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Engineering Certificate of Authorization 3684

November 11, 2021

Taco Bell Corporation
1 Glen Bell Way
Irvine, Georgia 92618

Attn: Chad Gornall
Associate Construction Manager
Mobile: 814.572.4800
Email: Chad.Gornall@yum.com

Re: **Report of Geotechnical Engineering Services**
Proposed Taco Bell #293296
403 E. Main Street
Cartersville, GA 30120
PSI Report No.: 0775-3203
Taco Entity No.: 293296

Dear Mr. Gornall:

Professional Service Industries (PSI), an Intertek company, is pleased to transmit our Geotechnical Engineering Services Report for the proposed Proposed Taco Bell to be located on 403 E. Main Street in Cartersville, GA 30120. This report includes the results of field and laboratory testing, and recommendations for foundation and pavement design, and general site development.

PSI appreciates the opportunity to perform this Geotechnical Study and look forward to continued participation during the design and construction phases of this project. If you have any questions pertaining to this report, or if PSI may be of further service, please contact our office at 813-886-1075.

PSI also has great interest in providing materials testing and inspection services during the construction of this project. If you will advise us of the appropriate time to discuss these engineering services, we will be pleased to meet with you at your convenience.

Very truly yours,
PROFESSIONAL SERVICE INDUSTRIES, INC.

Karl E Suter
Digitally signed by Karl E Suter
Date: 2021.11.11 12:16:16 -05'00'

GEORGIA REGISTERED No. 19002 PROFESSIONAL ENGINEER KARL E. SUTER

Muthanna Al Saadi E.I.
Engineer Intern

Karl E. Suter, P.E.
Principal Consultant

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1 PROJECT INFORMATION

1.1 PROPOSAL AND PROJECT AUTHORIZATION

This report presents our findings and recommendations of a geotechnical exploration and assessment performed by Professional Service Industries (PSI) for the proposed Taco Bell project located on 403 E. Main Street in Cartersville, GA 30120. These services were performed in general accordance with the Project Agreement For Architectural / Engineering / Consultant Services Form between Taco Bell of America, Inc., and PSI.

1.2 PROJECT DESCRIPTION

Project information provided to PSI includes a drawing titled "Site Sketch", prepared by Taco Bell. This drawing presents proposed construction and some existing site features, and approximate borings location. Another provided drawing presents the "Preliminary Site Plan" superimposed over an aerial photo of the site.

Based on the information provided, we understand that the proposed project will be consist of demolishing the existing building and constructing a new Taco Bell restaurant at the approximately 0.7 -acre site. The project will include constructing a single-story metal-framed building with an approximate footprint of 2,000 square feet located at the north portion of the site with a corresponding drive-through, driveway, and parking area. The dumpster enclosure will be east of the existing restaurant. Structural loads were not provided to us; however, this report is based on loads for isolated column and continuous wall footings not exceeding 30 kips and 2 kips per linear foot, respectively. Traffic loading information was not provided. Therefore, the recommendations are based on light daily consisting of 30,000 ESAL over 20 years and heavy-duty being 60,000 ESAL over 20 years.

At the time of this report, we were not provided with proposed grading information for the project. Based on our site reconnaissance observations, we estimate relief within the proposed building footprint is on the order of 1 to 2 feet and overall relief across the proposed construction area on the order of 3 feet. This report is based on maximum cut and fills depths being on the order of 3 feet.

The information presented in this section was used in the preparation of this report. Estimated loads and corresponding foundation sizes have a direct effect on the recommendations, including the type of foundation, the allowable soil bearing pressure, and the estimated settlement. In addition, estimated subgrade elevations and cut/fill quantities can have a direct effect on the provided recommendations. If any of the noted information is incorrect or has changed, please inform PSI so that we may amend the recommendations presented in this report, if appropriate. If PSI is not retained to perform this function, PSI cannot be responsible for the impact of the changes on the performance of the project.

1.3 PURPOSE AND SCOPE OF WORK

The purpose of this study was to obtain information regarding the general subsurface conditions within the proposed construction area, to assess the engineering characteristics of the subsurface materials, and to provide general design recommendations regarding the geotechnical aspects of the proposed construction. To accomplish this, PSI performed a site reconnaissance, drilled seven soil test borings within the areas of proposed site improvements, conducted laboratory classification testing, and prepared this report summarizing the findings and our conclusions and recommendations.

The scope of our geotechnical services did not include an environmental assessment for determining the presence or absence of wetlands, or hazardous or toxic materials in the soil, bedrock, groundwater, or air, on or below or around this site. Any statement in this report or on the boring logs regarding odors, colors, unusual or unexpected items, or conditions are strictly for the information of our client.

PSI did not provide nor was it requested to provide any service to investigate or detect the presence of moisture, mold, or other biological contaminants in or around any structure or any service that was designed or intended to prevent or lower the risk of the occurrence of the amplification of the same. Client acknowledges that mold is ubiquitous to the environment, with mold amplification occurring when building materials are impacted by moisture. Client further acknowledges that site conditions are outside of PSI's control and that mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, PSI cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

2 EXPLORATION PROCEDURES

2.1 FIELD SERVICES

PSI advanced seven soil test borings to depth 20 feet below the existing ground surface within the proposed site as below:

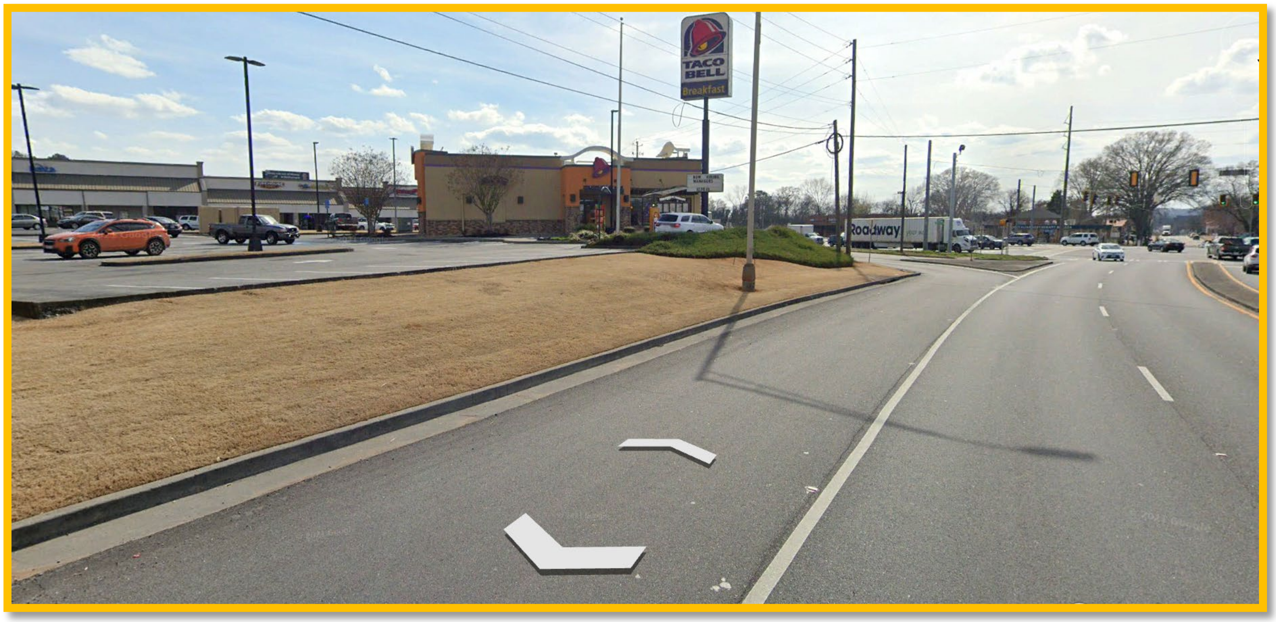
1. Two borings (B-1 and B-2) were drilled near the proposed building footprint area.
2. One boring (B-3), was drilled within the proposed pylon site and drive-thru.
3. Three borings (B-4 through B-6), were drilled within the proposed parking lot.
4. One boring (B-7) was drilled with the proposed trash enclosure footprint.

The approximate boring locations are shown on the "Boring Location Plan" included in the Appendix. Horizontal and vertical survey control was not performed for the test boring locations prior to our field exploration program. The borings were located by estimating distances and relationships to obvious landmarks and the Conceptual Site Plan provided by the client. The boring locations are considered accurate to the degree implied by these methods. PSI subcontracted with a private utility locator to clear the boring locations prior to drilling.

Soil test borings were advanced at this site by Drilling Solutions, a subcontractor hired by PSI, utilizing a CME-45 drilling rig using hollow-stem, continuous-flight augers. The boring and sampling operations were conducted in general compliance with ASTM D 1586. At regular intervals, soil samples were obtained with a standard 2-inch O.D. split-barrel sampler.

An automatic trip drop hammer was used for the standard penetration testing, which has a higher efficiency than a manual cathead-and-rope hammer. Typically, the automatic hammer yields lower standard penetration test resistances (N-values) than a manual cathead-and-rope hammer. This reduction has been taken into account in our evaluation. However, the N-values reported on the logs, and the consistency descriptions on the boring logs are based on the field-recorded values.

The recovered soil samples were classified visually bydriller in the field, then transported to our laboratory for additional visual classification and laboratory testing. A "Boring Log" was prepared for each boring, and the "Logs" are included in the Appendix of the report. The logs were prepared using the observations made in the field by the engineer and driller, and the classifications in the laboratory and the laboratory test results. Strata descriptions, presented on the logs, were based on visual-manual evaluations by our project manager and include the classifications in general accordance with the Unified Soil Classification System (USCS). The "Soil Classification Chart", included in the Appendix, illustrates the USCS legend depicted on the logs. Existing topographic information was not provided to us. Therefore, ground surface elevations are not presented on the boring logs or referenced in this report.



