| 45.25 | 0.31 | 0.59 | 0.52* | 0.93 | 0.00 | 0.93 |
| 45.30 | 0.31 | 0.59 | 0.52* | 0.93 | 0.00 | 0.93 |
| 45.35 | 0.31 | 0.59 | 0.52* | 0.92 | 0.00 | 0.92 |
| 45.40 | 0.31 | 0.59 | 0.52* | 0.91 | 0.00 | 0.91 |
| 45.45 | 0.30 | 0.59 | 0.52* | 0.91 | 0.00 | 0.91 |
| 45.50 | 0.30 | 0.59 | 0.51* | 0.90 | 0.00 | 0.90 |
| 45.55 | 0.30 | 0.59 | 0.51* | 0.89 | 0.00 | 0.89 |
| 45.60 | 0.30 | 0.59 | 0.51* | 0.89 | 0.00 | 0.89 |
| 45.65 | 0.30 | 0.59 | 0.51* | 0.88 | 0.00 | 0.88 |
| 45.70 | 0.30 | 0.59 | 0.50* | 0.87 | 0.00 | 0.87 |
| 45.75 | 0.30 | 0.59 | 0.50* | 0.87 | 0.00 | 0.87 |
| 45.80 | 0.29 | 0.59 | 0.50* | 0.86 | 0.00 | 0.86 |
| 45.85 | 0.29 | 0.59 | 0.50* | 0.85 | 0.00 | 0.85 |
| 45.90 | 0.29 | 0.59 | 0.49* | 0.84 | 0.00 | 0.84 |
| 45.95 | 0.29 | 0.59 | 0.49* | 0.84 | 0.00 | 0.84 |
| 46.00 | 0.29 | 0.59 | 0.49* | 0.83 | 0.00 | 0.83 |
| 46.05 | 0.29 | 0.59 | 0.49* | 0.82 | 0.00 | 0.82 |
| 46.10 | 0.29 | 0.59 | 0.49* | 0.82 | 0.00 | 0.82 |
| 46.15 | 0.29 | 0.59 | 0.48* | 0.81 | 0.00 | 0.81 |
| 46.20 | 0.28 | 0.59 | 0.48* | 0.80 | 0.00 | 0.80 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 46.25 | 0.28 | 0.59 | 0.48* | 0.80 | 0.00 | 0.80 |
| 46.30 | 0.28 | 0.59 | 0.48* | 0.79 | 0.00 | 0.79 |
| 46.35 | 0.28 | 0.59 | 0.48* | 0.78 | 0.00 | 0.78 |
| 46.40 | 0.28 | 0.59 | 0.47* | 0.77 | 0.00 | 0.77 |
| 46.45 | 0.28 | 0.59 | 0.47* | 0.77 | 0.00 | 0.77 |
| 46.50 | 0.28 | 0.59 | 0.47* | 0.76 | 0.00 | 0.76 |
| 46.55 | 0.28 | 0.59 | 0.47* | 0.75 | 0.00 | 0.75 |
| 46.60 | 0.27 | 0.59 | 0.47* | 0.75 | 0.00 | 0.75 |
| 46.65 | 0.27 | 0.59 | 0.46* | 0.74 | 0.00 | 0.74 |
| 46.70 | 0.27 | 0.59 | 0.46* | 0.73 | 0.00 | 0.73 |
| 46.75 | 0.27 | 0.59 | 0.46* | 0.72 | 0.00 | 0.72 |
| 46.80 | 0.27 | 0.59 | 0.46* | 0.72 | 0.00 | 0.72 |
| 46.85 | 0.27 | 0.59 | 0.46* | 0.71 | 0.00 | 0.71 |
| 46.90 | 0.27 | 0.59 | 0.46* | 0.70 | 0.00 | 0.70 |
| 46.95 | 0.27 | 0.59 | 0.45* | 0.69 | 0.00 | 0.69 |
| 47.00 | 0.27 | 0.59 | 0.45* | 0.69 | 0.00 | 0.69 |
| 47.05 | 0.26 | 0.59 | 0.45* | 0.68 | 0.00 | 0.68 |
| 47.10 | 0.26 | 0.59 | 0.45* | 0.67 | 0.00 | 0.67 |
| 47.15 | 0.26 | 0.59 | 0.45* | 0.66 | 0.00 | 0.66 |
| 47.20 | 0.26 | 0.59 | 0.44* | 0.66 | 0.00 | 0.66 |
| 47.25 | 0.26 | 0.59 | 0.44* | 0.65 | 0.00 | 0.65 |
| 47.30 | 0.26 | 0.59 | 0.44* | 0.64 | 0.00 | 0.64 |
| 47.35 | 0.26 | 0.59 | 0.44* | 0.63 | 0.00 | 0.63 |
| 47.40 | 0.26 | 0.59 | 0.44* | 0.63 | 0.00 | 0.63 |
| 47.45 | 0.26 | 0.59 | 0.44* | 0.62 | 0.00 | 0.62 |
| 47.50 | 0.25 | 0.59 | 0.43* | 0.61 | 0.00 | 0.61 |
| 47.55 | 0.25 | 0.59 | 0.43* | 0.60 | 0.00 | 0.60 |
| 47.60 | 0.25 | 0.59 | 0.43* | 0.59 | 0.00 | 0.59 |
| 47.65 | 0.25 | 0.59 | 0.43* | 0.59 | 0.00 | 0.59 |
| 47.70 | 0.25 | 0.59 | 0.43* | 0.58 | 0.00 | 0.58 |
| 47.75 | 0.25 | 0.59 | 0.43* | 0.57 | 0.00 | 0.57 |
| 47.80 | 0.25 | 0.59 | 0.42* | 0.56 | 0.00 | 0.56 |
| 47.85 | 0.25 | 0.59 | 0.42* | 0.55 | 0.00 | 0.55 |
| 47.90 | 0.25 | 0.59 | 0.42* | 0.55 | 0.00 | 0.55 |
| 47.95 | 0.25 | 0.59 | 0.42* | 0.54 | 0.00 | 0.54 |
| 48.00 | 0.24 | 0.59 | 0.42* | 0.53 | 0.00 | 0.53 |
| 48.05 | 0.24 | 0.58 | 0.42* | 0.52 | 0.00 | 0.52 |
| 48.10 | 0.24 | 0.58 | 0.41* | 0.51 | 0.00 | 0.51 |
| 48.15 | 0.24 | 0.58 | 0.41* | 0.51 | 0.00 | 0.51 |
| 48.20 | 0.24 | 0.58 | 0.41* | 0.50 | 0.00 | 0.50 |
| 48.25 | 0.24 | 0.58 | 0.41* | 0.49 | 0.00 | 0.49 |
| 48.30 | 0.24 | 0.58 | 0.41* | 0.48 | 0.00 | 0.48 |
| 48.35 | 0.24 | 0.58 | 0.41* | 0.47 | 0.00 | 0.47 |
| 48.40 | 0.24 | 0.58 | 0.40* | 0.46 | 0.00 | 0.46 |
| 48.45 | 0.24 | 0.58 | 0.40* | 0.46 | 0.00 | 0.46 |
| 48.50 | 0.23 | 0.58 | 0.40* | 0.45 | 0.00 | 0.45 |
| 48.55 | 0.23 | 0.58 | 0.40* | 0.44 | 0.00 | 0.44 |
| 48.60 | 0.23 | 0.58 | 0.40* | 0.43 | 0.00 | 0.43 |
| 48.65 | 0.23 | 0.58 | 0.40* | 0.42 | 0.00 | 0.42 |
| 48.70 | 0.23 | 0.58 | 0.40* | 0.41 | 0.00 | 0.41 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 48.75 | 0.23 | 0.58 | 0.39* | 0.41 | 0.00 | 0.41 |
| 48.80 | 0.23 | 0.58 | 0.39* | 0.40 | 0.00 | 0.40 |
| 48.85 | 0.23 | 0.58 | 0.39* | 0.39 | 0.00 | 0.39 |
| 48.90 | 0.23 | 0.58 | 0.39* | 0.38 | 0.00 | 0.38 |
| 48.95 | 0.23 | 0.58 | 0.39* | 0.37 | 0.00 | 0.37 |
| 49.00 | 0.23 | 0.58 | 0.39* | 0.36 | 0.00 | 0.36 |
| 49.05 | 0.22 | 0.58 | 0.39* | 0.35 | 0.00 | 0.35 |
| 49.10 | 0.22 | 0.58 | 0.38* | 0.35 | 0.00 | 0.35 |
| 49.15 | 0.22 | 0.58 | 0.38* | 0.34 | 0.00 | 0.34 |
| 49.20 | 0.22 | 0.58 | 0.38* | 0.33 | 0.00 | 0.33 |
| 49.25 | 0.22 | 0.58 | 0.38* | 0.32 | 0.00 | 0.32 |
| 49.30 | 0.22 | 0.58 | 0.38* | 0.31 | 0.00 | 0.31 |
| 49.35 | 0.22 | 0.58 | 0.38* | 0.30 | 0.00 | 0.30 |
| 49.40 | 0.22 | 0.58 | 0.38* | 0.29 | 0.00 | 0.29 |
| 49.45 | 0.22 | 0.58 | 0.37* | 0.28 | 0.00 | 0.28 |
| 49.50 | 0.22 | 0.58 | 0.37* | 0.28 | 0.00 | 0.28 |
| 49.55 | 0.22 | 0.58 | 0.37* | 0.27 | 0.00 | 0.27 |
| 49.60 | 0.21 | 0.58 | 0.37* | 0.26 | 0.00 | 0.26 |
| 49.65 | 0.21 | 0.58 | 0.37* | 0.25 | 0.00 | 0.25 |
| 49.70 | 0.21 | 0.58 | 0.37* | 0.24 | 0.00 | 0.24 |
| 49.75 | 0.21 | 0.58 | 0.37* | 0.23 | 0.00 | 0.23 |
| 49.80 | 0.21 | 0.58 | 0.36* | 0.22 | 0.00 | 0.22 |
| 49.85 | 0.21 | 0.58 | 0.36* | 0.21 | 0.00 | 0.21 |
| 49.90 | 0.21 | 0.58 | 0.36* | 0.20 | 0.00 | 0.20 |
| 49.95 | 0.21 | 0.58 | 0.36* | 0.19 | 0.00 | 0.19 |
| 50.00 | 0.21 | 0.58 | 0.36* | 0.19 | 0.00 | 0.19 |
| 50.05 | 0.21 | 0.58 | 0.36* | 0.18 | 0.00 | 0.18 |
| 50.10 | 0.21 | 0.58 | 0.36* | 0.17 | 0.00 | 0.17 |
| 50.15 | 0.21 | 0.58 | 0.36* | 0.16 | 0.00 | 0.16 |
| 50.20 | 0.21 | 0.58 | 0.36* | 0.15 | 0.00 | 0.15 |
| 50.25 | 0.21 | 0.58 | 0.36* | 0.14 | 0.00 | 0.14 |
| 50.30 | 0.21 | 0.58 | 0.36* | 0.13 | 0.00 | 0.13 |
| 50.35 | 0.21 | 0.58 | 0.36* | 0.12 | 0.00 | 0.12 |
| 50.40 | 0.21 | 0.58 | 0.36* | 0.11 | 0.00 | 0.11 |
| 50.45 | 0.21 | 0.58 | 0.36* | 0.10 | 0.00 | 0.10 |
| 50.50 | 0.21 | 0.58 | 0.36* | 0.09 | 0.00 | 0.09 |
| 50.55 | 0.21 | 0.58 | 0.36* | 0.08 | 0.00 | 0.08 |
| 50.60 | 0.21 | 0.58 | 0.36* | 0.07 | 0.00 | 0.07 |
| 50.65 | 0.21 | 0.58 | 0.36* | 0.06 | 0.00 | 0.06 |
| 50.70 | 0.21 | 0.58 | 0.36* | 0.06 | 0.00 | 0.06 |
| 50.75 | 0.21 | 0.58 | 0.36* | 0.05 | 0.00 | 0.05 |
| 50.80 | 0.21 | 0.58 | 0.36* | 0.04 | 0.00 | 0.04 |
| 50.85 | 0.21 | 0.58 | 0.36* | 0.03 | 0.00 | 0.03 |
| 50.90 | 0.21 | 0.58 | 0.36* | 0.02 | 0.00 | 0.02 |
| 50.95 | 0.21 | 0.58 | 0.36* | 0.01 | 0.00 | 0.01 |
| 51.00 | 0.21 | 0.58 | 0.36* | 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.

