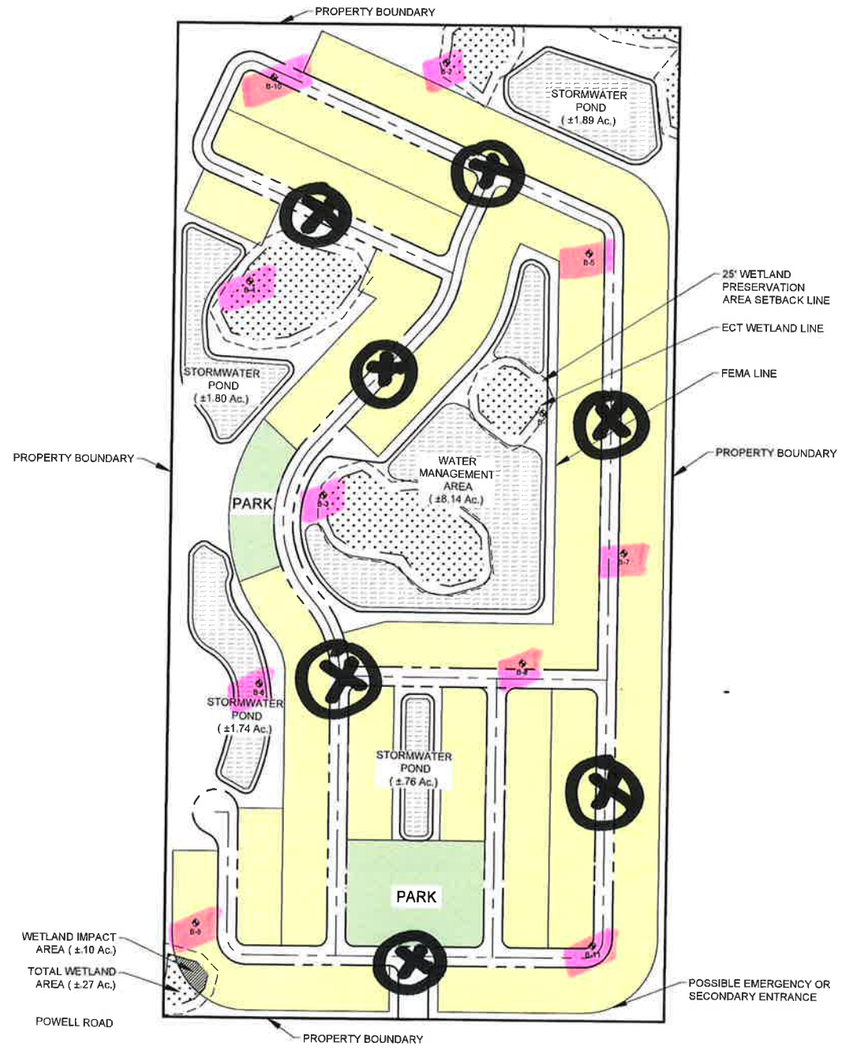


⊗ = additional borings

0 100 200 400
SCALE IN FEET

* ASSUMES 100% IMPACT BASED ON DIRECTION FROM ECT.

## Site Data Table

| | |
|---|---|
| Project Location | Hernando County, Florida |
| Total Project Area | 79.77-acres |
| Total Developable Area | 67.66-acres |
| Current Zoning | PDP |
| FLU | RES |
| 45' X 120' Lots | 270 |
| Total Stormwater Mgt Area | 14.49 Ac. (21.4 % of Developable Area) (Includes 4.39 Ac. Of Wetland Preservation Area) |
| Required Park Area | 3.20 Ac. |
| Provided Park Area | 3.42 Ac. |
| Required Preservation Area | 5.58 Ac. (7 % of Total Project Area) |
| Provided | |
| Wetland Preservation Area | 6.79 Ac. (7.18 % of Total Project Area) |
| Undisturbed FEMA Area | 1.96 Ac. (3.0 % of Total Project Area) |
| Impacted Wetland Area | .27 Ac. * Assumes 100% Impact Based On Direction From ECT. ) |

PROJECT NAME:
POWELL 80 ACRES

DRAWING TITLE:
CONCEPTUAL SITE PLAN 3

PREPARED FOR:
MERITAGE HOMES

PROJECT No. 001-01-01

SHEET 1 of 1

LevelUp Consulting, LLC
505 E. Jackson Street
Suite 200
Tampa, Florida 33602
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# *REPORT OF*
# *GEOTECHNICAL ENGINEERING EVALUATION*

## GAGNE PARCEL

**Pasco County, Florida**

***PREPARED FOR:***

## MERITAGE HOMES OF FLORIDA, INC.

**10117 Princess Palm Avenue**
**Tampa, Florida 33610**

***FES PROJECT NO.: 21-5233 (Rev.1)***

**October 27, 2021**
**(Revised March 8, 2022)**

***PREPARED BY:***

FAULKNER
ENGINEERING SERVICES, Inc.

2734 Causeway Center Drive
Tampa, Florida 33619

October 27, 2021 (Revised March 8, 2022)

Mr. Garth Noble
Meritage Homes of Florida, Inc.
10117 Princess Palm Avenue
Tampa, Florida 33610

**RE: Report of Geotechnical Engineering Evaluation**
**Gagne Parcel**
**Zephyrhills, Pasco County, Florida**
**FES Project No.: 21-5233 (Rev.1)**

Dear Mr. Noble:

**Faulkner Engineering Services, Inc. (FES)** has completed a geotechnical engineering evaluation of the referenced project. We provided our services in general accordance with FES Proposal No. P21-7910 dated August 25, 2021, change order 1 dated September 14, 2021 and change order 2 dated January 18, 2022. The purpose of our geotechnical engineering evaluation was to analyze the subsurface soil and groundwater conditions at the site in order to determine the capacity of the subsurface soils to support multi-family and single-family residential development; provide foundation and flexible pavement design recommendations; and address the requirements outlined in Section 807.4 of the Pasco County Land Development Code relating to a Geotechnical/Geological Engineering Report. This report summarizes our field exploration and presents our findings, conclusions, and geotechnical engineering recommendations.

## PROJECT INFORMATION

### Existing Site

Gagne parcel is a 139± acre property located at the north and southwest corners of Chancey Road and Paul S. Buchman Road in Zephyrhills, Pasco County, Florida, within Sections 23 and 24, Township 26 South and Range 21 East. Our geotechnical engineering evaluation was concentrated south of Chancey Road. The property south of Chancey Road is generally open and grass covered with scattered trees. There is a pond near the center of the property and wetlands to the east and south. The site topography slopes down from north to south with an elevation change of about 10 feet. A general site location map is shown on **Figure 1**.

### Proposed Construction

Based on our review of the site plan prepared by LevelUp Consulting LLC, we understand that the proposed development includes construction of single-family and multi-family residential structures with associated internal roadways, stormwater ponds, and a lift station. Our current geotechnical engineering evaluation was limited to the planned residential building areas, interior roadways, stormwater ponds, lift station, and the existing CSX crossing near the northeast corner of the property.

### Soil Survey Review

According to the “Soil Survey of Pasco County, Florida”, as prepared by the U.S. Department of Agriculture Natural Resource Conservation Service (formerly the Soil Conservation Service) the subject property is primarily underlain by:

- *Wauchula fine sand, 0 to 5 percent slopes (Map Unit Symbol 1)* – The NRCS describes this soil unit as poorly drained and located on flats on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 34 inches below ground surface (bgs) followed by a layer of sandy clay loam from about 34 to 80 inches bgs. The NRCS indicates the seasonal high ground water table (SHGWT) is about 6 to 18 inches bgs.

- *Pomona fine sand (Map Unit Symbol 2)* – The NRCS describes this soil unit as poorly drained and located on flatwoods on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 52 inches bgs followed by a layer of fine sandy loam from about 52 to 60 inches bgs underlain by a layer of fine sand from about 60 to 80 inches bgs. The NRCS indicates the SHGWT is about 6 to 18 inches bgs.

- *Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes (Map Unit Symbol 10)* – The NRCS describes this soil unit as poorly drained and located on flatwoods on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand from the surface to a depth of about 39 inches bgs followed by a layer of sandy clay loam from about 39 to 80 inches bgs. The NRCS indicates the SHGWT is about 6 to 18 inches bgs (3 to 18 inches bgs when wet).

- *Zephyr muck (Map Unit Symbol 16)* – The NRCS describes this soil unit as very poorly drained and located on depressions on marine terraces. The NRCS indicates that this soil unit has a surface layer of muck from the surface to about 13 inches bgs followed by a layer of fine sand from about 13 to 31 inches bgs underlain by a layer of sandy clay loam from about 31 to 61 inches bgs followed by a layer of fine sandy loam from about 61 to 80 inches bgs. The NRCS indicates the SHGWT is about 0 inches bgs.

- *Electra Variant, fine sand, 0 to 5 percent slopes (Map Unit Symbol 18)* – The NRCS describes this soil unit as somewhat poorly drained and located on rises and flats on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 70 inches bgs followed by a layer of sandy clay loam from about 70 inches to 78 inches bgs followed by a layer of weathered bedrock from about 78 to 82 inches bgs. The NRCS indicates the SHGWT is at about 24 to 42 inches bgs.

- *Lochloosa fine sand, 0 to 5 percent slopes (Map Unit Symbol 48)* – The NRCS describes this soil unit as somewhat poorly drained and located on ridges and knolls on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 25 inches bgs followed by a layer of sandy clay loam from 25 inches to 30 inches bgs followed by a layer of sandy clay from about 30 to 52 inches bgs followed by a layer of sandy clay loam from 52 to 74 inches bgs. NRCS indicates the SHGWT is at about 15 to 60 inches bgs.

The NRCS soil classifications are based on interpretation of a combination of factors including but not limited to aerial photographs and widely spaced hand auger borings. Borders shown on the map included in **Appendix A**, between mapping units are approximate, and the transitions between soil units will be gradual. In addition to various minor inclusions within a mapped soil unit, areas of dissimilar soils can also occur. However, the soil survey provides a good basis for an initial evaluation of shallow soil conditions in the area, and can provide an indication of various historic activities such as development, mining and filling operations at the site.

## SUBSURFACE SOILS EVALUATION

### Field Evaluation

During our field evaluation, thirty-six (36) standard penetration test (SPT) borings were advanced to a depth of approximately 20 feet bgs within the planned single-family lots and the planned multi-family building areas (1 SPT boring per multi-family building), fifteen (15) SPT borings were advanced to depths of approximately 15 to 25 feet bgs within the planned stormwater ponds, one (1) SPT boring was advanced to a depth of about 20 feet bgs in the planned lift station area, thirty-three (33) auger borings were advanced to depths of about 8 feet bgs at generally equal intervals along the planned interior roadways, and four (4) auger borings were advanced to depths of about 15 feet bgs, one each at four corners of the existing CSX crossing near the northeast corner of the property. The fieldwork was performed from September 23 to October 18, 2021 and on February 3, 2022 using track-mounted D-25 and CME-45 drill rigs operated by J&R Precision Drilling. The procedures used by FES for field sampling and testing were in general accordance with ASTM procedures, industry standards of care, and established geotechnical engineering practice.

A senior geotechnical engineering technician from FES, experienced in soil sampling and classifications, was onsite during the fieldwork to monitor the drilling and also perform a brief cursory site reconnaissance, noting pertinent site and topographic features as well as surface indicators of soil conditions. The SPT and auger borings were located in the field by FES personnel using a hand-held GPS device. GPS coordinates of the borings were obtained by superimposing the site plan over an aerial image using Google Earth. Some of the borings were selected by LevelUp and provided to us on a site plan. The approximate boring locations are shown on the attached boring location plan (**Figure 2**).

The SPT borings were performed utilizing continuous sampling methods within the first 10 feet and every 5 feet thereafter until the termination depths of the borings, employing wet rotary drilling techniques to keep the boreholes from collapsing. The drillers collected soil samples using a 1.4-inch I.D. split barrel sampler driven by an automatic hammer system with a 140-pound hammer falling a distance of 30 inches, in general accordance with standard penetration test procedures (ASTM D1586). Upon completion, each borehole was backfilled with borehole cuttings and bentonite chips to the surface.

The auger borings were advanced by mechanically rotating an approximately 4-inch diameter continuous flight auger into the subsurface soils. The cuttings brought to the surface were logged in the field and representative samples were obtained at each change in the soil stratigraphy. Upon completion, each borehole was backfilled with borehole cuttings to the surface.

Detailed descriptions of the soils encountered during the field exploration are presented on the attached soil boring logs and profiles in **Appendix B**.

### Soil Sample Handling, Classification, and Laboratory Testing

FES field personnel classified the soils obtained from the field sampling techniques using standard visual manual methods in accordance with ASTM D2488. The samples recovered from both the SPT and mechanical auger borings were placed in sealed containers to retain moisture and transported to the FES soils laboratory accredited by Construction Materials Engineering Council, Inc., (CMEC) for further evaluation and testing. To further aid in classification and evaluation of geotechnical engineering properties, laboratory testing was performed on representative soil samples collected during the field sampling. The laboratory testing performed was in general accordance with appropriate sections of ASTM D1140, material finer than the No. 200 sieve, ASTM D4318, Atterberg Limits and ASTM D4442 for moisture content. The laboratory test results were in general accordance with field classification of the soils except some soils were reclassified based on the fines content from laboratory testing. The laboratory test results and the soil classifications were reviewed by a professional geotechnical engineer. The results from the laboratory testing are presented on the boring logs and profiles contained in **Appendix B**.

# FINDINGS

## Subsurface Conditions

### General Soil Profile

The subsurface stratigraphy at the project site is illustrated in the soil boring logs and profiles shown in **Appendix B**. The logs and profiles were developed using field and laboratory data from the SPT and mechanical auger borings. The computer-generated boring logs and profiles should imply no increased accuracy. Based on this data, four subsurface units, or strata, were identified at the site as described below.

| | |
|---|---|
| Stratum 1 | SAND, SAND with clay, SAND with silt; very loose to dense, fine-grained quartz with clay, silt with occasional fines roots, cementation and clay nodules |
| | USCS classification = SP, SP-SC, SP-SM |
| Stratum 2 | CLAYEY SAND, SILTY SAND; very loose to dense, fine-grained quartz, variably clayey, silty, occasional cementation |
| | USCS classification = SC, SM |
| Stratum 3 | CLAY, SILT; very soft to hard, variably sandy, clay, silt, occasional cementation |
| | USCS classification = CL, CH, ML |
| Stratum 4 | LIMESTONE; limestone bedrock |

Stratum 1 occurred as the surficial stratum in most SPT and auger borings and typically extended with varying thicknesses from the ground surface to depths ranging from approximately 1 foot bgs to termination depths of about 15 to 20 feet bgs in the SPT borings and from the ground surface to about 10 feet bgs in the auger borings. The SPT “N” values within this stratum ranged from 2 to 28 blows per foot, indicating very loose to dense relative density.

Stratum 2 occurred in most SPT and auger borings below Stratum 1 except in borings BB-14, BB-24, BB-32, LS-1, PB-11 through PB-14, AB-1, HA-17, and HA-32 where Stratum 2 occurred at the ground surface. This stratum extended with varying thicknesses from the ground surface to depths ranging from about 2 feet bgs to the termination of the SPT borings at about 15 to 20 feet bgs and from ground surface to auger boring termination at about 8 to 15 feet bgs. The SPT “N” values ranged from 3 to 37 blows per foot indicating very loose to dense relative density. The results of the laboratory testing performed on representative soil samples of this stratum indicated that the fines contents ranged from 16.6 to 47.3 percent.

Stratum 3 occurred in most SPT borings below Strata 1 and/or 2 from about 2 feet bgs to SPT boring termination depths of about 15 to 20 feet bgs. Stratum 3 was encountered in the auger borings at depths ranging from about 2 to 15 feet bgs. The SPT “N” values within this stratum ranged from 0 to 25 blows per foot indicating very soft to hard consistency. The results of the laboratory testing performed on representative soil samples of this stratum indicated that the fines contents ranged from 53.8 to 69.8 percent.

Stratum 4 occurred below Strata 1, 2 and 3 in most SPT borings at depths ranging from about 8 feet bgs to boring termination at about 15 to 25 feet bgs. Stratum 4 was not encountered in any of the auger borings within the depths explored. This stratum consisted of limestone bedrock with SPT “N” values ranging from 2 blows per foot to refusal blow counts of 50 blows for less than 6 inches of sampler penetration.

The conditions presented above highlight the major subsurface stratifications encountered during our field evaluation of the site. More detailed descriptions of the materials encountered are provided in **Appendix B.** A soil classification key is included as **Appendix C**. It should be understood that subsurface conditions will vary across this site and between boring locations. Changes in subsurface strata may be more gradual than indicated.

**Groundwater**

Groundwater was encountered in our SPT and auger borings at depths ranging from about 1.0 to 6.7 feet bgs at the time of drilling. In some of the SPT borings, groundwater was not encountered within the first 10 feet at the time of drilling after which drilling fluid was introduced to keep the boreholes from collapsing. Groundwater was also not encountered in some auger borings within the depths explored. Groundwater levels will fluctuate with time due to seasonal rainfall and locally heavy precipitation events; therefore, future groundwater levels may be encountered at depths different from those indicated by our borings. Please refer to the attached Groundwater Data table (**Table 1**) for the groundwater conditions at the time of drilling and our estimates for the estimated SHGWT.

The SHGWT is typically encountered during late summer following the rainy season. Several factors can affect the seasonal high groundwater level such as drainage characteristics of the soils; land surface elevation; and relief points such as lakes, rivers and swamps. Based on our experience, review of the depth of existing groundwater levels, review of the soil indicators (where encountered) exposed in our borings, and a review of the soil survey for Pasco County, we estimate the seasonal high groundwater levels within the areas explored may be encountered at depths ranging from approximately 1 to 5 feet bgs.

## CONCLUSIONS

Our geotechnical engineering evaluation of this site and our recommendations with respect to the proposed residential development are based on our site observations, field exploratory data obtained from our borings, laboratory test results, and our professional judgment. It is our opinion that with proper site preparation in accordance with procedures presented in the **Recommendations** section of this report (including some possible minor undercutting and replacing of the shallow clayey soils in some locations as discussed below), the soils encountered should adequately support the planned single- and multi-family residential structures on a shallow foundation system.

Based on the SPT blow counts recorded during our field study within the planned building areas, the soils are generally very loose to dense (coarse-grained soils) within the upper 10 feet with penetration resistances (N values) ranging from 2 to 37 blows per foot and medium to very stiff (fine-grained soils) within the upper 10 feet with penetration resistances (N values) ranging from 4 to 19 blows per foot. Below the upper 10 feet to the termination of the SPT borings, the soils are generally medium-dense to dense (coarse-grained soils) with penetration resistances (N values) ranging from 9 to 31 blows per foot and very soft to very stiff (fine-grained soils) with penetration resistances (N values) ranging from 0 to 22 blows per foot. Limestone bedrock has SPT “N” values ranging from 2 blows per foot to refusal blow counts of 50 blows for less than 6 inches of sampler penetration.

In-place densification of the surface and near surface soils using a heavy vibratory roller compactor will be required subsequent to clearing and stripping operations and prior to the placement of fill soil or beginning construction. Any additional fill required to bring the site to final design grade should comply with the criteria specified in the **Recommendations** section below.

Most of the borings encountered Stratum 2 and Stratum 3 soils near or at the ground surface. The Stratum 3 soils and some Stratum 2 soils with fines contents greater 35 percent are unsuitable bearing soils. Where these soils are present at the ground surface or at shallow depths, we recommend undercutting these soils and replacing with suitable compacted structural fill such than a minimum of 3 feet of separation is maintained between the bottom of the planned footings and the fine-grained soils. Alternatively, the suitable fill can be added in accordance with the recommendations presented in this report to maintain the recommended 3-foot separation.

Boring BB-3 performed within the planned building area encountered minor weight-of-hammer (WOH) instance from about 13.5 to 16 feet bgs. The WOH instances generally occur in very loose or very soft soils or potential voids. The WOH instance in boring BB-3 occurred in what appeared to be very soft clay that was possibly bridged over by competent clayey sands (SC) (Stratum 2) prior to consolidation. The WOH zone was immediately underlain by competent limestone as indicated by the SPT “N” values. Loss of drilling fluid circulation was not observed during drilling. WOH instances does not necessarily indicate sinkhole activity without other indicators being present such as raveling/eroding of upper soils into to the underlying strata, loss of drilling fluid circulation, voids, etc. Additionally, the WOH instance occurred at a depth below the zone of significant influence of the potential stress increase due to the planned residential structure.

The SPT borings (PB-1 to PB-15) performed within the stormwater pond areas generally encountered fine sand (SP), fine sand with clay (SP-SC), fine sand with silt (SP-SM) (Stratum 1), clayey sand (SC) (Stratum 2), clay (CL) (Stratum 3), and limestone bedrock (Stratum 4) from the ground surface to boring termination at about 15 to 25 feet bgs. Stratum 1 soils, if excavated will provide a good source for structural fill during site development. Stratum 2 soils can also be used as structural fill or backfill provided they conform to the criteria specified in the **Recommendations** section below. Stratum 3, clay, silt (CL, CH, ML) and Stratum 4, limestone bedrock are unsuitable for use as structural fill or backfill.

Loss of drilling fluid circulation was observed in borings BB-1, BB-2, BB-5, BB-8, BB-10 to BB-12, BB-21 to BB-32, PB-2, PB-3, and PB-5 to PB-8 at or near the limestone bedrock at the time of drilling. Florida limestone is generally porous and loss of drilling fluid circulation is common within the limestone or near limestone interface with other strata and does not indicate sinkhole activity without other indicators such as presence of voids, raveling of surficial soils, etc.

The auger borings performed along the proposed interior access roadway alignments generally encountered fine sand (SP), fine sand with silt (SP-SM), fine sand with clay (SP-SC) (Stratum 1) clayey sand (SC) (Stratum 2), and clay (Stratum 3) from the ground surface to the boring termination depths at approximately 8 feet bgs. It appears that the shallow subsurface soils will provide a suitable subgrade for roadway pavement, after proper site preparation and in-place densification methods described in the **Recommendations** section of this report except at some borings where high fines content soils are present at or near the existing ground surface. The encountered Stratum 1 soils can be used as backfill during utility installations. Stratum 2 soils can also be used as utility backfill provided they conform to the requirements presented in the **Recommendations** section below. Stratum 3, clay (CL) if encountered is unsuitable for re-use as backfill material. We also recommend that suitable fill with fines content of less than 15 percent be placed a minimum of 2 feet below the bottom of the base course (if the subgrade is un-stabilized) or a minimum of 2 feet below the bottom of the subgrade (if the subgrade is stabilized). Minor undercutting and replacing of soils with fines contents of less than 15 percent fines will be required in some locations. Undercutting and replacing of soils will be required at some auger boring locations due to the presence of high fines content soils at or near the ground surface.

The auger borings performed near the existing CSX crossing generally encountered fine sand (SP), fine sand with clay (SP-SC), fine sand with silt (SP-SM) (Stratum 1), clayey sand (SC) (Stratum 2), and clay (Stratum 3) from the ground surface to the boring termination depths at approximately 15 feet bgs. Limestone bedrock was not encountered within the depths explored at these locations.

Groundwater was encountered at depths ranging from about 1.0 to 6.7 feet bgs and not encountered within the first 10 feet in some SPT borings and not encountered within the boring termination depths of about 8 feet bgs in some auger borings at the time of drilling. We recommend maintaining a minimum separation of 1 foot between the bottom of the lowest footing and the estimated SHGWT (**Table 1**). For the roadway areas, we recommend a minimum of 24 inches of separation between the bottom of the base course and the estimated SHGWT (**Table 1**), if a limerock base course is used. The minimum separation between the bottom of the base course and the estimated SHGWT can be reduced to 12 inches if a moisture tolerant base course such as crushed concrete or soil-cement is used. Underdrains will be required in conjunction with using a moisture tolerant base course if the above-mentioned base clearance if not available. Alternatively, suitable structural fill can be added in some locations, in order to maintain the required base clearance, in accordance with the **Recommendations** section below.

We understand that the planned lift station may be constructed to a termination depth of approximately ±15 feet bgs. Based on our understanding of the lift station construction, a mat or reinforced concrete slab foundation should provide suitable support for the lift station provided that proper subgrade preparation is provided. The data obtained from the soil boring LS-1 indicate that the planned lift station will bear on Stratum 3 soils. Stratum 3 soils are unsuitable bearing soils. We recommend undercutting these soils a minimum of 2 feet below the planned bottom of the lift station foundation and replacing with more granular bearing material such as No. 57 stone. Stratum 1 soils once dried back to their optimum moisture content (ASTM D1557) can be reused as backfill material for the lift station. Stratum 2 soils can also be used as backfill provided these soils conform to the criteria specified in the **Recommendations** section below. It is important to note that dewatering and excavation of clay soils will be significant construction considerations during the lift station installation. The contractor should be made aware of these conditions prior to commencing work.

If structures or roadways are planned over the existing wetlands or borrow area, we recommend that these areas be dewatered, the bottom stripped of all soft/organic sediments, if present, the exposed subgrade proof-rolled and backfilled to final design grade using suitable compacted structural fill in accordance with the recommendations presented in this report.

## Use of Information

It should be noted that subsurface conditions can vary across this site and between boring locations. Conditions can also vary in areas not explored by our borings. Contractors bidding earthwork requirements are urged to conduct their own borings, test pits or other investigations to determine those conditions that may affect their specific work requirements. FES cannot be responsible for interpretations made by others based on the information contained in this report and the attachments.

# RECOMMENDATIONS

## Site Preparation

### Site Stripping/Undercutting

Before earthwork and construction activities begin, all existing topsoil, vegetation, surface debris, the existing trees including the root system, large roots down to finger-size and any other deleterious material should be removed from within the construction limits. Site stripping should extend at least ten feet beyond the construction area. Any pockets of organics, organic laden soils and/or deleterious material should be undercut to competent soil. The resulting excavations should be backfilled with structural fill placed in maximum one-foot-thick loose lifts. Backfill soils should be of the same composition and be compacted to the same criteria as structural fill soils. This process should be observed by a representative of FES to check that all organics, organic laden soils and/or deleterious material has been removed.