Groundwater level measurements were measured in the boreholes at the time of boring, upon completion, and prior to site departure. The results of the readings are included on the soil test boring logs and discussed in Section 3.3.4. The borings were backfilled prior to site departure using the soil cuttings, for safety considerations. Therefore, delayed groundwater readings are not available.

2.2 LABORATORY TESTING

An engineer intern visually-manually classified the soil samples in the laboratory in general accordance with the Unified Soil Classification System (USCS) (ASTM D2487 and D2488). Percent finer than the No. 200 sieve (ASTM D1140), Atterberg limits tests (ASTM D4318), and natural water content determinations (ASTM D2216) were conducted on representative samples recovered from the test boring locations. The laboratory test results are presented in Section 3.3.6 and are shown on the individual boring logs.

3 SITE AND SUBSURFACE CONDITIONS

3.1 SITE DESCRIPTION

The proposed project is located on 403 E. Main Street in Cartersville, GA 30120. The site encompasses an area of approximately 0.7 acres. The site location is depicted on the "Site Vicinity Map" (Figure 1) included in the Appendix.

At the time of our site reconnaissance (October 2021), the site was developed with single-story central portion of the site. Based upon limited field observations, the building exterior appeared to be in fair condition. The remaining site area was generally paved with asphalt. The asphalt generally appeared to be in fair to poor condition, and several areas of block cracking were observed. Concrete sidewalks were observed around the perimeter of the building, and landscaped areas were noted along the east, south, and north site boundaries.

3.2 SITE GEOLOGY

The site is located within the Valley and Ridge Physiographic Province of Georgia. This region is characterized by long north-northeasterly trending ridges separated by fertile valleys. The province owes its topography to the erosion of alternating layers of hard and soft sedimentary rock that were folded and faulted during the formation of the Appalachians. Geologic mapping indicates the geology beneath the site is listed as sedimentary dolostones. Rocks have weathered in place to form overburden residual soils, including sands, silts, and clays, some of which contain chert fragments ranging from gravel to boulder size.

Sites underlain by carbonate sedimentary rock are susceptible to development of sinkholes due to normal solutioning. Sinkholes can form either through a collapse of the rock itself as the crown of the void in solutioned rock approaches the ground surface or through the erosion of soils from the overburden layer into slots and cavities in the bedrock. Sinkholes are naturally occurring phenomena, and their timing or occurrence cannot accurately be predicted. Many factors can influence sinkhole activity, including both on-site and off-site activities. In addition, site excavations can remove or weaken the "roof" over sinkholes. Further, changes in drainage patterns can induce the development of sinkholes. Geologic mapping indicates the site is underlain by dolostone, shale, and sandstone, which are sedimentary rocks that are generally less susceptible to solutioning and formation of sinkholes than areas underlain by limestone.

Geologic mapping indicates the site underlined by Shady Dolomite Formation. The mapped bedrock includes a dolostone and carbonate formation. Based on the weathered materials encountered at the base of the borings, the site appears to be within an area underlain primarily by shale.

3.3 SUBSURFACE CONDITIONS

General subsurface conditions encountered during the subsurface exploration are described below. For more detailed soil descriptions and stratifications at the boring locations, the Boring Logs should be reviewed. The Boring Logs represent our interpretation of the subsurface conditions based on a review of the field logs and an engineering examination of the samples. The horizontal stratification lines designating the interface between various strata represent approximate boundaries. Transition between different strata in the field may be gradual in both the horizontal and vertical directions. Groundwater, or lack thereof, encountered in the borings and noted on the "Boring Logs" represents conditions only at the time of the exploration.

3.3.1 SURFACE

Initially, the borings encountered an asphalt pavement layer ranging from about 3 to 4 inches in thickness. An underlying by graded aggregate base (GAB) from about 3 to 4 inches thick was noted beneath the asphalt, in B-3, the surface encountered a concrete layer with an approximate thickness of 6-inch.

3.3.2 RESIDUUM

Residual soils were encountered below the pavement layers at the borings. The residuum soil majority consisted of medium stiff to very stiff Lean CLAY (Cl) with N values between 4 and 25, and soft to stiff Sandy Silt (ML) encountered in B-2 and B-3 with N values between 4 and 16. A layer of very stiff to hard Sandy Silt (MH) was encountered in B-4 with N values between 13 and 33. All of the borings were terminated in residual soil at the planned depths.

3.3.3 LABORATORY TEST RESULTS

The soil samples recovered from the borings were visually reviewed in the laboratory by a geotechnical engineer to confirm the field classifications. The samples were classified using the Unified Soil

Classification System (USCS) in general accordance with the American Society of Testing and Materials (ASTM) test designation D2487. The soil classification was based on visual observations and laboratory testing.

4 GEOTECHNICAL EVALUATION AND RECOMMENDATIONS

4.1 GEOTECHNICAL ASSESSMENT

The following geotechnical design recommendations have been developed on the basis of the previously described project characteristics and subsurface conditions encountered. If there are any changes in these project criteria, including building location on the site or the construction of earth retaining structures are required, a review should be made by PSI to determine if modifications to the recommendations are warranted.

Once final design plans and specifications are available, a general review by PSI is recommended as a means to check that the evaluations made in preparation of this report are correct and that earthwork and foundation recommendations are properly interpreted and implemented.

Careful observation of site preparation activities should be conducted to confirm subsurface conditions within previously unexplored areas are consistent with those encountered during our limited subsurface exploration.

Based on the results of the fieldwork, laboratory evaluation, and engineering analyses, we have identified the following potential constraints to the development of this site; the presence of the following:

- High plasticity elastic silt (MH) near the surface
- Variable and low SPT N-values
- Carbonate bedrock (limestone) with the potential for karst features

However, we believe with proper planning and execution, the site can be adapted for the proposed structure and associated improvements if some risk of excessive or differential settlements due to poorly compacted fill soils can be tolerated.

4.1.1 HIGH PLASTICITY ELASTIC SILT (MH) NEAR THE SURFACE

Near-surface, residual elastic silt (MH) soils with an N-value between 13 and 33 bpf were encountered at borings B-4. The elastic silt in particular is a poor material for support of floor slabs, pavements, and foundations due to its tendency for volume change with changes in moisture content and its low strength when wet allowed to swell in the presence of free water. The elastic silt tend to rut and pump and will be difficult to work with due to the narrow moisture content range where it can be successfully compacted. We anticipate that these may not provide adequate support for foundation, slab and pavement support or may not pass a proofroll, and may require some undercutting. The need for removal and replacement of these soils will be determined by observations of the geotechnical engineer during grading and construction, including the recommended proofroll evaluation discussed in Section 4.2, and foundation observations discussed in Section 4.4. If undercutting of existing, low consistency MH material is deemed necessary, the overexcavated material should be replaced with suitable structural fill, placed and compacted as described in Section 4.2 of this report. In any event, the owner should be prepared for removal and replacement of MH soils in selected site areas

4.1.2 CARBONATE BEDROCK (LIMESTONE).

Because the site is mapped as being underlain by carbonate rock, there is some risk of solution activity within the subject property. In addition, it is typical in karst geology for the overburden soils to exhibit weaker zones and elevated moisture contents. The borings did not encounter rock, so it does not appear that there is variable depth to rock that would impact the planned construction. While there are variable and low SPT N-values at the site, the borings all had higher N-values near the bottom of the borehole. Consequently, we did not observe signs of incipient sinkholes. The contractor should be aware of indicators of solution activity, such as depressions and surficial voids, during construction and notify the owner and design team if depressions and surficial voids during construction are observed. A specific exploration or site reconnaissance to determine the extent of sinkhole development or solution activity on this site and the influence it may have on the proposed project was not included in the scope of work for this project. The present standard of practice of geotechnical engineering does not permit accurate prediction of where or when sinkholes will occur.

4.2 SITE PREPARATION AND EARTHWORK

Site clearing, stripping and grubbing operations should only be performed in dry weather conditions.

Initially, remnants of the existing construction including foundations, floor slabs, pavements and utilities, as well as wet soils, topsoil, organics, debris, and other unsuitable materials, should be stripped from an area extending at least 10 feet beyond the outline of the proposed construction. Any existing below-grade construction encountered during site grading or construction should be examined by the Geotechnical Engineer to determine if these materials will require removal. Depressions or low areas resulting from stripping and grubbing or removal of utility lines and other subsurface appurtenances should be backfilled with compacted structural fill in accordance with the recommendations presented in this report. All unsuitable materials resulting from the clearing and demolition operations should be legally disposed off-site

After stripping, removal of unsuitable surface soils, and rough excavation grading, we recommend that areas to provide support for the floor slabs, pavements, and/or structural fill be evaluated for the presence of soft or loose surficial soils by proof-rolling and inspection by the Geotechnical Engineer. Based on the SPT N-values, we anticipate that the surface soils will fail a proofroll and extensive remedial earthwork may be required to prepare a stabilized subgrade. We caution that the subgrade soils exposed after stripping contain sufficient silt to render them both moisture sensitive and frost susceptible. Due to their moisture sensitivity, proper site drainage is crucial during earthwork operations to reduce accumulation of moisture and wet weather delays. These soils may become unstable due to the presence of excess moisture and normal construction equipment traffic operating over them. Accordingly, construction traffic should be kept to a minimum on the exposed soils to reduce the potential for creating an unstable subgrade. If the surface soils become softened/unstable during wet weather or frozen, these soils should be removed before additional fill is placed. As previously mentioned, consideration should be given to sequencing the construction so that the existing pavement can be left in place as long as possible to protect the subgrade.