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

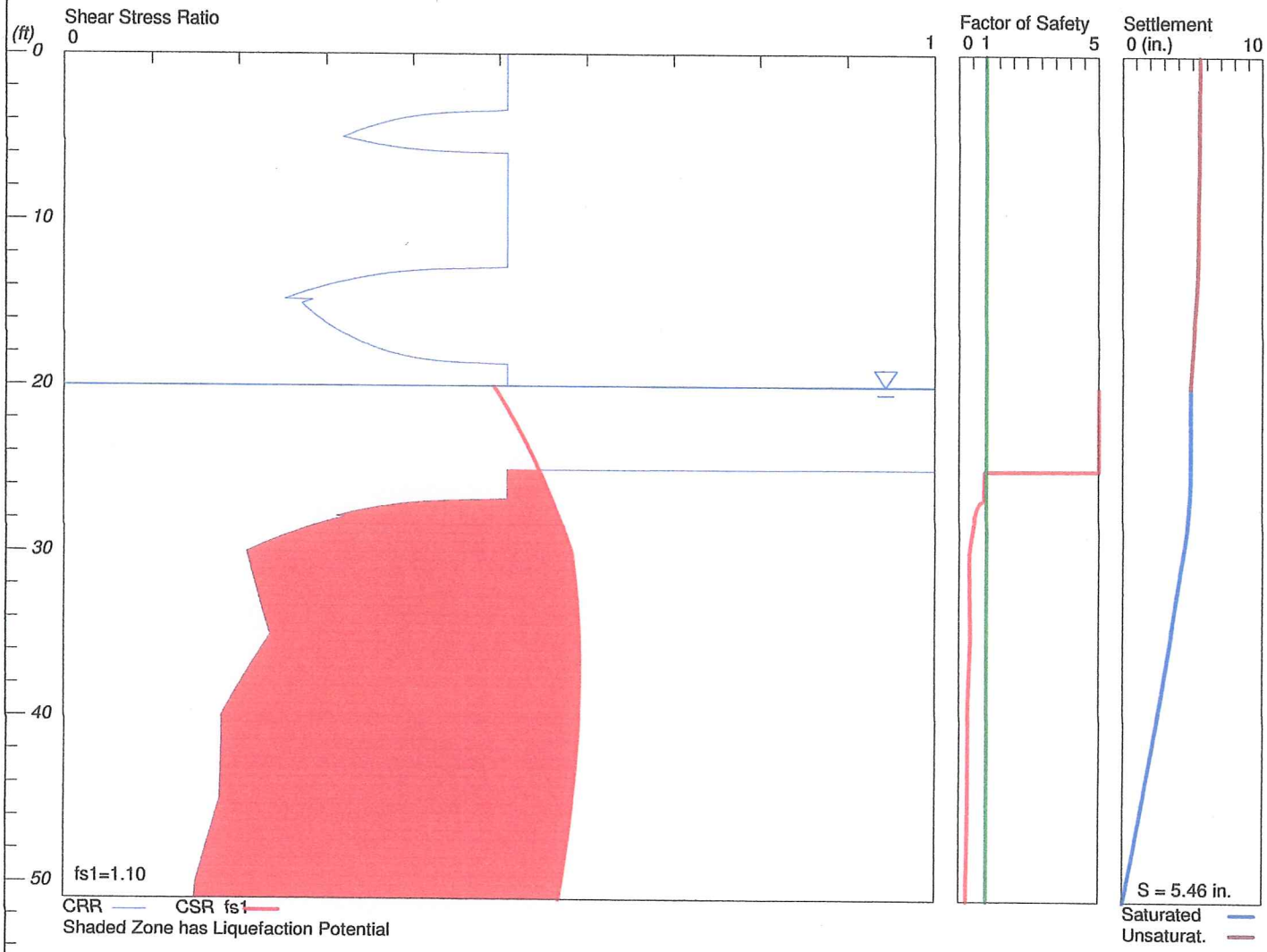
| | |
|---|---|
| CRRm | Cyclic resistance ratio from soils |
| CSRsf | Cyclic stress ratio induced by a given earthquake (with user request factor of safety) |
| F.S. | Factor of Safety against liquefaction, F.S.=CRRm/CSRsf |
| S_sat | Settlement from saturated sands |
| S_dry | Settlement from Unsaturated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

# Liquefaction Analysis

## 544-21005

*Hole No.=BH-2  Water Depth=20 ft  Surface Elev.=-75*

*Magnitude=7.45*
*Acceleration=0.724g*



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LIQUEFACTION ANALYSIS SUMMARY



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Input File Name: C:\Users\jminor\Documents\Liquefy5\544-21005 BH-2 GW 20.liq
Title: 544-21005
Subtitle: APN 780-330-004

Surface Elev.=-75
Hole No.=BH-2
Depth of Hole= 51.00 ft
Water Table during Earthquake= 20.00 ft
Water Table during In-Situ Testing= 19.50 ft
Max. Acceleration= 0.72 g
Earthquake Magnitude= 7.45

Input Data:
Surface Elev.=-75
Hole No.=BH-2
Depth of Hole=51.00 ft
Water Table during Earthquake= 20.00 ft
Water Table during In-Situ Testing= 19.50 ft
Max. Acceleration=0.72 g
Earthquake Magnitude=7.45
No-Liquefiable Soils: Based on Analysis

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 = 1.25
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1.1
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: Yes*

* Recommended Options

In-Situ Test Data:

| Depth | SPT | gamma | Fines |
|---|---|---|---|

| ft | | pcf | % |
|---|---|---|---|
| 0.00 | 16.66 | 100.10 | 32.20 |
| 2.00 | 16.66 | 100.10 | 32.20 |
| 5.00 | 9.00 | 116.20 | 56.50 |
| 10.00 | 19.33 | 116.20 | 63.90 |
| 15.00 | 17.00 | 122.70 | 11.10 |
| 20.00 | 8.66 | 122.70 | NoLiq |
| 25.00 | 13.00 | 128.10 | NoLiq |
| 30.00 | 10.66 | 128.10 | 36.90 |
| 35.00 | 11.00 | 128.10 | 47.20 |
| 40.00 | 9.33 | 128.10 | 36.50 |
| 45.00 | 15.00 | 128.10 | 16.80 |
| 50.00 | 15.00 | 128.10 | 9.20 |

Output Results:

Settlement of Saturated Sands=4.82 in.
Settlement of Unsaturated Sands=0.64 in.
Total Settlement of Saturated and Unsaturated Sands=5.46 in.
Differential Settlement=2.732 to 3.607 in.

| Depth ft | CRRm | CSRfs | F.S. | S_sat. in. | S_dry in. | S_all in. |
|---|---|---|---|---|---|---|
| 0.00 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.05 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.10 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.15 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.20 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.25 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.30 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.35 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.40 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.45 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.50 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.55 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.60 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.65 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.70 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.75 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.80 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.85 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.90 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 0.95 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.00 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.05 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.10 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.15 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.20 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.25 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.30 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.35 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.40 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.45 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.50 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.55 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.60 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.65 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.70 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.75 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.80 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.85 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.90 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 1.95 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.00 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.05 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.10 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.15 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.20 | 0.51 | 0.52 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.64 | 5.46 |
| 2.40 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.45 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.50 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.55 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.60 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.65 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.70 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.75 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.80 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.85 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.90 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 2.95 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.00 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.05 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.10 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.15 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.20 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.46 |
| 3.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.40 | 0.50 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.45 | 0.47 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.50 | 0.45 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.55 | 0.43 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.60 | 0.42 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.65 | 0.41 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.70 | 0.40 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3.75 | 0.40 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.80 | 0.39 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.85 | 0.39 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.90 | 0.38 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 3.95 | 0.38 | 0.51 | 5.00 | 4.82 | 0.63 | 5.45 |
| 4.00 | 0.37 | 0.51 | 5.00 | 4.82 | 0.62 | 5.45 |
| 4.05 | 0.37 | 0.51 | 5.00 | 4.82 | 0.62 | 5.45 |
| 4.10 | 0.37 | 0.51 | 5.00 | 4.82 | 0.62 | 5.45 |
| 4.15 | 0.36 | 0.51 | 5.00 | 4.82 | 0.62 | 5.45 |
| 4.20 | 0.36 | 0.51 | 5.00 | 4.82 | 0.62 | 5.45 |
| 4.25 | 0.36 | 0.51 | 5.00 | 4.82 | 0.62 | 5.44 |
| 4.30 | 0.35 | 0.51 | 5.00 | 4.82 | 0.62 | 5.44 |
| 4.35 | 0.35 | 0.51 | 5.00 | 4.82 | 0.62 | 5.44 |
| 4.40 | 0.35 | 0.51 | 5.00 | 4.82 | 0.62 | 5.44 |
| 4.45 | 0.35 | 0.51 | 5.00 | 4.82 | 0.61 | 5.44 |
| 4.50 | 0.34 | 0.51 | 5.00 | 4.82 | 0.61 | 5.44 |
| 4.55 | 0.34 | 0.51 | 5.00 | 4.82 | 0.61 | 5.44 |
| 4.60 | 0.34 | 0.51 | 5.00 | 4.82 | 0.61 | 5.43 |
| 4.65 | 0.33 | 0.51 | 5.00 | 4.82 | 0.61 | 5.43 |
| 4.70 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.43 |
| 4.75 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.43 |
| 4.80 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.43 |
| 4.85 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.43 |
| 4.90 | 0.32 | 0.51 | 5.00 | 4.82 | 0.60 | 5.43 |
| 4.95 | 0.32 | 0.51 | 5.00 | 4.82 | 0.60 | 5.43 |
| 5.00 | 0.32 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.05 | 0.32 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.10 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.15 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.20 | 0.33 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.25 | 0.34 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.30 | 0.34 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.35 | 0.35 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.40 | 0.35 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.45 | 0.36 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.50 | 0.36 | 0.51 | 5.00 | 4.82 | 0.60 | 5.42 |
| 5.55 | 0.37 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.60 | 0.38 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.65 | 0.38 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.70 | 0.39 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.75 | 0.40 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.80 | 0.42 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.85 | 0.43 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.90 | 0.46 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 5.95 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.42 |
| 6.00 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.05 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.10 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.15 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.20 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |

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|---|---|---|---|---|---|---|
| 6.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.40 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.45 | 0.51 | 0.51 | 5.00 | 4.82 | 0.59 | 5.41 |
| 6.50 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.55 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.60 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.65 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.70 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.75 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.80 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.85 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.41 |
| 6.90 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 6.95 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.00 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.05 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.10 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.15 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.20 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.58 | 5.40 |
| 7.40 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.40 |
| 7.45 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.40 |
| 7.50 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.40 |
| 7.55 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.40 |
| 7.60 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.40 |
| 7.65 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.40 |
| 7.70 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 7.75 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 7.80 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 7.85 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 7.90 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 7.95 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 8.00 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 8.05 | 0.51 | 0.51 | 5.00 | 4.82 | 0.57 | 5.39 |
| 8.10 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.15 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.20 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.40 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.39 |
| 8.45 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.50 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.55 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.60 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.65 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.70 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |

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|---|---|---|---|---|---|---|
| 8.75 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.80 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.85 | 0.51 | 0.51 | 5.00 | 4.82 | 0.56 | 5.38 |
| 8.90 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 8.95 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 9.00 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 9.05 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 9.10 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 9.15 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 9.20 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.38 |
| 9.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.40 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.45 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.50 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.55 | 0.51 | 0.51 | 5.00 | 4.82 | 0.55 | 5.37 |
| 9.60 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.37 |
| 9.65 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.37 |
| 9.70 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.37 |
| 9.75 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.37 |
| 9.80 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.37 |
| 9.85 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.36 |
| 9.90 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.36 |
| 9.95 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.36 |
| 10.00 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.36 |
| 10.05 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.36 |
| 10.10 | 0.51 | 0.51 | 5.00 | 4.82 | 0.54 | 5.36 |
| 10.15 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.36 |
| 10.20 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.36 |
| 10.25 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.36 |
| 10.30 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.36 |
| 10.35 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.36 |
| 10.40 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.45 | 0.51 | 0.51 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.50 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.55 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.60 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.65 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.70 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.75 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.80 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.85 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.90 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 10.95 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 11.00 | 0.51 | 0.50 | 5.00 | 4.82 | 0.53 | 5.35 |
| 11.05 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.10 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.15 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.20 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |

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|---|---|---|---|---|---|---|
| 11.25 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.30 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.35 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.40 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.45 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.35 |
| 11.50 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.55 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.60 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.65 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.70 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.75 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.80 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.85 | 0.51 | 0.50 | 5.00 | 4.82 | 0.52 | 5.34 |
| 11.90 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.34 |
| 11.95 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.34 |
| 12.00 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.34 |
| 12.05 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.34 |
| 12.10 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.34 |
| 12.15 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.33 |
| 12.20 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.33 |
| 12.25 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.33 |
| 12.30 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.33 |
| 12.35 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.33 |
| 12.40 | 0.51 | 0.50 | 5.00 | 4.82 | 0.51 | 5.33 |
| 12.45 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.33 |
| 12.50 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.33 |
| 12.55 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.33 |
| 12.60 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.33 |
| 12.65 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.32 |
| 12.70 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.32 |
| 12.75 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.32 |
| 12.80 | 0.51 | 0.50 | 5.00 | 4.82 | 0.50 | 5.32 |
| 12.85 | 0.49 | 0.50 | 5.00 | 4.82 | 0.49 | 5.32 |
| 12.90 | 0.44 | 0.50 | 5.00 | 4.82 | 0.49 | 5.32 |
| 12.95 | 0.42 | 0.50 | 5.00 | 4.82 | 0.49 | 5.32 |
| 13.00 | 0.41 | 0.50 | 5.00 | 4.82 | 0.49 | 5.31 |
| 13.05 | 0.39 | 0.50 | 5.00 | 4.82 | 0.49 | 5.31 |
| 13.10 | 0.38 | 0.50 | 5.00 | 4.82 | 0.49 | 5.31 |
| 13.15 | 0.38 | 0.50 | 5.00 | 4.82 | 0.49 | 5.31 |
| 13.20 | 0.37 | 0.50 | 5.00 | 4.82 | 0.48 | 5.31 |
| 13.25 | 0.36 | 0.50 | 5.00 | 4.82 | 0.48 | 5.31 |
| 13.30 | 0.36 | 0.50 | 5.00 | 4.82 | 0.48 | 5.30 |
| 13.35 | 0.35 | 0.50 | 5.00 | 4.82 | 0.48 | 5.30 |
| 13.40 | 0.35 | 0.50 | 5.00 | 4.82 | 0.48 | 5.30 |
| 13.45 | 0.34 | 0.50 | 5.00 | 4.82 | 0.47 | 5.30 |
| 13.50 | 0.34 | 0.50 | 5.00 | 4.82 | 0.47 | 5.30 |
| 13.55 | 0.33 | 0.50 | 5.00 | 4.82 | 0.47 | 5.30 |
| 13.60 | 0.33 | 0.50 | 5.00 | 4.82 | 0.47 | 5.29 |
| 13.65 | 0.32 | 0.50 | 5.00 | 4.82 | 0.47 | 5.29 |
| 13.70 | 0.32 | 0.50 | 5.00 | 4.82 | 0.46 | 5.29 |

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|---|---|---|---|---|---|---|
| 13.75 | 0.31 | 0.50 | 5.00 | 4.82 | 0.46 | 5.29 |
| 13.80 | 0.31 | 0.50 | 5.00 | 4.82 | 0.46 | 5.28 |
| 13.85 | 0.31 | 0.50 | 5.00 | 4.82 | 0.46 | 5.28 |
| 13.90 | 0.30 | 0.50 | 5.00 | 4.82 | 0.45 | 5.28 |
| 13.95 | 0.30 | 0.50 | 5.00 | 4.82 | 0.45 | 5.28 |
| 14.00 | 0.30 | 0.50 | 5.00 | 4.82 | 0.45 | 5.27 |
| 14.05 | 0.29 | 0.50 | 5.00 | 4.82 | 0.45 | 5.27 |
| 14.10 | 0.29 | 0.50 | 5.00 | 4.82 | 0.44 | 5.27 |
| 14.15 | 0.29 | 0.50 | 5.00 | 4.82 | 0.44 | 5.26 |
| 14.20 | 0.28 | 0.50 | 5.00 | 4.82 | 0.44 | 5.26 |
| 14.25 | 0.28 | 0.50 | 5.00 | 4.82 | 0.43 | 5.26 |
| 14.30 | 0.28 | 0.50 | 5.00 | 4.82 | 0.43 | 5.26 |
| 14.35 | 0.27 | 0.50 | 5.00 | 4.82 | 0.43 | 5.25 |
| 14.40 | 0.27 | 0.50 | 5.00 | 4.82 | 0.42 | 5.25 |
| 14.45 | 0.27 | 0.50 | 5.00 | 4.82 | 0.42 | 5.24 |
| 14.50 | 0.26 | 0.50 | 5.00 | 4.82 | 0.42 | 5.24 |
| 14.55 | 0.26 | 0.50 | 5.00 | 4.82 | 0.41 | 5.24 |
| 14.60 | 0.26 | 0.50 | 5.00 | 4.82 | 0.41 | 5.23 |
| 14.65 | 0.26 | 0.50 | 5.00 | 4.82 | 0.40 | 5.23 |
| 14.70 | 0.25 | 0.50 | 5.00 | 4.82 | 0.40 | 5.22 |
| 14.75 | 0.25 | 0.50 | 5.00 | 4.82 | 0.39 | 5.22 |
| 14.80 | 0.28 | 0.50 | 5.00 | 4.82 | 0.39 | 5.21 |
| 14.85 | 0.28 | 0.50 | 5.00 | 4.82 | 0.39 | 5.21 |
| 14.90 | 0.28 | 0.50 | 5.00 | 4.82 | 0.38 | 5.21 |
| 14.95 | 0.27 | 0.50 | 5.00 | 4.82 | 0.38 | 5.20 |
| 15.00 | 0.27 | 0.50 | 5.00 | 4.82 | 0.38 | 5.20 |
| 15.05 | 0.27 | 0.50 | 5.00 | 4.82 | 0.37 | 5.20 |
| 15.10 | 0.27 | 0.50 | 5.00 | 4.82 | 0.37 | 5.19 |
| 15.15 | 0.27 | 0.50 | 5.00 | 4.82 | 0.36 | 5.19 |
| 15.20 | 0.28 | 0.50 | 5.00 | 4.82 | 0.36 | 5.18 |
| 15.25 | 0.28 | 0.50 | 5.00 | 4.82 | 0.35 | 5.18 |
| 15.30 | 0.28 | 0.50 | 5.00 | 4.82 | 0.35 | 5.18 |
| 15.35 | 0.28 | 0.50 | 5.00 | 4.82 | 0.35 | 5.17 |
| 15.40 | 0.28 | 0.50 | 5.00 | 4.82 | 0.34 | 5.17 |
| 15.45 | 0.28 | 0.50 | 5.00 | 4.82 | 0.34 | 5.16 |
| 15.50 | 0.28 | 0.50 | 5.00 | 4.82 | 0.33 | 5.16 |
| 15.55 | 0.28 | 0.50 | 5.00 | 4.82 | 0.33 | 5.15 |
| 15.60 | 0.28 | 0.50 | 5.00 | 4.82 | 0.33 | 5.15 |
| 15.65 | 0.29 | 0.50 | 5.00 | 4.82 | 0.32 | 5.15 |
| 15.70 | 0.29 | 0.50 | 5.00 | 4.82 | 0.32 | 5.14 |
| 15.75 | 0.29 | 0.50 | 5.00 | 4.82 | 0.31 | 5.14 |
| 15.80 | 0.29 | 0.50 | 5.00 | 4.82 | 0.31 | 5.13 |
| 15.85 | 0.29 | 0.50 | 5.00 | 4.82 | 0.31 | 5.13 |
| 15.90 | 0.29 | 0.50 | 5.00 | 4.82 | 0.30 | 5.13 |
| 15.95 | 0.29 | 0.50 | 5.00 | 4.82 | 0.30 | 5.12 |
| 16.00 | 0.29 | 0.50 | 5.00 | 4.82 | 0.29 | 5.12 |
| 16.05 | 0.30 | 0.50 | 5.00 | 4.82 | 0.29 | 5.11 |
| 16.10 | 0.30 | 0.50 | 5.00 | 4.82 | 0.29 | 5.11 |
| 16.15 | 0.30 | 0.50 | 5.00 | 4.82 | 0.28 | 5.11 |
| 16.20 | 0.30 | 0.50 | 5.00 | 4.82 | 0.28 | 5.10 |

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|---|---|---|---|---|---|---|
| 16.25 | 0.30 | 0.50 | 5.00 | 4.82 | 0.27 | 5.10 |
| 16.30 | 0.30 | 0.50 | 5.00 | 4.82 | 0.27 | 5.09 |
| 16.35 | 0.30 | 0.50 | 5.00 | 4.82 | 0.26 | 5.09 |
| 16.40 | 0.31 | 0.50 | 5.00 | 4.82 | 0.26 | 5.09 |
| 16.45 | 0.31 | 0.50 | 5.00 | 4.82 | 0.26 | 5.08 |
| 16.50 | 0.31 | 0.50 | 5.00 | 4.82 | 0.25 | 5.08 |
| 16.55 | 0.31 | 0.50 | 5.00 | 4.82 | 0.25 | 5.07 |
| 16.60 | 0.31 | 0.50 | 5.00 | 4.82 | 0.24 | 5.07 |
| 16.65 | 0.31 | 0.50 | 5.00 | 4.82 | 0.24 | 5.07 |
| 16.70 | 0.31 | 0.50 | 5.00 | 4.82 | 0.24 | 5.06 |
| 16.75 | 0.32 | 0.50 | 5.00 | 4.82 | 0.23 | 5.06 |
| 16.80 | 0.32 | 0.50 | 5.00 | 4.82 | 0.23 | 5.05 |
| 16.85 | 0.32 | 0.50 | 5.00 | 4.82 | 0.22 | 5.05 |
| 16.90 | 0.32 | 0.50 | 5.00 | 4.82 | 0.22 | 5.05 |
| 16.95 | 0.32 | 0.50 | 5.00 | 4.82 | 0.22 | 5.04 |
| 17.00 | 0.33 | 0.50 | 5.00 | 4.82 | 0.21 | 5.04 |
| 17.05 | 0.33 | 0.50 | 5.00 | 4.82 | 0.21 | 5.03 |
| 17.10 | 0.33 | 0.50 | 5.00 | 4.82 | 0.20 | 5.03 |
| 17.15 | 0.33 | 0.50 | 5.00 | 4.82 | 0.20 | 5.03 |
| 17.20 | 0.33 | 0.50 | 5.00 | 4.82 | 0.20 | 5.02 |
| 17.25 | 0.33 | 0.50 | 5.00 | 4.82 | 0.19 | 5.02 |
| 17.30 | 0.34 | 0.50 | 5.00 | 4.82 | 0.19 | 5.01 |
| 17.35 | 0.34 | 0.50 | 5.00 | 4.82 | 0.19 | 5.01 |
| 17.40 | 0.34 | 0.50 | 5.00 | 4.82 | 0.18 | 5.01 |
| 17.45 | 0.34 | 0.50 | 5.00 | 4.82 | 0.18 | 5.00 |
| 17.50 | 0.35 | 0.50 | 5.00 | 4.82 | 0.17 | 5.00 |
| 17.55 | 0.35 | 0.50 | 5.00 | 4.82 | 0.17 | 4.99 |
| 17.60 | 0.35 | 0.50 | 5.00 | 4.82 | 0.17 | 4.99 |
| 17.65 | 0.35 | 0.50 | 5.00 | 4.82 | 0.16 | 4.99 |
| 17.70 | 0.36 | 0.50 | 5.00 | 4.82 | 0.16 | 4.98 |
| 17.75 | 0.36 | 0.50 | 5.00 | 4.82 | 0.15 | 4.98 |
| 17.80 | 0.36 | 0.50 | 5.00 | 4.82 | 0.15 | 4.98 |
| 17.85 | 0.36 | 0.50 | 5.00 | 4.82 | 0.15 | 4.97 |
| 17.90 | 0.37 | 0.50 | 5.00 | 4.82 | 0.14 | 4.97 |
| 17.95 | 0.37 | 0.50 | 5.00 | 4.82 | 0.14 | 4.96 |
| 18.00 | 0.37 | 0.50 | 5.00 | 4.82 | 0.14 | 4.96 |
| 18.05 | 0.38 | 0.50 | 5.00 | 4.82 | 0.13 | 4.96 |
| 18.10 | 0.38 | 0.50 | 5.00 | 4.82 | 0.13 | 4.95 |
| 18.15 | 0.39 | 0.50 | 5.00 | 4.82 | 0.12 | 4.95 |
| 18.20 | 0.39 | 0.50 | 5.00 | 4.82 | 0.12 | 4.95 |
| 18.25 | 0.39 | 0.50 | 5.00 | 4.82 | 0.12 | 4.94 |
| 18.30 | 0.40 | 0.50 | 5.00 | 4.82 | 0.11 | 4.94 |
| 18.35 | 0.41 | 0.50 | 5.00 | 4.82 | 0.11 | 4.93 |
| 18.40 | 0.41 | 0.50 | 5.00 | 4.82 | 0.11 | 4.93 |
| 18.45 | 0.42 | 0.50 | 5.00 | 4.82 | 0.10 | 4.93 |
| 18.50 | 0.43 | 0.50 | 5.00 | 4.82 | 0.10 | 4.92 |
| 18.55 | 0.44 | 0.50 | 5.00 | 4.82 | 0.10 | 4.92 |
| 18.60 | 0.46 | 0.50 | 5.00 | 4.82 | 0.09 | 4.92 |
| 18.65 | 0.49 | 0.50 | 5.00 | 4.82 | 0.09 | 4.91 |
| 18.70 | 0.51 | 0.50 | 5.00 | 4.82 | 0.08 | 4.91 |