### Proof-Rolling / In-Place Densification

Following site stripping and prior to any fill placement or beginning construction, proof-rolling / in-place densification of the ground surface with a heavy vibratory roller should be performed within the construction area. Based on experience, vibratory rollers should be operated in the static mode within 100 feet of existing structures to avoid transmission of vibrations that could cause structural distress.

Compaction within the construction area should continue until the soils appear relatively firm and unyielding and the soils have achieved a relative compaction of at least 95 percent of modified Proctor maximum dry density (ASTM D1557) to a depth of at least 2 feet below the present ground surface or 2 feet below the bottom of the lowest footing, whichever is lower.
The subgrade soil 1-foot below new pavement should be compacted to at least 98 percent of the modified Proctor maximum dry density (ASTM D1557). The moisture content of the fill soils during placement and compaction shall be maintained within 2 percent of the optimum moisture content as determined by ASTM D1557.

Proof-rolling and densification efforts should be closely monitored by an FES engineering technician to observe any unusual or excessive deflection of the soils beneath the compacting equipment used. If unusual or excessive deflection is observed, then the areas should be undercut to firm soil and backfilled with compacted structural fill placed in maximum one-foot-thick loose lifts.

## Borrow Areas

### Structural Fill Suitability

Definition

The preferred soil used for structural fill and backfill can be defined as clean fine sand containing less than twelve percent material by weight that is finer than a number 200 sieve (material conforming to SP to SP-SM or SP-SC in the Unified Soils Classification System).

Encountered soils containing up to 35 percent fines (materials conforming to SC, SM, or SC-SM in the Unified Soil Classification System) may also be utilized as structural fill, provided the working subgrade is above the existing groundwater level. However, Florida Building Code (Chapter 18, Section 1803.5.3) states that soils with plasticity index of 15 or greater are considered expansive and hence are unsuitable for use as structural fill. Please note that soils conforming to SC, SM, or SC-SM are difficult to work with and will require additional time and effort for either drying or moisture conditioning during placement and compaction.

Any muck or organic soil if encountered on site will not be suitable for fill and should be disposed of offsite or placed in landscape areas and used for planting purposes. Soils containing organic content, as determined by ASTM D2974, of more than 5 percent shall not be used as structural fill. Because of the variability of the subsurface soils encountered, additional laboratory testing should be performed on the excavated material during grading and earthwork activities to evaluate its suitability for use as fill material.

Soil Suitability

The SPT borings performed within the planned stormwater pond areas indicated soils conforming to Stratum 1 (SP, SP-SC, and SP-SM), Stratum 2 (SC), Stratum 3 (CL, CH, ML), and Stratum 4 limestone bedrock are present from existing ground surface to boring termination at about 15 to 25 feet bgs. Stratum 1 soils will provide a good source of structural fill, if excavated during site development. Stratum 2 soils can also be used as structural fill provided they conform to the criteria specified above. Stratum 3, clay, silt, and Stratum 4, limestone bedrock are unsuitable for reuse as structural fill or backfill.

Placement

Structural fill with less than 12 percent fines should be placed in lifts not to exceed one foot thick. Materials with fines content between 12 and 35 percent should be placed in maximum 6-inch loose lifts. Soils with fines content greater than 35 percent shall not be used as structural fill.

The fill material should be compacted to at least 95 percent of its modified Proctor maximum dry density (ASTM D1557). The upper 1-foot below pavements should be compacted to 98 percent of modified Proctor maximum dry density. The moisture content of the fill during placement and compaction shall be maintained within 2 percent of the optimum moisture content (ASTM D1557). Confined areas, such as utility trenches, should be compacted with manually operated portable vibratory compaction equipment.
Field density testing to verify compaction should be performed for each lift of structural fill placed for each 2,000 $ft^2$ of area below structures and for each 5,000 $ft^2$ below pavements. In pavement areas, the subbase and base materials should be tested to the same frequency. Density tests should be performed for each lift of fill for every 100 lineal feet of backfill placed in utility excavations or other excavations that are within the paving areas.

Depending on the time of year construction occurs, materials excavated containing clay fines may exist in a saturated condition. These soils will require processing and drying to achieve a moisture content to allow placement and proper compaction. Spreading the clayey material in thin lifts (6 inches loose thickness) and aerating by disking can facilitate and hasten the drying process. Disking will also be useful to breakdown larger clods of clayey soils. Specialty equipment typically associated with clayey soils such as a sheep's foot roller will also be required to achieve proper compaction.

The placement and compaction of moisture sensitive soils of this type will require time and effort beyond that typically associated with sandy soils. A grading contractor experienced with placing and compaction of clayey soils can likely reduce costly project delays due to soil conditions.

## Groundwater Control

Groundwater will likely be encountered during excavation and fill placement activities. Dewatering may be accomplished by either draining the water to sumps which can then be pumped away from the area or by the use of sanded, vacuum well points. Groundwater fluctuations can occur due to variations in rainfall and other site-specific factors. These variations should be considered when planning earthwork activities.

An alternative to dewatering in shallow undercut areas where groundwater is encountered is to use clean sand classified as SP material (less than 5% fines) according to the Unified Soil Classification System as a first lift through any standing water. This first lift will create a platform to place and compact additional fill material upon.

## Foundation Recommendations

Based on the subsurface data obtained from our exploratory borings, the planned single- and multi-family residential structures can be supported on a shallow foundation system provided the recommendations contained in this report are closely adhered to (including possible undercutting and replacing of high fines content Stratum 2 and Stratum 3 soils as described above) and proper densification of the site bearing soils occurs.

Column footings and continuous strip footings can be designed using a net allowable soil bearing pressure of 2,000 psf assuming a footing embedment of at least 12 inches below lowest exterior adjacent grades. Using this net allowable soil bearing pressure, we anticipate maximum total foundation settlements of less than 1 inch and differential settlements of less than 0.5 inches.

If the actual column/wall loads result in a footing/soil contact pressure that exceeds the above allowable bearing pressure, the footings should be constructed wider or the footing embedment below lowest adjacent exterior grade increased. Even though computed footing dimensions may be less, column and wall footings should have a minimum width in accordance with the applicable building code for the type of structure and construction to avoid excessive settlements and punching shear failures. We also recommend a minimum 1-foot separation between the bottom of the lowest footing and the estimated SHGWT (**Table 1**).

Because of possible disturbance from excavation, the soils exposed at the bottom of the foundation excavations should be re-compacted to at least 95 percent of the soils modified Proctor maximum dry density (ASTM D1557) prior to the placement of reinforcing steel and concrete. The compaction should be checked prior to the placement of reinforcing steel. Density test should be performed at intervals of 50 linear feet along the footing excavations to ensure compaction.

## Floor Slab Recommendations

We have assumed that no unusual floor loads will be applied to the floor slabs due to vibration, impact or high intensity contact pressures. A modulus of subgrade reaction of 200 pounds per cubic inch may be used for floor slab design purposes if the slab is placed on structural fill or in-situ soils that have been prepared and densified in accordance with the recommendations presented in this report. This modulus of subgrade reaction is based on the assumption that the soil beneath the slab will achieve a Limerock Bearing Ratio (LBR) value of at least 15. The subgrade should also be covered with an effective vapor barrier to reduce the possibility of slab dampness.

## Flexible Pavement Recommendations

The following minimum pavement sections are provided for consideration for this development. However, the project civil engineer should develop the actual minimum pavement thickness based on anticipated traffic loads and other considerations in accordance with FDOT and Pasco County standards. A base material other than limerock should be used if an underdrain is required to control groundwater.

| Section Description | Light Duty (inches) | Heavy Duty (inches) |
|---|---|---|
| **Surface Course**<br>Type SP-9.5 or SP-12.5 Asphaltic (Section 334 FDOT) compacted to minimum per applicable requirement of the mix design bulk density ($G_{mm}$) (FM 1-T166). | 1.5 | 3 |
| **Base Course**<br>Limerock (Section 911, FDOT) having a minimum LBR of 100 (FM 5-515) and compacted to at least 98 percent of its modified Proctor maximum dry density and moisture content maintained within 2 percent of the optimum value (FM1-T180). **If the bottom of the base is within 2 feet of the seasonal high groundwater level, then a moisture tolerant base will be required such as cement-treated aggregate or crushed concrete or shell-rock.** | 6 | 10 |
| **Subbase**<br>A minimum LBR of 40 (FM5-515) and compacted to at least 98 percent of the modified Proctor maximum dry density at a moisture content within 2 percent of the optimum value (FM1-T180). | 12 | 12 |

Methods and materials used for pavement construction should conform to applicable sections of the most recent edition of the FDOT Standard Specifications for Road and Bridge Construction. We further recommend that LBR testing be performed on the subgrade soils to establish an LBR value to determine the level of stabilization required, if any.

Subgrade soils should be compacted as specified above and free of ruts or disturbances caused by construction vehicles after compaction has been achieved.

## POTENTIAL FOR SINKHOLE DEVELOPMENT

Most of Florida is prone to sinkhole formation because it is underlain by carbonate deposits that are susceptible to dissolution by circulating ground water. The soluble limestone and dolomites that constitute the carbonate deposits are altered by dissolution and weathering processes to a distinct geomorphology known as “Karst”. Where the carbonate rock is covered by relatively insoluble deposits such as the sand and clay deposits that exist in west-central Florida, the buried Karst features form a distinctive type of terrain known as “mantled Karst”. In mantled Karst regions, the carbonate rock is not exposed at the land surface; however the presence may be indicated by sinkholes or surface depressions that result when the overburden materials take the shape of the underlying Karst features. [Tihansky, A.B., 1999, Sinkholes, West-Central Florida, in Galloway, Devin, Jones, D.R., and Ingebritsen, S.E., eds., Land Subsidence in the United States: USGS Circular 1182.].

At the time of our fieldwork, we observed no strong visual evidence to suggest that active sinkhole conditions exist on the property explored nor were suggestive near surface conditions observed in our borings. A review of a map titled “Pasco County Sinkholes” published in 2008 by the Florida Center for Instructional Technology (FCIT) indicates that the area in the vicinity of the planned Gagne Parcel residential development is not an area of reported excessive sinkhole activity. Furthermore, we assess that the risk of sinkhole occurrence at the property explored is no greater or less than that of the surrounding area. However, because Florida is underlain by limestone bedrock that is susceptible to dissolution and the subsequent development of karst features such as voids and sinkholes in the natural soil overburden, construction in Pasco and surrounding counties is accompanied by some risk that internal soil erosion and ground subsidence could affect new structures in the future. It is not possible to investigate or design to completely eliminate the possibility of future sinkhole related problems. In any event, the Owner must understand and accept this risk.

## TESTING AND MONITORING

Construction testing and monitoring are essential to proper site construction and performance. Observation and testing of site preparation and earthwork activities is an integral part of the engineering recommendations contained in this report. Having FES provide the construction materials testing and inspection services provides continuity and increases the potential that our recommendations will be properly implemented.

## LIMITATIONS

This report has been prepared for the exclusive use of **Meritage Homes of Florida, Inc.** for the specific application to the project previously discussed. Our conclusions and recommendations have been rendered using generally accepted standards of geotechnical engineering and geology practice in the state of Florida. No other warranty is expressed or implied.

Our conclusions and recommendations are based on the design information furnished to us, the data obtained from the previously described subsurface investigation, laboratory testing, and our professional judgment. They do not reflect variations in the subsurface conditions that are likely to exist in the region of our borings and in unexplored areas of the site. These variations are due to the inherent variability of the subsurface conditions in this geologic region. Should variations become apparent during construction, it will be necessary to re-evaluate our conclusions and recommendations based upon our on-site observations of the conditions.

The scope of our services does not include any environmental assessments or studies for the possible presence of hazardous or toxic materials in the soil, groundwater or surface water within or in the general vicinity of the site studied. Any statements made in this report or shown on the test boring logs regarding unusual subsurface conditions and/or composition, odor, staining, origin or other characteristics of the surface and/or subsurface materials are strictly for the information of our client and may or may not be indicative of an environmental problem.

If changes are made in the overall design or the location of the proposed stormwater pond areas, building areas, the roadway alignments, or the lift station, the recommendations presented in this report must not be considered valid unless the changes are reviewed by FES and recommendations modified or verified in writing. FES should be given the opportunity to review the grading plan and the applicable portions of the project specifications when the design is finalized. This review will allow FES to check whether these documents are consistent with the intent of our recommendations.

## CLOSING

Faulkner Engineering Services, Inc., appreciates the opportunity to be of service to **Meritage Homes of Florida, Inc.** by providing these geotechnical consulting services and we look forward to assisting you through project completion. If you have any questions concerning this report, please do not hesitate to contact the undersigned.

Sincerely,

**Faulkner Engineering Services, Inc.**

Matthew J. Reinhart, E.I.
Staff Geotechnical Engineer

Pavan K. Kolukula, P.E.
Senior Geotechnical Engineer
Florida License No. 83670

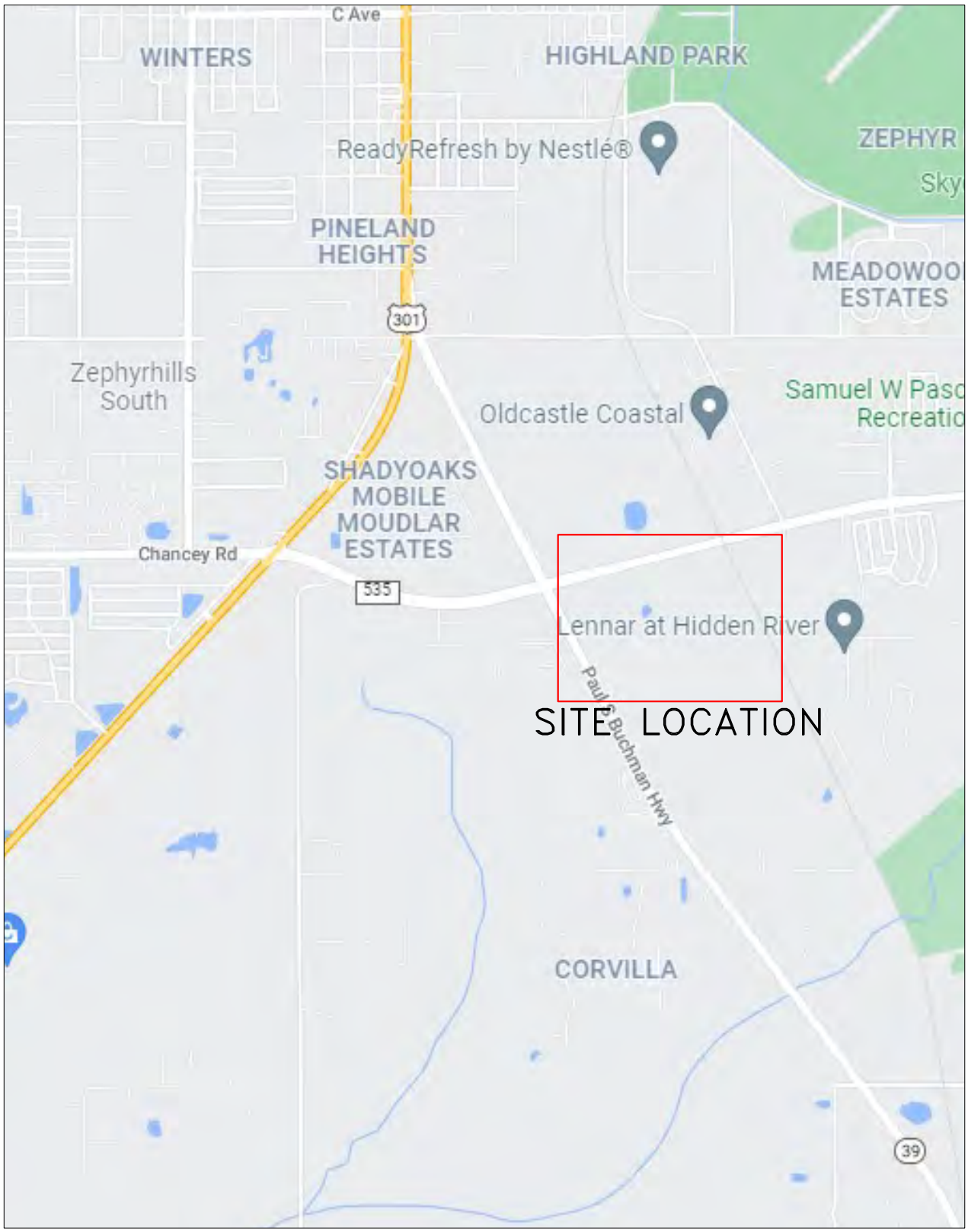
This item has been digitally signed and sealed by David W. Faulkner, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Copy to: Mr. Chris Torres (Meritage Homes of Florida, Inc.)

Attachments: Figure 1: Site Location Map
Figure 2: Boring Location Plan
Table 1: Groundwater Data

Appendix A: Soil Survey Map
Appendix B: SPT Boring Logs and Auger Boring Profiles
Appendix C: Key to Soil Classification

# SITE LOCATION MAP





FAULKNER ENGINEERING SERVICES, Inc.

Geotechnical Engineers
Construction Material Testing

2734 Causeway Center Dr
Tampa, Florida 33619
PHONE: 813.621.8168
FAX: 813.621.8232
www.faulknereng.com


Gagne Parcel

| N.T.S. | DATE 10.04.21 | JOB NO. 21-5233 |
|---|---|---|
| DRAWN: MR<br>CHKD: PK | FIGURE 1 | |

# BORING LOCATION PLAN


## LEGEND

- SPT BUILDING BORING
- SPT POND BORING
- AUGER BORING
- SPT LIFT STATION BORING

Note:
Basemap provided by Levelup Consulting, LLC


FAULKNER ENGINEERING SERVICES, Inc.
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FAX: 813.621.8232
www.faulknereng.com


| Gagne Parcel | N.T.S. | DATE 3.8.22 | JOB NO. 21-5233 |
|---|---|---|---|
| | DRAWN: MR | FIGURE 2 | |
| | CHKD: PK | | |

# Table 1 - Groundwater Data

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| BB-1 | - | 4.0 | 2.0 |
| BB-2 | - | 3.4 | 2.0 |
| BB-3 | - | 4.0 | 3.0 |
| BB-4 | - | 4.0 | 3.0 |
| BB-5 | - | 3.4 | 2.0 |
| BB-6 | - | 3.5 | 2.0 |
| BB-7 | - | 3.7 | 2.0 |
| BB-8 | - | 4.1 | 3.0 |
| BB-9 | - | NE | 2.0 |
| BB-10 | - | 3.4 | 2.0 |
| BB-11 | - | 4.2 | 2.0 |
| BB-12 | - | 1.0 | 1.0 |
| BB-13 | - | 1.0 | 1.0 |
| BB-14 | - | NE | 1.0 |
| BB-15 | - | 3.3 | 2.5 |
| BB-16 | - | 3.0 | 2.0 |
| BB-17 | - | 3.3 | 2.5 |
| BB-18 | - | 3.7 | 3.0 |
| BB-19 | - | 3.0 | 2.0 |
| BB-20 | - | 3.0 | 2.5 |
| BB-21 | - | 2.9 | 2.0 |
| BB-22 | - | 2.3 | 1.5 |
| BB-23 | - | 1.0 | 1.0 |
| BB-24 | - | 1.0 | 1.0 |
| BB-25 | - | 2.0 | 1.5 |
| BB-26 | - | NE | 2.0 |
| BB-27 | - | NE | 2.0 |
| BB-28 | - | 1.0 | 1.0 |
| BB-29 | - | 3.6 | 3.0 |
| BB-30 | - | 2.0 | 1.5 |
| BB-31 | - | NE | 2.0 |
| BB-32 | - | NE | 1.5 |
| BB-33 | - | 3.0 | 2.5 |
| BB-34 | - | 3.0 | 2.5 |
| BB-35 | - | NE | 3.0 |
| BB-36 | - | NE | 2.0 |
| PB-1 | - | 3.5 | 2.0 |
| PB-2 | - | 3.0 | 2.0 |

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| PB-3 | - | NE | 2.5 |
| PB-4 | - | 3.3 | 2.0 |
| PB-5 | - | 1.0 | 1.0 |
| PB-6 | - | 3.0 | 2.0 |
| PB-7 | - | 3.0 | 2.5 |
| PB-8 | - | NE | 1.0 |
| PB-9 | - | NE | 2.0 |
| PB-10 | - | NE | 1.0 |
| PB-11 | - | NE | 1.0 |
| PB-12 | - | NE | 1.0 |
| PB-13 | - | NE | 0.5 |
| PB-14 | - | NE | 2.0 |
| PB-15 | - | NE | 2.0 |
| LS-1 | - | NE | 1.0 |
| AB-1 | - | 6.4 | 5.0 |
| AB-2 | - | 6.5 | 5.0 |
| AB-3 | - | 6.7 | 5.0 |
| AB-4 | - | 6.2 | 5.0 |
| HA-1 | - | 3.2 | 2.0 |
| HA-2 | - | 3.3 | 2.0 |
| HA-3 | - | 3.8 | 3.0 |
| HA-4 | - | 4.0 | 2.0 |
| HA-5 | - | 3.7 | 3.0 |
| HA-6 | - | 3.8 | 3.0 |
| HA-7 | - | 4.0 | 3.0 |
| HA-8 | - | 3.8 | 2.0 |
| HA-9 | - | 3.8 | 2.0 |
| HA-10 | - | 3.5 | 2.5 |
| HA-11 | - | 3.0 | 1.0 |
| HA-12 | - | 3.0 | 2.5 |
| HA-13 | - | 1.3 | 1.0 |
| HA-14 | - | 3.6 | 2.0 |
| HA-15 | - | NE | 2.0 |
| HA-16 | - | NE | 2.0 |
| HA-17 | - | 1.0 | 1.0 |
| HA-18 | - | 3.6 | 2.0 |
| HA-19 | - | 4.0 | 2.0 |
| HA-20 | - | 3.7 | 3.0 |
| HA-21 | - | 1.0 | 1.0 |
| HA-22 | - | 1.0 | 1.0 |

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| HA-23 | - | 1.0 | 1.0 |
| HA-24 | - | NE | 2.0 |
| HA-25 | - | 3.0 | 2.0 |
| HA-26 | - | 3.3 | 2.0 |
| HA-27 | - | 3.3 | 2.5 |
| HA-28 | - | NE | 2.0 |
| HA-29 | - | 2.9 | 2.0 |
| HA-30 | - | 3.0 | 2.5 |
| HA-31 | - | 2.9 | 2.0 |
| HA-32 | - | 1.0 | 1.0 |
| HA-33 | - | 2.0 | 1.5 |

[1] - North American Vertical Datum, ground elevations not available at time of drilling

[2] - Below Ground Surface

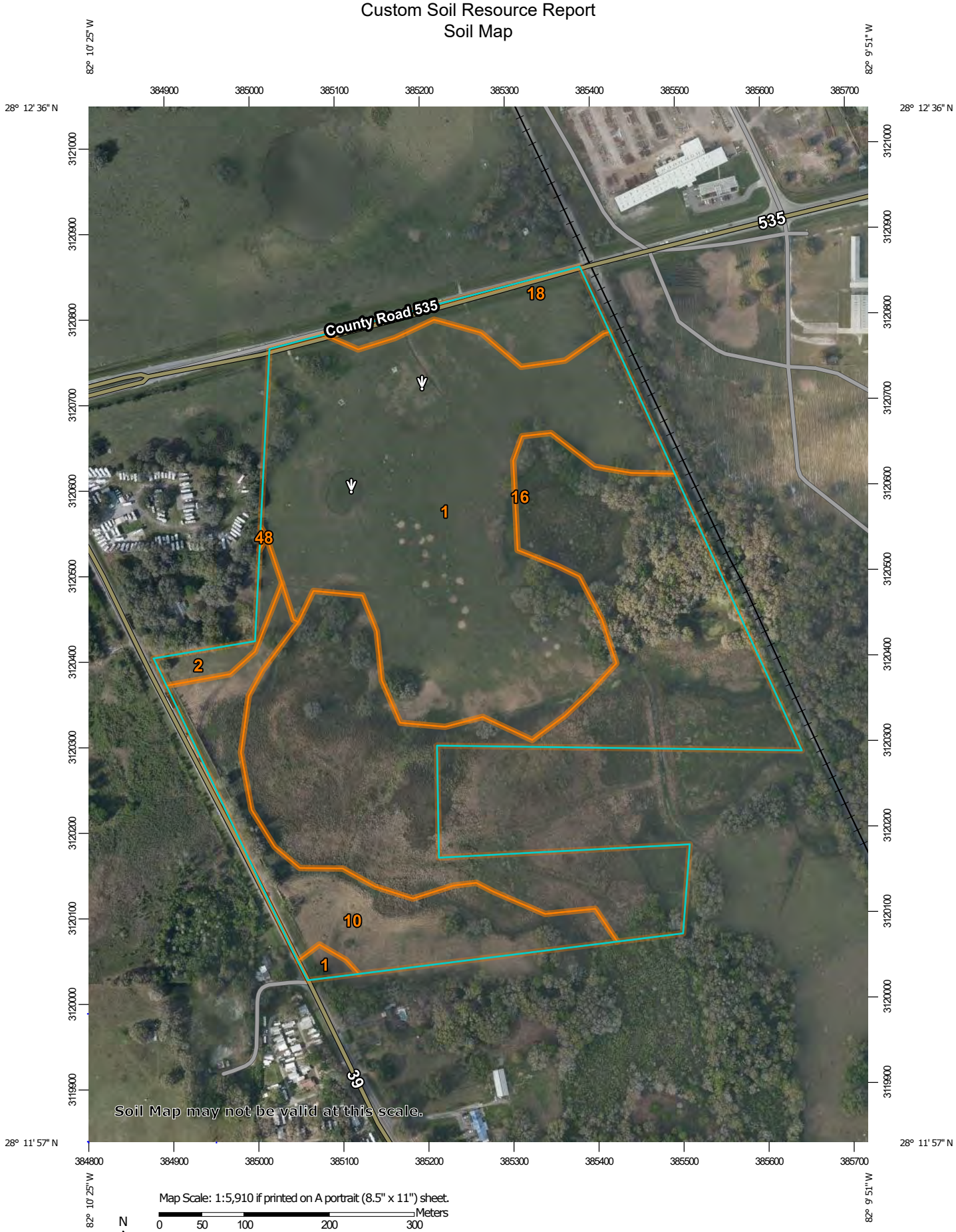
[3] - Seasonal High Groundwater Table

NE - Not encountered in the first 10 feet (SPT boring) or boring termination (auger borings)