The proof-roll should be performed using a loaded tandem axle dump truck, or similar rubber-tired equipment, weighing between 15 and 20 tons. The vehicle should make at least four passes over each location, with the last two passes perpendicular to the first two. Areas that wave, rut, or deflect significantly, typically greater than one inch, and continue to do so after several passes of the proof-roller should be undercut to firmer soils as recommended by the geotechnical engineer. Based on the presence of marginal-strength soils, extensive over-excavation of unsuitable bearing soil should be expected. Undercut areas should be backfilled in thin lifts with approved, compacted fill materials. Proof-roll operations should be monitored carefully by PSI's Project Geotechnical Engineer.

Drying soils for re-use as structural fill is often considered a routine aspect of typical grading operations and is not considered a pay item. However, the silt soils encountered at the site will be more difficult to dry and compact than most area soils typically considered suitable for support of commercial construction. If unit prices for earthwork operations are established, they should be examined closely before the contract is executed. If undercutting is a pay item, then undercut volumes should be determined by field measurement. Methods such as counting trucks should not be used for determination of undercut volume, as they are less accurate. Due to the presence of elevated in-situ moistures for the site soils, some drying should be expected.

Recommended criteria for soil fill characteristics (both on-site and imported materials) and compaction procedures are listed below. The project design documents should include the following recommendations to address proper placement and compaction of project fill materials. Earthwork operations should not begin until representative samples are collected and tested. The maximum dry density and optimum moisture content should be determined.

EARTH FILL MATERIALS

- Imported and on-site soil material satisfactory for structural fill should include clean soil material with USCS classifications of (GW, GP, GM, SW, SP, SM, and some SC, CL or ML). The fill material should have a Standard Proctor (ASTM D698) Maximum Dry Density of at least 100 pcf, a maximum Liquid Limit of 45 and a Plasticity Index of 20 or less. Elastic SILT (MH) and Fat CLAY (CH) soils should not be reused as structural fill.

- Organic content or other foreign matter (debris) should be no greater than 3 percent by weight, and no large roots (greater than ¼ inch in diameter) should be allowed. Organic materials should not be intentionally mixed into structural fill.

- Material utilized as fill should not contain rocks greater that 3 inches in diameter or greater than 30 percent retained on the ¾-inch sieve.

COMPACTION RECOMMENDATIONS

- Maximum loose lift thickness – 8 inches, mass fill. Loose lifts of 4 to 6 inches in trenches and other confined spaces where hand operated equipment is used.

- Compaction requirements – 95 percent of the maximum dry density and 98 percent within the upper 12 inches as determined by the standard Proctor (ASTM D698) compaction test.

- Soil moisture content at time of compaction – within -1 to -3 percent of the optimum moisture content.

TEST CRITERIA TO EVALUATE FILL AND COMPACTION

- One standard Proctor compaction test and one Atterberg limits test for each soil type used as project fill. Gradation tests may be necessary and should be performed at the geotechnical engineer's discretion.

- One density test every 2,500 square feet for each lift or two tests per lift, whichever is greater (for preliminary planning only; the test frequency should be determined by our engineering staff).

- Trench fill areas – one density test every 75 linear feet at vertical intervals of 2 feet or less.

It will be important to maintain positive site drainage throughout construction. Storm water runoff should be diverted around the building and pavement areas. The site should be graded at all times such that water is not allowed to pond. The surface should be sealed with a smooth drum roller to enhance drainage if precipitation is expected. Subgrades damaged by construction equipment should be repaired immediately to avoid further degradation in adjacent areas and to help prevent water ponding.

Should there be a significant time lag or period of inclement weather between site grading and the fine grading of the slab prior to the placement of stone or concrete, the Geotechnical Engineer of Record or qualified representative should assess the condition of the prepared subgrade. The subgrade may require scarification and re-compaction or other remedial measures to provide a firm and unyielding subgrade prior to final slab construction.

4.3 SEISMIC CONSIDERATIONS

The project site is located within a municipality that employs the 2015 International Building Code® (IBC). As part of this Code, the design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event, as well as the properties of the soils that underlie the site. As part of the procedure to evaluate seismic forces, the Code requires the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile within the upper 100 feet of the ground surface.

To define the Site Class for this project, we first interpreted the results of soil test borings drilled within the project site and estimated appropriate soil properties below the base of the borings to a depth of 100 feet, as permitted by the Code. The estimated soil properties were based upon our experience with subsurface conditions in the general site area.

Based upon the Su-values recorded during the field exploration, the subsurface conditions within the site are consistent with the characteristics of a Site Class "D" as defined in Table 1613.5.2 of the Code

The associated IBC (2015) probabilistic ground acceleration values and site coefficients for the general site area were obtained from the SEAOC/OSGPD U.S. Seismic Design Maps Web Application (http://seismicmaps.org) and are presented in the table below:

Ground Motion Values for Site Class "D"*

Period (sec)	**Mapped MCE Spectral Response Acceleration** (g)**		**Site Coefficients**		**Adjusted MCE Spectral Response Acceleration (g)**		**Design Spectral Response Acceleration (g)**	
0.2	S_s	0.262	F_a	1.59	SM_s	0.417	SD_s	0.278
1.0	S_1	0.103	F_v	2.388	SM_1	0.246	SD_1	0.164

*2% Probability of Exceedance in 50 years for Latitude 34.1669 and Longitude -84.7878
**At B-C interface (i.e. top of bedrock).
MCE = Maximum Considered Earthquake

The Site Coefficients, Fa and Fv presented in the above tables were obtained also from the noted webpage, as a function of the site classification and mapped spectral response acceleration at the short (Ss) and 1-second (S1) periods but can also be interpolated from IBC Tables 1613.2.3(1) and 1613.2.3(2).

4.4 FOUNDATION RECOMMENDATIONS

Based on the subsurface exploration performed at the site, following recommendations are provided to support the proposed structure at the site.

Based on the results of the geotechnical exploration and anticipated structural loads, Depending upon grading, we anticipate that potentially elastic silt (MH) soils will have to be removed and replaced with low plastic structural fill to a depth of 2 feet below the foundation subgrade.

The planned construction can be supported on conventional spread-type footing foundations bearing on either competent naturally deposited soils, compacted-engineered fill or the existing fill (providing the owner is willing to accept the risk). Spread footings for building columns and continuous footings for bearing walls can be designed for allowable soil bearing pressures of 2,000 psf and 1,500 psf, respectively, based on dead load plus design live load. PSI recommends a minimum dimension of 24 inches for square footings and 18 inches for continuous footings to reduce the possibility of a local bearing capacity failure.

PSI calculates that footings with a width no larger than 5 feet, designed and constructed in accordance with the recommendations herein will experience post-construction total settlements generally less than 1-inch with differential settlement along a 40-foot long portion of a continuous footing, or similarly spaced column footings generally less than ½-inch. Total and differential settlements of these magnitudes are usually considered tolerable for the anticipated construction. However, the tolerance of the proposed structure to the predicted total and differential settlements should be confirmed by the structural engineer.

The foundation excavations should be evaluated for the presence of organic-laden and/or poorly compacted fill soils. Due to the site being previously graded, there is potential for encountering poorly compacted fill soils during grading or foundation excavation. Therefore, all foundation excavations should be evaluated for the presence of organic-laden and/or poorly compacted fill soils to determine if these materials are present at the bearing elevation. Should additional over-excavation of previously placed fill or organic-laden soil be required in footing excavations, the replacement material should be suitable structural fill soil, non-excavatable flowable fill, or lean concrete. Number 57 stone should not be used as backfill beneath foundations because of the tendency of water to accumulate in open-graded aggregate.

To assess the suitability of the foundation bearing soil, we recommend that Dynamic Cone Penetrometer (DCP) testing be performed within footing excavations and should extend to a minimum depth of 3 feet below the bottom of the foundation grade. Due to the variable N-values observed in the borings, some overexcavation of unsuitable bearing soil should be expected.

All foundations should bear at a minimum depth of 18 inches below the lowest adjacent final ground surface for frost penetration, and protective embedment. PSI recommends that the foundations be designed in accordance with the 2018 International Building Code.

Foundation concrete should be placed as soon as possible after excavation and after any needed overexcavation and re-compaction. If foundation excavations must be left open overnight, or exposed to inclement weather, the base of the excavation should be protected with a "mud mat" consisting of 2-3 inches thick of lean concrete. Footing excavations should be protected from surface water run-off and freezing. If water is allowed to accumulate within a footing excavation and soften the bearing soils, or if the bearing soils are allowed to freeze, the deficient soils should be removed from the excavation prior to concrete placement.

4.5 FLOOR SLAB RECOMMENDATIONS

Floor slabs may be supported on subgrades prepared in accordance with the SITE PREPARATION AND EARTHWORK section (paragraph 4.2) of this report. Depending upon grading, we anticipate that potentially elastic silt (MH) soils will have to be removed and replaced with low plastic structural fill to a depth of 2 feet below the slab subgrade in some slab areas. additional undercutting may not be required in areas receiving more than 2 feet of new fill.

Where concrete slabs are designed as beams on an elastic foundation, the soils that will comprise the subgrade soils should be assumed to have a modulus of subgrade reaction (k) of 120 pounds per cubic inch (pci). This value is estimated based on the expected results of a plate load test using a nominal 1 foot by 1 footplate. and should be corrected for load areas greater than 1 ft by 1 ft

In order to provide uniform support beneath any proposed floor slab-on-grade, we recommend that floor slabs be underlain by a minimum of 4 inches of compacted aggregate base course material.

The aggregate base course material should be compacted to at least 98 percent of its standard Proctor maximum dry density. Open-graded crushed stone, such as No. 57 stone, may also be used; however, it is our experience that open graded crushed stone can collect water during periods of rain and cause saturation and softening of the subgrade soils prior to placement of the floor slab concrete. Therefore, construction sequencing/timing, and the season in which the stone is placed, should be taken into consideration.