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|---|---|---|---|---|---|---|
| 18.75 | 0.51 | 0.50 | 5.00 | 4.82 | 0.08 | 4.91 |
| 18.80 | 0.51 | 0.49 | 5.00 | 4.82 | 0.08 | 4.90 |
| 18.85 | 0.51 | 0.49 | 5.00 | 4.82 | 0.07 | 4.90 |
| 18.90 | 0.51 | 0.49 | 5.00 | 4.82 | 0.07 | 4.89 |
| 18.95 | 0.51 | 0.49 | 5.00 | 4.82 | 0.07 | 4.89 |
| 19.00 | 0.51 | 0.49 | 5.00 | 4.82 | 0.06 | 4.89 |
| 19.05 | 0.51 | 0.49 | 5.00 | 4.82 | 0.06 | 4.88 |
| 19.10 | 0.51 | 0.49 | 5.00 | 4.82 | 0.06 | 4.88 |
| 19.15 | 0.51 | 0.49 | 5.00 | 4.82 | 0.05 | 4.88 |
| 19.20 | 0.51 | 0.49 | 5.00 | 4.82 | 0.05 | 4.87 |
| 19.25 | 0.51 | 0.49 | 5.00 | 4.82 | 0.05 | 4.87 |
| 19.30 | 0.51 | 0.49 | 5.00 | 4.82 | 0.04 | 4.87 |
| 19.35 | 0.51 | 0.49 | 5.00 | 4.82 | 0.04 | 4.86 |
| 19.40 | 0.51 | 0.49 | 5.00 | 4.82 | 0.04 | 4.86 |
| 19.45 | 0.51 | 0.49 | 5.00 | 4.82 | 0.03 | 4.86 |
| 19.50 | 0.51 | 0.49 | 5.00 | 4.82 | 0.03 | 4.85 |
| 19.55 | 0.51 | 0.49 | 5.00 | 4.82 | 0.03 | 4.85 |
| 19.60 | 0.51 | 0.49 | 5.00 | 4.82 | 0.02 | 4.85 |
| 19.65 | 0.51 | 0.49 | 5.00 | 4.82 | 0.02 | 4.84 |
| 19.70 | 0.51 | 0.49 | 5.00 | 4.82 | 0.02 | 4.84 |
| 19.75 | 0.51 | 0.49 | 5.00 | 4.82 | 0.01 | 4.84 |
| 19.80 | 0.51 | 0.49 | 5.00 | 4.82 | 0.01 | 4.83 |
| 19.85 | 0.51 | 0.49 | 5.00 | 4.82 | 0.01 | 4.83 |
| 19.90 | 0.51 | 0.49 | 5.00 | 4.82 | 0.00 | 4.83 |
| 19.95 | 0.51 | 0.49 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.00 | 0.51 | 0.49 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.05 | 2.00 | 0.49 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.10 | 2.00 | 0.49 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.15 | 2.00 | 0.49 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.20 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.25 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.30 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.35 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.40 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.45 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.50 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.55 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.60 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.65 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.70 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.75 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.80 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.85 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.90 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 20.95 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.00 | 2.00 | 0.50 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.05 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.10 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.15 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.20 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |

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|---|---|---|---|---|---|---|
| 21.25 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.30 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.35 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.40 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.45 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.50 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.55 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.60 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.65 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.70 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.75 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.80 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.85 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.90 | 2.00 | 0.51 | 5.00 | 4.82 | 0.00 | 4.82 |
| 21.95 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.00 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.05 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.10 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.15 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.20 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.25 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.30 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.35 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.40 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.45 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.50 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.55 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.60 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.65 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.70 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.75 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.80 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.85 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.90 | 2.00 | 0.52 | 5.00 | 4.82 | 0.00 | 4.82 |
| 22.95 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.00 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.05 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.10 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.15 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.20 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.25 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.30 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.35 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.40 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.45 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.50 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.55 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.60 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.65 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.70 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |

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|---|---|---|---|---|---|---|
| 23.75 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.80 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.85 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.90 | 2.00 | 0.53 | 5.00 | 4.82 | 0.00 | 4.82 |
| 23.95 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.00 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.05 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.10 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.15 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.20 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.25 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.30 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.35 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.40 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.45 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.50 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.55 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.60 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.65 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.70 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.75 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.80 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.85 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.90 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 24.95 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 25.00 | 2.00 | 0.54 | 5.00 | 4.82 | 0.00 | 4.82 |
| 25.05 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.10 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.15 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.20 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.25 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.30 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.35 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.40 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.45 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.50 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.55 | 0.51 | 0.55 | 0.93* | 4.82 | 0.00 | 4.82 |
| 25.60 | 0.51 | 0.55 | 0.92* | 4.82 | 0.00 | 4.82 |
| 25.65 | 0.51 | 0.55 | 0.92* | 4.82 | 0.00 | 4.82 |
| 25.70 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 25.75 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 25.80 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 25.85 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 25.90 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 25.95 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 26.00 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 26.05 | 0.51 | 0.55 | 0.92* | 4.81 | 0.00 | 4.81 |
| 26.10 | 0.51 | 0.55 | 0.92* | 4.80 | 0.00 | 4.80 |
| 26.15 | 0.51 | 0.55 | 0.92* | 4.80 | 0.00 | 4.80 |
| 26.20 | 0.51 | 0.55 | 0.92* | 4.80 | 0.00 | 4.80 |

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|---|---|---|---|---|---|---|
| 26.25 | 0.51 | 0.56 | 0.92* | 4.80 | 0.00 | 4.80 |
| 26.30 | 0.51 | 0.56 | 0.92* | 4.80 | 0.00 | 4.80 |
| 26.35 | 0.51 | 0.56 | 0.91* | 4.79 | 0.00 | 4.79 |
| 26.40 | 0.51 | 0.56 | 0.91* | 4.79 | 0.00 | 4.79 |
| 26.45 | 0.51 | 0.56 | 0.91* | 4.79 | 0.00 | 4.79 |
| 26.50 | 0.51 | 0.56 | 0.91* | 4.78 | 0.00 | 4.78 |
| 26.55 | 0.51 | 0.56 | 0.91* | 4.78 | 0.00 | 4.78 |
| 26.60 | 0.51 | 0.56 | 0.91* | 4.78 | 0.00 | 4.78 |
| 26.65 | 0.51 | 0.56 | 0.91* | 4.77 | 0.00 | 4.77 |
| 26.70 | 0.51 | 0.56 | 0.91* | 4.77 | 0.00 | 4.77 |
| 26.75 | 0.51 | 0.56 | 0.91* | 4.76 | 0.00 | 4.76 |
| 26.80 | 0.51 | 0.56 | 0.91* | 4.76 | 0.00 | 4.76 |
| 26.85 | 0.48 | 0.56 | 0.86* | 4.76 | 0.00 | 4.76 |
| 26.90 | 0.44 | 0.56 | 0.79* | 4.75 | 0.00 | 4.75 |
| 26.95 | 0.42 | 0.56 | 0.75* | 4.75 | 0.00 | 4.75 |
| 27.00 | 0.41 | 0.56 | 0.72* | 4.74 | 0.00 | 4.74 |
| 27.05 | 0.40 | 0.56 | 0.70* | 4.74 | 0.00 | 4.74 |
| 27.10 | 0.39 | 0.56 | 0.69* | 4.73 | 0.00 | 4.73 |
| 27.15 | 0.38 | 0.56 | 0.67* | 4.73 | 0.00 | 4.73 |
| 27.20 | 0.37 | 0.56 | 0.66* | 4.72 | 0.00 | 4.72 |
| 27.25 | 0.37 | 0.56 | 0.65* | 4.72 | 0.00 | 4.72 |
| 27.30 | 0.36 | 0.56 | 0.64* | 4.71 | 0.00 | 4.71 |
| 27.35 | 0.35 | 0.56 | 0.63* | 4.70 | 0.00 | 4.70 |
| 27.40 | 0.35 | 0.56 | 0.62* | 4.70 | 0.00 | 4.70 |
| 27.45 | 0.34 | 0.56 | 0.61* | 4.69 | 0.00 | 4.69 |
| 27.50 | 0.34 | 0.56 | 0.60* | 4.69 | 0.00 | 4.69 |
| 27.55 | 0.33 | 0.57 | 0.59* | 4.68 | 0.00 | 4.68 |
| 27.60 | 0.33 | 0.57 | 0.58* | 4.67 | 0.00 | 4.67 |
| 27.65 | 0.33 | 0.57 | 0.58* | 4.67 | 0.00 | 4.67 |
| 27.70 | 0.32 | 0.57 | 0.57* | 4.66 | 0.00 | 4.66 |
| 27.75 | 0.32 | 0.57 | 0.56* | 4.66 | 0.00 | 4.66 |
| 27.80 | 0.31 | 0.57 | 0.56* | 4.65 | 0.00 | 4.65 |
| 27.85 | 0.31 | 0.57 | 0.55* | 4.64 | 0.00 | 4.64 |
| 27.90 | 0.32 | 0.57 | 0.56* | 4.64 | 0.00 | 4.64 |
| 27.95 | 0.32 | 0.57 | 0.56* | 4.63 | 0.00 | 4.63 |
| 28.00 | 0.31 | 0.57 | 0.55* | 4.62 | 0.00 | 4.62 |
| 28.05 | 0.31 | 0.57 | 0.54* | 4.62 | 0.00 | 4.62 |
| 28.10 | 0.31 | 0.57 | 0.54* | 4.61 | 0.00 | 4.61 |
| 28.15 | 0.30 | 0.57 | 0.53* | 4.60 | 0.00 | 4.60 |
| 28.20 | 0.30 | 0.57 | 0.52* | 4.60 | 0.00 | 4.60 |
| 28.25 | 0.30 | 0.57 | 0.52* | 4.59 | 0.00 | 4.59 |
| 28.30 | 0.29 | 0.57 | 0.51* | 4.58 | 0.00 | 4.58 |
| 28.35 | 0.29 | 0.57 | 0.51* | 4.58 | 0.00 | 4.58 |
| 28.40 | 0.29 | 0.57 | 0.50* | 4.57 | 0.00 | 4.57 |
| 28.45 | 0.28 | 0.57 | 0.50* | 4.56 | 0.00 | 4.56 |
| 28.50 | 0.28 | 0.57 | 0.49* | 4.55 | 0.00 | 4.55 |
| 28.55 | 0.28 | 0.57 | 0.48* | 4.55 | 0.00 | 4.55 |
| 28.60 | 0.27 | 0.57 | 0.48* | 4.54 | 0.00 | 4.54 |
| 28.65 | 0.27 | 0.57 | 0.47* | 4.53 | 0.00 | 4.53 |
| 28.70 | 0.27 | 0.57 | 0.47* | 4.52 | 0.00 | 4.52 |