# APPENDIX A

## Soil Survey Map

# Custom Soil Resource Report
## Soil Map




Map Scale: 1:5,910 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pasco County, Florida
Survey Area Data: Version 20, Aug 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 8, 2019—Feb 28, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 1 | Wauchula fine sand, 0 to 5 percent slopes | 37.1 | 40.6% |
| 2 | Pomona fine sand | 1.4 | 1.5% |
| 10 | Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes | 11.3 | 12.4% |
| 16 | Zephyr muck | 37.4 | 40.9% |
| 18 | Electra Variant fine sand, 0 to 5 percent slopes | 4.1 | 4.5% |
| 48 | Lochloosa fine sand, 0 to 5 percent slopes | 0.0 | 0.0% |
| **Totals for Area of Interest** | | **91.4** | **100.0%** |

# APPENDIX B

## SPT Boring Logs and Auger Boring Profiles

# DRILL HOLE LOG
## BORING NO.: BB-1

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 4.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, brown, fine SAND | | 1 | 1 1 1 | 2 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 1 2 | 3 | |
| 5 | | | Gray brown, with small roots | | 3 | 2 3 4 | 7 | |
| | | CL | Stiff, gray brown, CLAY with cemented silt | | 4 | 8 3 4 | 7 | |
| | | | Gray | | 5 | 4 6 5 | 11 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 4 3 2 | 5 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 7 4 5 | 9 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-2

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 3 3 | 6 | |
| 5 | | | Medium-Dense | | 3 | 4 6 6 | 12 | |
| | | | | | 4 | 6 6 9 | 15 | |
| | | | | | 5 | 6 6 8 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 5 5 8 | 13 | |
| 15 | | | | | | | | |
| | | | | | 7 | 6 5 5 | 10 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 18 feet*

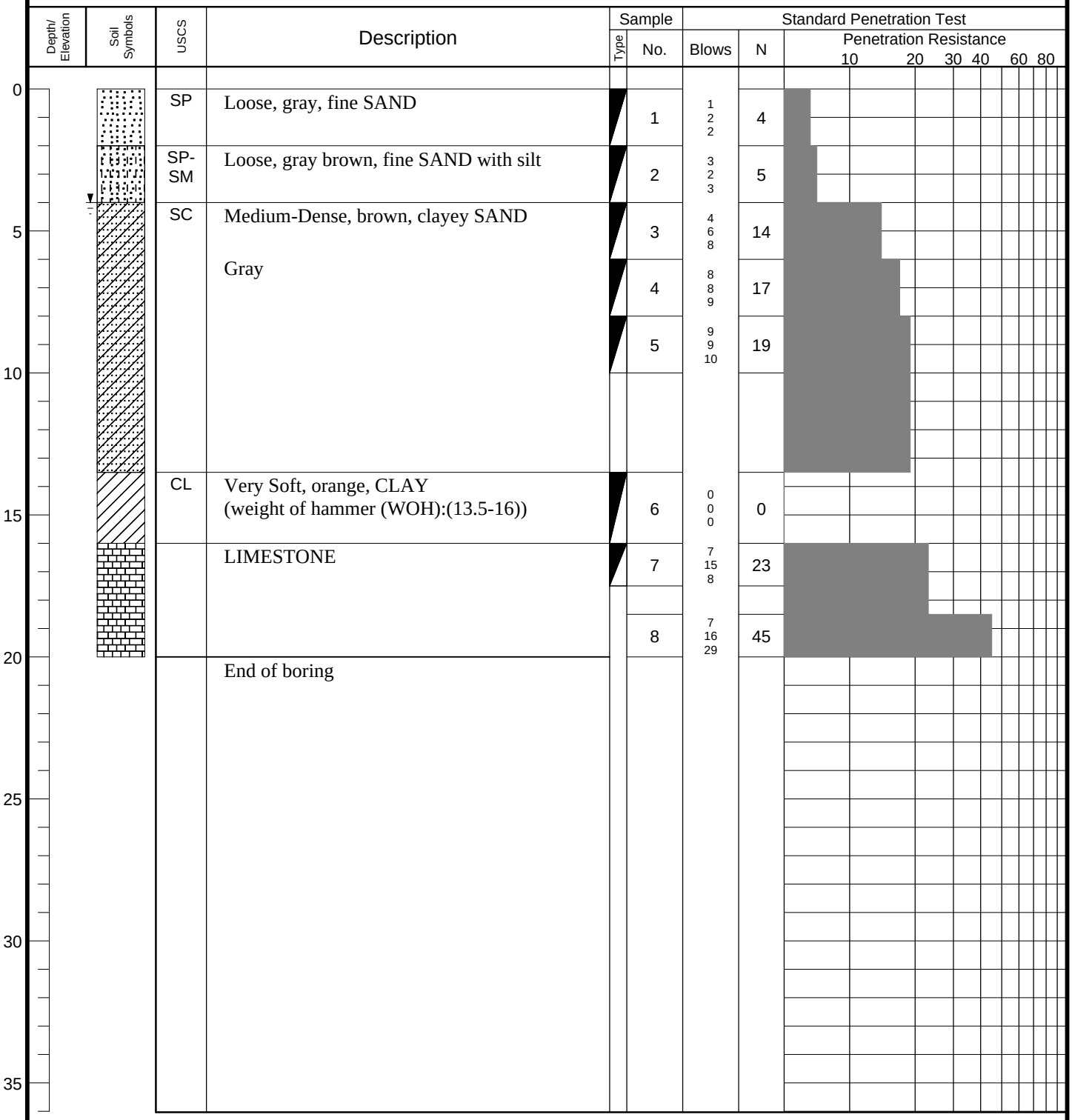
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-3

**Project No.:** 21-5233
**Date:** 10/18/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▽ **:** 4'




**Groundwater not encountered at 10 feet*

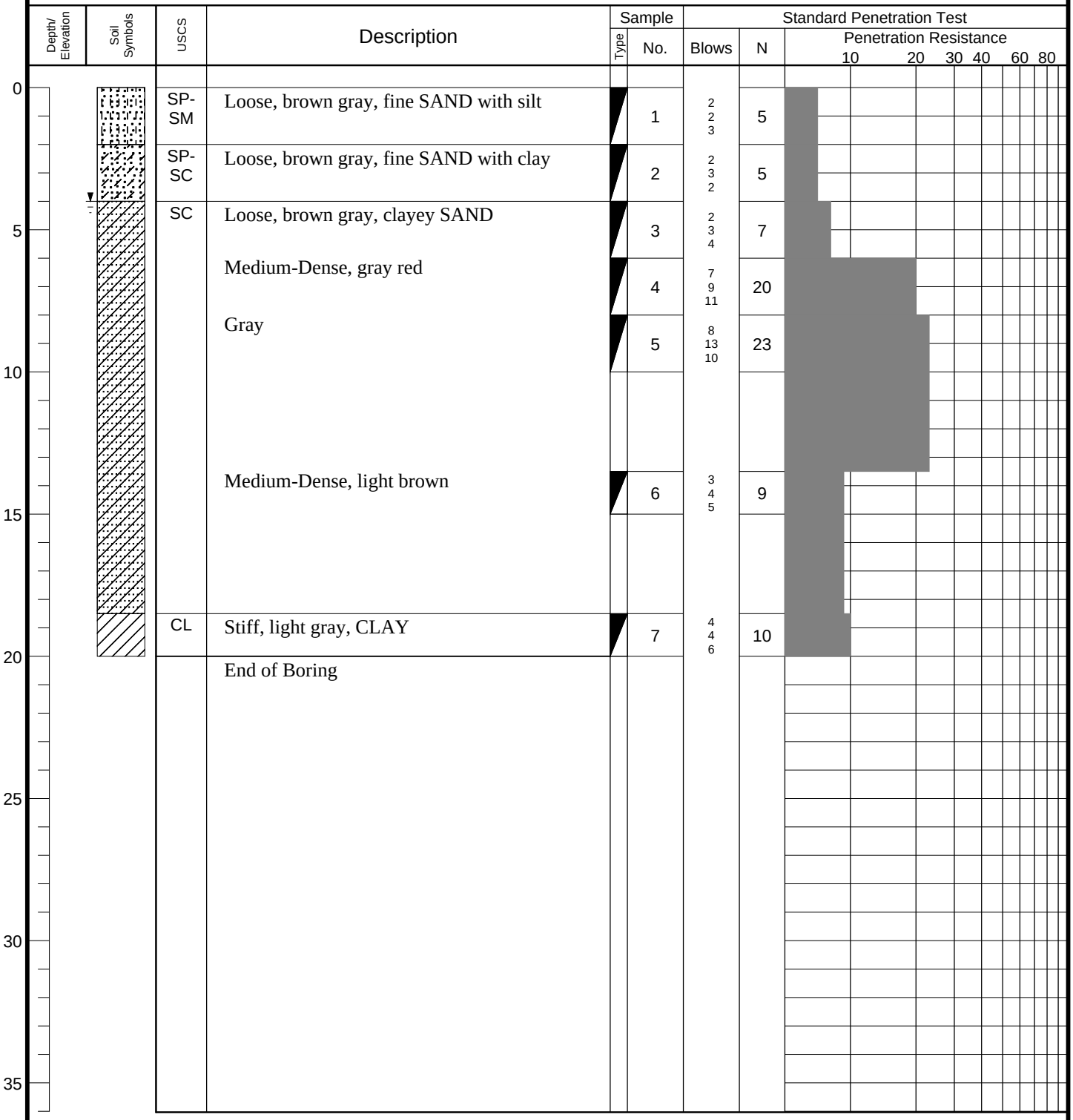
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-4

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 4.0'




**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-5

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND with clay nodules | | 1 | 1 1 2 | 3 | |
| | | SC | Loose, gray, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Medium-Dense, gray orange | | 3 | 3 8 6 | 14 | |
| | | | | | 4 | 5 6 6 | 12 | |
| | | CL | Veru Stiff, gray orange, CLAY | | 5 | 4 6 8 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 1 1 1 | 2 | |
| 15 | | | | | | | | |
| | | | | | 7 | 2 3 5 | 8 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

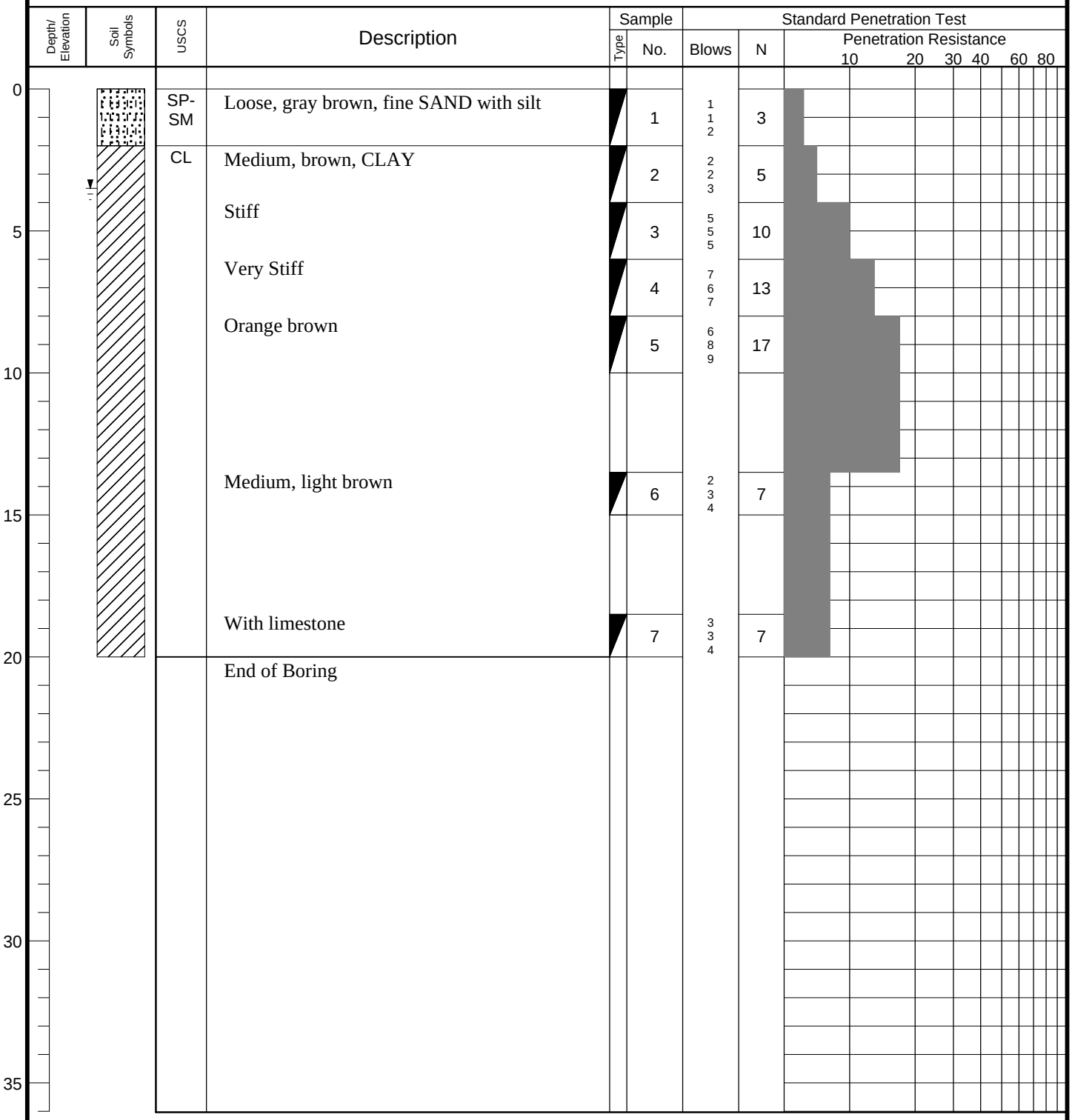
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-6

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.5'



| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, gray brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | CL | Medium, brown, CLAY | | 2 | 2 2 3 | 5 | |
| 5 | | | Stiff | | 3 | 5 5 5 | 10 | |
| | | | Very Stiff | | 4 | 7 6 7 | 13 | |
| | | | Orange brown | | 5 | 6 8 9 | 17 | |
| 10 | | | | | | | | |
| | | | Medium, light brown | | 6 | 2 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With limestone | | 7 | 3 3 4 | 7 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-7

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-25
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.7'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP | Loose, brown, fine SAND with clay nodules | | 1 | 1 2 2 | 4 | |
| | | SC | Medium-Dense, brown, clayey SAND | | 2 | 3 5 5 | 10 | |
| 5 | | | Gray | | 3 | 7 7 7 | 14 | |
| | | | With cementation | | 4 | 6 8 11 | 19 | |
| | | CL | Very stiff, gray, CLAY | | 5 | 8 9 10 | 19 | |
| 10 | | | | | | | | |
| | | | Gray orange, with sand | | 6 | 5 8 8 | 16 | |
| 15 | | | | | | | | |
| | | | Stiff | | 7 | 5 5 6 | 11 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-8

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 4.1'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND with fine roots | | 1 | 2 2 2 | 4 | |
| | | | Light brown, with fine roots | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Loose, gray brown, clayey SAND (-200=32.4%) (Moisture Content=16.3%) Medium-Dense | | 3 | 2 2 6 | 8 | |
| | | | | | 4 | 4 5 9 | 14 | |
| | | | | | 5 | 5 10 9 | 19 | |
| 10 | | | | | | | | |
| 15 | | CH | Very Stiff, gray, CLAY with cementation (-200=53.8%) (Moisture Content=21.5%) (LL=52 PI=33) | | 6 | 5 10 8 | 18 | |
| 20 | | ML | Stiff, gray, SILT | | 7 | 5 8 6 | 14 | |
| | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-9

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance 10 20 30 40 60 80 |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | CL | Stiff, brown, CLAY | | 2 | 3 3 5 | 8 | |
| 5 | | | Gray brown | | 3 | 5 5 7 | 12 | |
| | | | Light brown | | 4 | 3 3 4 | 7 | |
| | | | | | 5 | 4 4 5 | 9 | |
| 10 | | | | | | | | |
| | | | With cementation | | 6 | 4 4 5 | 9 | |
| 15 | | | | | | | | |
| | | | With limestone | | 7 | 7 7 7 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-10

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, gray, fine SAND with silt and fine roots | | 1 | 2 2 2 | 4 | |
| | | SP-SC | Loose, brown gray, fine SAND with clay | | 2 | 2 3 3 | 6 | |
| 5 | | SC | Medium-Dense, gray, clayey SAND | | 3 | 6 8 10 | 18 | |
| | | | Dense, gray brown | | 4 | 12 19 15 | 34 | |
| | | | | | 5 | 13 18 19 | 37 | |
| 10 | | | | | | | | |
| | | ML | Stiff, gray, calcareous SILT with limestone | | 6 | 3 4 5 | 9 | |
| 15 | | | | | | | | |
| | | SM | Medium-Dense, gray, silty SAND | | 7 | 3 6 4 | 10 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 18 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-11

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water> Initial ▽ :**

**Elevation:** NA
**Logged By:** BB
**At Completion ▼ :** 4.2'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 1 2 | 3 | |
| 5 | | | Gray brown | | 3 | 2 3 3 | 6 | |
| | | | Medium-Dense | | 4 | 4 5 6 | 11 | |
| | | | | | 5 | 5 10 11 | 21 | |
| 10 | | CL | Very stiff, gray orange, CLAY | | 6 | 6 7 9 | 16 | |
| 15 | | | with limestone | | 7 | 5 8 8 | 16 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

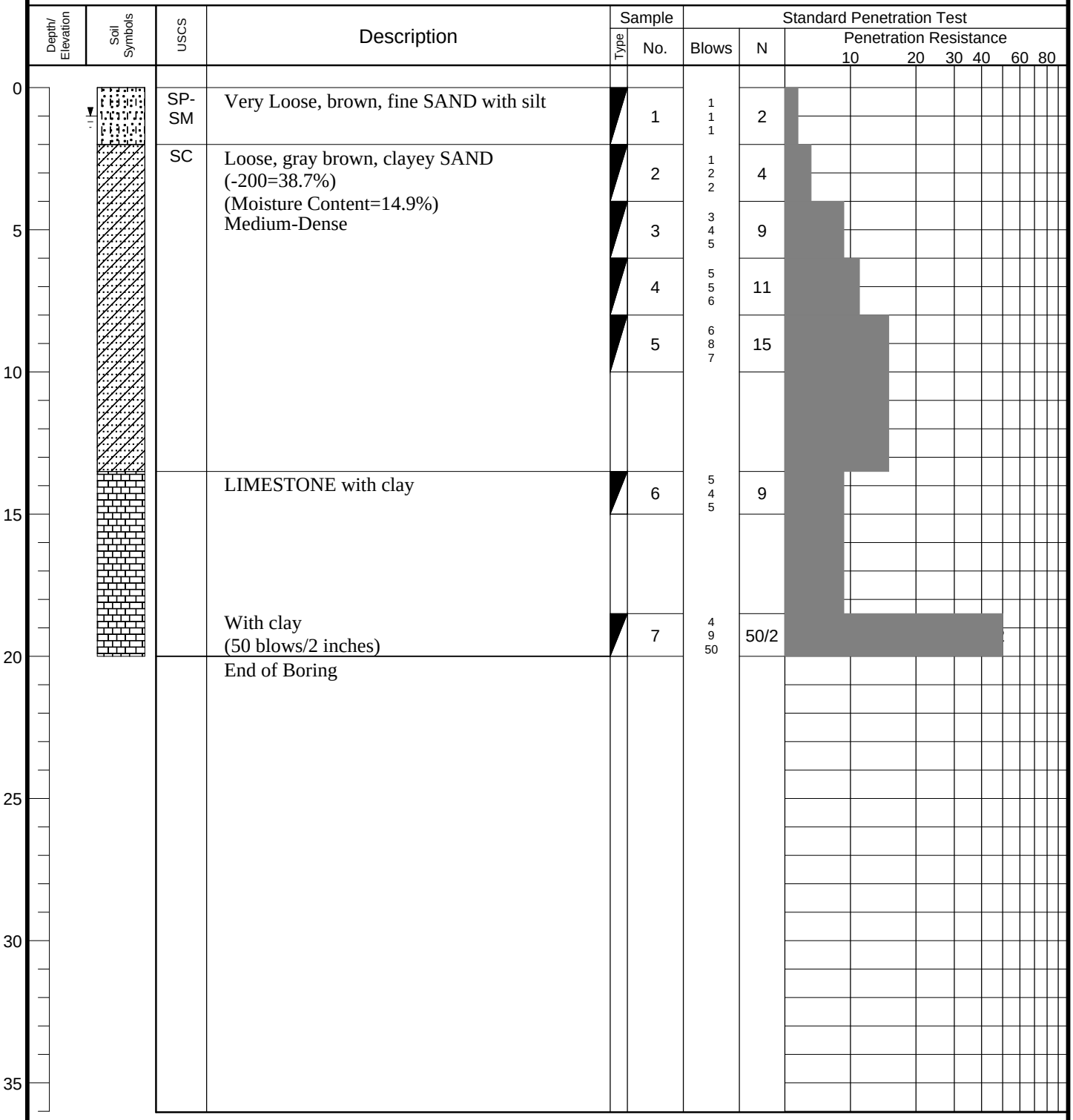
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-12

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 1.0'




*loss of circulation at 15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-13

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 2 1 | 3 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 1 2 3 | 5 | |
| 5 | | CL | Medium, gray, CLAY with sand | | 3 | 2 2 3 | 5 | |
| | | SC | Medium-Dense, brown, clayey SAND | | 4 | 4 4 6 | 10 | |
| | | | | | 5 | 7 9 8 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 4 3 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 5 10 21 | 31 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-14

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, brown, clayey SAND (-200=22.7%) | | 1 | 1 1 2 | 3 | |
| | | | (-200=22.2%) | | 2 | 2 2 3 | 5 | |
| 5 | | | | | 3 | 3 4 3 | 7 | |
| | | | | | 4 | 4 4 4 | 8 | |
| | | SP-SM | Medium-Dense, gray brown, fine SAND with silt | | 5 | 3 4 6 | 10 | |
| 10 | | | | | | | | |
| | | CL | Medium, gray brown, CLAY | | 6 | 2 3 3 | 6 | |
| 15 | | | | | | | | |
| | | | | | 7 | 2 2 3 | 5 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: BB-15

**Project No.:** 21-5233
**Date:** 9/29/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.3'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 1 3 | 4 | |
| | | SP | Loose, brown, fine SAND | | 2 | 1 2 3 | 5 | |
| 5 | | SC | Loose, light brown, clayey SAND (-200=24.3%) | | 3 | 3 4 3 | 7 | |
| | | CL | Stiff, light brown, CLAY with sand | | 4 | 4 4 6 | 10 | |
| | | | | | 5 | 4 5 6 | 11 | |
| 10 | | | | | | | | |
| | | | Medium, light orange brown | | 6 | 3 3 3 | 6 | |
| 15 | | | | | | | | |
| | | | Stiff, light gray brown | | 7 | 2 3 4 | 7 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

Penetration Resistance: 10 20 30 40 60 80

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-16

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | CL | Medium, orange brown, CLAY | | 2 | 1 2 2 | 4 | |
| 5 | | SC | Medium-Dense, orange brown, clayey SAND (-200=42.8%) | | 3 | 4 4 6 | 10 | |
| | | CL | Very Stiff, light brown, CLAY with sand | | 4 | 5 5 8 | 13 | |
| | | SC | Medium-Dense, light brown, clayey SAND (-200=21.6%) | | 5 | 9 8 7 | 15 | |
| 10 | | | | | | | | |
| | | | | | 6 | 10 12 12 | 24 | |
| 15 | | | | | | | | |
| | | | | | 7 | 4 6 8 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-17

**Project No.:** 21-5233
**Date:** 9/29/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.3'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | | | | 2 | 2 2 2 | 4 | |
| 5 | | CL | Medium, brown, CLAY | | 3 | 2 3 4 | 7 | |
| | | | Stiff | | 4 | 3 5 6 | 11 | |
| | | | Very Stiff, gray brown | | 5 | 4 7 8 | 15 | |
| 10 | | | | | | | | |
| | | | Medium, light brown | | 6 | 2 3 3 | 6 | |
| 15 | | | | | | | | |
| | | | | | 7 | 2 2 2 | 4 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

Penetration Resistance: 10 20 30 40 60 80

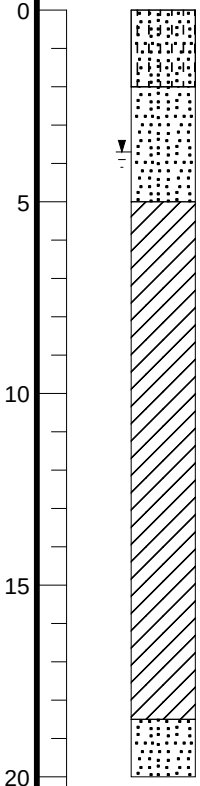
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-18