The crushed rock or aggregate base is intended to provide a capillary break to limit migration of moisture through the slab. If additional protection against moisture vapor is desired, a vapor retarding membrane may also be incorporated into the design; however, there are no specific conditions that mandate its use. Factors such as cost, special considerations for construction, and the floor coverings suggest that decisions on the use of vapor retarding membranes be made by the architect and owner. Based on the subsurface materials and the intended use of the structure, we recommend the use of a vapor retarding membrane. Vapor retarders, if used, should be installed in accordance with ACI 302.1, Chapter 3.

The precautions listed below should be closely followed for construction of slabs-on-grade. These details will not prevent the amount of slab movement but are intended to reduce potential damage should some settlement of the supporting subgrade take place.

- Cracking of slabs-on-grade is normal and should be expected. Cracking can occur not only as a result of heaving or compression of the supporting soil, but also as a result of concrete curing stresses. The occurrence of concrete shrinkage cracks, and problems associated with concrete curing may be reduced and/or controlled by limiting the water to cement ratio of the concrete, proper concrete placement, finishing, and curing, and by the placement of crack control joints at frequent intervals, particularly, where re-entrant slab corners occur. The American Concrete Institute (ACI) recommends a maximum panel size (in feet) equal to approximately three times the thickness of the slab (in inches) in both directions. For example, joints are recommended not to exceed spacing of 12 feet based on a four-inch thick slab. We also recommend that control joints be scored three feet in from and parallel to all foundation walls.

- Some increase in moisture content is inevitable as a result of development and associated landscaping; however, extreme moisture content increases can be largely controlled by proper and responsible site drainage, building maintenance and irrigation practices.

- All backfill in areas supporting slabs should be moisture conditioned and compacted as described earlier in this report. Backfill in all interior and exterior utility line trenches should be carefully compacted.

- Exterior slabs should be isolated from the building. These slabs should be reinforced to function as independent units. Movement of these slabs should not be transmitted to the building foundation or superstructure.

4.6 PAVEMENT DESIGN GUIDELINES AND PARAMETERS

4.6.1 PAVEMENT SUBGRADE PREPARATION

Following the stripping of deleterious materials, we recommend the proposed pavement subgrade be prepared grated to drain and compacted in accordance with the recommendations provided in Section 4.2 "SITE PREPARATION AND EARTHWORK" of this report. The final amount of removal and replacement of the elastic silt (MH) will be determined during construction; however, because of the poor subgrade characteristics, a minimum buffer of at least 12 inches of non-expansive low plasticity compacted fill should be placed prior to pavement construction in areas in which elastic silt (MH) are determined to be present.

PSI recommend proof-rolling and re-compacting the upper 1-foot of subgrade immediately prior to placement of the graded aggregate base course (GAB). The exposed pavement subgrade should also be evaluated by a representative of PSI immediately prior to placing GAB. If low consistency soils are encountered which cannot be adequately compacted in place, such soils should be removed and replaced with well-compacted soil fill or crushed stone materials.

Based upon the findings of our borings and in the absence of a grading plan, we anticipate existing ML or SM fill soils will be present at the subgrade elevation. A California Bearing Ratio (CBR) value of about 4 can be reasonably assumed for the structural fill or residual ML soils at compaction levels of about 98 percent of the standard Proctor maximum dry density range -1 to 2 percent of optimum moisture.

Site grading is generally accomplished early in the construction phase. Subsequently as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, and rainfall. As a result, the pavement subgrade may not be suitable for pavement construction and corrective action will be required. The subgrade should be carefully evaluated at the time of pavement construction and subgrade areas should be reworked, moisture conditioned, and property compacted to the recommendations in this report immediately prior to paving.

Prevention of infiltration of water into the subgrade is essential for the successful long-term performance of any pavement. Both the subgrade and the pavement surface should be sloped to promote surface drainage away from the pavement structure.

4.6.2 FLEXIBLE PAVEMENT RECOMMENDATIONS

Traffic loading information was not provided at the time of this report. Therefore, specific detailed pavement sections cannot be provided. However, we anticipate that traffic loads will be produced primarily by automobile traffic, occasional delivery and trash removal trucks, and fully loaded semi-tractor trailers. A California Bearing Ratio (CBR) value of 4 was assumed for the on-site SILTS and CLAYS, or newly placed structural fill, at compaction levels of about 98 percent of the standard Proctor maximum dry density within about 2 percent of optimum moisture.

Based on our experience with similar facilities and subgrade conditions which are typical for this region, we recommend the following preliminary minimal pavement sections. Once detailed traffic information is available, actual pavement section calculations should be performed to develop the design sections.

PAVEMENT SECTION	**MINIMUM RECOMMENDED MATERIAL THICKNESS (inches)**			**TOTAL PAVEMENT SECTION (inches)**
	Graded Aggregate Base (GAB)	**Superpave INTERMEDIATE (19 mm)**	**Superpave SURFACE (9.5 mm Type II)**	
Light Duty Areas	8	--	3 (in two lifts)	9
Heavy Duty Areas	8	2 ½	1 ½	12

Notes: 1) Light Duty Areas calculated based on traffic loading of 30,000 ESALS or less over 20 years with the reliability of 80%.

Parking stalls only with no through traffic. Prime coat required between ABC and asphalt.

2) Heavy Duty Areas calculated based on traffic loading of 60,000 ESALS or less over 20 years.

Actual pavement section thickness should be provided by the design civil engineer based upon anticipated traffic loads, volume, and the owner's design life requirements. The above sections represent minimum thickness representative of typical, local construction practices, and as such periodic maintenance should be anticipated. Pavement durability is based on the owner properly maintaining the pavement area with routine maintenance and seals.

4.6.3 RIGID PAVEMENT RECOMMENDATIONS

The use of concrete for paving has become more prevalent in recent years due to the long-term maintenance cost benefits of concrete compared to asphaltic pavements. Proper finishing of concrete pavements requires the use of appropriate construction joints to reduce the potential for cracking. Construction joints should be designed in accordance with current Portland Cement Association guidelines. Joints should be sealed to reduce the potential for water infiltration into pavement joints and subsequent infiltration into the supporting soils. The concrete should have a minimum compressive strength of 4,000 psi at 28 days. The concrete should also be designed with 5 ± 1 percent entrained air to improve workability and durability. All pavement materials and construction procedures should conform to GDOT or appropriate city, county requirements.

Large front-loading trash dump trucks frequently impose concentrated front-wheel loads on pavements during loading. This type of loading typically results in rutting of the pavement and ultimately, pavement failures. Therefore, we recommend that the pavement in trash pickup areas consist of a minimum 6-inch graded aggregate base overlain by a minimum 6.5-inch thick, rigid pavement.

RIGID (CONCRETE) PAVEMENT	**LIGHT-DUTY*** **60,000 ESALS OR ESAL OVER 20**	**HEAVY-DUTY** **60,000 ESALS OR ESAL OVER 20**
Portland Cement Concrete (4,000 psi)	5 inches	6 inches
Graded Aggregate Base (GAB)	4 inches	6 inches

Notes: *Parking stalls only.

5 CONSTRUCTION CONSIDERATIONS

5.1 GROUNDWATER

Based on the borings, it appears groundwater will not significantly impact the proposed construction. However, groundwater levels within this region tend to fluctuate with seasonal and climatic changes, and confined pockets of perched water often occur above the groundwater table. Generally, the highest groundwater levels occur in late winter and early spring; and the lowest levels in late summer and early fall. Therefore, water may be encountered during construction at depths not indicated during this study.

If groundwater is encountered, we recommend that the groundwater table be lowered and maintained at a depth of at least 2 feet below bearing levels and excavation bottoms during construction. The contractor should be responsible for selecting the most optimal dewatering method.

Furthermore, we recommend that the Contractor determine the actual groundwater levels at the time of construction to determine the groundwater impact on the construction procedures.

The contractor should be prepared to promptly remove surface water from the general construction area by similar methods. If groundwater is encountered during trenching or foundation installation, PSI should be notified so that we might determine whether there is a need for underslab drainage, perimeter drains, or other recommendations for dewatering.

5.2 EXCAVATION AND SAFETY

Based on our experience in the Valley and Ridge Physiographic Province, most residual soils encountered should generally be excavatable using conventional excavation equipment, such as scrapers, front end loaders, bulldozers, etc. All excavations should be sloped or shored in accordance with applicable OSHA regulations.

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, Part 1926, Subpart P". This document was issued to better allow for the safety of workers entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed, the owner and the Contractor could be liable for substantial penalties.

The Contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The Contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the Contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in all local, state, and federal safety regulations.

PSI is providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or the Contractor's or other parties' compliance with local, state, and federal safety or other regulations. Groundwater control is critical to excavation safety and is described above.

6 REPORT LIMITATIONS

The recommendations submitted are based on the available subsurface information obtained by PSI and design details furnished by Taco Bell Corporation for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation recommendations are required. If PSI is not retained to perform these functions, we will not be responsible for the impact of those conditions on the geotechnical recommendations for the project.

PSI warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area at the date of this report. No other warranties are implied or expressed.

After the plans and specifications are more complete, PSI should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At that time, it may be necessary to submit supplementary recommendations. This report has been prepared for the exclusive use of **Taco Bell Corporation** and their consultants for the specific application to the **Proposed Taco Bell #293296** located on 403 E. Main Street in Cartersville, GA 30120.