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|---|---|---|---|---|---|---|
| 28.75 | 0.27 | 0.57 | 0.46* | 4.52 | 0.00 | 4.52 |
| 28.80 | 0.26 | 0.57 | 0.46* | 4.51 | 0.00 | 4.51 |
| 28.85 | 0.26 | 0.57 | 0.45* | 4.50 | 0.00 | 4.50 |
| 28.90 | 0.26 | 0.58 | 0.45* | 4.49 | 0.00 | 4.49 |
| 28.95 | 0.26 | 0.58 | 0.44* | 4.49 | 0.00 | 4.49 |
| 29.00 | 0.25 | 0.58 | 0.44* | 4.48 | 0.00 | 4.48 |
| 29.05 | 0.25 | 0.58 | 0.44* | 4.47 | 0.00 | 4.47 |
| 29.10 | 0.25 | 0.58 | 0.43* | 4.46 | 0.00 | 4.46 |
| 29.15 | 0.25 | 0.58 | 0.43* | 4.45 | 0.00 | 4.45 |
| 29.20 | 0.24 | 0.58 | 0.42* | 4.44 | 0.00 | 4.44 |
| 29.25 | 0.24 | 0.58 | 0.42* | 4.44 | 0.00 | 4.44 |
| 29.30 | 0.24 | 0.58 | 0.41* | 4.43 | 0.00 | 4.43 |
| 29.35 | 0.24 | 0.58 | 0.41* | 4.42 | 0.00 | 4.42 |
| 29.40 | 0.23 | 0.58 | 0.40* | 4.41 | 0.00 | 4.41 |
| 29.45 | 0.23 | 0.58 | 0.40* | 4.40 | 0.00 | 4.40 |
| 29.50 | 0.23 | 0.58 | 0.40* | 4.39 | 0.00 | 4.39 |
| 29.55 | 0.23 | 0.58 | 0.39* | 4.39 | 0.00 | 4.39 |
| 29.60 | 0.23 | 0.58 | 0.39* | 4.38 | 0.00 | 4.38 |
| 29.65 | 0.22 | 0.58 | 0.38* | 4.37 | 0.00 | 4.37 |
| 29.70 | 0.22 | 0.58 | 0.38* | 4.36 | 0.00 | 4.36 |
| 29.75 | 0.22 | 0.58 | 0.38* | 4.35 | 0.00 | 4.35 |
| 29.80 | 0.22 | 0.58 | 0.37* | 4.34 | 0.00 | 4.34 |
| 29.85 | 0.21 | 0.58 | 0.37* | 4.33 | 0.00 | 4.33 |
| 29.90 | 0.21 | 0.58 | 0.37* | 4.32 | 0.00 | 4.32 |
| 29.95 | 0.21 | 0.58 | 0.36* | 4.31 | 0.00 | 4.31 |
| 30.00 | 0.21 | 0.58 | 0.36* | 4.30 | 0.00 | 4.30 |
| 30.05 | 0.21 | 0.58 | 0.36* | 4.29 | 0.00 | 4.29 |
| 30.10 | 0.21 | 0.58 | 0.36* | 4.28 | 0.00 | 4.28 |
| 30.15 | 0.21 | 0.58 | 0.36* | 4.28 | 0.00 | 4.28 |
| 30.20 | 0.21 | 0.58 | 0.36* | 4.27 | 0.00 | 4.27 |
| 30.25 | 0.21 | 0.58 | 0.36* | 4.26 | 0.00 | 4.26 |
| 30.30 | 0.21 | 0.58 | 0.36* | 4.25 | 0.00 | 4.25 |
| 30.35 | 0.21 | 0.58 | 0.36* | 4.24 | 0.00 | 4.24 |
| 30.40 | 0.21 | 0.58 | 0.36* | 4.23 | 0.00 | 4.23 |
| 30.45 | 0.21 | 0.58 | 0.36* | 4.22 | 0.00 | 4.22 |
| 30.50 | 0.21 | 0.58 | 0.36* | 4.21 | 0.00 | 4.21 |
| 30.55 | 0.21 | 0.58 | 0.36* | 4.20 | 0.00 | 4.20 |
| 30.60 | 0.21 | 0.58 | 0.36* | 4.19 | 0.00 | 4.19 |
| 30.65 | 0.21 | 0.58 | 0.36* | 4.18 | 0.00 | 4.18 |
| 30.70 | 0.21 | 0.58 | 0.36* | 4.17 | 0.00 | 4.17 |
| 30.75 | 0.21 | 0.58 | 0.36* | 4.16 | 0.00 | 4.16 |
| 30.80 | 0.21 | 0.58 | 0.36* | 4.15 | 0.00 | 4.15 |
| 30.85 | 0.21 | 0.58 | 0.36* | 4.14 | 0.00 | 4.14 |
| 30.90 | 0.21 | 0.58 | 0.36* | 4.13 | 0.00 | 4.13 |
| 30.95 | 0.21 | 0.58 | 0.36* | 4.12 | 0.00 | 4.12 |
| 31.00 | 0.21 | 0.58 | 0.36* | 4.12 | 0.00 | 4.12 |
| 31.05 | 0.21 | 0.58 | 0.36* | 4.11 | 0.00 | 4.11 |
| 31.10 | 0.21 | 0.59 | 0.37* | 4.10 | 0.00 | 4.10 |
| 31.15 | 0.21 | 0.59 | 0.37* | 4.09 | 0.00 | 4.09 |
| 31.20 | 0.21 | 0.59 | 0.37* | 4.08 | 0.00 | 4.08 |

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|---|---|---|---|---|---|---|
| 31.25 | 0.21 | 0.59 | 0.37* | 4.07 | 0.00 | 4.07 |
| 31.30 | 0.21 | 0.59 | 0.37* | 4.06 | 0.00 | 4.06 |
| 31.35 | 0.21 | 0.59 | 0.37* | 4.05 | 0.00 | 4.05 |
| 31.40 | 0.22 | 0.59 | 0.37* | 4.04 | 0.00 | 4.04 |
| 31.45 | 0.22 | 0.59 | 0.37* | 4.03 | 0.00 | 4.03 |
| 31.50 | 0.22 | 0.59 | 0.37* | 4.02 | 0.00 | 4.02 |
| 31.55 | 0.22 | 0.59 | 0.37* | 4.01 | 0.00 | 4.01 |
| 31.60 | 0.22 | 0.59 | 0.37* | 4.00 | 0.00 | 4.00 |
| 31.65 | 0.22 | 0.59 | 0.37* | 4.00 | 0.00 | 4.00 |
| 31.70 | 0.22 | 0.59 | 0.37* | 3.99 | 0.00 | 3.99 |
| 31.75 | 0.22 | 0.59 | 0.37* | 3.98 | 0.00 | 3.98 |
| 31.80 | 0.22 | 0.59 | 0.37* | 3.97 | 0.00 | 3.97 |
| 31.85 | 0.22 | 0.59 | 0.37* | 3.96 | 0.00 | 3.96 |
| 31.90 | 0.22 | 0.59 | 0.37* | 3.95 | 0.00 | 3.95 |
| 31.95 | 0.22 | 0.59 | 0.37* | 3.94 | 0.00 | 3.94 |
| 32.00 | 0.22 | 0.59 | 0.37* | 3.93 | 0.00 | 3.93 |
| 32.05 | 0.22 | 0.59 | 0.37* | 3.92 | 0.00 | 3.92 |
| 32.10 | 0.22 | 0.59 | 0.37* | 3.91 | 0.00 | 3.91 |
| 32.15 | 0.22 | 0.59 | 0.37* | 3.90 | 0.00 | 3.90 |
| 32.20 | 0.22 | 0.59 | 0.37* | 3.89 | 0.00 | 3.89 |
| 32.25 | 0.22 | 0.59 | 0.37* | 3.89 | 0.00 | 3.89 |
| 32.30 | 0.22 | 0.59 | 0.37* | 3.88 | 0.00 | 3.88 |
| 32.35 | 0.22 | 0.59 | 0.37* | 3.87 | 0.00 | 3.87 |
| 32.40 | 0.22 | 0.59 | 0.37* | 3.86 | 0.00 | 3.86 |
| 32.45 | 0.22 | 0.59 | 0.38* | 3.85 | 0.00 | 3.85 |
| 32.50 | 0.22 | 0.59 | 0.38* | 3.84 | 0.00 | 3.84 |
| 32.55 | 0.22 | 0.59 | 0.38* | 3.83 | 0.00 | 3.83 |
| 32.60 | 0.22 | 0.59 | 0.38* | 3.82 | 0.00 | 3.82 |
| 32.65 | 0.22 | 0.59 | 0.38* | 3.81 | 0.00 | 3.81 |
| 32.70 | 0.22 | 0.59 | 0.38* | 3.80 | 0.00 | 3.80 |
| 32.75 | 0.22 | 0.59 | 0.38* | 3.80 | 0.00 | 3.80 |
| 32.80 | 0.22 | 0.59 | 0.38* | 3.79 | 0.00 | 3.79 |
| 32.85 | 0.22 | 0.59 | 0.38* | 3.78 | 0.00 | 3.78 |
| 32.90 | 0.22 | 0.59 | 0.38* | 3.77 | 0.00 | 3.77 |
| 32.95 | 0.22 | 0.59 | 0.38* | 3.76 | 0.00 | 3.76 |
| 33.00 | 0.22 | 0.59 | 0.38* | 3.75 | 0.00 | 3.75 |
| 33.05 | 0.22 | 0.59 | 0.38* | 3.74 | 0.00 | 3.74 |
| 33.10 | 0.22 | 0.59 | 0.38* | 3.73 | 0.00 | 3.73 |
| 33.15 | 0.22 | 0.59 | 0.38* | 3.72 | 0.00 | 3.72 |
| 33.20 | 0.22 | 0.59 | 0.38* | 3.72 | 0.00 | 3.72 |
| 33.25 | 0.22 | 0.59 | 0.38* | 3.71 | 0.00 | 3.71 |
| 33.30 | 0.23 | 0.59 | 0.38* | 3.70 | 0.00 | 3.70 |
| 33.35 | 0.23 | 0.59 | 0.38* | 3.69 | 0.00 | 3.69 |
| 33.40 | 0.23 | 0.59 | 0.38* | 3.68 | 0.00 | 3.68 |
| 33.45 | 0.23 | 0.59 | 0.38* | 3.67 | 0.00 | 3.67 |
| 33.50 | 0.23 | 0.59 | 0.38* | 3.66 | 0.00 | 3.66 |
| 33.55 | 0.23 | 0.59 | 0.38* | 3.65 | 0.00 | 3.65 |
| 33.60 | 0.23 | 0.59 | 0.38* | 3.65 | 0.00 | 3.65 |
| 33.65 | 0.23 | 0.59 | 0.38* | 3.64 | 0.00 | 3.64 |
| 33.70 | 0.23 | 0.59 | 0.39* | 3.63 | 0.00 | 3.63 |