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.7'



| Depth/ Elevation | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|
| 0 | SP-SM | Loose, gray brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | SP | Loose, brown, fine SAND | | 2 | 2 2 3 | 5 | |
| | | Medium-Dense | | 3 | 3 4 5 | 9 | |
| 5 | CL | Stiff, brown, CLAY<br>Orange brown | | 4 | 6 6 6 | 12 | |
| | | Very Stiff, gray brown | | 5 | 5 7 8 | 15 | |
| 10 | | | | | | | |
| | | Light brown | | 6 | 5 7 9 | 16 | |
| 15 | | | | | | | |
| | SP | Medium-Dense, light brown, clayey SAND | | 7 | 6 9 9 | 18 | |
| 20 | | End of Boring | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-19

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, light brown, fine SAND | | 1 | 1 2 1 | 3 | |
| | | CL | Medium, light brown, CLAY | | 2 | 1 2 4 | 6 | |
| 5 | | SC | Medium-Dense, light brown, clayey SAND (-200=35.2%) | | 3 | 3 5 7 | 12 | |
| | | | | | 4 | 5 8 9 | 17 | |
| | | | | | 5 | 7 10 9 | 19 | |
| 10 | | | | | | | | |
| | | | | | 6 | 6 10 10 | 20 | |
| 15 | | | | | | | | |
| | | CL | Very Stiff, light brown, CLAY | | 7 | 9 9 10 | 19 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-20

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, gray, fine SAND | | 1 | 1 2 2 | 4 | |
| | | SP-SC | Loose, gray brown, fine SAND with clay | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Medium-Dense, gray brown, clayey SAND | | 3 | 3 4 5 | 9 | |
| | | | | | 4 | 5 8 7 | 15 | |
| | | | Brown | | 5 | 6 8 6 | 14 | |
| 10 | | | | | | | | |
| | | | Gray | | 6 | 3 5 8 | 13 | |
| 15 | | | | | | | | |
| | | | | | 7 | 7 10 7 | 17 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

Penetration Resistance: 10 20 30 40 60 80

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-21

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 2.9'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, gray brown, fine SAND with silt | | 1 | 2 2 2 | 4 | |
| | | SP | Loose, light brown, fine SAND | | 2 | 2 3 4 | 7 | |
| 5 | | CL | Stiff, brown, CLAY | | 3 | 2 3 4 | 7 | |
| | | | | | 4 | 4 6 5 | 11 | |
| | | | Very Stiff | | 5 | 6 6 7 | 13 | |
| 10 | | | | | | | | |
| | | | Stiff, light brown | | 6 | 3 5 6 | 11 | |
| 15 | | | | | | | | |
| | | | LIMESTONE with clay | | 7 | 9 7 7 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 18'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-22

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 2.3'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | SP-SC | Loose, brown, fine SAND with clay | | 2 | 1 2 2 | 4 | |
| 5 | | SC | Loose, gray brown, clayey SAND | | 3 | 2 3 4 | 7 | |
| | | | Medium-Dense | | 4 | 4 6 7 | 13 | |
| | | | Gray | | 5 | 5 8 7 | 15 | |
| 10 | | | | | | | | |
| | | CL | Stiff, gray, CLAY with limestone | | 6 | 7 6 6 | 12 | |
| 15 | | | | | | | | |
| | | | LIMESTONE with clay (50 blows/2 inches) | | 7 | | 50/2 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 17'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-23

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | CL | Stiff, gray brown, CLAY | | 3 | 4 5 6 | 11 | |
| | | SC | Medium-Dense, gray brown, clayey SAND | | 4 | 5 7 6 | 13 | |
| | | | | | 5 | 7 7 7 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 2 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 8 6 9 | 15 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-24

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, gray brown, clayey SAND (-200=25.0%) (Moisture Content=22.0%) | | 1 | 1 1 2 | 3 | |
| | | | | | 2 | 2 3 4 | 7 | |
| 5 | | CL | Stiff, brown, CLAY | | 3 | 4 6 5 | 11 | |
| | | SC | Medium-Dense, gray brown, clayey SAND | | 4 | 4 5 5 | 10 | |
| | | CL | Stiff, gray brown, CLAY | | 5 | 5 6 5 | 11 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 2 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 7 8 6 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 12'*

# DRILL HOLE LOG
## BORING NO.: BB-25

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 2.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, gray, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Medium-Dense, gray brown | | 3 | 4 5 6 | 11 | |
| | | CL | Stiff, gray brown, CLAY | | 4 | 5 7 6 | 13 | |
| | | | Very Stiff | | 5 | 8 8 10 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 3 4 3 | 7 | |
| 15 | | | | | | | | |
| | | | | | 7 | 5 8 7 | 15 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-26

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SC | Loose, brown, fine SAND with clay | | 1 | 1 2 3 | 5 | |
| | | SC | Medium-Dense, gray brown, clayey SAND | | 2 | 3 4 6 | 10 | |
| 5 | | | Gray | | 3 | 4 7 10 | 17 | |
| | | SP-SC | Dense, gray, fine SAND with clay | | 4 | 8 13 15 | 28 | |
| | | | | | 5 | 9 9 15 | 24 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 4 6 | 10 | |
| 15 | | | | | | | | |
| | | | | | 7 | 9 12 11 | 23 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 10'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-27

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | CL | Medium, brown, CLAY | | 2 | 2 2 3 | 5 | |
| 5 | | | Stiff | | 3 | 4 5 4 | 9 | |
| | | | Very Stiff, orange brown | | 4 | 4 7 8 | 15 | |
| | | | | | 5 | 6 9 8 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 3 5 15 | 20 | |
| 15 | | | | | | | | |
| | | | | | 7 | 9 13 10 | 23 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 12'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-28

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SC | Loose, brown, fine SAND with clay | | 1 | 2 2 2 | 4 | |
| | | SC | Loose, gray, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | | | 3 | 2 2 3 | 5 | |
| | | | Medium-Dense | | 4 | 4 8 7 | 15 | |
| | | | With shell fragments | | 5 | 7 7 7 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 3 5 | 8 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 10 7 9 | 16 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 12'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-29

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** MR
**At Completion** ▼ **:** 3.6'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, gray, fine SAND | | 1 | 1 1 1 | 2 | |
| | | SP-SM | Loose, brown, fine SAND with silt and cementation | | 2 | 1 2 2 | 4 | |
| 5 | | CL | Stiff, gray orange, CLAY with cementation | | 3 | 2 3 5 | 8 | |
| | | SC | Medium-Dense, brown orange, clayey SAND | | 4 | 5 8 10 | 18 | |
| | | CL | Very Stiff, gray, CLAY with cementation | | 5 | 6 7 8 | 15 | |
| 10 | | | | | | | | |
| | | | | | 6 | 11 11 7 | 18 | |
| 15 | | | | | | | | |
| | | | LIMESTONE | | 7 | 5 1 10 | 11 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-30

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 2.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 2 4 | 6 | |
| 5 | | | Gray brown | | 3 | 4 4 4 | 8 | |
| | | | Medium-Dense | | 4 | 5 7 6 | 13 | |
| | | | LIMESTONE with clay | | 5 | 4 6 7 | 13 | |
| 10 | | | | | | | | |
| | | | With clay | | 6 | 6 10 9 | 19 | |
| 15 | | | | | | | | |
| | | | With clay (50 blows/3 inches) | | 7 | | 50/3 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 12'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-31

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SC | Loose, gray brown, fine SAND with clay | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Medium-Dense, gray | | 3 | 3 4 6 | 10 | |
| | | | Gray brown, with rock fragments | | 4 | 4 8 9 | 17 | |
| | | | Gray | | 5 | 9 9 9 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 2 5 5 | 10 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 15 12 13 | 25 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 15'*
**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: BB-32

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, brown, clayey SAND | | 1 | 2 2 3 | 5 | |
| | | | Medium-Dense, gray | | 2 | 3 4 5 | 9 | |
| 5 | | CL | Stiff, gray, CLAY | | 3 | 4 4 5 | 9 | |
| | | | Very Stiff | | 4 | 4 6 7 | 13 | |
| | | | | | 5 | 7 8 9 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 5 6 6 | 12 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 9 12 10 | 22 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 15'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-33

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, gray, fine SAND | | 1 | 1 2 2 | 4 | |
| | | SP-SM | Loose, gray, fine SAND with silt | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Medium-Dense, gray brown, clayey SAND | | 3 | 3 4 5 | 9 | |
| | | | Gray | | 4 | 4 6 5 | 11 | |
| | | | | | 5 | 6 7 8 | 15 | |
| 10 | | CL | Very Stiff, gray, CLAY | | 6 | 10 7 7 | 14 | |
| 15 | | SC | Medium-Dense, gray, clayey SAND | | 7 | 6 8 10 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

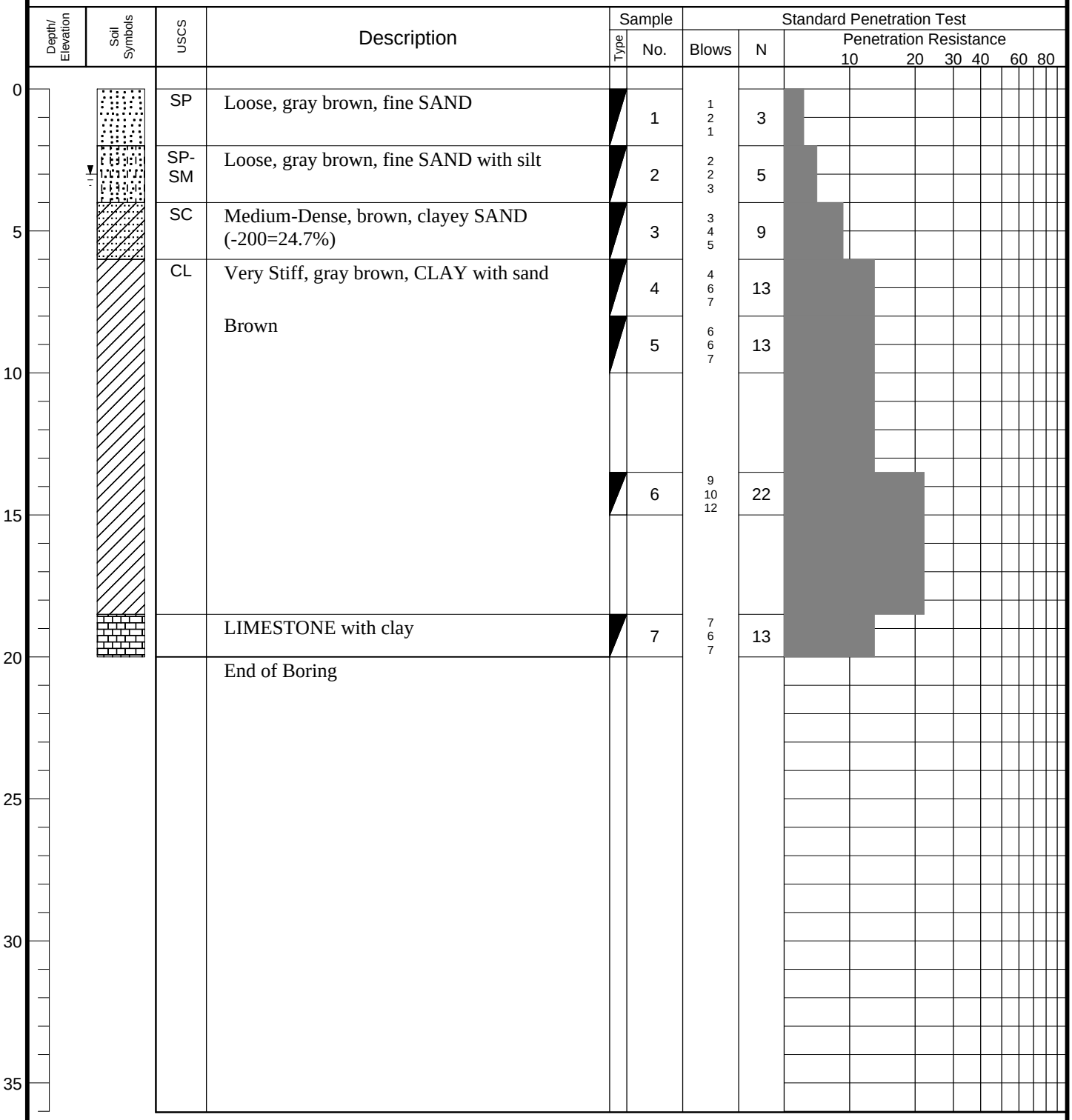
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-34

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.0'



| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, gray brown, fine SAND | | 1 | 1 2 1 | 3 | |
| | | SP-SM | Loose, gray brown, fine SAND with silt | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Medium-Dense, brown, clayey SAND (-200=24.7%) | | 3 | 3 4 5 | 9 | |
| | | CL | Very Stiff, gray brown, CLAY with sand | | 4 | 4 6 7 | 13 | |
| | | | Brown | | 5 | 6 6 7 | 13 | |
| 10 | | | | | | | | |
| | | | | | 6 | 9 10 12 | 22 | |
| 15 | | | | | | | | |
| | | | LIMESTONE with clay | | 7 | 7 6 7 | 13 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-35

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, gray, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | | Loose, brown | | 2 | 1 2 2 | 4 | |
| 5 | | CL | Stiff, gray brown, CLAY with sand | | 3 | 3 3 5 | 8 | |
| | | | Very Stiff, light brown | | 4 | 4 7 8 | 15 | |
| | | | Orange brown, with sand | | 5 | 6 7 9 | 16 | |
| 10 | | | | | | | | |
| | | | Stiff, light brown | | 6 | 3 5 6 | 11 | |
| 15 | | | | | | | | |
| | | | | | 7 | 4 5 4 | 9 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: BB-36

**Project No.:** 21-5233
**Date:** 9/29/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP | Loose, brown, fine SAND | | 1 | 1 1 2 | 3 | |
| | | CL | Medium, brown, CLAY | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Medium-Dense, light brown, clayey SAND (-200=31.3%) | | 3 | 3 4 6 | 10 | |
| | | | | | 4 | 6 8 9 | 17 | |
| | | | | | 5 | 7 7 10 | 17 | |
| 10 | | | | | | | | |
| | | | Dense | | 6 | 14 18 13 | 31 | |
| 15 | | | | | | | | |
| | | CL | Very Stiff, light brown, CLAY | | 7 | 7 8 10 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: LS-1

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, gray brown, clayey SAND (-200=35.4%)(Moisture content=18.7%) | | 1 | 2 2 4 | 6 | |
| | | | Medium-Dense, gray | | 2 | 3 4 5 | 9 | |
| 5 | | | (-200=38.6%)(Moisture content=23.2%) | | 3 | 3 5 6 | 11 | |
| | | | Brown (-200=43.3%)(Moisture content=23.5%) | | 4 | 4 4 8 | 12 | |
| | | CL | Hard, light brown, CLAY | | 5 | 9 12 13 | 25 | |
| 10 | | | | | | | | |
| | | | Very stiff, with cementation | | 6 | 6 6 11 | 17 | |
| 15 | | | | | | | | |
| | | | LIMESTONE | | 7 | 7 8 10 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-1

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-25
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.5'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND | | 1 | 1 1 2 | 3 | |
| | | SC | Loose, gray brown, clayey SAND (-200=36.2%) (Moisture Content=16.2%) | | 2 | 2 3 5 | 8 | |
| 5 | | | Medium-Dense | | 3 | 4 6 6 | 12 | |
| | | | | | 4 | 7 7 8 | 15 | |
| | | SM | Medium-Dense, gray brown, silty SAND | | 5 | 10 11 13 | 24 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 5 10 | 15 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-2

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown gray, fine SAND | | 1 | 2 2 1 | 3 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 2 2 | 4 | |
| 5 | | | Orange gray (-200=43.6%) (Moisture Content=20.7%) | | 3 | 2 3 4 | 7 | |
| | | | | | 4 | 3 3 5 | 8 | |
| | | CL | Stiff, orange gray, CLAY with sand | | 5 | 4 5 5 | 10 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 6 5 15 | 20 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-3

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND | | 1 | 1 2 1 | 3 | |
| | | SP-SC | Loose, light brown, fine SAND with clay | | 2 | 2 2 3 | 5 | |
| | | CL | Medium, gray brown, CLAY | | | | | |
| 5 | | | Stiff, brown | | 3 | 4 5 6 | 11 | |
| | | | | | 4 | 7 7 7 | 14 | |
| | | | Very Stiff | | 5 | 6 9 8 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 3 5 | 8 | |
| 15 | | | End of Boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 11'*
**Groundwater not encountered at first 10 feet*

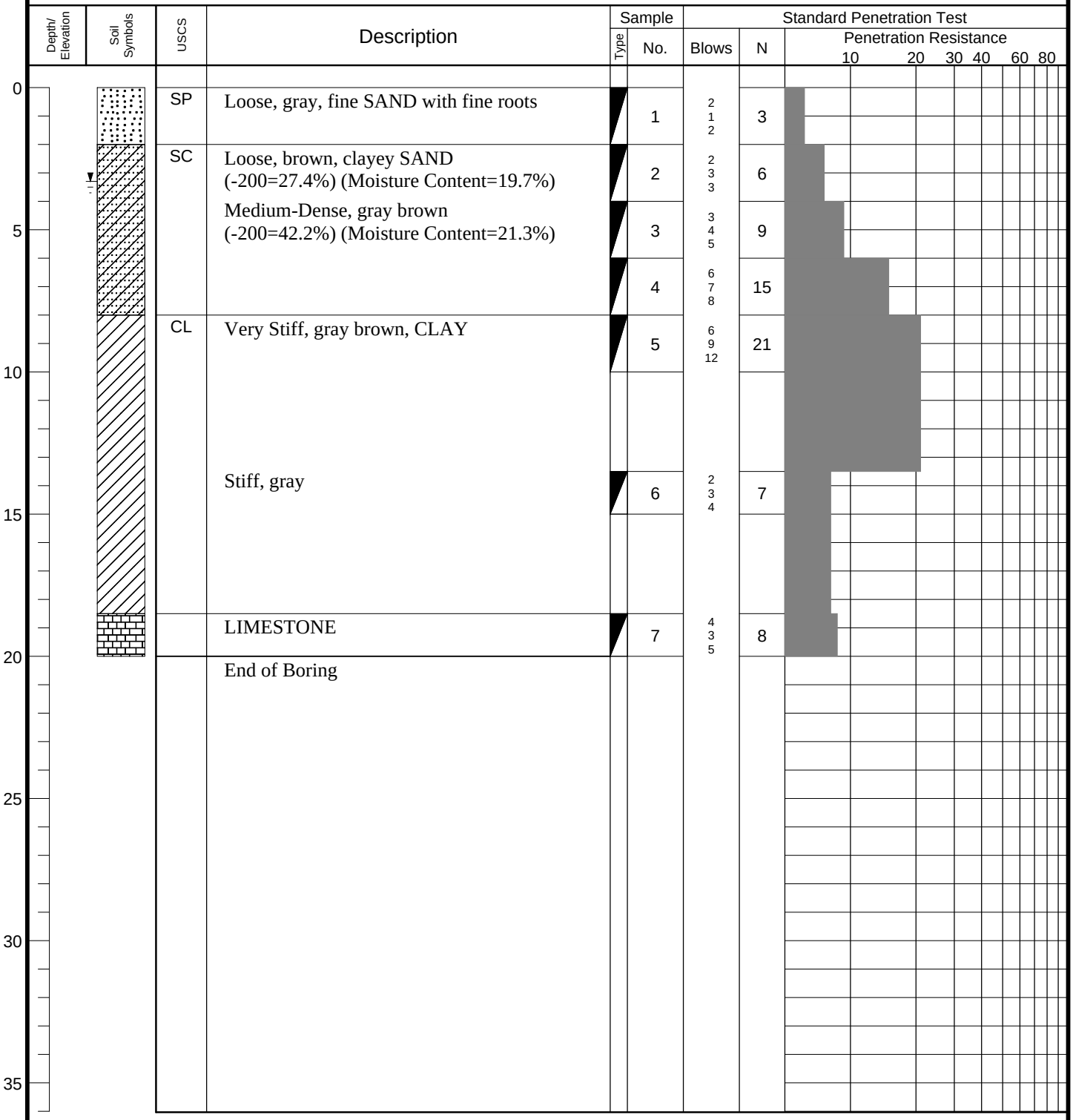
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-4

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** d-25
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** MR
**At Completion** ▼ : 3.3'




**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-5

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND | | 1 | 1 1 2 | 3 | |
| | | SP-SC | Loose, brown gray, fine SAND with clay | | 2 | 2 2 2 | 4 | |
| 5 | | | Medium-dense | | 3 | 4 5 7 | 12 | |
| | | SC | Medium-dense, brown gray, clayey SAND | | 4 | 7 7 7 | 14 | |
| | | | (-200=43.5%) (Moisture Content=21.5%) | | 5 | 6 8 10 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 5 7 10 | 17 | |
| 15 | | | | | | | | |
| | | | | | 7 | 9 9 13 | 22 | |
| 20 | | | | | | | | |
| | | | | | 8 | | 50/3" | |
| 25 | | | End of boring | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 11'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-6

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 2 2 2 | 4 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Gray (-200=36.0%) (Moisture Content=17.4%) | | 3 | 3 3 4 | 7 | |
| | | CL | Very Stiff, gray, CLAY | | 4 | 4 6 7 | 13 | |
| | | SC | Medium-Dense, brown, clayey SAND | | 5 | 5 7 6 | 13 | |
| 10 | | | | | | | | |
| | | | LIMESTONE (50 blows/3 inches) | | 6 | | 50/3 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-7

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | SP-SC | Loose, light brown, fine SAND with clay | | 2 | 1 2 1 | 3 | |
| 5 | | CL | Stiff, gray, CLAY | | 3 | 2 3 5 | 8 | |
| | | | | | 4 | 4 4 5 | 9 | |
| | | | Very Stiff | | 5 | 6 7 6 | 13 | |
| 10 | | | | | | | | |
| | | | LIMESTONE (50 blows/1 inch) | | 6 | | 50/1 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 13'*

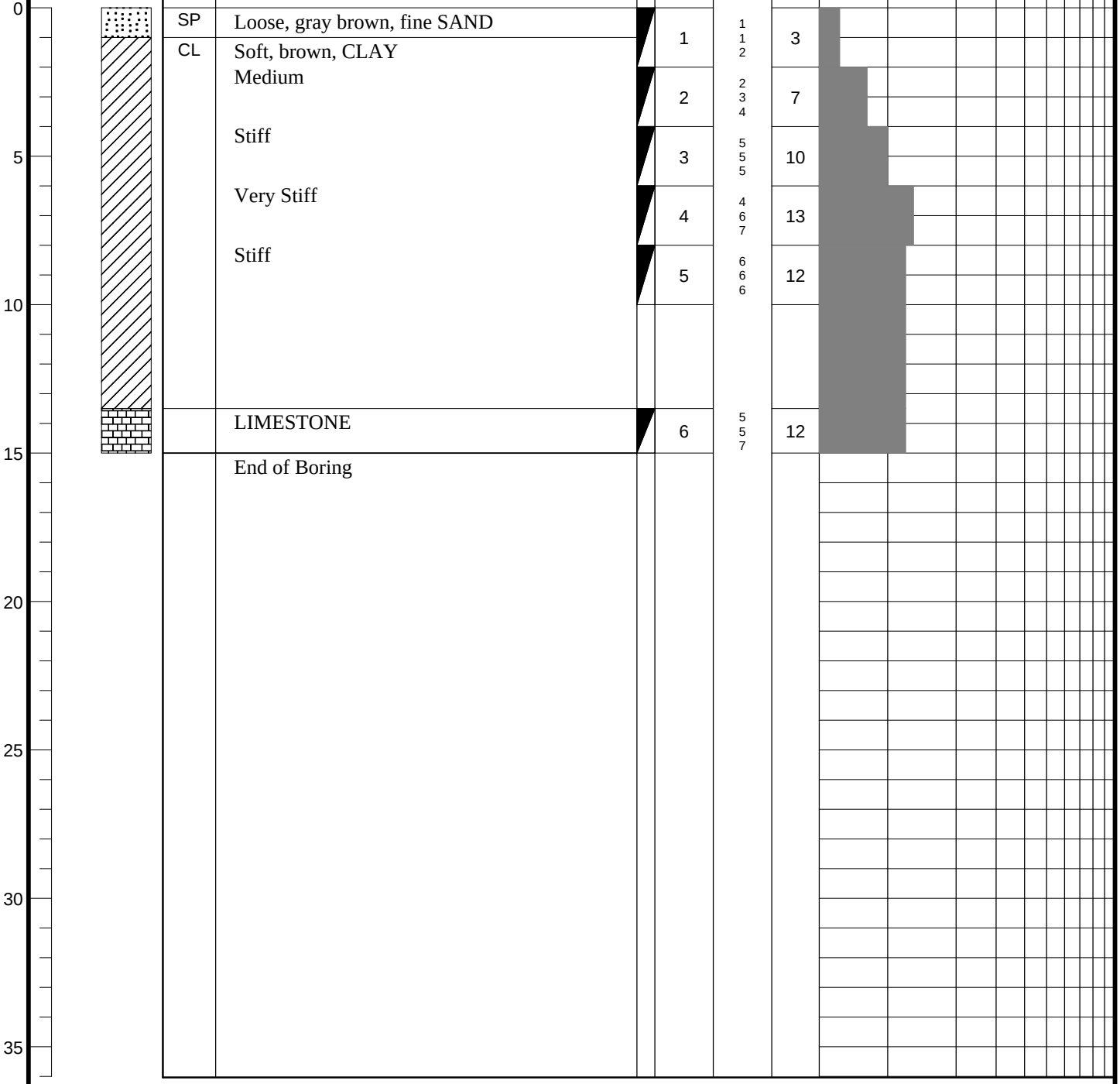
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-8

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE




*Loose of circulation at 12'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-9