APPENDICES

SITE VICINITY MAP

SITE VICINITY MAP

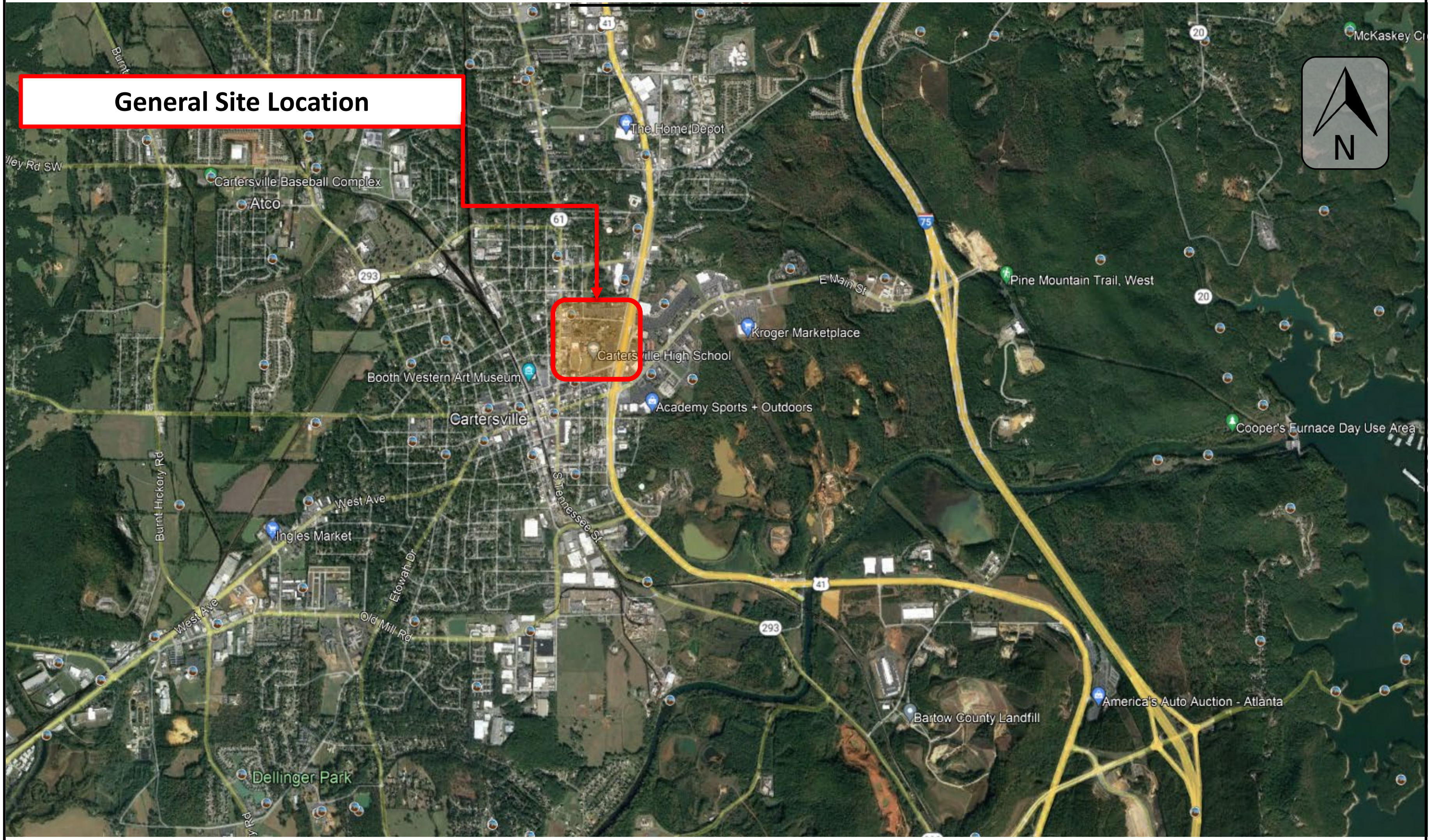


FIGURE No.: 1

DRAWN BY: M.A.S

CHECKED BY: K.E.S

Geotechnical Engineering Services
Proposed Taco Bell #293296
403 E. Main Street
Cartersville, GA 30120
PSI PROJECT No.: 0775-3203
DATE: 11/9/2021

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BORING LOCATION PLAN

FIELD TESTING LOCATION PLAN

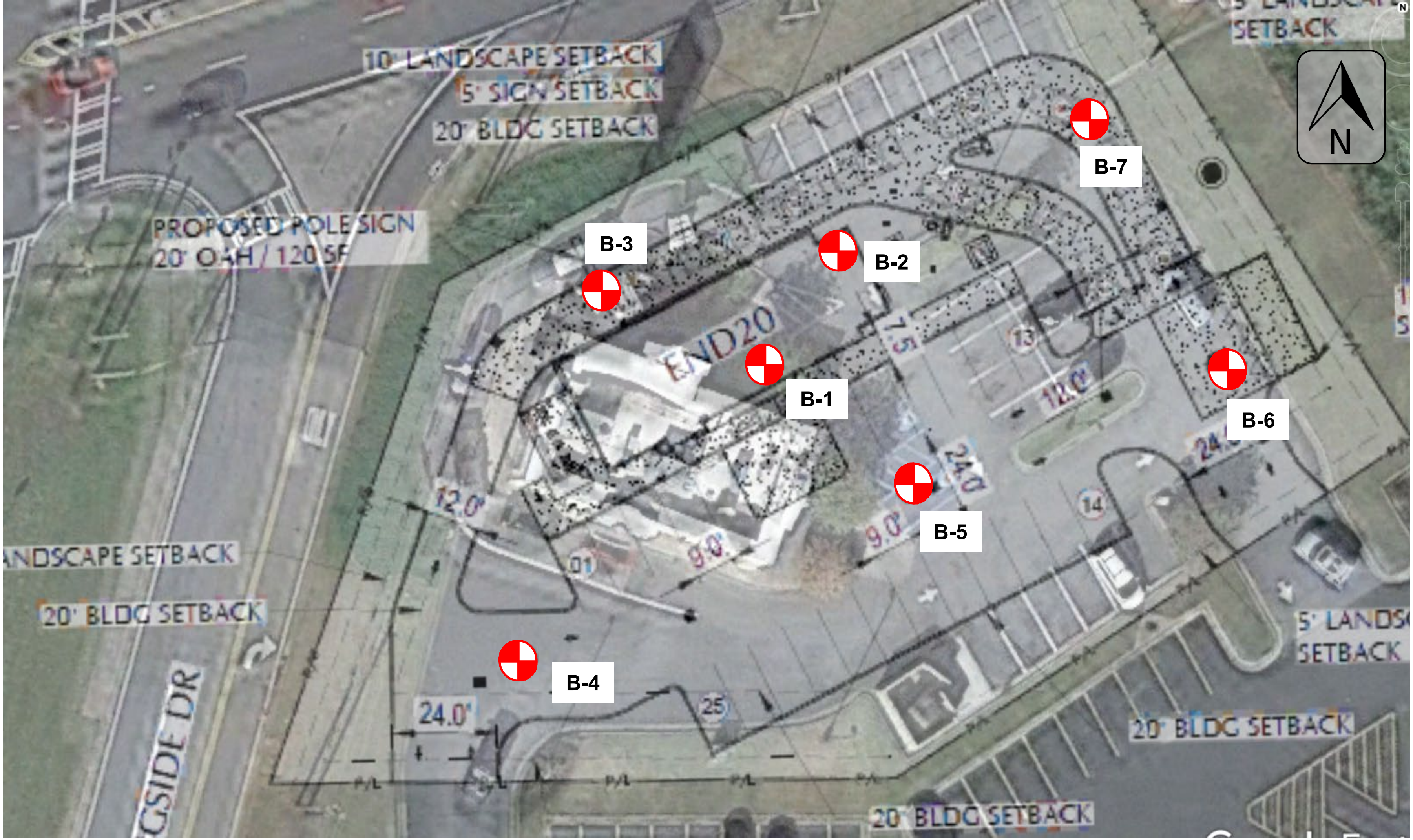

FIGURE No.: 2

DRAWN BY: M.A.S

CHECKED BY: K.E.S

Geotechnical Engineering Services
Proposed Taco Bell #293296
403 E. Main Street
Cartersville, GA 30120
PSI PROJECT No.: 0775-3203
DATE: 11/9/2021

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GENERAL NOTES AND SOIL CLASSIFICATION CHART

GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

Q_U - TSF	N - Blows/foot	Consistency
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

Description	Criteria
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term	% Dry Weight
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

Description	Criteria
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided:	Fracture planes appear polished or glossy, sometimes striated

Description	Criteria
Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed:	Inclusion of small pockets of different soils
Layer:	Inclusion greater than 3 inches thick (75 mm)
Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

Q_U - TSF	Consistency
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

Description	Criteria
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

Voids	Void Diameter
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

(Typically Sedimentary Rock)

Component	Size Range
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

Rock Mass Description	RQD Value
Excellent	90 -100
Good	75 - 90
Fair	50 - 75
Poor	25 -50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS	●	GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		(LITTLE OR NO FINES)	○	GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES	▥	GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)	▨	GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS	■	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		(LITTLE OR NO FINES)	░	SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES	▥	SM	SILTY SANDS, SAND - SILT MIXTURES
		(APPRECIABLE AMOUNT OF FINES)	▨	SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	▥	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			▨	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			▤	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	▥	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
			▨	CH	INORGANIC CLAYS OF HIGH PLASTICITY
			∿	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			ψ	PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