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|---|---|---|---|---|---|---|
| 33.75 | 0.23 | 0.59 | 0.39* | 3.62 | 0.00 | 3.62 |
| 33.80 | 0.23 | 0.59 | 0.39* | 3.61 | 0.00 | 3.61 |
| 33.85 | 0.23 | 0.59 | 0.39* | 3.60 | 0.00 | 3.60 |
| 33.90 | 0.23 | 0.59 | 0.39* | 3.59 | 0.00 | 3.59 |
| 33.95 | 0.23 | 0.59 | 0.39* | 3.58 | 0.00 | 3.58 |
| 34.00 | 0.23 | 0.59 | 0.39* | 3.58 | 0.00 | 3.58 |
| 34.05 | 0.23 | 0.59 | 0.39* | 3.57 | 0.00 | 3.57 |
| 34.10 | 0.23 | 0.59 | 0.39* | 3.56 | 0.00 | 3.56 |
| 34.15 | 0.23 | 0.59 | 0.39* | 3.55 | 0.00 | 3.55 |
| 34.20 | 0.23 | 0.59 | 0.39* | 3.54 | 0.00 | 3.54 |
| 34.25 | 0.23 | 0.59 | 0.39* | 3.53 | 0.00 | 3.53 |
| 34.30 | 0.23 | 0.59 | 0.39* | 3.52 | 0.00 | 3.52 |
| 34.35 | 0.23 | 0.59 | 0.39* | 3.51 | 0.00 | 3.51 |
| 34.40 | 0.23 | 0.59 | 0.39* | 3.51 | 0.00 | 3.51 |
| 34.45 | 0.23 | 0.59 | 0.39* | 3.50 | 0.00 | 3.50 |
| 34.50 | 0.23 | 0.59 | 0.39* | 3.49 | 0.00 | 3.49 |
| 34.55 | 0.23 | 0.59 | 0.39* | 3.48 | 0.00 | 3.48 |
| 34.60 | 0.23 | 0.59 | 0.39* | 3.47 | 0.00 | 3.47 |
| 34.65 | 0.23 | 0.59 | 0.39* | 3.46 | 0.00 | 3.46 |
| 34.70 | 0.23 | 0.59 | 0.39* | 3.45 | 0.00 | 3.45 |
| 34.75 | 0.23 | 0.59 | 0.39* | 3.45 | 0.00 | 3.45 |
| 34.80 | 0.23 | 0.59 | 0.39* | 3.44 | 0.00 | 3.44 |
| 34.85 | 0.23 | 0.59 | 0.40* | 3.43 | 0.00 | 3.43 |
| 34.90 | 0.23 | 0.59 | 0.40* | 3.42 | 0.00 | 3.42 |
| 34.95 | 0.24 | 0.59 | 0.40* | 3.41 | 0.00 | 3.41 |
| 35.00 | 0.24 | 0.59 | 0.40* | 3.40 | 0.00 | 3.40 |
| 35.05 | 0.24 | 0.59 | 0.40* | 3.39 | 0.00 | 3.39 |
| 35.10 | 0.23 | 0.59 | 0.40* | 3.38 | 0.00 | 3.38 |
| 35.15 | 0.23 | 0.59 | 0.40* | 3.38 | 0.00 | 3.38 |
| 35.20 | 0.23 | 0.59 | 0.39* | 3.37 | 0.00 | 3.37 |
| 35.25 | 0.23 | 0.59 | 0.39* | 3.36 | 0.00 | 3.36 |
| 35.30 | 0.23 | 0.59 | 0.39* | 3.35 | 0.00 | 3.35 |
| 35.35 | 0.23 | 0.59 | 0.39* | 3.34 | 0.00 | 3.34 |
| 35.40 | 0.23 | 0.59 | 0.39* | 3.33 | 0.00 | 3.33 |
| 35.45 | 0.23 | 0.59 | 0.39* | 3.32 | 0.00 | 3.32 |
| 35.50 | 0.23 | 0.59 | 0.39* | 3.32 | 0.00 | 3.32 |
| 35.55 | 0.23 | 0.59 | 0.39* | 3.31 | 0.00 | 3.31 |
| 35.60 | 0.23 | 0.59 | 0.39* | 3.30 | 0.00 | 3.30 |
| 35.65 | 0.23 | 0.59 | 0.39* | 3.29 | 0.00 | 3.29 |
| 35.70 | 0.23 | 0.59 | 0.38* | 3.28 | 0.00 | 3.28 |
| 35.75 | 0.23 | 0.59 | 0.38* | 3.27 | 0.00 | 3.27 |
| 35.80 | 0.23 | 0.59 | 0.38* | 3.26 | 0.00 | 3.26 |
| 35.85 | 0.23 | 0.59 | 0.38* | 3.25 | 0.00 | 3.25 |
| 35.90 | 0.22 | 0.59 | 0.38* | 3.25 | 0.00 | 3.25 |
| 35.95 | 0.22 | 0.59 | 0.38* | 3.24 | 0.00 | 3.24 |
| 36.00 | 0.22 | 0.59 | 0.38* | 3.23 | 0.00 | 3.23 |
| 36.05 | 0.22 | 0.59 | 0.38* | 3.22 | 0.00 | 3.22 |
| 36.10 | 0.22 | 0.59 | 0.38* | 3.21 | 0.00 | 3.21 |
| 36.15 | 0.22 | 0.59 | 0.37* | 3.20 | 0.00 | 3.20 |
| 36.20 | 0.22 | 0.59 | 0.37* | 3.19 | 0.00 | 3.19 |

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|---|---|---|---|---|---|---|
| 36.25 | 0.22 | 0.59 | 0.37* | 3.18 | 0.00 | 3.18 |
| 36.30 | 0.22 | 0.59 | 0.37* | 3.17 | 0.00 | 3.17 |
| 36.35 | 0.22 | 0.59 | 0.37* | 3.16 | 0.00 | 3.16 |
| 36.40 | 0.22 | 0.59 | 0.37* | 3.16 | 0.00 | 3.16 |
| 36.45 | 0.22 | 0.59 | 0.37* | 3.15 | 0.00 | 3.15 |
| 36.50 | 0.22 | 0.59 | 0.37* | 3.14 | 0.00 | 3.14 |
| 36.55 | 0.22 | 0.59 | 0.37* | 3.13 | 0.00 | 3.13 |
| 36.60 | 0.22 | 0.59 | 0.37* | 3.12 | 0.00 | 3.12 |
| 36.65 | 0.22 | 0.59 | 0.36* | 3.11 | 0.00 | 3.11 |
| 36.70 | 0.22 | 0.59 | 0.36* | 3.10 | 0.00 | 3.10 |
| 36.75 | 0.21 | 0.59 | 0.36* | 3.09 | 0.00 | 3.09 |
| 36.80 | 0.21 | 0.59 | 0.36* | 3.08 | 0.00 | 3.08 |
| 36.85 | 0.21 | 0.59 | 0.36* | 3.07 | 0.00 | 3.07 |
| 36.90 | 0.21 | 0.59 | 0.36* | 3.06 | 0.00 | 3.06 |
| 36.95 | 0.21 | 0.59 | 0.36* | 3.05 | 0.00 | 3.05 |
| 37.00 | 0.21 | 0.59 | 0.36* | 3.05 | 0.00 | 3.05 |
| 37.05 | 0.21 | 0.59 | 0.36* | 3.04 | 0.00 | 3.04 |
| 37.10 | 0.21 | 0.59 | 0.36* | 3.03 | 0.00 | 3.03 |
| 37.15 | 0.21 | 0.59 | 0.36* | 3.02 | 0.00 | 3.02 |
| 37.20 | 0.21 | 0.59 | 0.35* | 3.01 | 0.00 | 3.01 |
| 37.25 | 0.21 | 0.59 | 0.35* | 3.00 | 0.00 | 3.00 |
| 37.30 | 0.21 | 0.59 | 0.35* | 2.99 | 0.00 | 2.99 |
| 37.35 | 0.21 | 0.59 | 0.35* | 2.98 | 0.00 | 2.98 |
| 37.40 | 0.21 | 0.59 | 0.35* | 2.97 | 0.00 | 2.97 |
| 37.45 | 0.21 | 0.59 | 0.35* | 2.96 | 0.00 | 2.96 |
| 37.50 | 0.21 | 0.59 | 0.35* | 2.95 | 0.00 | 2.95 |
| 37.55 | 0.21 | 0.59 | 0.35* | 2.94 | 0.00 | 2.94 |
| 37.60 | 0.21 | 0.59 | 0.35* | 2.93 | 0.00 | 2.93 |
| 37.65 | 0.20 | 0.59 | 0.35* | 2.92 | 0.00 | 2.92 |
| 37.70 | 0.20 | 0.59 | 0.34* | 2.91 | 0.00 | 2.91 |
| 37.75 | 0.20 | 0.59 | 0.34* | 2.90 | 0.00 | 2.90 |
| 37.80 | 0.20 | 0.59 | 0.34* | 2.89 | 0.00 | 2.89 |
| 37.85 | 0.20 | 0.59 | 0.34* | 2.88 | 0.00 | 2.88 |
| 37.90 | 0.20 | 0.59 | 0.34* | 2.87 | 0.00 | 2.87 |
| 37.95 | 0.20 | 0.59 | 0.34* | 2.86 | 0.00 | 2.86 |
| 38.00 | 0.20 | 0.59 | 0.34* | 2.85 | 0.00 | 2.85 |
| 38.05 | 0.20 | 0.59 | 0.34* | 2.84 | 0.00 | 2.84 |
| 38.10 | 0.20 | 0.59 | 0.34* | 2.83 | 0.00 | 2.83 |
| 38.15 | 0.20 | 0.59 | 0.34* | 2.82 | 0.00 | 2.82 |
| 38.20 | 0.20 | 0.59 | 0.34* | 2.81 | 0.00 | 2.81 |
| 38.25 | 0.20 | 0.59 | 0.33* | 2.80 | 0.00 | 2.80 |
| 38.30 | 0.20 | 0.59 | 0.33* | 2.79 | 0.00 | 2.79 |
| 38.35 | 0.20 | 0.59 | 0.33* | 2.78 | 0.00 | 2.78 |
| 38.40 | 0.20 | 0.59 | 0.33* | 2.77 | 0.00 | 2.77 |
| 38.45 | 0.20 | 0.59 | 0.33* | 2.76 | 0.00 | 2.76 |
| 38.50 | 0.20 | 0.59 | 0.33* | 2.75 | 0.00 | 2.75 |
| 38.55 | 0.19 | 0.59 | 0.33* | 2.74 | 0.00 | 2.74 |
| 38.60 | 0.19 | 0.59 | 0.33* | 2.73 | 0.00 | 2.73 |
| 38.65 | 0.19 | 0.59 | 0.33* | 2.72 | 0.00 | 2.72 |
| 38.70 | 0.19 | 0.59 | 0.33* | 2.71 | 0.00 | 2.71 |