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 3 2 3 | 5 | |
| | | | | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Medium-Dense, brown, clayey SAND (-200=25.2%) | | 3 | 3 6 12 | 18 | |
| | | | Gray | | 4 | 4 7 10 | 17 | |
| | | CL | Very Stiff, gray, CLAY | | 5 | 12 11 13 | 24 | |
| 10 | | | | | | | | |
| | | | Stiff, light brown | | 6 | 4 4 7 | 11 | |
| 15 | | | | | | | | |
| | | | Very Stiff | | 7 | 6 7 9 | 16 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: PB-10

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▽ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, gray brown, fine SAND | | 1 | 2 3 4 | 7 | |
| | | SC | Loose, gray brown, clayey SAND (-200=29.3%)(Moisture content=17.2%) Medium-Dense, gray | | 2 | 3 5 5 | 10 | |
| 5 | | | Light gray (-200=41.2%)(Moisture content=20.3%) | | 3 | 3 5 7 | 12 | |
| | | CL | Stiff, gray brown, CLAY | | 4 | 4 4 6 | 10 | |
| | | | Very Stiff | | 5 | 5 8 9 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 6 8 12 | 20 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 5 7 7 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-11

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Medium-Dense, brown, clayey SAND | | 1 | 2 4 6 | 10 | |
| | | | Loose, light gray brown (-200=40.0%) (Moisture Content=17.4%) | | 2 | 3 3 2 | 5 | |
| 5 | | | | | 3 | 3 3 4 | 7 | |
| | | | Medium-Dense, brown (-200=44.4%) (Moisture Content=23.3%) | | 4 | 4 7 6 | 13 | |
| | | CL | Very Stiff, light brown, CLAY | | 5 | 8 8 10 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 13 7 14 | 21 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 10 11 13 | 24 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-12

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, gray brown, clayey SAND (-200=36.5%)(Moisture content=18.0%) | | 1 | 3 3 3 | 6 | |
| | | | Medium-Dense | | 2 | 3 4 5 | 9 | |
| 5 | | | Gray | | 3 | 3 5 10 | 15 | |
| | | | (-200=38.9%)(Moisture content=24.6%) | | 4 | 4 9 13 | 22 | |
| | | | Hard, with cementation | | 5 | 12 14 17 | 31 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 8 9 11 | 20 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 7 10 13 | 23 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

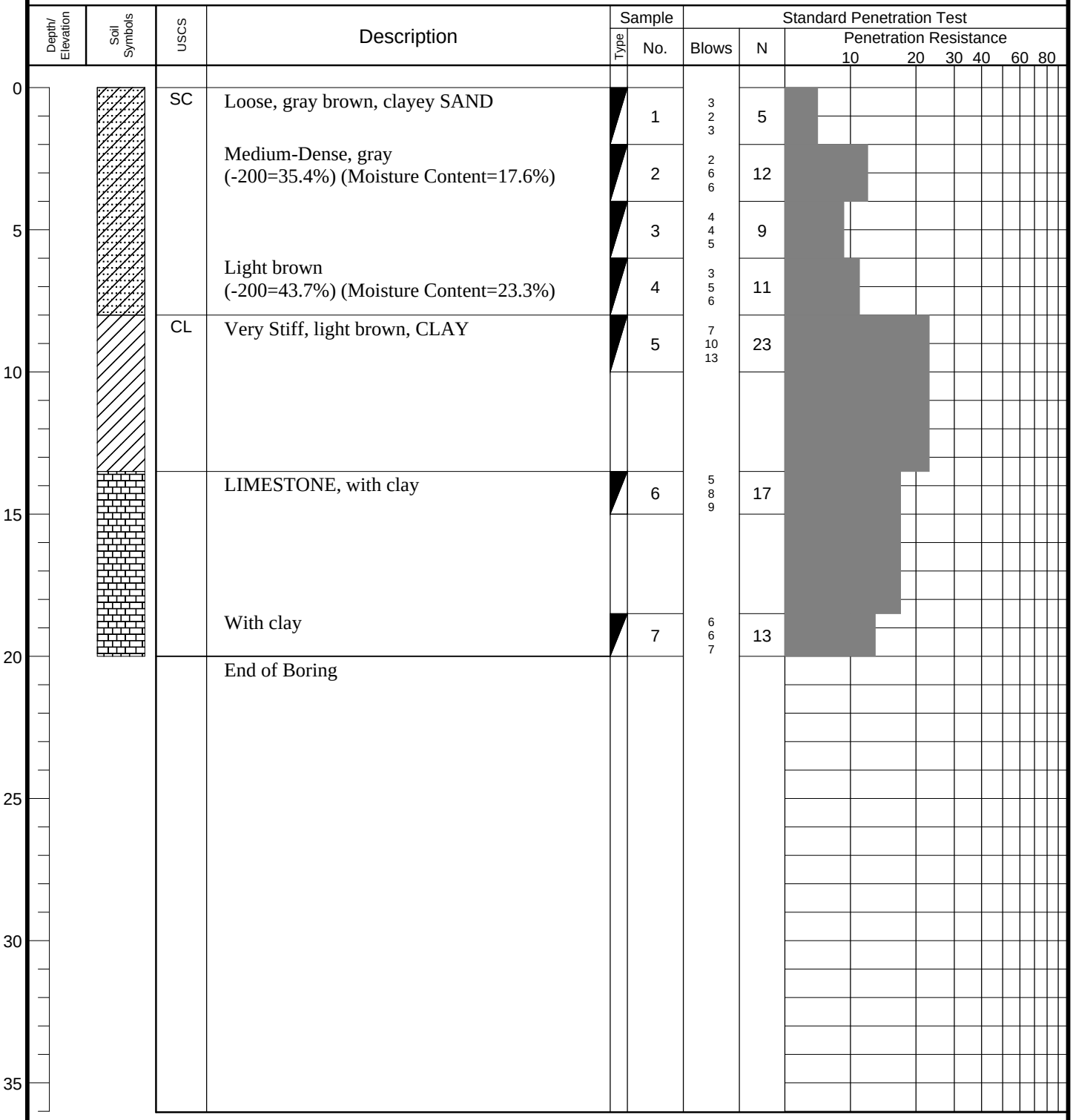
# DRILL HOLE LOG
## BORING NO.: PB-13

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB

**At Completion** ▼ : * NE




**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-14

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SC | Loose, brown, clayey SAND with cementation | | 1 | 2 2 3 | 5 | |
| | | | Medium-Dense, gray brown (-200=34.2%)(Moisture content=16.9%) | | 2 | 2 4 7 | 11 | |
| 5 | | | | | 3 | 2 3 8 | 11 | |
| | | | Brown (-200=47.3%) (Moisture Content=19.8%) | | 4 | 4 6 10 | 16 | |
| | | CL | Very Stiff, brown, CLAY | | 5 | 8 8 11 | 19 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 3 2 2 | 4 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 2 4 4 | 8 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-15

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP | Loose, brown, fine SAND | | 1 | 2 2 2 | 4 | |
| | | SC | Gray brown (-200=33.3%)(Moisture content=15.2%) | | 2 | 3 4 3 | 7 | |
| 5 | | | Medium-Dense, light brown | | 3 | 3 6 7 | 13 | |
| | | SP-SC | Medium-Dense, brown, fine SAND with clay | | 4 | 5 5 8 | 13 | |
| | | CL | Very Stiff, light brown, CLAY | | 5 | 9 11 12 | 23 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 3 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 3 5 6 | 11 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

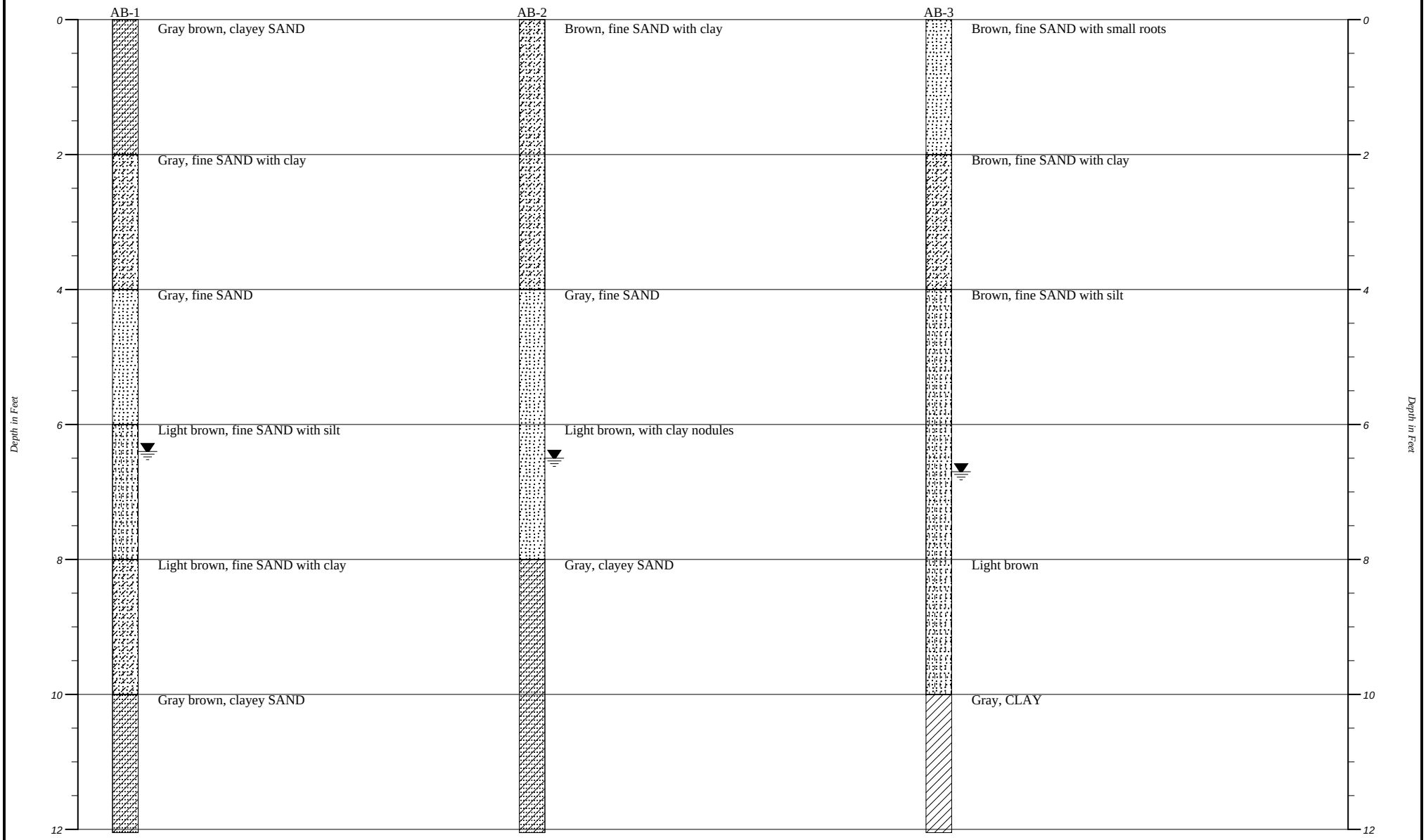
# KEY TO SYMBOLS

| Symbol | Description |
|---|---|
| **Strata symbols** | |
|  | Poorly graded sand |
|  | Clayey sand |
|  | Low plasticity clay |
|  | Limestone |
|  | Poorly graded sand with silt |
|  | Poorly graded sand with clay |
|  | High plasticity clay |
|  | Silt |
|  | Silty sand |
|  | Blank |
| **Misc. Symbols** | |
|  | Water table at boring completion |
| **Soil Samplers** | |
|  | Standard penetration test |

**Notes:**

1. Exploratory boring were performed using a 2-inch diameter split barrel sampler driven by a 140 lbs hammer (In accordance with ASTM D1586)

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




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

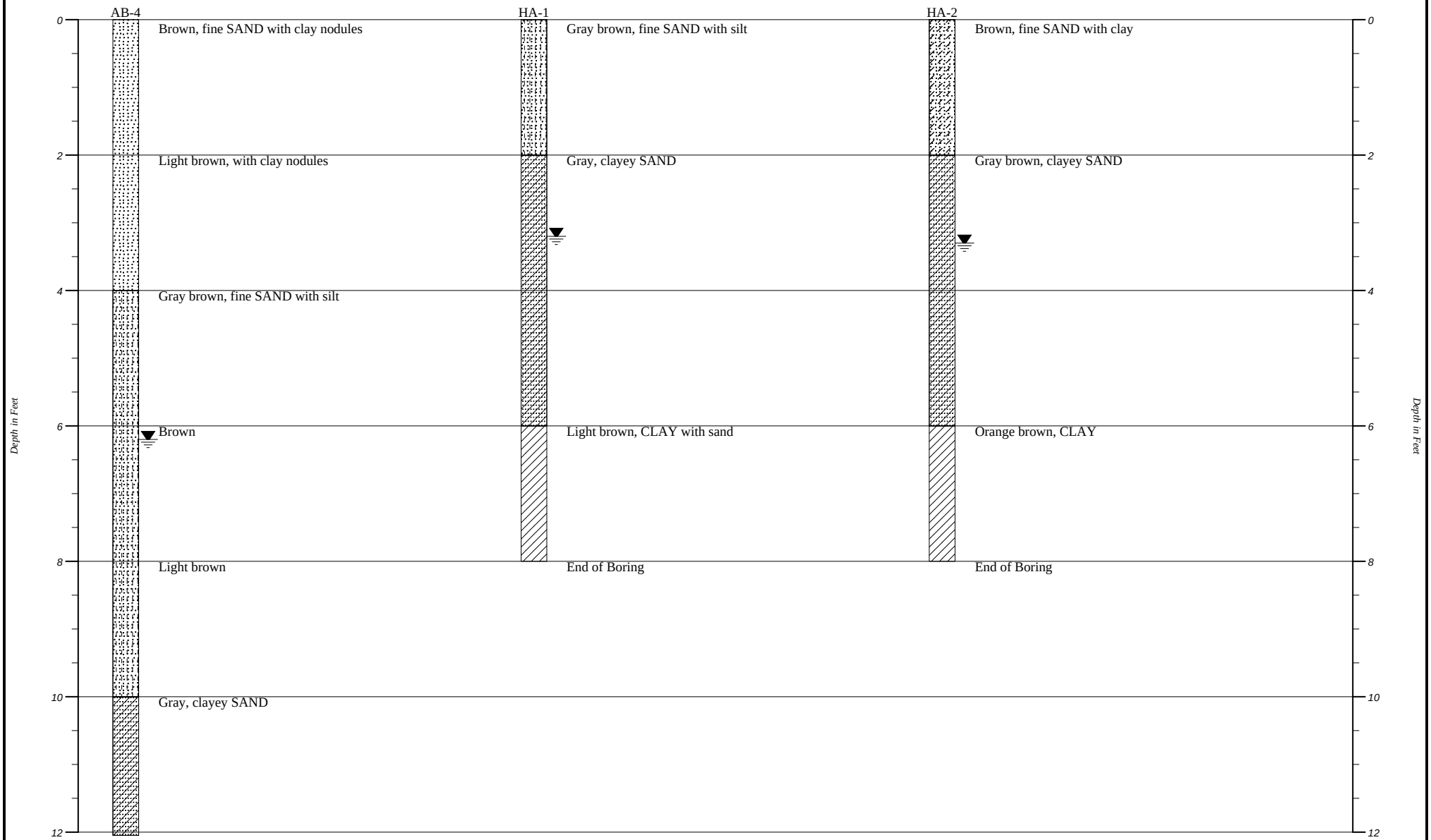
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 10/4/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

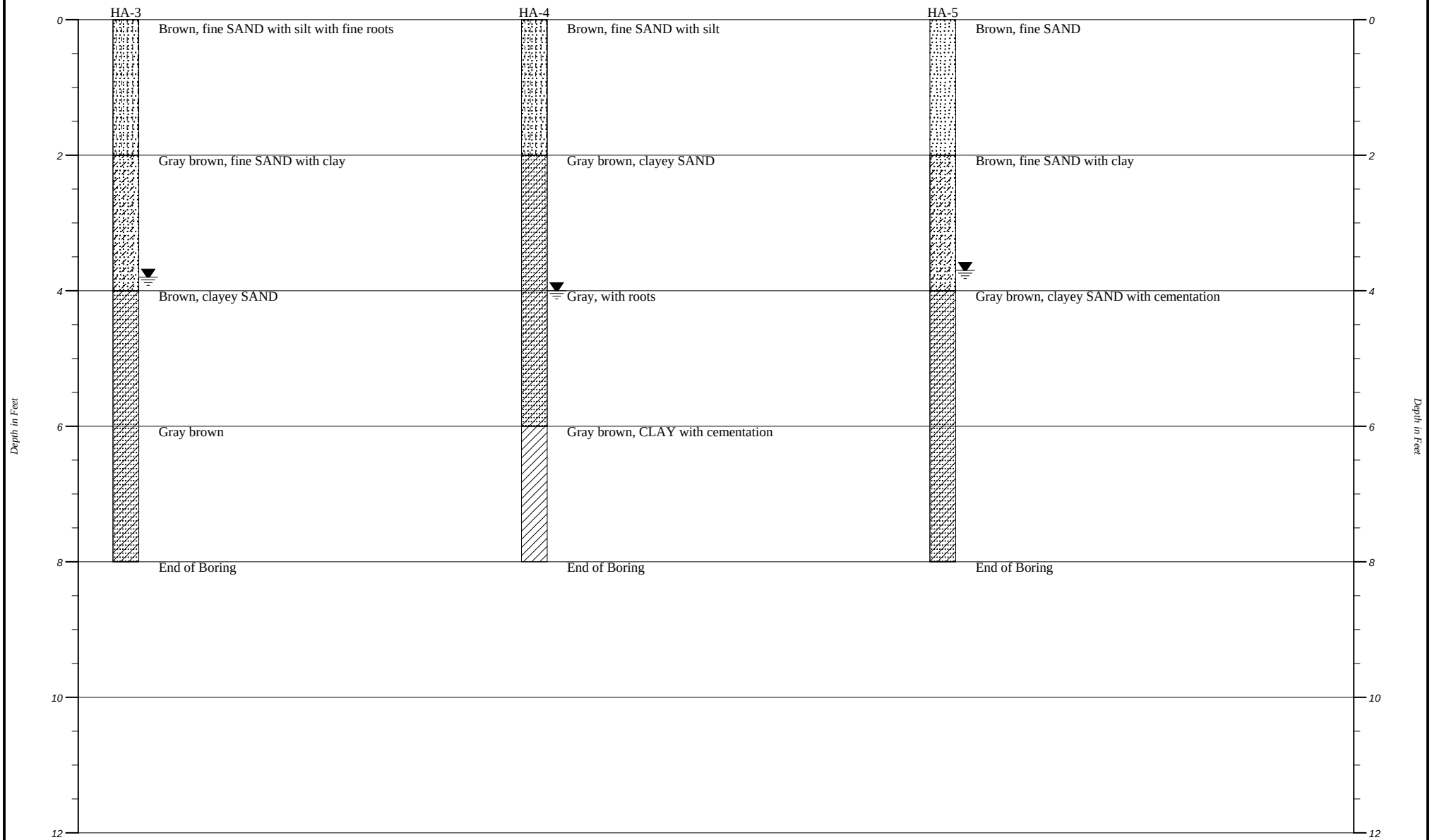
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 10/4/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

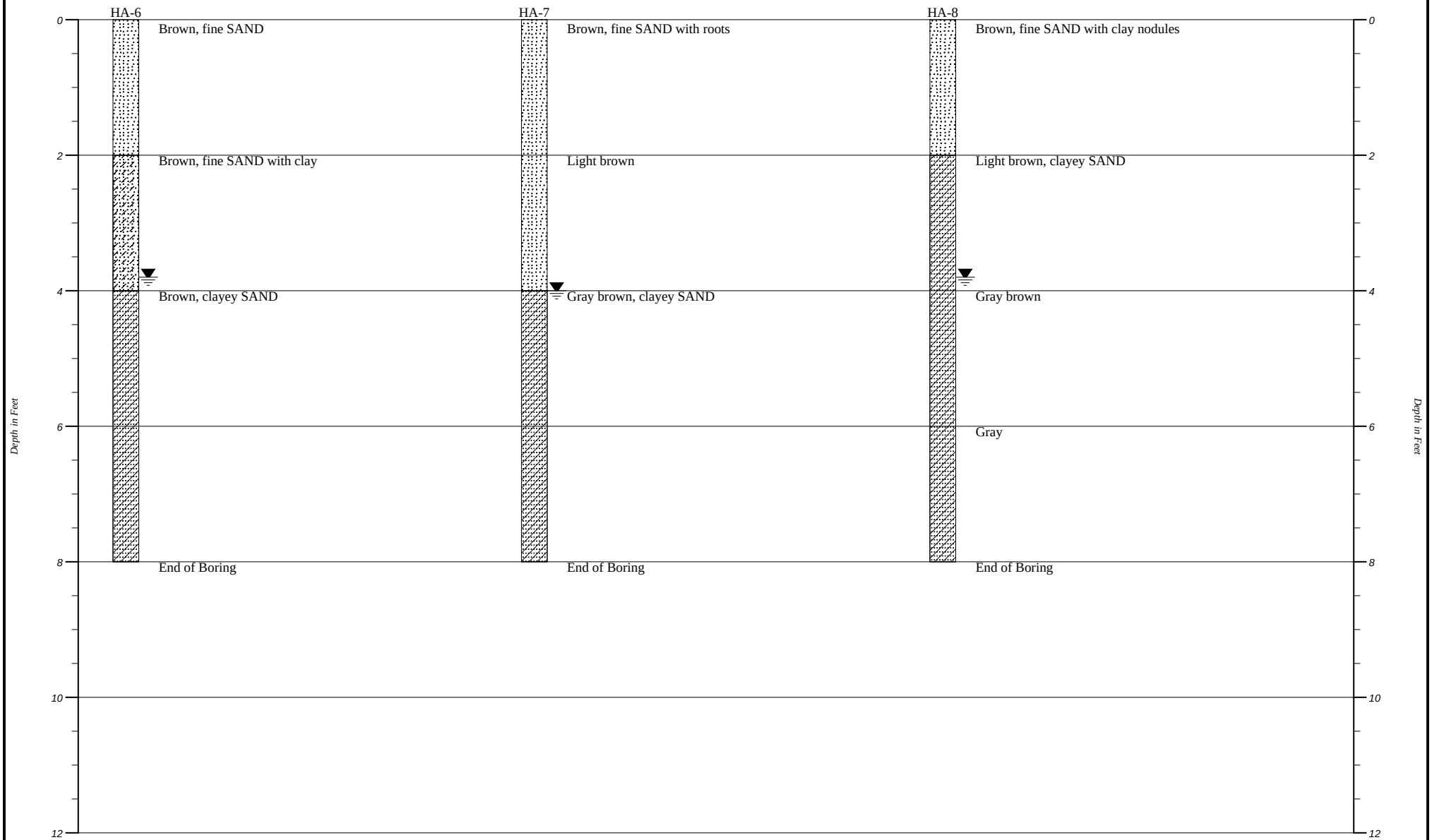
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 10/4/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

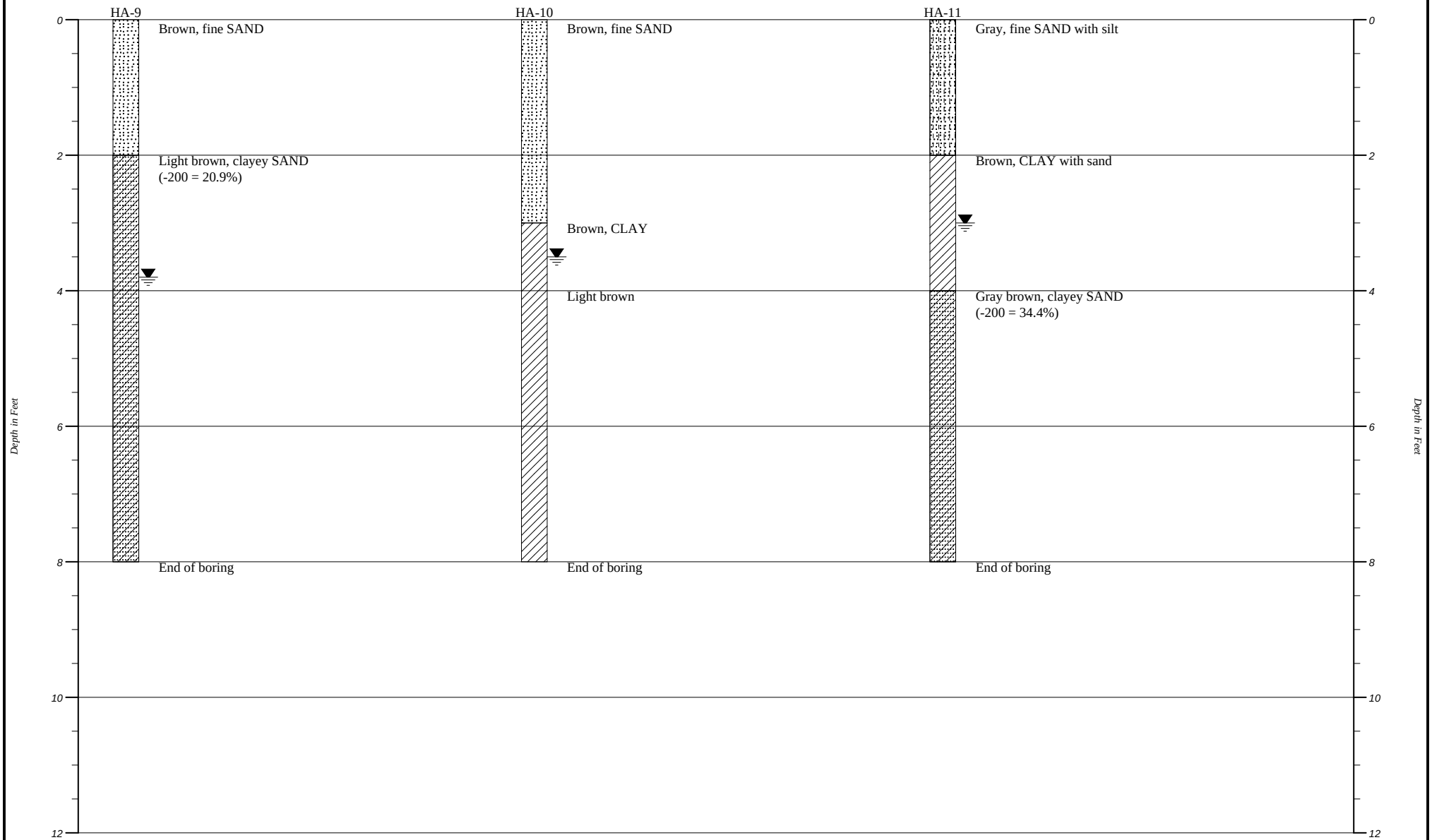
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY | DATE PERFORMED |
|---|---|---|
| VERTICAL SCALE: 1"=2' | PK/DF | 10/1/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