BORING LOGS

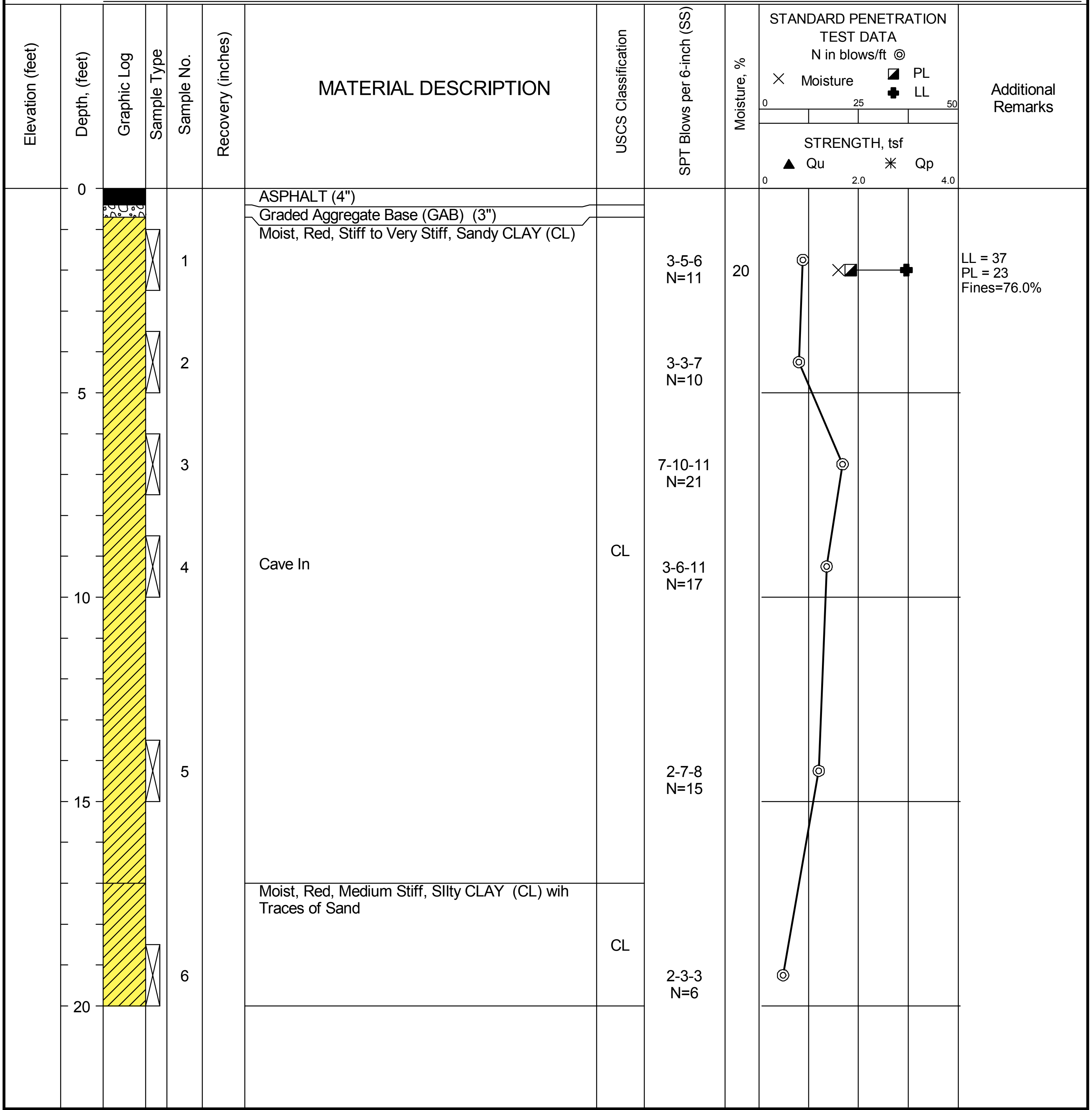
BORING B-1

DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

Water		
▽	While Drilling	N.O. feet
▼	Upon Completion	N.O. feet
▽	Delay	N/A

BORING LOCATION:
Refer to Sheet 1



Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
			ASPHALT (4")				
			Graded Aggregate Base (GAB) (3")				
			Moist, Red, Stiff to Very Stiff, Sandy CLAY (CL)				
☒	1				3-5-6 N=11	20	LL = 37 PL = 23 Fines=76.0%
☒	2				3-3-7 N=10		
☒	3				7-10-11 N=21		
☒	4		Cave In	CL	3-6-11 N=17		
☒	5				2-7-8 N=15		
			Moist, Red, Medium Stiff, SIlty CLAY (CL) wih Traces of Sand	CL			
☒	6				2-3-3 N=6		

intertek psi

Professional Service Industries, Inc.
5801 Benjamin Center Dr, Suite 112
Tampa, FL 33634
Telephone: (813) 886-1075

PROJECT NO.: 0775-3203
PROJECT: Taco Bell
LOCATION: 403 E Main St
Cartersville, GA

The stratification lines represent approximate boundaries. The transition may be gradual.

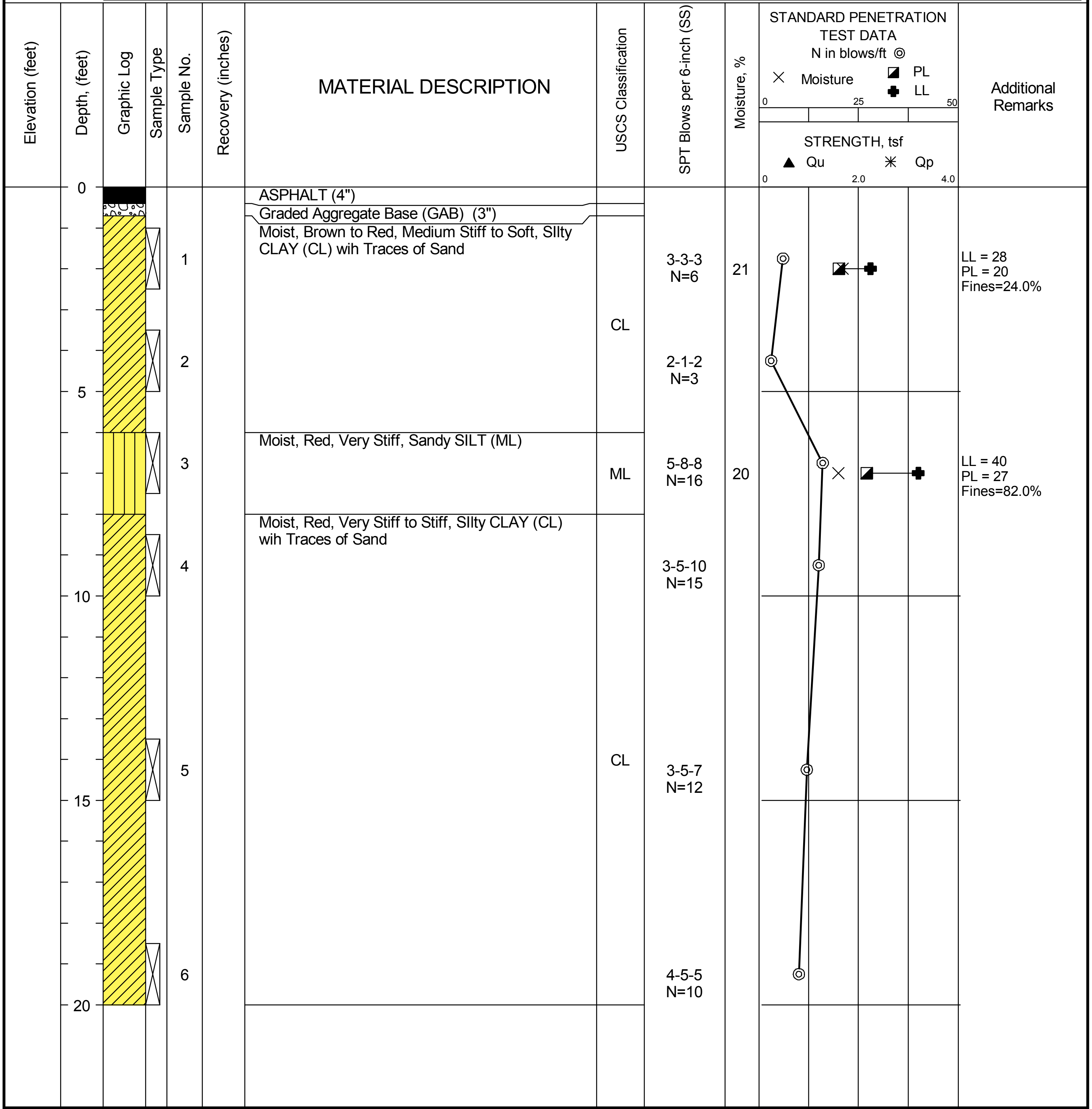
BORING B-2

DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

Water		
▽	While Drilling	N.O. feet
▼	Upon Completion	N.O. feet
▽	Delay	N/A

BORING LOCATION:
Refer to Sheet 1



Sample No.	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
	ASPHALT (4")				
	Graded Aggregate Base (GAB) (3")				
1	Moist, Brown to Red, Medium Stiff to Soft, SIlty CLAY (CL) wih Traces of Sand	CL	3-3-3 N=6	21	LL = 28 PL = 20 Fines=24.0%
2			2-1-2 N=3		
3	Moist, Red, Very Stiff, Sandy SILT (ML)	ML	5-8-8 N=16	20	LL = 40 PL = 27 Fines=82.0%
4	Moist, Red, Very Stiff to Stiff, SIlty CLAY (CL) wih Traces of Sand	CL	3-5-10 N=15		
5			3-5-7 N=12		
6			4-5-5 N=10		

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PROJECT: Taco Bell
LOCATION: 403 E Main St
Cartersville, GA

The stratification lines represent approximate boundaries. The transition may be gradual.