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|---|---|---|---|---|---|---|
| 38.75 | 0.19 | 0.59 | 0.33* | 2.70 | 0.00 | 2.70 |
| 38.80 | 0.19 | 0.59 | 0.33* | 2.69 | 0.00 | 2.69 |
| 38.85 | 0.19 | 0.59 | 0.32* | 2.68 | 0.00 | 2.68 |
| 38.90 | 0.19 | 0.59 | 0.32* | 2.67 | 0.00 | 2.67 |
| 38.95 | 0.19 | 0.59 | 0.32* | 2.66 | 0.00 | 2.66 |
| 39.00 | 0.19 | 0.59 | 0.32* | 2.65 | 0.00 | 2.65 |
| 39.05 | 0.19 | 0.59 | 0.32* | 2.64 | 0.00 | 2.64 |
| 39.10 | 0.19 | 0.59 | 0.32* | 2.63 | 0.00 | 2.63 |
| 39.15 | 0.19 | 0.59 | 0.32* | 2.62 | 0.00 | 2.62 |
| 39.20 | 0.19 | 0.59 | 0.32* | 2.61 | 0.00 | 2.61 |
| 39.25 | 0.19 | 0.59 | 0.32* | 2.60 | 0.00 | 2.60 |
| 39.30 | 0.19 | 0.59 | 0.32* | 2.59 | 0.00 | 2.59 |
| 39.35 | 0.19 | 0.59 | 0.32* | 2.58 | 0.00 | 2.58 |
| 39.40 | 0.19 | 0.59 | 0.31* | 2.57 | 0.00 | 2.57 |
| 39.45 | 0.19 | 0.59 | 0.31* | 2.56 | 0.00 | 2.56 |
| 39.50 | 0.18 | 0.59 | 0.31* | 2.55 | 0.00 | 2.55 |
| 39.55 | 0.18 | 0.59 | 0.31* | 2.54 | 0.00 | 2.54 |
| 39.60 | 0.18 | 0.59 | 0.31* | 2.53 | 0.00 | 2.53 |
| 39.65 | 0.18 | 0.59 | 0.31* | 2.52 | 0.00 | 2.52 |
| 39.70 | 0.18 | 0.59 | 0.31* | 2.51 | 0.00 | 2.51 |
| 39.75 | 0.18 | 0.59 | 0.31* | 2.50 | 0.00 | 2.50 |
| 39.80 | 0.18 | 0.59 | 0.31* | 2.48 | 0.00 | 2.48 |
| 39.85 | 0.18 | 0.59 | 0.31* | 2.47 | 0.00 | 2.47 |
| 39.90 | 0.18 | 0.59 | 0.31* | 2.46 | 0.00 | 2.46 |
| 39.95 | 0.18 | 0.59 | 0.31* | 2.45 | 0.00 | 2.45 |
| 40.00 | 0.18 | 0.59 | 0.30* | 2.44 | 0.00 | 2.44 |
| 40.05 | 0.18 | 0.59 | 0.30* | 2.43 | 0.00 | 2.43 |
| 40.10 | 0.18 | 0.59 | 0.30* | 2.42 | 0.00 | 2.42 |
| 40.15 | 0.18 | 0.59 | 0.30* | 2.41 | 0.00 | 2.41 |
| 40.20 | 0.18 | 0.59 | 0.30* | 2.40 | 0.00 | 2.40 |
| 40.25 | 0.18 | 0.59 | 0.30* | 2.39 | 0.00 | 2.39 |
| 40.30 | 0.18 | 0.59 | 0.30* | 2.38 | 0.00 | 2.38 |
| 40.35 | 0.18 | 0.59 | 0.30* | 2.37 | 0.00 | 2.37 |
| 40.40 | 0.18 | 0.59 | 0.30* | 2.36 | 0.00 | 2.36 |
| 40.45 | 0.18 | 0.59 | 0.30* | 2.34 | 0.00 | 2.34 |
| 40.50 | 0.18 | 0.59 | 0.30* | 2.33 | 0.00 | 2.33 |
| 40.55 | 0.18 | 0.59 | 0.30* | 2.32 | 0.00 | 2.32 |
| 40.60 | 0.18 | 0.59 | 0.30* | 2.31 | 0.00 | 2.31 |
| 40.65 | 0.18 | 0.59 | 0.30* | 2.30 | 0.00 | 2.30 |
| 40.70 | 0.18 | 0.59 | 0.30* | 2.29 | 0.00 | 2.29 |
| 40.75 | 0.18 | 0.59 | 0.30* | 2.28 | 0.00 | 2.28 |
| 40.80 | 0.18 | 0.59 | 0.30* | 2.27 | 0.00 | 2.27 |
| 40.85 | 0.18 | 0.59 | 0.30* | 2.26 | 0.00 | 2.26 |
| 40.90 | 0.18 | 0.59 | 0.30* | 2.25 | 0.00 | 2.25 |
| 40.95 | 0.18 | 0.59 | 0.30* | 2.24 | 0.00 | 2.24 |
| 41.00 | 0.18 | 0.59 | 0.30* | 2.23 | 0.00 | 2.23 |
| 41.05 | 0.18 | 0.59 | 0.30* | 2.22 | 0.00 | 2.22 |
| 41.10 | 0.18 | 0.59 | 0.30* | 2.21 | 0.00 | 2.21 |
| 41.15 | 0.18 | 0.59 | 0.30* | 2.19 | 0.00 | 2.19 |
| 41.20 | 0.18 | 0.59 | 0.30* | 2.18 | 0.00 | 2.18 |

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|---|---|---|---|---|---|---|
| 41.25 | 0.18 | 0.59 | 0.30* | 2.17 | 0.00 | 2.17 |
| 41.30 | 0.18 | 0.59 | 0.30* | 2.16 | 0.00 | 2.16 |
| 41.35 | 0.18 | 0.59 | 0.30* | 2.15 | 0.00 | 2.15 |
| 41.40 | 0.18 | 0.59 | 0.30* | 2.14 | 0.00 | 2.14 |
| 41.45 | 0.18 | 0.59 | 0.30* | 2.13 | 0.00 | 2.13 |
| 41.50 | 0.18 | 0.59 | 0.30* | 2.12 | 0.00 | 2.12 |
| 41.55 | 0.18 | 0.59 | 0.30* | 2.11 | 0.00 | 2.11 |
| 41.60 | 0.18 | 0.59 | 0.30* | 2.10 | 0.00 | 2.10 |
| 41.65 | 0.18 | 0.59 | 0.30* | 2.09 | 0.00 | 2.09 |
| 41.70 | 0.18 | 0.59 | 0.30* | 2.08 | 0.00 | 2.08 |
| 41.75 | 0.18 | 0.59 | 0.30* | 2.07 | 0.00 | 2.07 |
| 41.80 | 0.18 | 0.59 | 0.30* | 2.05 | 0.00 | 2.05 |
| 41.85 | 0.18 | 0.59 | 0.30* | 2.04 | 0.00 | 2.04 |
| 41.90 | 0.18 | 0.59 | 0.30* | 2.03 | 0.00 | 2.03 |
| 41.95 | 0.18 | 0.59 | 0.30* | 2.02 | 0.00 | 2.02 |
| 42.00 | 0.18 | 0.59 | 0.30* | 2.01 | 0.00 | 2.01 |
| 42.05 | 0.18 | 0.59 | 0.30* | 2.00 | 0.00 | 2.00 |
| 42.10 | 0.18 | 0.59 | 0.30* | 1.99 | 0.00 | 1.99 |
| 42.15 | 0.18 | 0.59 | 0.31* | 1.98 | 0.00 | 1.98 |
| 42.20 | 0.18 | 0.59 | 0.31* | 1.97 | 0.00 | 1.97 |
| 42.25 | 0.18 | 0.59 | 0.31* | 1.96 | 0.00 | 1.96 |
| 42.30 | 0.18 | 0.59 | 0.31* | 1.95 | 0.00 | 1.95 |
| 42.35 | 0.18 | 0.59 | 0.31* | 1.94 | 0.00 | 1.94 |
| 42.40 | 0.18 | 0.59 | 0.31* | 1.93 | 0.00 | 1.93 |
| 42.45 | 0.18 | 0.59 | 0.31* | 1.92 | 0.00 | 1.92 |
| 42.50 | 0.18 | 0.59 | 0.31* | 1.90 | 0.00 | 1.90 |
| 42.55 | 0.18 | 0.59 | 0.31* | 1.89 | 0.00 | 1.89 |
| 42.60 | 0.18 | 0.59 | 0.31* | 1.88 | 0.00 | 1.88 |
| 42.65 | 0.18 | 0.59 | 0.31* | 1.87 | 0.00 | 1.87 |
| 42.70 | 0.18 | 0.59 | 0.31* | 1.86 | 0.00 | 1.86 |
| 42.75 | 0.18 | 0.59 | 0.31* | 1.85 | 0.00 | 1.85 |
| 42.80 | 0.18 | 0.59 | 0.31* | 1.84 | 0.00 | 1.84 |
| 42.85 | 0.18 | 0.59 | 0.31* | 1.83 | 0.00 | 1.83 |
| 42.90 | 0.18 | 0.59 | 0.31* | 1.82 | 0.00 | 1.82 |
| 42.95 | 0.18 | 0.59 | 0.31* | 1.81 | 0.00 | 1.81 |
| 43.00 | 0.18 | 0.59 | 0.31* | 1.80 | 0.00 | 1.80 |
| 43.05 | 0.18 | 0.59 | 0.31* | 1.79 | 0.00 | 1.79 |
| 43.10 | 0.18 | 0.59 | 0.31* | 1.78 | 0.00 | 1.78 |
| 43.15 | 0.18 | 0.59 | 0.31* | 1.77 | 0.00 | 1.77 |
| 43.20 | 0.18 | 0.59 | 0.31* | 1.75 | 0.00 | 1.75 |
| 43.25 | 0.18 | 0.59 | 0.31* | 1.74 | 0.00 | 1.74 |
| 43.30 | 0.18 | 0.59 | 0.31* | 1.73 | 0.00 | 1.73 |
| 43.35 | 0.18 | 0.59 | 0.31* | 1.72 | 0.00 | 1.72 |
| 43.40 | 0.18 | 0.59 | 0.31* | 1.71 | 0.00 | 1.71 |
| 43.45 | 0.18 | 0.59 | 0.31* | 1.70 | 0.00 | 1.70 |
| 43.50 | 0.18 | 0.59 | 0.31* | 1.69 | 0.00 | 1.69 |
| 43.55 | 0.18 | 0.59 | 0.31* | 1.68 | 0.00 | 1.68 |
| 43.60 | 0.18 | 0.59 | 0.31* | 1.67 | 0.00 | 1.67 |
| 43.65 | 0.18 | 0.59 | 0.31* | 1.66 | 0.00 | 1.66 |
| 43.70 | 0.18 | 0.59 | 0.31* | 1.65 | 0.00 | 1.65 |

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|---|---|---|---|---|---|---|
| 43.75 | 0.18 | 0.59 | 0.31* | 1.64 | 0.00 | 1.64 |
| 43.80 | 0.18 | 0.59 | 0.31* | 1.63 | 0.00 | 1.63 |
| 43.85 | 0.18 | 0.59 | 0.31* | 1.62 | 0.00 | 1.62 |
| 43.90 | 0.18 | 0.59 | 0.31* | 1.60 | 0.00 | 1.60 |
| 43.95 | 0.18 | 0.59 | 0.31* | 1.59 | 0.00 | 1.59 |
| 44.00 | 0.18 | 0.58 | 0.31* | 1.58 | 0.00 | 1.58 |
| 44.05 | 0.18 | 0.58 | 0.31* | 1.57 | 0.00 | 1.57 |
| 44.10 | 0.18 | 0.58 | 0.31* | 1.56 | 0.00 | 1.56 |
| 44.15 | 0.18 | 0.58 | 0.31* | 1.55 | 0.00 | 1.55 |
| 44.20 | 0.18 | 0.58 | 0.31* | 1.54 | 0.00 | 1.54 |
| 44.25 | 0.18 | 0.58 | 0.31* | 1.53 | 0.00 | 1.53 |
| 44.30 | 0.18 | 0.58 | 0.31* | 1.52 | 0.00 | 1.52 |
| 44.35 | 0.18 | 0.58 | 0.31* | 1.51 | 0.00 | 1.51 |
| 44.40 | 0.18 | 0.58 | 0.31* | 1.50 | 0.00 | 1.50 |
| 44.45 | 0.18 | 0.58 | 0.31* | 1.49 | 0.00 | 1.49 |
| 44.50 | 0.18 | 0.58 | 0.31* | 1.48 | 0.00 | 1.48 |
| 44.55 | 0.18 | 0.58 | 0.31* | 1.47 | 0.00 | 1.47 |
| 44.60 | 0.18 | 0.58 | 0.31* | 1.46 | 0.00 | 1.46 |
| 44.65 | 0.18 | 0.58 | 0.31* | 1.44 | 0.00 | 1.44 |
| 44.70 | 0.18 | 0.58 | 0.31* | 1.43 | 0.00 | 1.43 |
| 44.75 | 0.18 | 0.58 | 0.31* | 1.42 | 0.00 | 1.42 |
| 44.80 | 0.18 | 0.58 | 0.30* | 1.41 | 0.00 | 1.41 |
| 44.85 | 0.18 | 0.58 | 0.30* | 1.40 | 0.00 | 1.40 |
| 44.90 | 0.18 | 0.58 | 0.30* | 1.39 | 0.00 | 1.39 |
| 44.95 | 0.18 | 0.58 | 0.30* | 1.38 | 0.00 | 1.38 |
| 45.00 | 0.18 | 0.58 | 0.30* | 1.37 | 0.00 | 1.37 |
| 45.05 | 0.18 | 0.58 | 0.30* | 1.36 | 0.00 | 1.36 |
| 45.10 | 0.18 | 0.58 | 0.30* | 1.35 | 0.00 | 1.35 |
| 45.15 | 0.18 | 0.58 | 0.30* | 1.34 | 0.00 | 1.34 |
| 45.20 | 0.18 | 0.58 | 0.30* | 1.33 | 0.00 | 1.33 |
| 45.25 | 0.18 | 0.58 | 0.30* | 1.32 | 0.00 | 1.32 |
| 45.30 | 0.18 | 0.58 | 0.30* | 1.30 | 0.00 | 1.30 |
| 45.35 | 0.18 | 0.58 | 0.30* | 1.29 | 0.00 | 1.29 |
| 45.40 | 0.18 | 0.58 | 0.30* | 1.28 | 0.00 | 1.28 |
| 45.45 | 0.18 | 0.58 | 0.30* | 1.27 | 0.00 | 1.27 |
| 45.50 | 0.18 | 0.58 | 0.30* | 1.26 | 0.00 | 1.26 |
| 45.55 | 0.17 | 0.58 | 0.30* | 1.25 | 0.00 | 1.25 |
| 45.60 | 0.17 | 0.58 | 0.30* | 1.24 | 0.00 | 1.24 |
| 45.65 | 0.17 | 0.58 | 0.30* | 1.23 | 0.00 | 1.23 |
| 45.70 | 0.17 | 0.58 | 0.30* | 1.22 | 0.00 | 1.22 |
| 45.75 | 0.17 | 0.58 | 0.30* | 1.21 | 0.00 | 1.21 |
| 45.80 | 0.17 | 0.58 | 0.30* | 1.20 | 0.00 | 1.20 |
| 45.85 | 0.17 | 0.58 | 0.30* | 1.19 | 0.00 | 1.19 |
| 45.90 | 0.17 | 0.58 | 0.30* | 1.17 | 0.00 | 1.17 |
| 45.95 | 0.17 | 0.58 | 0.30* | 1.16 | 0.00 | 1.16 |
| 46.00 | 0.17 | 0.58 | 0.30* | 1.15 | 0.00 | 1.15 |
| 46.05 | 0.17 | 0.58 | 0.30* | 1.14 | 0.00 | 1.14 |
| 46.10 | 0.17 | 0.58 | 0.30* | 1.13 | 0.00 | 1.13 |
| 46.15 | 0.17 | 0.58 | 0.30* | 1.12 | 0.00 | 1.12 |
| 46.20 | 0.17 | 0.58 | 0.29* | 1.11 | 0.00 | 1.11 |