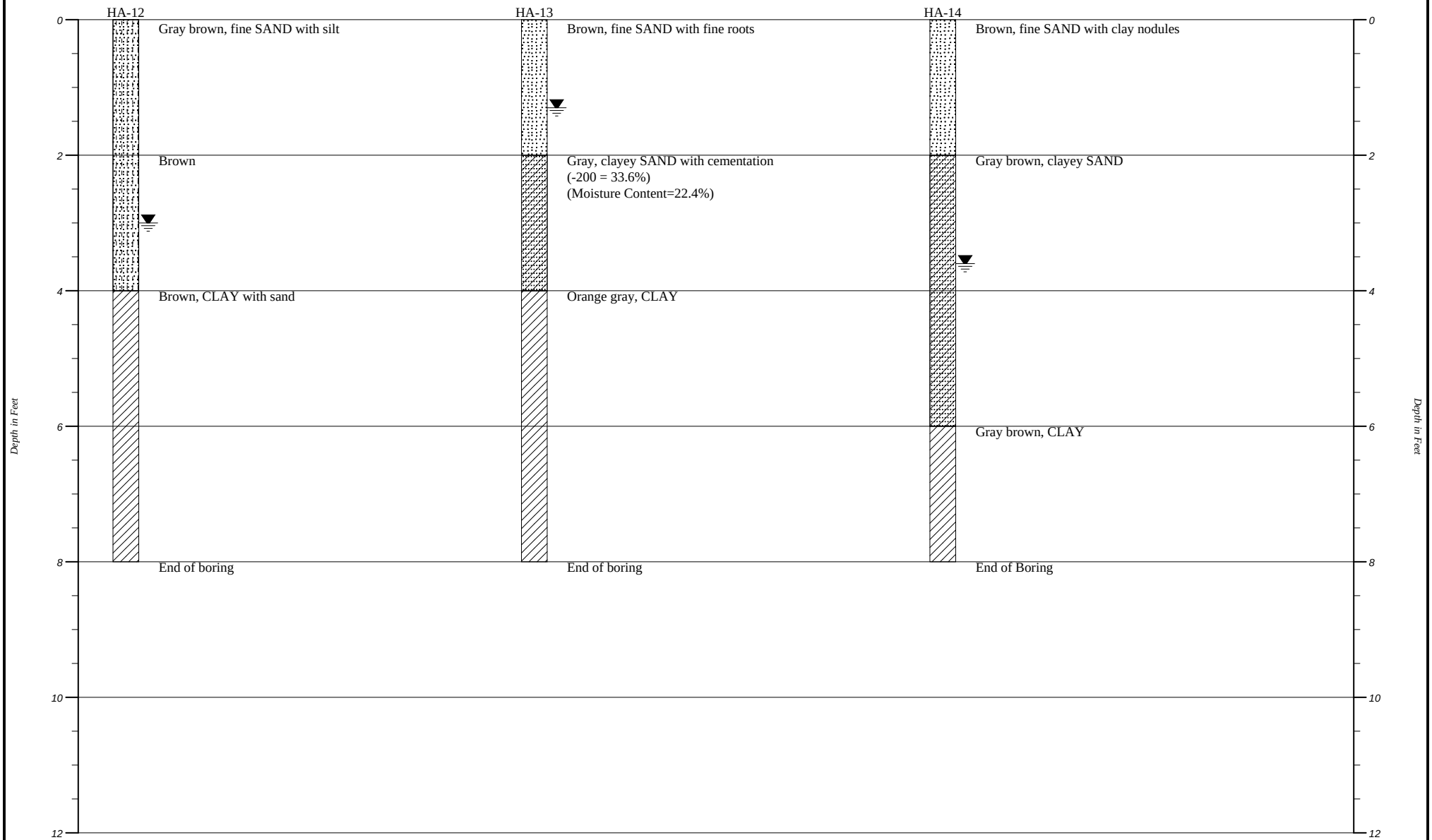
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/30/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

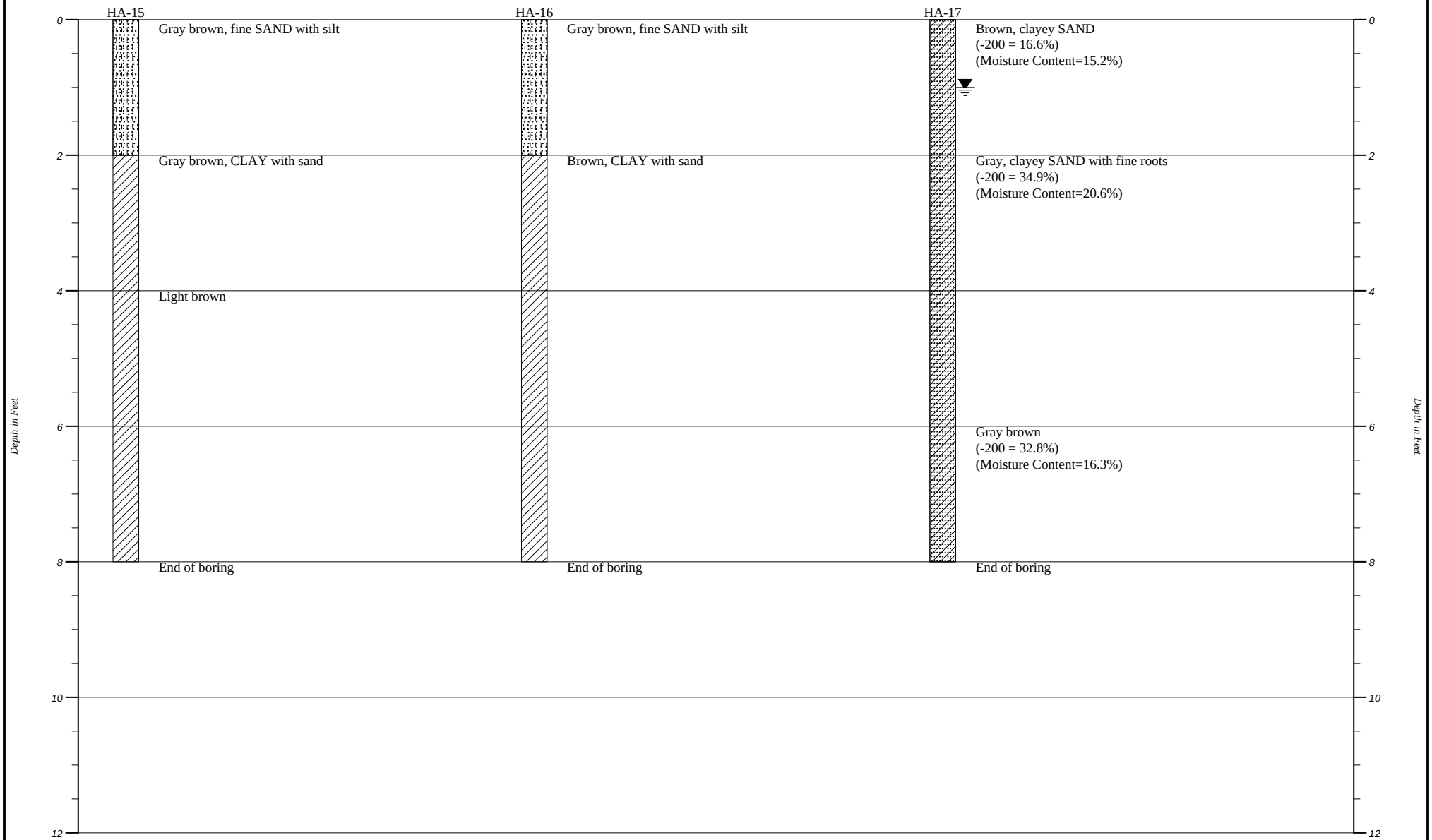
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/30/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

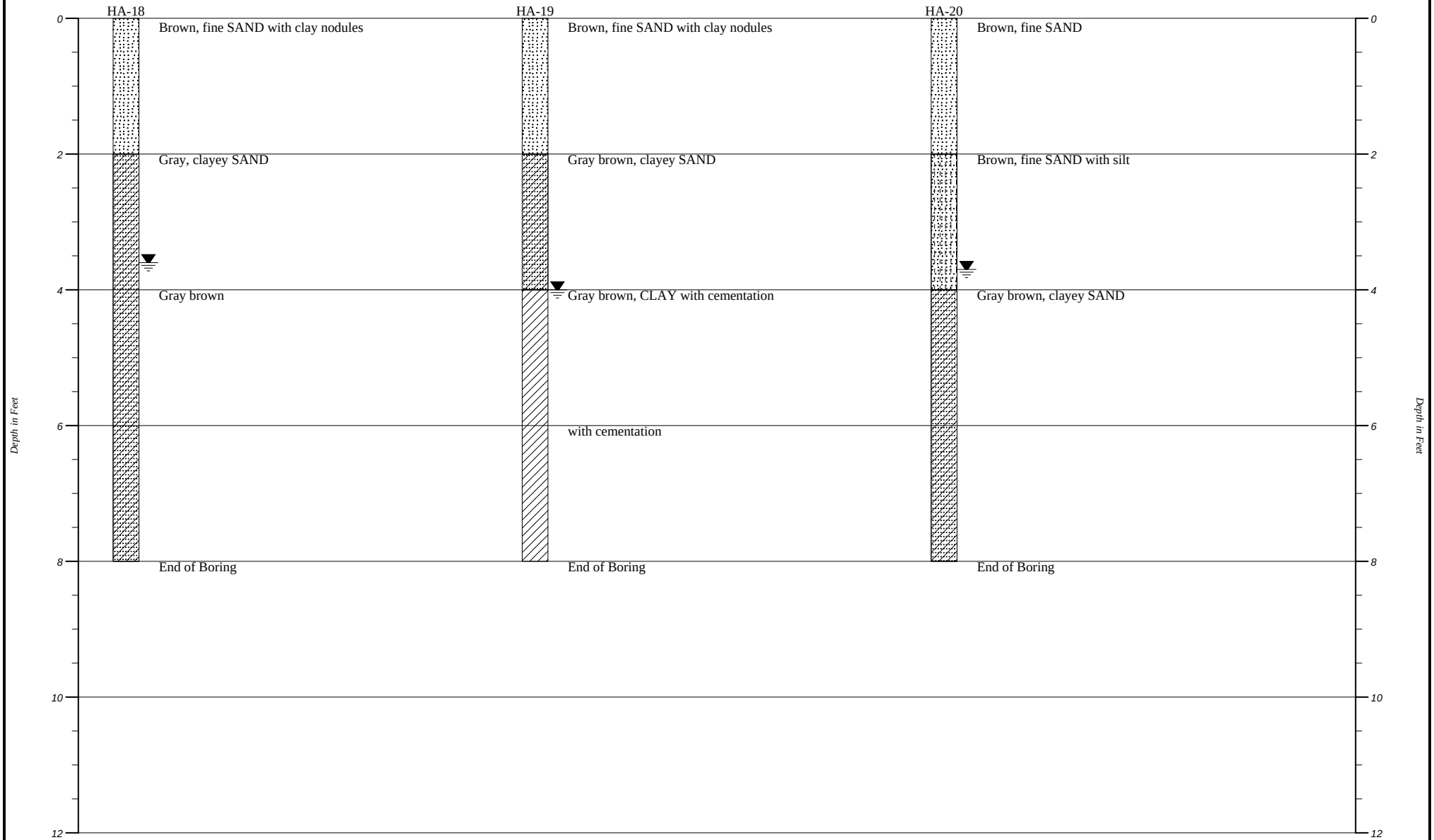
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/30/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

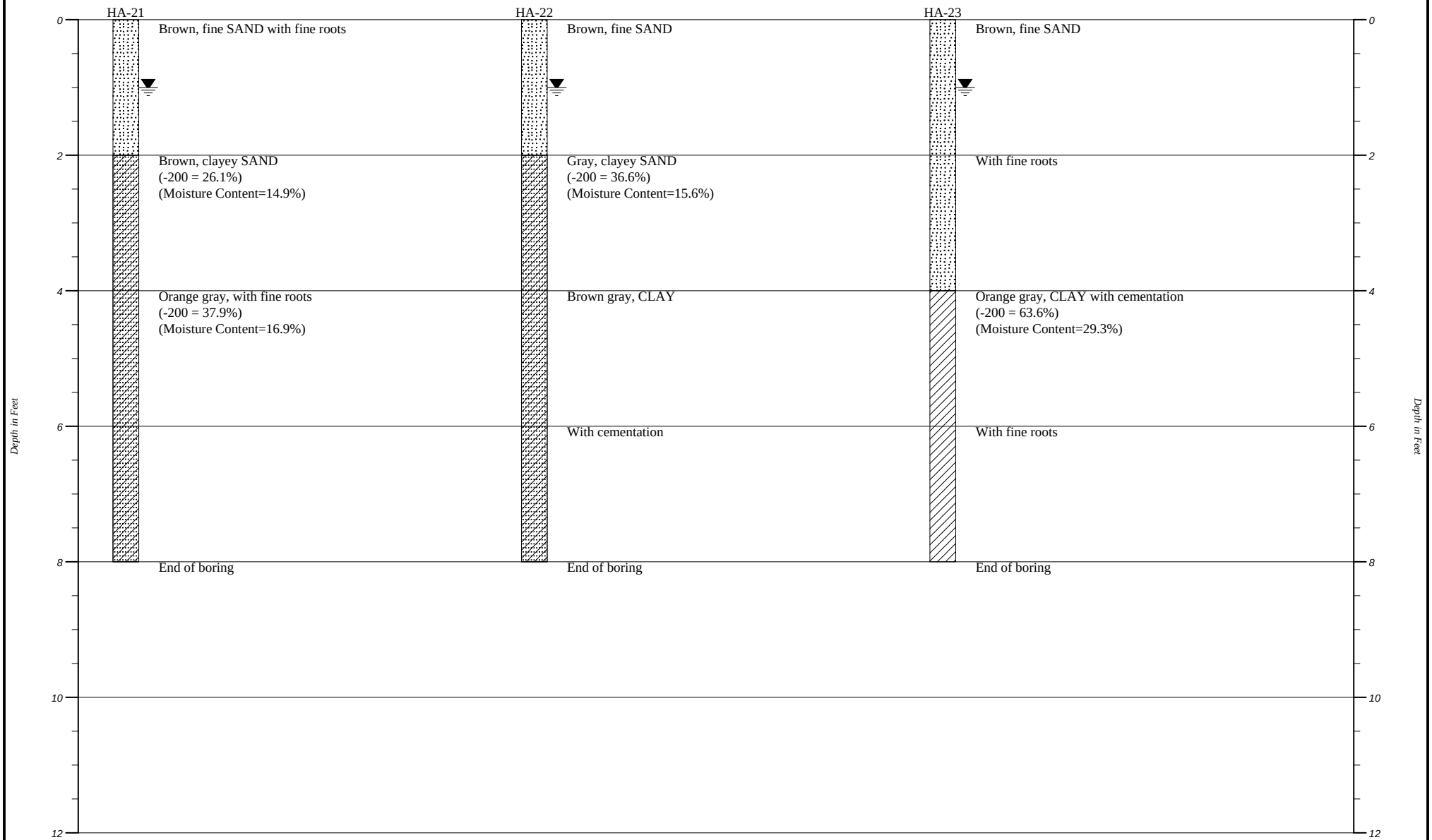
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 10/1/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

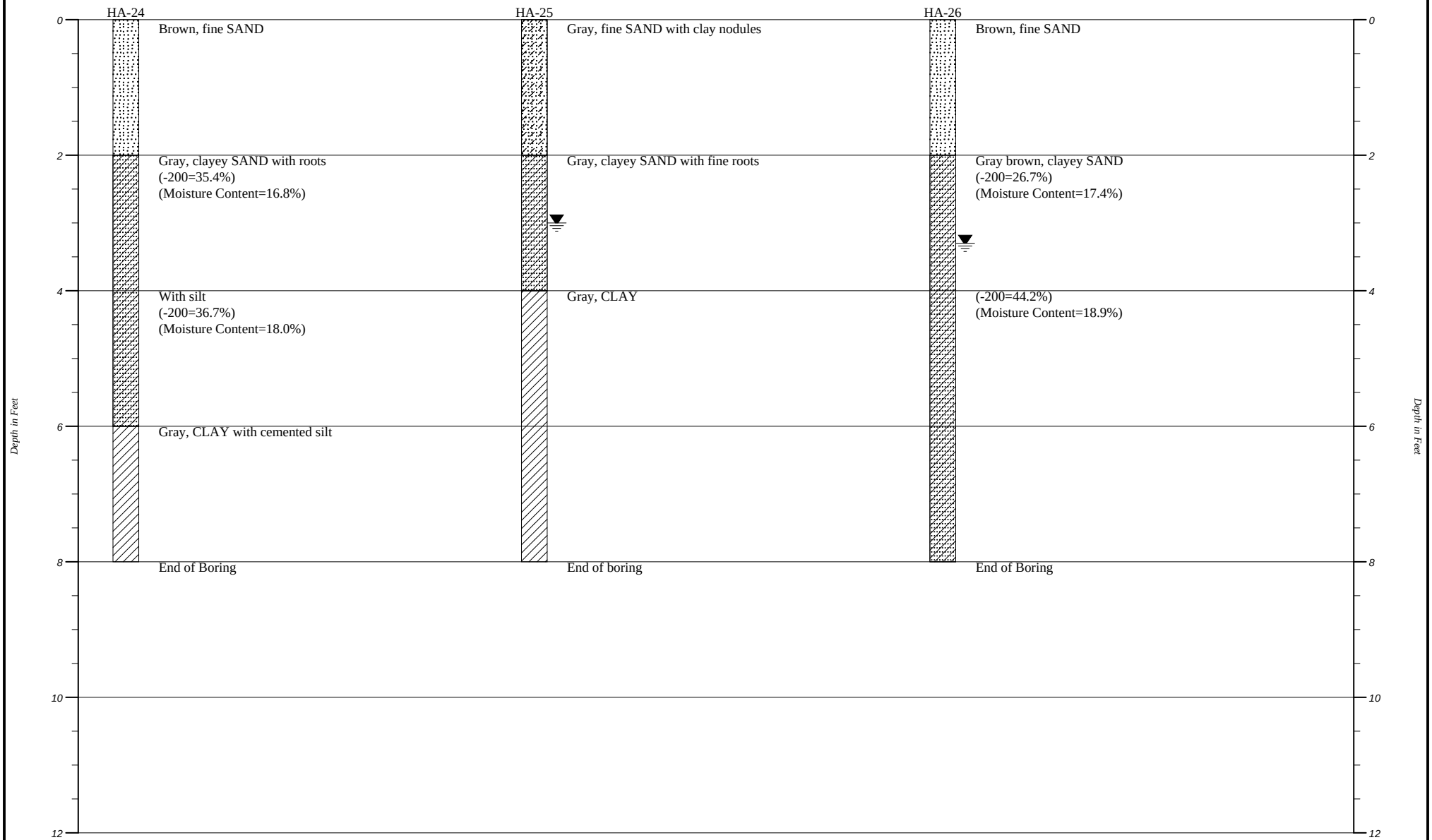
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/23/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

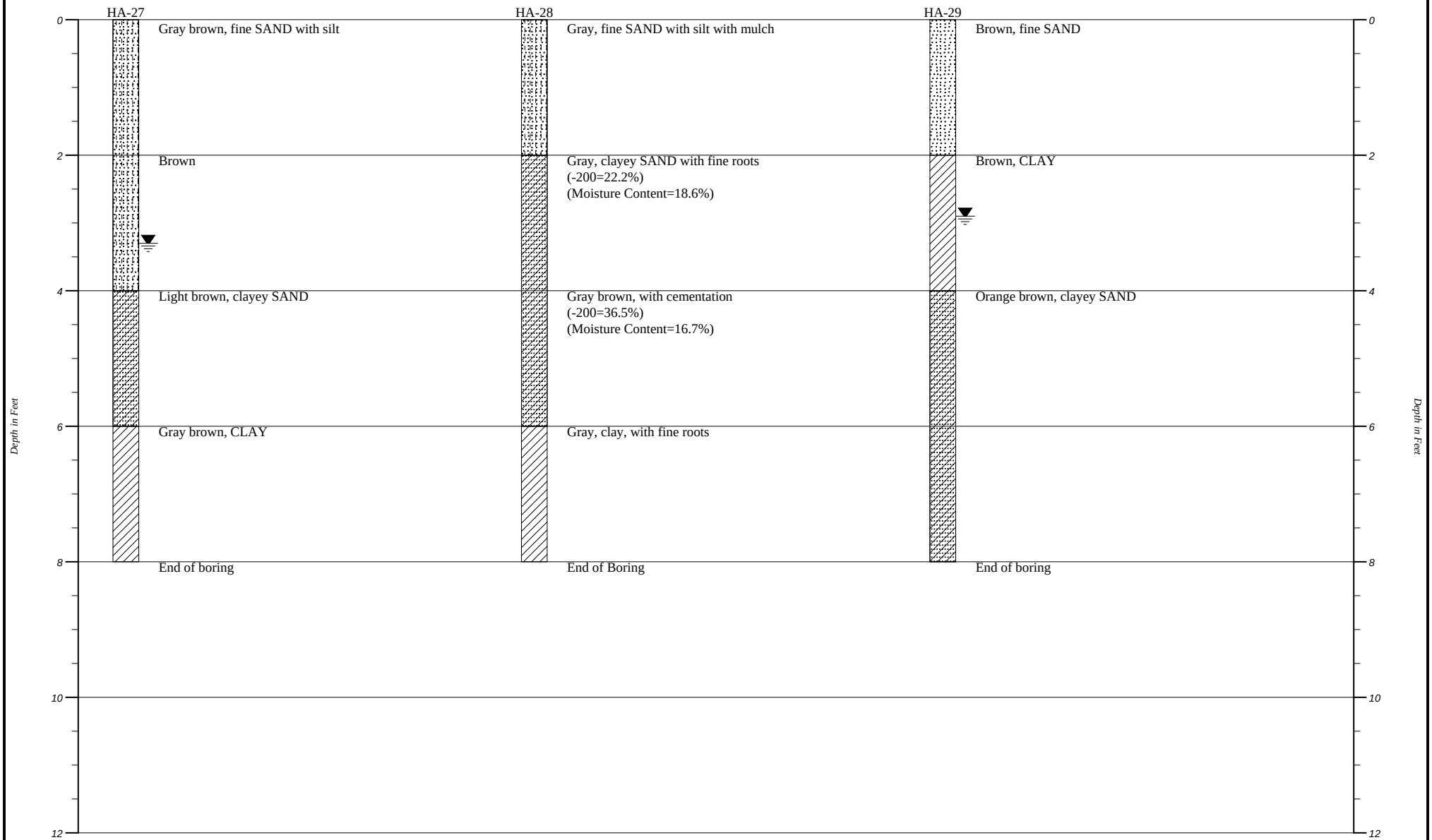
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/23/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

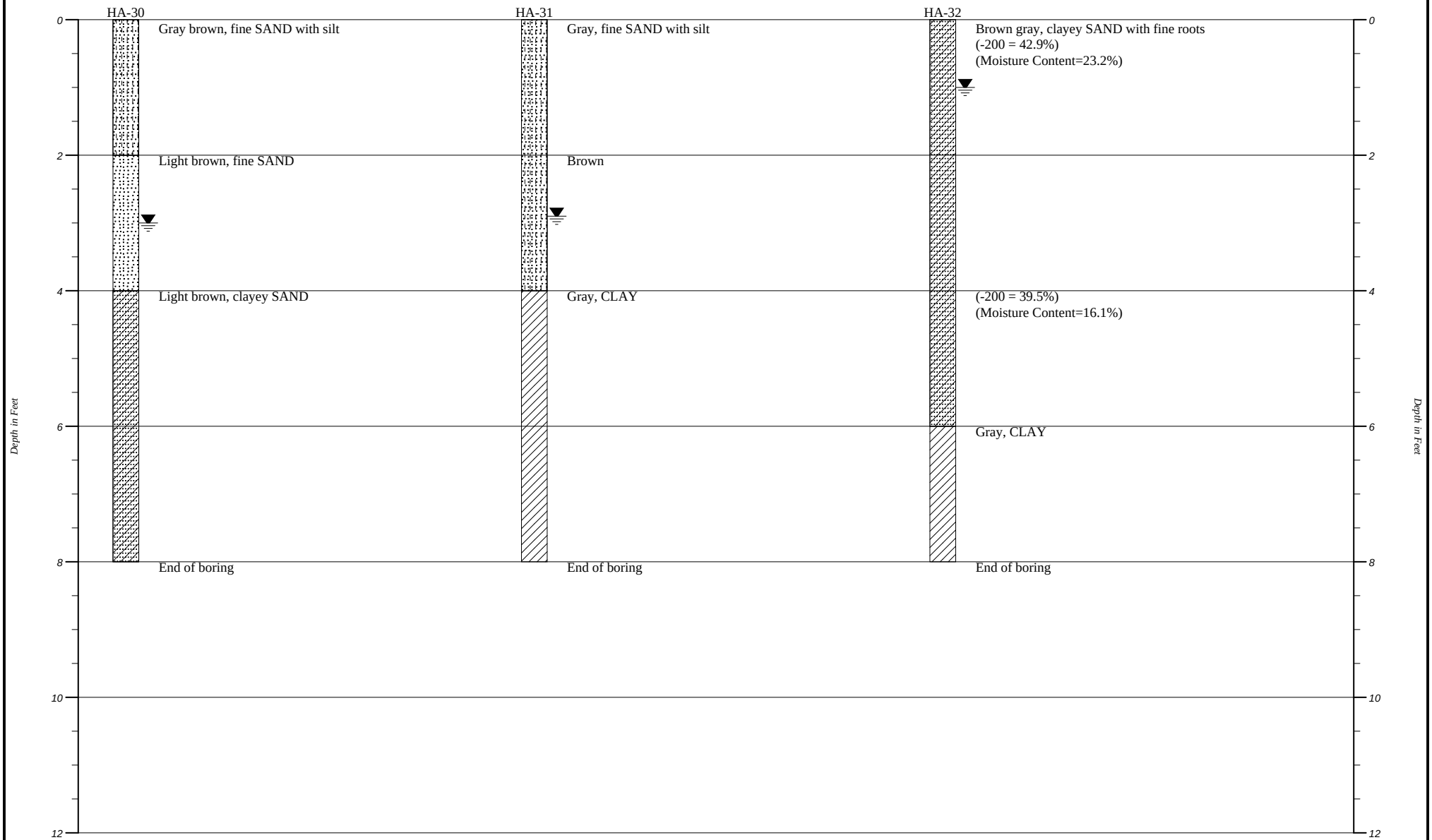
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/24/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