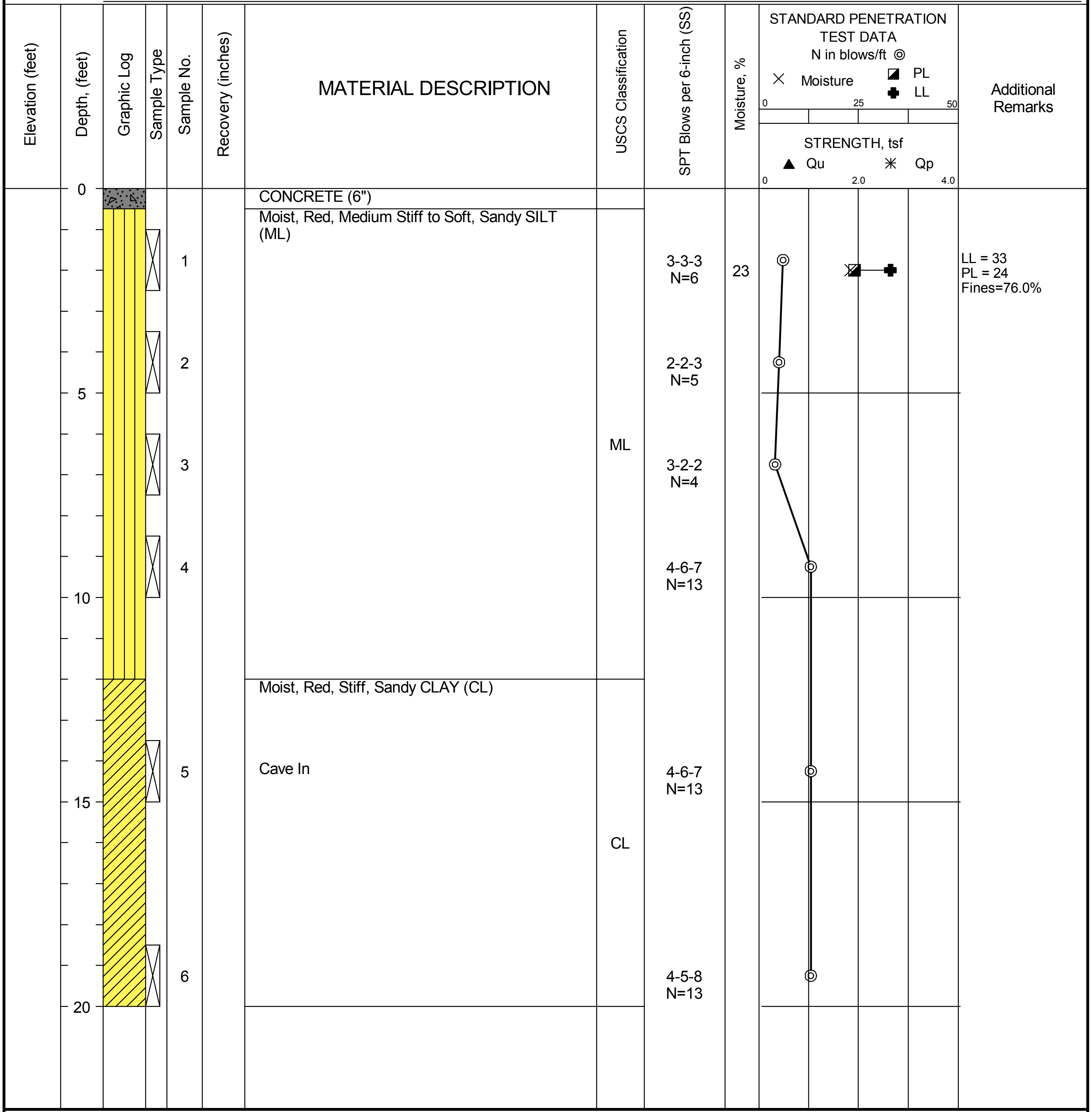
BORING B-3

DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

Water		
▽	While Drilling	N.O. feet
▼	Upon Completion	N.O. feet
▼	Delay	N/A

BORING LOCATION:
Refer to Sheet 1



Depth, (feet)	Sample No.	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
0		CONCRETE (6")				
		Moist, Red, Medium Stiff to Soft, Sandy SILT (ML)	ML			
	1			3-3-3 N=6	23	LL = 33 PL = 24 Fines=76.0%
	2			2-2-3 N=5		
5						
	3			3-2-2 N=4		
	4			4-6-7 N=13		
10						
		Moist, Red, Stiff, Sandy CLAY (CL)	CL			
	5	Cave In		4-6-7 N=13		
15						
	6			4-5-8 N=13		
20						

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PROJECT NO.: 0775-3203
PROJECT: Taco Bell
LOCATION: 403 E Main St
Cartersville, GA

The stratification lines represent approximate boundaries. The transition may be gradual.

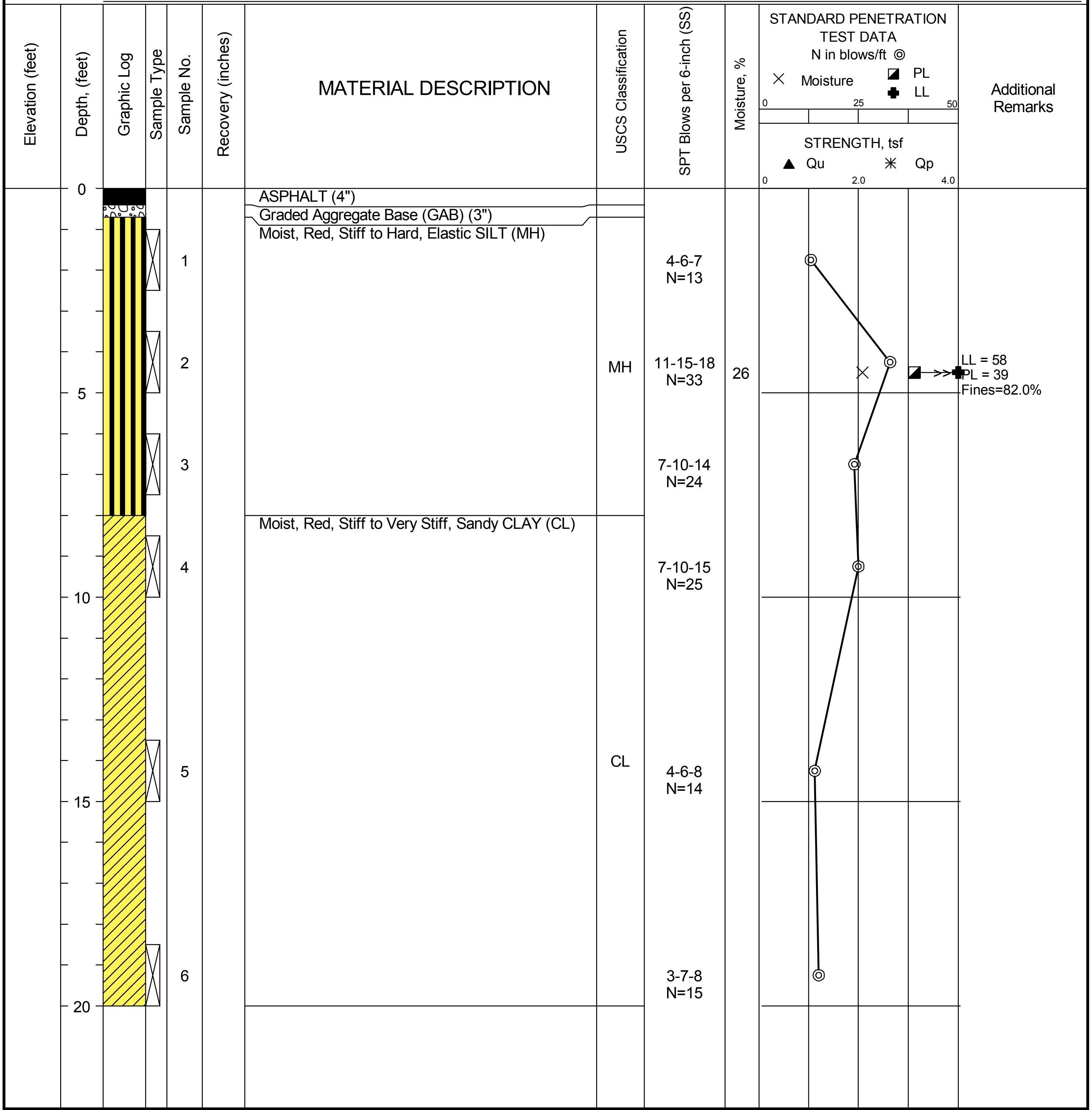
BORING B-4

DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

Water		
∇	While Drilling	N.O. feet
▼	Upon Completion	N.O. feet
∇	Delay	N/A

BORING LOCATION:
Refer to Sheet 1



Depth (ft)	Sample No.	Material Description	USCS	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
0		ASPHALT (4")				
		Graded Aggregate Base (GAB) (3")				
		Moist, Red, Stiff to Hard, Elastic SILT (MH)	MH			
	1			4-6-7 N=13		
	2			11-15-18 N=33	26	LL = 58 PL = 39 Fines=82.0%
5	3			7-10-14 N=24		
		Moist, Red, Stiff to Very Stiff, Sandy CLAY (CL)	CL			
10	4			7-10-15 N=25		
15	5			4-6-8 N=14		
20	6			3-7-8 N=15		

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PROJECT NO.: 0775-3203
PROJECT: Taco Bell
LOCATION: 403 E Main St
Cartersville, GA

The stratification lines represent approximate boundaries. The transition may be gradual.

DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

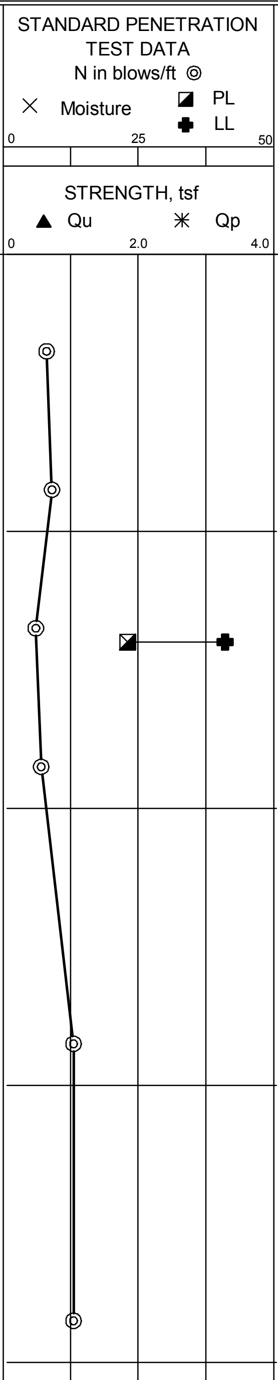
DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

BORING B-5

Water		
▽	While Drilling	N.O. feet
▼	Upon Completion	N.O. feet
▽	Delay	N/A

BORING LOCATION:
Refer to Sheet 1

Elevation (feet)	Depth, (feet)	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
	0				ASPHALT (3")				
					Graded Aggregate Base (GAB) (4")				
					Moist, Red, Medium Stiff to Stiff, Sandy CLAY (CL)	CL			
			1				3-4-4 N=8		
			2				3-4-5 N=9		
	5								
			3				2-2-4 N=6	23	LL = 41 PL = 23 Fines=75.0%
			4				2-3-4 N=7		
	10								
			5				3-6-7 N=13		
	15								
			6				3-4-9 N=13		
	20								



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Tampa, FL 33634
Telephone: (813) 886-1075

PROJECT NO.: 0775-3203
PROJECT: Taco Bell
LOCATION: 403 E Main St
Cartersville, GA

The stratification lines represent approximate boundaries. The transition may be gradual.

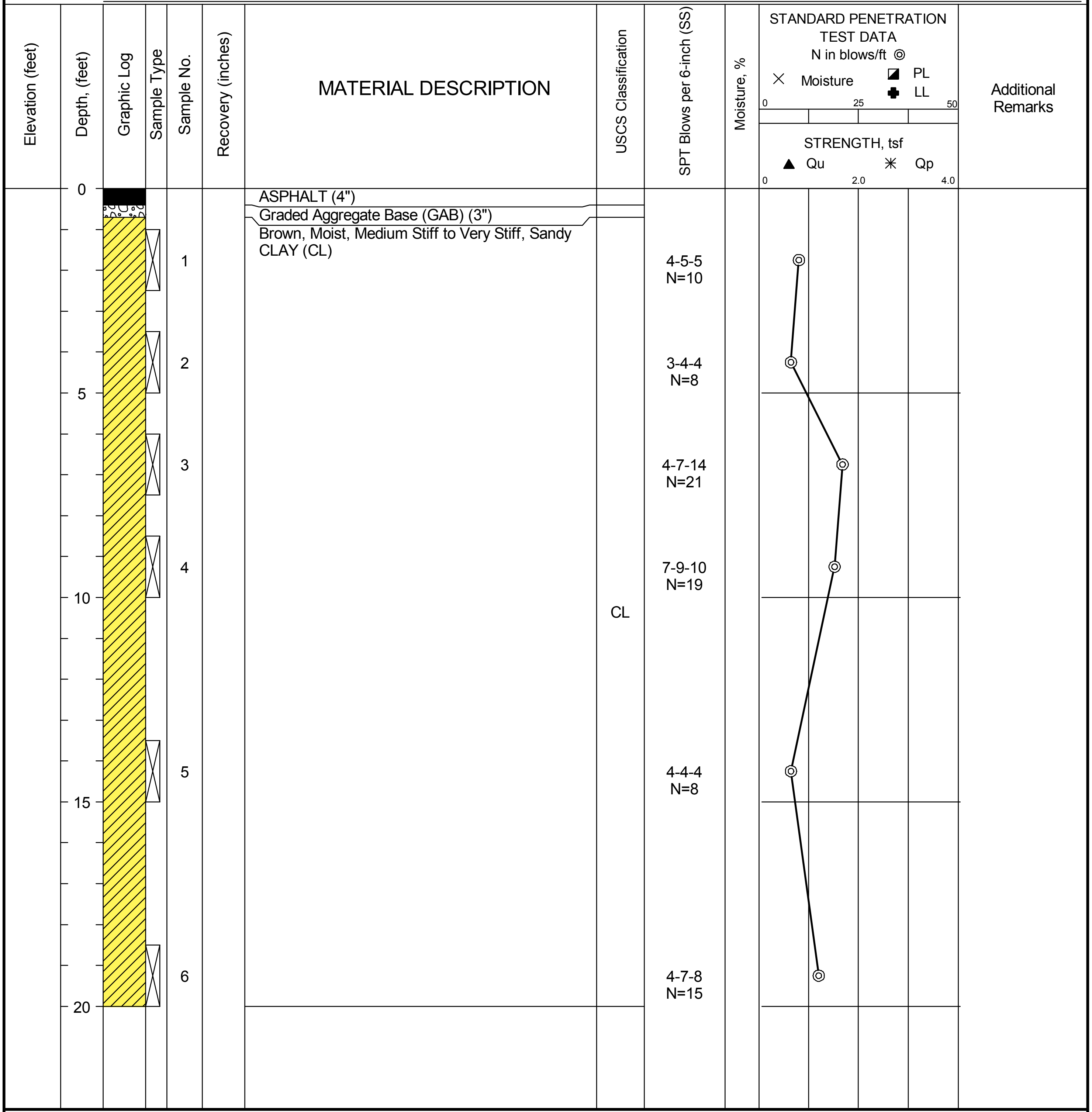
BORING B-6

DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

Water		
▽	While Drilling	N.O. feet
▼	Upon Completion	N.O. feet
▽	Delay	N/A

BORING LOCATION:
Refer to Sheet 1



Depth, (feet)	Sample No.	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)
0		ASPHALT (4")		
		Graded Aggregate Base (GAB) (3")		
		Brown, Moist, Medium Stiff to Very Stiff, Sandy CLAY (CL)	CL	
	1			4-5-5 N=10
	2			3-4-4 N=8
5	3			4-7-14 N=21
	4			7-9-10 N=19
10	5			4-4-4 N=8
15	6			4-7-8 N=15
20				

Professional Service Industries, Inc.
5801 Benjamin Center Dr, Suite 112
Tampa, FL 33634
Telephone: (813) 886-1075

PROJECT NO.: 0775-3203
PROJECT: Taco Bell
LOCATION: 403 E Main St
Cartersville, GA

The stratification lines represent approximate boundaries. The transition may be gradual.

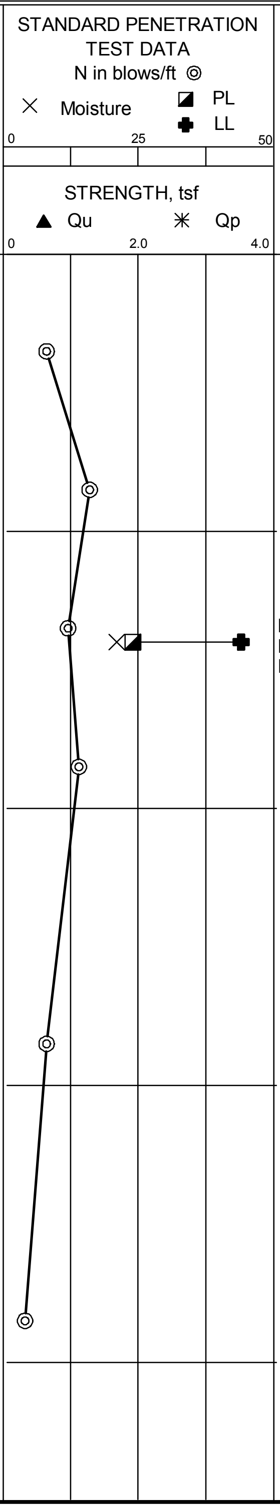
DATE STARTED: 10/21/21
DATE COMPLETED: 10/21/21
COMPLETION DEPTH 20.0 ft
BENCHMARK: N/A
ELEVATION: N/A
LATITUDE:
LONGITUDE:
STATION: N/A **OFFSET:** N/A
REMARKS:

DRILL COMPANY: Drilling Solutions, Inc
DRILLER: Antonio **LOGGED BY:** Antonio
DRILL RIG: CME-45
DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: SS
HAMMER TYPE: Automatic
EFFICIENCY N/A
REVIEWED BY:

BORING B-7

Water			
	∇	While Drilling	N.O. feet
	▼	Upon Completion	N.O. feet
	∇	Delay	N/A

BORING LOCATION:
Refer to Sheet 1



Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	Additional Remarks
	0					ASPHALT (4")				
						Graded Aggregate Base (GAB) (3")				
						Moist, Brown, Medium Stiff to Stiff, Sandy CLAY (CL)				
			☒	1				3-3-5 N=8		
			☒	2				6-7-9 N=16		
	5						CL			
			☒	3				5-5-7 N=12	21	LL = 44 PL = 24 Fines=78.0%
			☒	4		Cave In		6-6-8 N=14		
	10					Moist, Brown, Medium Stiff to Soft, Sandy CLAY (CL)				
			☒	5				3-4-4 N=8		
	15						CL			
			☒	6				2-2-2 N=4		
	20									

intertek
psi

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