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|---|---|---|---|---|---|---|
| 46.25 | 0.17 | 0.58 | 0.29* | 1.10 | 0.00 | 1.10 |
| 46.30 | 0.17 | 0.58 | 0.29* | 1.09 | 0.00 | 1.09 |
| 46.35 | 0.17 | 0.58 | 0.29* | 1.08 | 0.00 | 1.08 |
| 46.40 | 0.17 | 0.58 | 0.29* | 1.06 | 0.00 | 1.06 |
| 46.45 | 0.17 | 0.58 | 0.29* | 1.05 | 0.00 | 1.05 |
| 46.50 | 0.17 | 0.58 | 0.29* | 1.04 | 0.00 | 1.04 |
| 46.55 | 0.17 | 0.58 | 0.29* | 1.03 | 0.00 | 1.03 |
| 46.60 | 0.17 | 0.58 | 0.29* | 1.02 | 0.00 | 1.02 |
| 46.65 | 0.17 | 0.58 | 0.29* | 1.01 | 0.00 | 1.01 |
| 46.70 | 0.17 | 0.58 | 0.29* | 1.00 | 0.00 | 1.00 |
| 46.75 | 0.17 | 0.58 | 0.29* | 0.99 | 0.00 | 0.99 |
| 46.80 | 0.17 | 0.58 | 0.29* | 0.98 | 0.00 | 0.98 |
| 46.85 | 0.17 | 0.58 | 0.29* | 0.96 | 0.00 | 0.96 |
| 46.90 | 0.17 | 0.58 | 0.29* | 0.95 | 0.00 | 0.95 |
| 46.95 | 0.17 | 0.58 | 0.29* | 0.94 | 0.00 | 0.94 |
| 47.00 | 0.17 | 0.58 | 0.29* | 0.93 | 0.00 | 0.93 |
| 47.05 | 0.17 | 0.58 | 0.29* | 0.92 | 0.00 | 0.92 |
| 47.10 | 0.17 | 0.58 | 0.29* | 0.91 | 0.00 | 0.91 |
| 47.15 | 0.17 | 0.58 | 0.29* | 0.90 | 0.00 | 0.90 |
| 47.20 | 0.17 | 0.58 | 0.29* | 0.89 | 0.00 | 0.89 |
| 47.25 | 0.17 | 0.58 | 0.29* | 0.88 | 0.00 | 0.88 |
| 47.30 | 0.17 | 0.58 | 0.29* | 0.86 | 0.00 | 0.86 |
| 47.35 | 0.16 | 0.58 | 0.29* | 0.85 | 0.00 | 0.85 |
| 47.40 | 0.16 | 0.58 | 0.28* | 0.84 | 0.00 | 0.84 |
| 47.45 | 0.16 | 0.58 | 0.28* | 0.83 | 0.00 | 0.83 |
| 47.50 | 0.16 | 0.58 | 0.28* | 0.82 | 0.00 | 0.82 |
| 47.55 | 0.16 | 0.58 | 0.28* | 0.81 | 0.00 | 0.81 |
| 47.60 | 0.16 | 0.58 | 0.28* | 0.80 | 0.00 | 0.80 |
| 47.65 | 0.16 | 0.58 | 0.28* | 0.78 | 0.00 | 0.78 |
| 47.70 | 0.16 | 0.58 | 0.28* | 0.77 | 0.00 | 0.77 |
| 47.75 | 0.16 | 0.58 | 0.28* | 0.76 | 0.00 | 0.76 |
| 47.80 | 0.16 | 0.58 | 0.28* | 0.75 | 0.00 | 0.75 |
| 47.85 | 0.16 | 0.58 | 0.28* | 0.74 | 0.00 | 0.74 |
| 47.90 | 0.16 | 0.58 | 0.28* | 0.73 | 0.00 | 0.73 |
| 47.95 | 0.16 | 0.58 | 0.28* | 0.72 | 0.00 | 0.72 |
| 48.00 | 0.16 | 0.58 | 0.28* | 0.71 | 0.00 | 0.71 |
| 48.05 | 0.16 | 0.58 | 0.28* | 0.69 | 0.00 | 0.69 |
| 48.10 | 0.16 | 0.58 | 0.28* | 0.68 | 0.00 | 0.68 |
| 48.15 | 0.16 | 0.58 | 0.28* | 0.67 | 0.00 | 0.67 |
| 48.20 | 0.16 | 0.58 | 0.28* | 0.66 | 0.00 | 0.66 |
| 48.25 | 0.16 | 0.58 | 0.28* | 0.65 | 0.00 | 0.65 |
| 48.30 | 0.16 | 0.58 | 0.28* | 0.64 | 0.00 | 0.64 |
| 48.35 | 0.16 | 0.58 | 0.28* | 0.62 | 0.00 | 0.62 |
| 48.40 | 0.16 | 0.58 | 0.28* | 0.61 | 0.00 | 0.61 |
| 48.45 | 0.16 | 0.57 | 0.28* | 0.60 | 0.00 | 0.60 |
| 48.50 | 0.16 | 0.57 | 0.28* | 0.59 | 0.00 | 0.59 |
| 48.55 | 0.16 | 0.57 | 0.28* | 0.58 | 0.00 | 0.58 |
| 48.60 | 0.16 | 0.57 | 0.28* | 0.57 | 0.00 | 0.57 |
| 48.65 | 0.16 | 0.57 | 0.27* | 0.56 | 0.00 | 0.56 |
| 48.70 | 0.16 | 0.57 | 0.27* | 0.54 | 0.00 | 0.54 |

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|---|---|---|---|---|---|---|
| 48.75 | 0.16 | 0.57 | 0.27* | 0.53 | 0.00 | 0.53 |
| 48.80 | 0.16 | 0.57 | 0.27* | 0.52 | 0.00 | 0.52 |
| 48.85 | 0.16 | 0.57 | 0.27* | 0.51 | 0.00 | 0.51 |
| 48.90 | 0.16 | 0.57 | 0.27* | 0.50 | 0.00 | 0.50 |
| 48.95 | 0.16 | 0.57 | 0.27* | 0.49 | 0.00 | 0.49 |
| 49.00 | 0.16 | 0.57 | 0.27* | 0.47 | 0.00 | 0.47 |
| 49.05 | 0.16 | 0.57 | 0.27* | 0.46 | 0.00 | 0.46 |
| 49.10 | 0.16 | 0.57 | 0.27* | 0.45 | 0.00 | 0.45 |
| 49.15 | 0.16 | 0.57 | 0.27* | 0.44 | 0.00 | 0.44 |
| 49.20 | 0.15 | 0.57 | 0.27* | 0.43 | 0.00 | 0.43 |
| 49.25 | 0.15 | 0.57 | 0.27* | 0.42 | 0.00 | 0.42 |
| 49.30 | 0.15 | 0.57 | 0.27* | 0.40 | 0.00 | 0.40 |
| 49.35 | 0.15 | 0.57 | 0.27* | 0.39 | 0.00 | 0.39 |
| 49.40 | 0.15 | 0.57 | 0.27* | 0.38 | 0.00 | 0.38 |
| 49.45 | 0.15 | 0.57 | 0.27* | 0.37 | 0.00 | 0.37 |
| 49.50 | 0.15 | 0.57 | 0.27* | 0.36 | 0.00 | 0.36 |
| 49.55 | 0.15 | 0.57 | 0.27* | 0.35 | 0.00 | 0.35 |
| 49.60 | 0.15 | 0.57 | 0.27* | 0.33 | 0.00 | 0.33 |
| 49.65 | 0.15 | 0.57 | 0.27* | 0.32 | 0.00 | 0.32 |
| 49.70 | 0.15 | 0.57 | 0.27* | 0.31 | 0.00 | 0.31 |
| 49.75 | 0.15 | 0.57 | 0.27* | 0.30 | 0.00 | 0.30 |
| 49.80 | 0.15 | 0.57 | 0.27* | 0.29 | 0.00 | 0.29 |
| 49.85 | 0.15 | 0.57 | 0.26* | 0.27 | 0.00 | 0.27 |
| 49.90 | 0.15 | 0.57 | 0.26* | 0.26 | 0.00 | 0.26 |
| 49.95 | 0.15 | 0.57 | 0.26* | 0.25 | 0.00 | 0.25 |
| 50.00 | 0.15 | 0.57 | 0.26* | 0.24 | 0.00 | 0.24 |
| 50.05 | 0.15 | 0.57 | 0.26* | 0.23 | 0.00 | 0.23 |
| 50.10 | 0.15 | 0.57 | 0.26* | 0.21 | 0.00 | 0.21 |
| 50.15 | 0.15 | 0.57 | 0.26* | 0.20 | 0.00 | 0.20 |
| 50.20 | 0.15 | 0.57 | 0.26* | 0.19 | 0.00 | 0.19 |
| 50.25 | 0.15 | 0.57 | 0.26* | 0.18 | 0.00 | 0.18 |
| 50.30 | 0.15 | 0.57 | 0.26* | 0.17 | 0.00 | 0.17 |
| 50.35 | 0.15 | 0.57 | 0.26* | 0.16 | 0.00 | 0.16 |
| 50.40 | 0.15 | 0.57 | 0.26* | 0.14 | 0.00 | 0.14 |
| 50.45 | 0.15 | 0.57 | 0.26* | 0.13 | 0.00 | 0.13 |
| 50.50 | 0.15 | 0.57 | 0.26* | 0.12 | 0.00 | 0.12 |
| 50.55 | 0.15 | 0.57 | 0.26* | 0.11 | 0.00 | 0.11 |
| 50.60 | 0.15 | 0.57 | 0.26* | 0.10 | 0.00 | 0.10 |
| 50.65 | 0.15 | 0.57 | 0.26* | 0.08 | 0.00 | 0.08 |
| 50.70 | 0.15 | 0.57 | 0.26* | 0.07 | 0.00 | 0.07 |
| 50.75 | 0.15 | 0.57 | 0.26* | 0.06 | 0.00 | 0.06 |
| 50.80 | 0.15 | 0.57 | 0.26* | 0.05 | 0.00 | 0.05 |
| 50.85 | 0.15 | 0.57 | 0.26* | 0.04 | 0.00 | 0.04 |
| 50.90 | 0.15 | 0.57 | 0.26* | 0.02 | 0.00 | 0.02 |
| 50.95 | 0.15 | 0.57 | 0.26* | 0.01 | 0.00 | 0.01 |
| 51.00 | 0.15 | 0.57 | 0.26* | 0.00 | 0.00 | 0.00 |

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* 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.

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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 |