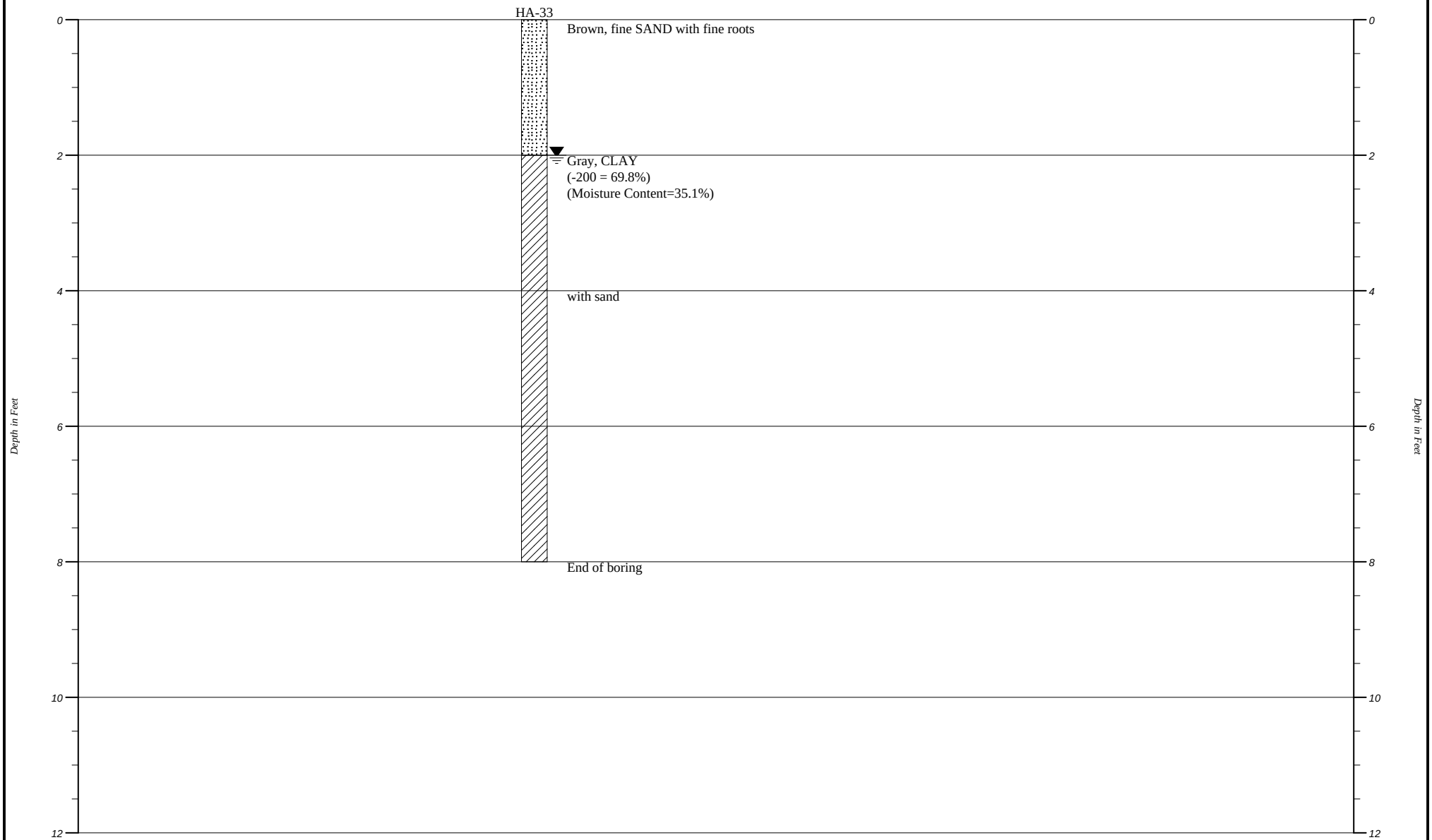
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/24/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=2' | | 9/24/2021 |

Gagne Parcel

PROJECT NO. 21-5233

# APPENDIX C

## Key to Soil Classification

# UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

| Major Division | | Group Symbol | Laboratory Classification Data | | Soil Description |
|---|---|---|---|---|---|
| | | | Finer than No. 200 Sieve % | Supplementary Requirements | |
| Coarse-Grained (Over 50% by Weight Coarser than No. 200 Sieve) | Gravelly Soils (Over Half of Coarse Fraction Larger than No. 4 Sieve) | GW | 0 - 5* | $C_u \geq 4$ and $1 \leq C_c \leq 3$ | Well-Graded Gravels, Sandy Gravels |
| | | GP | 0 - 5* | $C_u < 4$ and / or $1 > C_c > 3$ | Gap-Graded or Uniform Gravels, Sandy Gravels |
| | | GM | 12 or More* | PI < 4 or Below A-Line | Silty Gravels, Silty Sandy Gravels |
| | | GC | 12 of More* | PI ≥ 7 and On or Above A-Line | Clayey Gravels, Clayey Sandy Gravels |
| | Sandy Soils (Over Half of Coarse Fraction Larger than No. 4 Sieve) | SW | 0 - 5* | $C_u \geq 6$ and $1 \leq C_c \leq 3$ | Well-Graded Sands, Gravelly Sands |
| | | SP | 0 - 5* | $C_u < 6$ and / or $1 > C_c > 3$ | Gap-Graded or Uniform Sands, Gravelly Sands |
| | | SM | 12 or More* | PI < 4 or Below A-Line | Silty Sands, Silty Gravelly Sands |
| | | SC | 12 of More* | PI ≥ 7 and On or Above A-Line | Clayey Sands, Clayey Gravelly Sands |
| Fine-Grained (Over 50% by Weight Finer than No. 200 Sieve) | LOW Compressibility (Liquid Limit Less Than 50) | ML | Plasticity Chart | | Silts, Very Fine Sands, Silty or Clayey Fine Sands, Micaceous Silts |
| | | CL | Plasticity Chart | | Low Plasticity Clays, Sandy or Silty Clays |
| | | OL | Plasticity Chart, Organic Odor or Color | | Organic Silts and Clays of Low Plasticity |
| | HIGH Compressibility (Liquid Limit Greater Than 50) | MH | Plasticity Chart | | Micaceous Silts, Diatomaceous Silts, Volcanic Ash |
| | | CH | Plasticity Chart | | Highly Plastic Clays and Sandy Clays |
| | | OH | Plasticity Chart, Organic Odor or Color | | Organic Silts and Clays of High Plasticity |
| Soils with Fibrous Organic Matter | | PT | Fibrous Organic Matter, Will Char, Burn, or Glow | | Peat, Sandy Peats, and Clayey Peat |

*For Soils having 5 to 12 percent passing the No. 200 Sieve, use a dual symbol such as GW-GC.

# *REPORT OF*
# *GEOTECHNICAL ENGINEERING EVALUATION*

## GAGNE PARCEL

**Pasco County, Florida**

***PREPARED FOR:***

## MERITAGE HOMES OF FLORIDA, INC.

**10117 Princess Palm Avenue**
**Tampa, Florida 33610**

***FES PROJECT NO.: 21-5233***

**October 27, 2021**

***PREPARED BY:***

FAULKNER
ENGINEERING SERVICES, Inc.

2734 Causeway Center Drive
Tampa, Florida 33619

October 27, 2021

Mr. Garth Noble
Meritage Homes of Florida, Inc.
10117 Princess Palm Avenue
Tampa, Florida 33610

**RE: Report of Geotechnical Engineering Evaluation**
**Gagne Parcel**
**Zephyrhills, Pasco County, Florida**
**FES Project No.: 21-5233**

Dear Mr. Noble:

**Faulkner Engineering Services, Inc. (FES)** has completed a geotechnical engineering evaluation of the referenced project. We provided our services in general accordance with FES Proposal No. P21-7910 dated August 25, 2021 and change order 1 dated September 14, 2021. The purpose of our geotechnical engineering evaluation was to analyze the subsurface soil and groundwater conditions at the site in order to determine the capacity of the subsurface soils to support multi-family and single-family residential development and provide foundation and flexible pavement design recommendations; and address the requirements outlined in Section 807.4 of the Pasco County Land Development Code relating to a Geotechnical/Geological Engineering Report. This report summarizes our field exploration and presents our findings, conclusions, and geotechnical engineering recommendations.

## PROJECT INFORMATION

### Existing Site

Gagne parcel is a 139± acre property located at the north and southwest corners of Chancey Road and Paul S. Buchman Road in Zephyrhills, Pasco County, Florida, Sections 23 and 24, Township 26 South and Range 21 East. Our geotechnical engineering evaluation was concentrated south of Chancey Road. The property south of Chancey Road is generally open and grass covered with scattered trees. There is a pond near the center of the property and wetlands to the east and south. The site topography slopes down from north to south with an elevation change of about 10 feet. A general site location map is shown on **Figure 1**.

### Proposed Construction

Based on our review of the site plan prepared by LevelUp Consulting LLC, we understand that the proposed development includes construction of single-family and multi-family residential structures with associated internal roadways and stormwater ponds. Our current geotechnical engineering evaluation was limited to the planned residential building areas, interior roadways, stormwater ponds and the existing CSX crossing near the northeast corner of the property.

### Soil Survey Review

According to the “Soil Survey of Pasco County, Florida”, as prepared by the U.S. Department of Agriculture Natural Resource Conservation Service (formerly the Soil Conservation Service) the subject property is primarily underlain by:

- *Wauchula fine sand, 0 to 5 percent slopes (Map Unit Symbol 1)* – The NRCS describes this soil unit as poorly drained and located on flats on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 34 inches below ground surface (bgs) followed by a layer of sandy clay loam from about 34 to 80 inches bgs. The NRCS indicates the seasonal high ground water table (SHGWT) is about 6 to 18 inches bgs.

- *Pomona fine sand (Map Unit Symbol 2)* – The NRCS describes this soil unit as poorly drained and located on flatwoods on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 52 inches bgs followed by a layer of fine sandy loam from about 52 to 60 inches bgs underlain by a layer of fine sand from about 60 to 80 inches bgs. The NRCS indicates the SHGWT is about 6 to 18 inches bgs.

- *Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes (Map Unit Symbol 10)* – The NRCS describes this soil unit as poorly drained and located on flatwoods on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand from the surface to a depth of about 39 inches bgs followed by a layer of sandy clay loam from about 39 to 80 inches bgs. The NRCS indicates the SHGWT is about 6 to 18 inches bgs (3 to 18 inches bgs when wet).

- *Zephyr muck (Map Unit Symbol 16)* – The NRCS describes this soil unit as very poorly drained and located on depressions on marine terraces. The NRCS indicates that this soil unit has a surface layer of muck from the surface to about 13 inches bgs followed by a layer of fine sand from about 13 to 31 inches bgs underlain by a layer of sandy clay loam from about 31 to 61 inches bgs followed by a layer of fine sandy loam from about 61 to 80 inches bgs. The NRCS indicates the SHGWT is about 0 inches bgs.

- *Electra Variant, fine sand, 0 to 5 percent slopes (Map Unit Symbol 18)* – The NRCS describes this soil unit as somewhat poorly drained and located on rises and flats on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 70 inches bgs followed by a layer of sandy clay loam from about 70 inches to 78 inches bgs followed by a layer of weathered bedrock from about 78 to 82 inches bgs. The NRCS indicates the SHGWT is at about 24 to 42 inches bgs.

- *Lochloosa fine sand, 0 to 5 percent slopes (Map Unit Symbol 48)* – The NRCS describes this soil unit as somewhat poorly drained and located on ridges and knolls on marine terraces. The NRCS indicates that this soil unit has a surface layer of fine sand to about 25 inches bgs followed by a layer of sandy clay loam from 25 inches to 30 inches bgs followed by a layer of sandy clay from about 30 to 52 inches bgs followed by a layer of sandy clay loam from 52 to 74 inches bgs. NRCS indicates the SHGWT is at about 15 to 60 inches bgs.

The NRCS soil classifications are based on interpretation of a combination of factors including but not limited to aerial photographs and widely spaced hand auger borings. Borders shown on the map included in **Appendix A**, between mapping units are approximate, and the transitions between soil units will be gradual. In addition to various minor inclusions within a mapped soil unit, areas of dissimilar soils can also occur. However, the soil survey provides a good basis for an initial evaluation of shallow soil conditions in the area, and can provide an indication of various historic activities such as development, mining and filling operations at the site.

## SUBSURFACE SOILS EVALUATION

### Field Evaluation

During our field evaluation, thirty-six (36) standard penetration test (SPT) borings were advanced to a depth of approximately 20 feet bgs within the planned single-family lots and the planned multi-family building areas (1 SPT boring per multi-family building), eight (8) SPT borings were advanced to depths of approximately 15 to 25 feet bgs within the planned stormwater ponds, thirty-three (33) auger borings were advanced to depths of approximately 8 feet bgs at generally equal intervals along the planned roadways, and four (4) auger borings were advanced to depths of about 15 feet bgs at four corners of the existing CSX crossing near the northeast corner of the property. The fieldwork was performed from September 23 to October 18, 2021 using a track-mounted D-25 drill rig operated by J&R Precision Drilling. The procedures used by FES for field sampling and testing were in general accordance with ASTM procedures, industry standards of care, and established geotechnical engineering practice.

A senior geotechnical engineering technician from FES, experienced in soil sampling and classifications, was onsite during the fieldwork to monitor the drilling and also perform a brief cursory site reconnaissance, noting pertinent site and topographic features as well as surface indicators of soil conditions. The SPT and auger borings were located in the field by FES personnel using a hand-held GPS device. GPS coordinates of some of most borings were provided to us on the site plan prepared by LevelUp. The approximate boring locations are shown on the attached boring location plan (**Figure 2**).

The SPT borings were performed utilizing continuous sampling methods within the first 10 feet and every 5 feet thereafter until the termination depths of the borings, employing wet rotary drilling techniques to keep the boreholes from collapsing. The drillers collected soil samples using a 1.4-inch I.D. split barrel sampler driven by an automatic hammer system with a 140-pound hammer falling a distance of 30 inches, in general accordance with standard penetration test procedures (ASTM D1586). Upon completion, each borehole was backfilled with borehole cuttings and bentonite chips to the surface.

The auger borings were advanced by mechanically rotating an approximately 4-inch diameter continuous flight auger into the subsurface soils. The cuttings brought to the surface were logged in the field and representative samples were obtained at each change in the soil stratigraphy. Upon completion, each borehole was backfilled with borehole cuttings to the surface.

Detailed descriptions of the soils encountered during the field exploration are presented on the attached soil boring logs and profiles in **Appendix B**.

### Soil Sample Handling, Classification, and Laboratory Testing

FES field personnel classified the soils obtained from the field sampling techniques using standard visual manual methods in accordance with ASTM D2488. The samples recovered from both the SPT and mechanical auger borings were placed in sealed containers to retain moisture and transported to the FES soils laboratory accredited by Construction Materials Engineering Council, Inc., (CMEC) for further evaluation and testing. To further aid in classification and evaluation of geotechnical engineering properties, laboratory testing was performed on representative soil samples collected during the field sampling. The laboratory testing performed was in general accordance with appropriate sections of ASTM D1140, material finer than the No. 200 sieve and ASTM D4318, Atterberg Limits. The laboratory test results were in general accordance with field classification of the soils except some soils were reclassified based on the fines content from laboratory testing. The laboratory test results and the soil classifications were reviewed by a professional geotechnical engineer. The results from the laboratory testing are presented on the boring logs and profiles contained in **Appendix B**.

# FINDINGS

## Subsurface Conditions

### General Soil Profile

The subsurface stratigraphy at the project site is illustrated in the soil boring logs and profiles shown in **Appendix B**. The logs and profiles were developed using field and laboratory data from the SPT and mechanical auger borings. The computer-generated boring logs and profiles should imply no increased accuracy. Based on this data, four subsurface units, or strata, were identified at the site as described below.

| | |
|---|---|
| Stratum 1 | SAND, SAND with clay, SAND with silt; very loose to medium dense, fine grained quartz with clay, silt with occasional fines roots, cementation and clay nodules |
| | USCS classification = SP, SP-SC, SP-SM |
| Stratum 2 | CLAYEY SAND, SILTY SAND; very loose to dense, fine-grained quartz, variably clayey, silty, occasional cementation |
| | USCS classification = SC, SM |
| Stratum 3 | CLAY, SILT; very soft to very stiff, variably sandy clay, silt, occasional cementation |
| | USCS classification = CL, CH, ML |
| Stratum 4 | LIMESTONE; limestone bedrock |

Stratum 1 occurred as the surface stratum in most SPT and auger borings and typically extended with varying thicknesses from the ground surface to depths ranging from approximately 2 feet bgs to termination depths of 20 feet bgs in the SPT borings and from the ground surface to about 10 feet bgs in the auger borings. The SPT “N” values within this stratum ranged from 2 to 28 blows per foot, indicating very loose to medium-dense relative density.

Stratum 2 occurred in most SPT and auger borings below Stratum 1 (except borings BB-14, BB-32, AB-1, HA-17, and HA-32 where Stratum 2 occurred at the ground surface) and occurred at depths ranging from about 2 feet bgs to the termination of the SPT borings at about 20 feet bgs and from ground surface to auger boring termination at about 8 to 15 feet bgs. The SPT “N” values ranged from 3 to 37 blows per foot indicating very loose to dense relative density. The results of the laboratory testing performed on representative soil samples of this stratum indicated that the fines contents ranged from 16.6 to 44.2 percent.

Stratum 3 occurred in most SPT borings below Strata 1 and/or 2 from about 2 feet bgs to SPT boring termination depths of about 20 feet bgs. Stratum 3 was encountered in the auger borings at depths ranging from 2 to 15 feet bgs. The SPT “N” values within this stratum ranged from 0 to 22 blows per foot indicating very soft to very stiff consistency. The results of the laboratory testing performed on representative soil samples of this stratum indicated that the fines contents ranged from 53.8 to 69.8 percent.

Stratum 4 occurred below Strata 1, 2 and 3 in most SPT borings at depths ranging from about 8 feet bgs to boring termination at about 15 to 25 feet bgs. Stratum 4 was not encountered in any of the auger borings within the depths explored. This stratum consisted of limestone bedrock with SPT “N” values ranging from 2 blows per foot to a refusal blow counts of 50 blows for less than 6 inches of sampler penetration.

The conditions presented above highlight the major subsurface stratifications encountered during our field evaluation of the site. More detailed descriptions of the materials encountered are provided in **Appendix B.** A soil classification key is included as **Appendix C**. It should be understood that subsurface conditions will vary across this site and between boring locations. Changes in subsurface strata may be more gradual than indicated.

**Groundwater**

Groundwater was encountered in our SPT and auger borings at depths ranging from about 1.0 to 6.7 feet bgs at the time of drilling. In some of the SPT borings, groundwater was not encountered within the first 10 feet at the time of drilling after which drilling fluid was introduced to keep the boreholes from collapsing. Groundwater was also not encountered in some auger borings within the depths explored. Groundwater levels will fluctuate with time due to seasonal rainfall and locally heavy precipitation events; therefore, future groundwater levels may be encountered at depths different from those indicated by our borings. Please refer to the attached Groundwater Data table (**Table 1**) for the groundwater conditions at the time of drilling and our estimates for the estimated SHGWT.

The SHGWT is typically encountered during late summer following the rainy season. Several factors can affect the seasonal high groundwater level such as drainage characteristics of the soils; land surface elevation; and relief points such as lakes, rivers and swamps. Based on our experience, review of the depth of existing groundwater levels, review of the soil indicators (where encountered) exposed in our borings, and a review of the soil survey for Pasco County, we estimate the seasonal high groundwater levels within the areas explored may be encountered at depths ranging from approximately 1 to 5 feet bgs.

## CONCLUSIONS

Our geotechnical engineering evaluation of this site and our recommendations with respect to the proposed residential development are based on our site observations, field exploratory data obtained from our borings, laboratory test results, and our professional judgment. It is our opinion that with proper site preparation in accordance with procedures presented in the **Recommendations** section of this report (including some possible minor undercutting and replacing of the shallow clayey soils in some locations as discussed below), the soils encountered should adequately support the planned single- and multi-family structures on a shallow foundation system.

Based on the SPT blow counts recorded during our field study within the planned building areas, the soils are generally very loose to dense (coarse-grained soils) within the upper 10 feet with penetration resistances (N values) ranging from 2 to 37 blows per foot and soft to very stiff (fine grained soils) within the upper 10 feet with penetration resistances (N values) ranging from 4 to 19 blows per foot. Below the upper 10 feet to the termination of the SPT borings, the soils are generally loose to dense (coarse-grained soils) with penetration resistances (N values) ranging from 9 to 31 blows per foot and very soft to very stiff (fine-grained soils) with penetration resistances (N values) ranging from 0 to 22 blows per foot. Limestone bedrock has SPT “N” values ranging from 2 blows per foot to refusal blow counts of 50 blows for less than 6 inches of sampler penetration.

In-place densification of the surface and near surface soils using a heavy vibratory roller compactor will be required subsequent to clearing and stripping operations and prior to the placement of fill soil or beginning construction. Any additional fill required to bring the site to final design grade should comply with the criteria specified in the **Recommendations** section below.

Most of the borings encountered Stratum 2 and Stratum 3 soils near or at the ground surface. The Stratum 3 soils and some Stratum 2 soils with fines contents greater 35 percent are unsuitable bearing soils. Where these soils are present at the ground surface or at shallow depths we recommend undercutting these soils and replacing with suitable compacted structural fill such than a minimum of 3 feet of separation is maintained between the bottom of the planned footings and the fine-grained soils. Alternatively, the suitable fill can be added in accordance with the recommendations presented in this report to maintain the recommended 3-foot separation.

Boring BB-3 performed within the planned building area encountered minor weight-of-hammer (WOH) instance from about 13.5 to 16 feet bgs. The WOH instances generally occur in very loose or very soft soils or potential voids. The WOH instance in boring BB-3 occurred in what appeared to be very soft clay that was possibly bridged over by competent clayey sands (SC) (Stratum 2) prior to consolidation. The WOH zone was immediately underlain by competent limestone as indicated by the SPT "N" values. Loss of drilling fluid circulation was not observed during drilling. WOH instances does not necessarily indicate sinkhole activity without other indicators being present such as raveling/eroding of upper soils into to the underlying strata, loss of drilling fluid circulation, voids, etc. Additionally, the WOH instance occurred at a depth below the zone of significant influence of the potential stress increase due to the planned residential structure.

The SPT borings (PB-1 to PB-8) performed within the stormwater pond areas generally encountered fine sand (SP), fine sand with clay, (SP-SC) fine sand with silt (SP-SM) (Stratum 1), clayey sand (SC) (Stratum 2), clay (CL) (Stratum 3), and limestone bedrock (Stratum 4) from the ground surface to boring termination at about 20 to 23.5 feet bgs. Stratum 1 soils, if excavated will provide a good source for structural fill during site development. Stratum 2 soils can also be used as structural fill or backfill provided they conform to the criteria specified in the **Recommendations** section below. Stratum 3, clay, silt (CL, CH, ML) and Stratum 4, limestone bedrock are unsuitable for use as structural fill or backfill.

Loss of drilling fluid circulation was observed in borings BB-1, BB-2, BB-5, BB-8, BB-10 to BB-12, BB-21 to BB-32, PB-2, PB-3, and PB-5 to PB-8 at or near the limestone bedrock at the time of drilling. Florida limestone is generally porous and loss of drilling fluid circulation is common within the limestone or near limestone interface with other strata and does not indicate sinkhole activity without other indicators such as presence of voids, raveling of surficial soils, etc.

The auger borings performed along the proposed interior access roadway alignments generally encountered fine sand (SP), fine sand with silt (SP-SM), fine sand with clay (SP-SC) (Stratum 1) clayey sand (SC) (Stratum 2), and clay (Stratum 3) from the ground surface to the boring termination depths at approximately 8 feet bgs. It appears that the shallow subsurface soils will provide a suitable subgrade for roadway pavement, after proper site preparation and in-place densification methods described in the **Recommendations** section of this report except at borings HA-16 and HA-32. The encountered Stratum 1 soils can be used as backfill during utility installations. Stratum 2 soils can also be used as utility backfill provided they conform to the requirements presented in the **Recommendations** section below. Stratum 3, clay (CL) if encountered is unsuitable for re-use as backfill material. We also recommend that suitable fill with fines content of less than 15 percent be placed a minimum of 2 feet below the bottom of the base course (if the subgrade is un-stabilized) or a minimum of 2 feet below the bottom of the subgrade (if the subgrade is stabilized). Minor undercutting and replacing of soils with fines contents of less than 15 percent fines will be required in some locations. Undercutting and replacing of soils will be required at borings HA-16 and HA-32 due to the presence of high fines content soils at the ground surface.

The auger borings performed near the existing CSX crossing generally encountered fine sand (SP), fine sand with clay (SP-SC), fine sand with silt (SP-SM) (Stratum 1), clayey sand (SC) (Stratum 2), and clay (Stratum 3) from the ground surface to the boring termination depths at approximately 15 feet bgs. Limestone bedrock was not encountered within the depths explored at these locations.

Groundwater was encountered at depths ranging from about 1.0 to 6.7 feet bgs and not encountered within the first 10 feet in some SPT borings and not encountered within the boring termination depths of about 8 feet bgs in some auger borings at the time of drilling. We recommend maintaining a minimum separation of 1 foot between the bottom of the lowest footing and the estimated SHGWT (**Table 1**). For the roadway areas, we recommend a minimum of 24 inches of separation between the bottom of the base course and the estimated SHGWT (**Table 1**), if a limerock base course is used. The minimum separation between the bottom of the base course and the estimated SHGWT can be reduced to 12 inches if a moisture tolerant base course such as crushed concrete or soil-cement is used. Underdrains will required in conjunction with using a moisture tolerant base course if the above mentioned base clearance if not available. Alternatively, suitable structural fill can be added in some locations, in order to maintain the required base clearance, in accordance with the **Recommendations** section below.

If structures or roadways are planned over the existing wetlands or borrow area, we recommend that these areas be dewatered, the bottom stripped of all soft/organic sediments, if present, the exposed subgrade proof-rolled and backfilled to final design grade using suitable compacted structural fill in accordance with the recommendations presented in this report.

## Use of Information

It should be noted that subsurface conditions can vary across this site and between boring locations. Conditions can also vary in areas not explored by our borings. Contractors bidding earthwork requirements are urged to conduct their own borings, test pits or other investigations to determine those conditions that may affect their specific work requirements. FES cannot be responsible for interpretations made by others based on the information contained in this report and the attachments.

# RECOMMENDATIONS

## Site Preparation

### Site Stripping/Undercutting

Before earthwork and construction activities begin, all existing topsoil, vegetation, surface debris, the existing trees including the root system, large roots down to finger-size and any other deleterious material should be removed from within the construction limits. Site stripping should extend at least ten feet beyond the construction area. Any pockets of organics, organic laden soils and/or deleterious material should be undercut to competent soil. The resulting excavations should be backfilled with structural fill placed in maximum one-foot thick loose lifts. Backfill soils should be of the same composition and be compacted to the same criteria as structural fill soils. This process should be observed by a representative of FES to check that all organics, organic laden soils and/or deleterious material has been removed.

### Proof-Rolling / In-Place Densification

Following site stripping and prior to any fill placement or beginning construction, proof-rolling / in-place densification of the ground surface with a heavy vibratory roller should be performed within the construction area. Based on experience, vibratory rollers should be operated in the static mode within 100 feet of existing structures to avoid transmission of vibrations that could cause structural distress.

Compaction within the construction area should continue until the soils appear relatively firm and unyielding and the soils have achieved a relative compaction of at least 95 percent of modified Proctor maximum dry density (ASTM D1557) to a depth of at least 2 feet below the present ground surface or 2 feet below the bottom of the lowest footing, whichever is lower.

The subgrade soil 1-foot below new pavement should be compacted to at least 98 percent of the modified Proctor maximum dry density (ASTM D1557). The moisture content of the fill soils during placement and compaction shall be maintained within 2 percent of the optimum moisture content as determined by ASTM D1557.

Proof-rolling and densification efforts should be closely monitored by an FES engineering technician to observe any unusual or excessive deflection of the soils beneath the compacting equipment used. If unusual or excessive deflection is observed, then the areas should be undercut to firm soil and backfilled with compacted structural fill placed in maximum one-foot thick loose lifts.

## Borrow Areas

### Structural Fill Suitability

Definition

The preferred soil used for structural fill and backfill can be defined as clean fine sand containing less than twelve percent material by weight that is finer than a number 200 sieve (material conforming to SP to SP-SM or SP-SC in the Unified Soils Classification System).

Encountered soils containing up to 35 percent fines (materials conforming to SC, SM, or SC-SM in the Unified Soil Classification System) may also be utilized as structural fill, provided the working subgrade is above the existing groundwater level. However, Florida Building Code (Chapter 18, Section 1803.5.3) states that soils with plasticity index of 15 or greater are considered expansive and hence are unsuitable for use as structural fill. Please note that soils conforming to SC, SM, or SC-SM are difficult to work with and will require additional time and effort for either drying or moisture conditioning during placement and compaction.

Any muck or organic soil if encountered on site will not be suitable for fill and should be disposed of offsite or placed in landscape areas and used for planting purposes. Soils containing organic content, as determined by ASTM D2974, of more than 5 percent shall not be used as structural fill. Because of the variability of the subsurface soils encountered, additional laboratory testing should be performed on the excavated material during grading and earthwork activities to evaluate its suitability for use as fill material.

Soil Suitability

The SPT borings performed within the planned stormwater pond areas indicated soils conforming to Stratum 1 (SP, SP-SC, and SP-SM), Stratum 2 (SC), Stratum 3 (CL, CH, ML), and Stratum 4 limestone bedrock are present from existing ground surface to boring termination at about 15 to 25 feet bgs. Stratum 1 soils will provide a good source of structural fill, if excavated during site development. Stratum 2 soils can also be used as structural fill provided they conform to the criteria specified above. Stratum 3, clay, silt, and Stratum 4, limestone bedrock are unsuitable for reuse as structural fill or backfill.

Placement

Structural fill with less than 12 percent fines should be placed in lifts not to exceed one foot thick. Materials with fines content between 12 and 35 percent should be placed in maximum 6-inch loose lifts. Soils with fines content greater than 35 percent shall not be used as structural fill.

The fill material should be compacted to at least 95 percent of its modified Proctor maximum dry density (ASTM D1557). The upper 1-foot below pavements should be compacted to 98 percent of modified Proctor maximum dry density. The moisture content of the fill during placement and compaction shall be maintained within 2 percent of the optimum moisture content (ASTM D1557). Confined areas, such as utility trenches, should be compacted with manually operated portable vibratory compaction equipment.

Field density testing to verify compaction should be performed for each lift of structural fill placed for each 2,000 $ft^2$ of area below structures and for each 5,000 $ft^2$ below pavements. In pavement areas, the subbase and base materials should be tested to the same frequency. Density tests should be performed for each lift of fill for every 100 lineal feet of backfill placed in utility excavations or other excavations that are within the paving areas.

Depending on the time of year construction occurs, materials excavated containing clay fines may exist in a saturated condition. These soils will require processing and drying to achieve a moisture content to allow placement and proper compaction. Spreading the clayey material in thin lifts (6 inches loose thickness) and aerating by disking can facilitate and hasten the drying process. Disking will also be useful to breakdown larger clods of clayey soils. Specialty equipment typically associated with clayey soils such as a sheep's foot roller will also be required to achieve proper compaction.

The placement and compaction of moisture sensitive soils of this type will require time and effort beyond that typically associated with sandy soils. A grading contractor experienced with placing and compaction of clayey soils can likely reduce costly project delays due to soil conditions.

## Groundwater Control

Groundwater will likely be encountered during excavation and fill placement activities. Dewatering may be accomplished by either draining the water to sumps which can then be pumped away from the area or by the use of sanded, vacuum well points. Groundwater fluctuations can occur due to variations in rainfall and other site specific factors. These variations should be considered when planning earthwork activities.

An alternative to dewatering in shallow undercut areas where groundwater is encountered is to use clean sand classified as SP material (less than 5% fines) according to the Unified Soil Classification System as a first lift through any standing water. This first lift will create a platform to place and compact additional fill material upon.

## Foundation Recommendations

Based on the subsurface data obtained from our exploratory borings, the planned single- and multi-family residential structures can be supported on a shallow foundation system provided the recommendations contained in this report are closely adhered to (including possible undercutting and replacing of high fines content Stratum 2 and Stratum 3 soils as described above) and proper densification of the site bearing soils occurs.

Column footings and continuous strip footings can be designed using a net allowable soil bearing pressure of 2,000 psf assuming a footing embedment of at least 12 inches below lowest exterior adjacent grades. Using this net allowable soil bearing pressure, we anticipate maximum total foundation settlements of less than 1 inch and differential settlements of less than 0.5 inches.

If the actual column/wall loads result in a footing/soil contact pressure that exceeds the above allowable bearing pressure, the footings should be constructed wider or the footing embedment below lowest adjacent exterior grade increased. Even though computed footing dimensions may be less, column and wall footings should have a minimum width in accordance with the applicable building code for the type of structure and construction to avoid excessive settlements and punching shear failures. We also recommend a minimum 1-foot separation between the bottom of the lowest footing and the estimated SHGWT (**Table 1**).

Because of possible disturbance from excavation, the soils exposed at the bottom of the foundation excavations should be re-compacted to at least 95 percent of the soils modified Proctor maximum dry density (ASTM D1557) prior to the placement of reinforcing steel and concrete. The compaction should be checked prior to the placement of reinforcing steel. Density test should be performed at intervals of 50 linear feet along the footing excavations to ensure compaction.

## Floor Slab Recommendations

We have assumed that no unusual floor loads will be applied to the floor slabs due to vibration, impact or high intensity contact pressures. A modulus of subgrade reaction of 200 pounds per cubic inch may be used for floor slab design purposes if the slab is placed on structural fill or in-situ soils that have been prepared and densified in accordance with the recommendations presented in this report. This modulus of subgrade reaction is based on the assumption that the soil beneath the slab will achieve a Limerock Bearing Ratio (LBR) value of at least 15. The subgrade should also be covered with an effective vapor barrier to reduce the possibility of slab dampness.

## Flexible Pavement Recommendations

The following minimum pavement sections are provided for consideration for this development. However, the project civil engineer should develop the actual minimum pavement thickness based on anticipated traffic loads and other considerations in accordance with FDOT and Pasco County standards. A base material other than limerock should be used if an underdrain is required to control groundwater.

| Section Description | Light Duty (inches) | Heavy Duty (inches) |
|---|---|---|
| **Surface Course**<br>Type SP-9.5 or SP-12.5 Asphaltic (Section 334 FDOT) compacted to minimum per applicable requirement of the mix design bulk density ($G_{mm}$) (FM 1-T166). | 1.5 | 3 |
| **Base Course**<br>Limerock (Section 911, FDOT) having a minimum LBR of 100 (FM 5-515) and compacted to at least 98 percent of its modified Proctor maximum dry density and moisture content maintained within 2 percent of the optimum value (FM1-T180). **If the bottom of the base is within 2 feet of the seasonal high groundwater level, then a moisture tolerant base will be required such as cement-treated aggregate or crushed concrete or shell-rock.** | 6 | 10 |
| **Subbase**<br>A minimum LBR of 40 (FM5-515) and compacted to at least 98 percent of the modified Proctor maximum dry density at a moisture content within 2 percent of the optimum value (FM1-T180). | 12 | 12 |

Methods and materials used for pavement construction should conform to applicable sections of the most recent edition of the FDOT Standard Specifications for Road and Bridge Construction. We further recommend that LBR testing be performed on the subgrade soils to establish an LBR value to determine the level of stabilization required, if any.

Subgrade soils should be compacted as specified above and free of ruts or disturbances caused by construction vehicles after compaction has been achieved.

## POTENTIAL FOR SINKHOLE DEVELOPMENT

Most of Florida is prone to sinkhole formation because it is underlain by carbonate deposits that are susceptible to dissolution by circulating ground water. The soluble limestone and dolomites that constitute the carbonate deposits are altered by dissolution and weathering processes to a distinct geomorphology known as "Karst". Where the carbonate rock is covered by relatively insoluble deposits such as the sand and clay deposits that exist in west-central Florida, the buried Karst features form a distinctive type of terrain known as "mantled Karst". In mantled Karst regions, the carbonate rock is not exposed at the land surface; however the presence may be indicated by sinkholes or surface depressions that result when the overburden materials take the shape of the underlying Karst features. [Tihansky, A.B., 1999, Sinkholes, West-Central Florida, in Galloway, Devin, Jones, D.R., and Ingebritsen, S.E., eds., Land Subsidence in the United States: USGS Circular 1182.].

At the time of our fieldwork, we observed no strong visual evidence to suggest that active sinkhole conditions exist on the property explored nor were suggestive near surface conditions observed in our borings. A review of a map titled "Pasco County Sinkholes" published in 2008 by the Florida Center for Instructional Technology (FCIT) indicates that the area in the vicinity of the planned Gagne Parcel residential development is not an area of reported excessive sinkhole activity. Furthermore, we assess that the risk of sinkhole occurrence at the property explored is no greater or less than that of the surrounding area. However, because Florida is underlain by limestone bedrock that is susceptible to dissolution and the subsequent development of karst features such as voids and sinkholes in the natural soil overburden, construction in Pasco and surrounding counties is accompanied by some risk that internal soil erosion and ground subsidence could affect new structures in the future. It is not possible to investigate or design to completely eliminate the possibility of future sinkhole related problems. In any event, the Owner must understand and accept this risk.

## TESTING AND MONITORING

Construction testing and monitoring are essential to proper site construction and performance. Observation and testing of site preparation and earthwork activities is an integral part of the engineering recommendations contained in this report. Having FES provide the construction materials testing and inspection services provides continuity and increases the potential that our recommendations will be properly implemented.

## LIMITATIONS

This report has been prepared for the exclusive use of **Meritage Homes of Florida, Inc.** for the specific application to the project previously discussed. Our conclusions and recommendations have been rendered using generally accepted standards of geotechnical engineering and geology practice in the state of Florida. No other warranty is expressed or implied.

Our conclusions and recommendations are based on the design information furnished to us, the data obtained from the previously described subsurface investigation, laboratory testing, and our professional judgment. They do not reflect variations in the subsurface conditions that are likely to exist in the region of our borings and in unexplored areas of the site. These variations are due to the inherent variability of the subsurface conditions in this geologic region. Should variations become apparent during construction, it will be necessary to re-evaluate our conclusions and recommendations based upon our on-site observations of the conditions.

The scope of our services does not include any environmental assessments or studies for the possible presence of hazardous or toxic materials in the soil, groundwater or surface water within or in the general vicinity of the site studied. Any statements made in this report or shown on the test boring logs regarding unusual subsurface conditions and/or composition, odor, staining, origin or other characteristics of the surface and/or subsurface materials are strictly for the information of our client and may or may not be indicative of an environmental problem.

If changes are made in the overall design or the location of the proposed stormwater pond areas, building areas or the roadway alignments, the recommendations presented in this report must not be considered valid unless the changes are reviewed by FES and recommendations modified or verified in writing. FES should be given the opportunity to review the grading plan and the applicable portions of the project specifications when the design is finalized. This review will allow FES to check whether these documents are consistent with the intent of our recommendations.

## CLOSING

Faulkner Engineering Services, Inc., appreciates the opportunity to be of service to **Meritage Homes of Florida, Inc.** by providing these geotechnical consulting services and we look forward to assisting you through project completion. If you have any questions concerning this report, please do not hesitate to contact the undersigned.

Sincerely,

**Faulkner Engineering Services, Inc.**

Matthew Reinhart

Matthew J. Reinhart, E.I.
Staff Geotechnical Engineer

Pavan K. Kolukula, P.E.
Senior Geotechnical Engineer
Florida License No. 83670

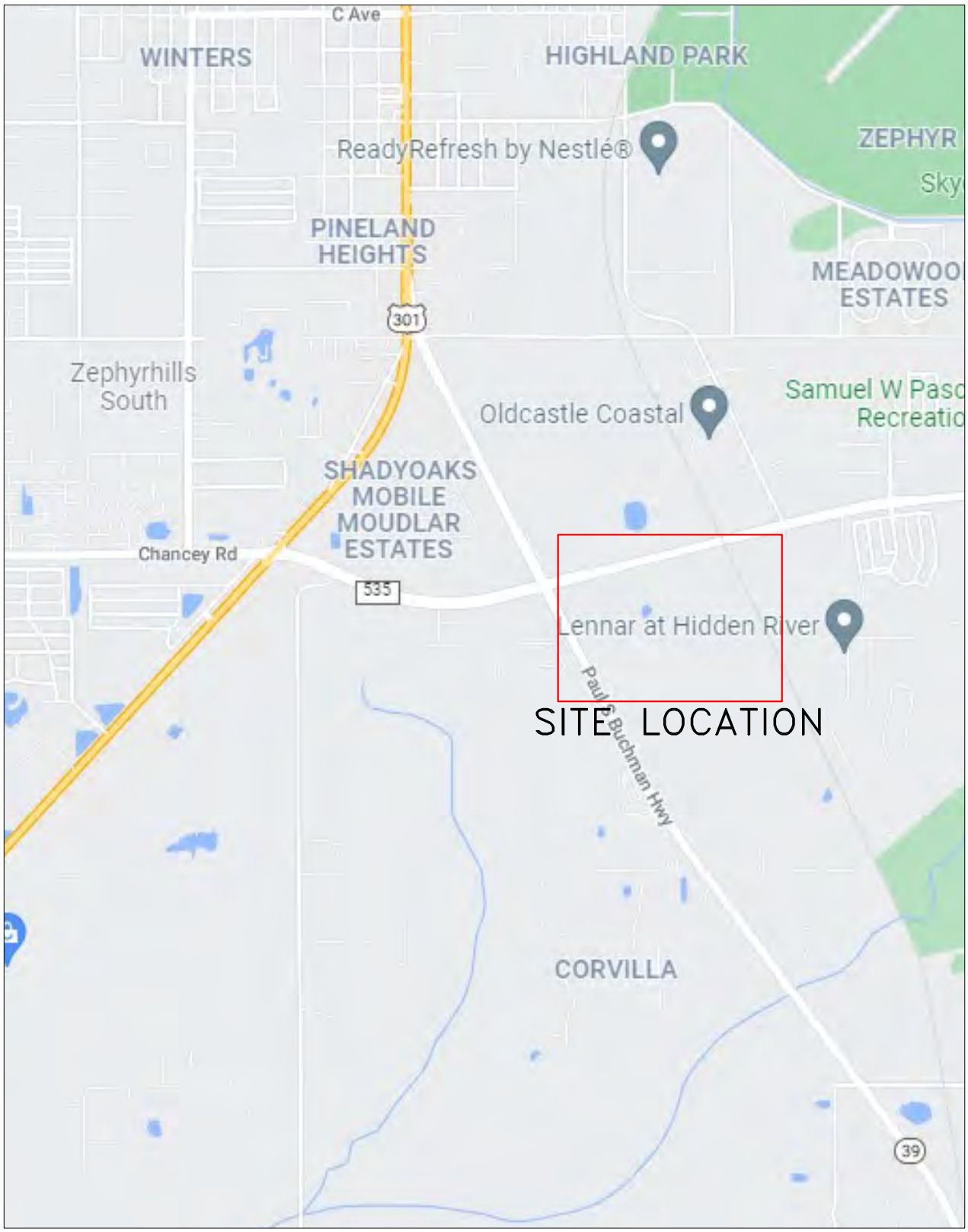
This item has been digitally signed and sealed by David W. Faulkner, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Copy to: Mr. Chris Torres (Meritage Homes of Florida, Inc.)

Attachments: Figure 1: Site Location Map
Figure 2: Boring Location Plan
Table 1: Groundwater Data

Appendix A: Soil Survey Map
Appendix B: SPT Boring Logs and Auger Boring Profiles
Appendix C: Key to Soil Classification

# SITE LOCATION MAP





FAULKNER ENGINEERING SERVICES, Inc.

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Construction Material Testing

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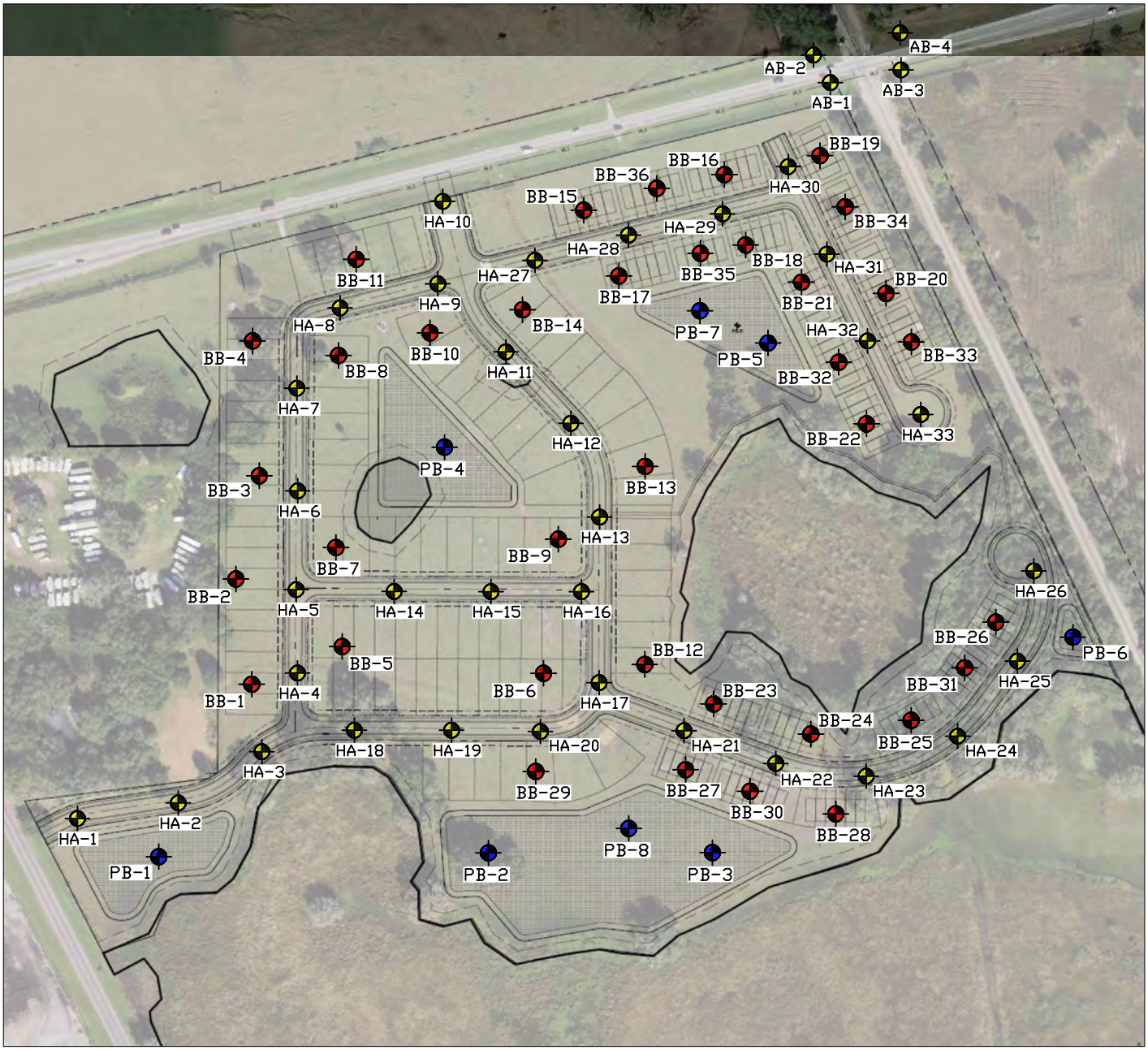
Gagne Parcel

| N.T.S. | DATE 10.04.21 | JOB NO. 21-5233 |
|---|---|---|
| DRAWN: MR<br>CHKD: PK | FIGURE 1 | |

# BORING LOCATION PLAN




## LEGEND

- SPT BUILDING BORING
- AUGER BORING
- SPT POND BORING

Notes:
Basemap provided by Levelup Consulting, LLC.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| | | | |
|---|---|---|---|
| Gagne Parcel | N.T.S. | DATE 10.25.21 | JOB NO. 21-5233 |
| | DRAWN: MR<br>CHKD: PK | FIGURE 2 | |

# Table 1 - Groundwater Data

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| BB-1 | - | 4.0 | 2.0 |
| BB-2 | - | 3.4 | 2.0 |
| BB-3 | - | 4.0 | 3.0 |
| BB-4 | - | 4.0 | 3.0 |
| BB-5 | - | 3.4 | 2.0 |
| BB-6 | - | 3.5 | 2.0 |
| BB-7 | - | 3.7 | 2.0 |
| BB-8 | - | 4.1 | 3.0 |
| BB-9 | - | NE | 2.0 |
| BB-10 | - | 3.4 | 2.0 |
| BB-11 | - | 4.2 | 2.0 |
| BB-12 | - | 1.0 | 1.0 |
| BB-13 | - | 1.0 | 1.0 |
| BB-14 | - | NE | 1.0 |
| BB-15 | - | 3.3 | 2.5 |
| BB-16 | - | 3.0 | 2.0 |
| BB-17 | - | 3.3 | 2.5 |
| BB-18 | - | 3.7 | 3.0 |
| BB-19 | - | 3.0 | 2.0 |
| BB-20 | - | 3.0 | 2.5 |
| BB-21 | - | 2.9 | 2.0 |
| BB-22 | - | 2.3 | 1.5 |
| BB-23 | - | 1.0 | 1.0 |
| BB-24 | - | 1.0 | 1.0 |
| BB-25 | - | 2.0 | 1.5 |
| BB-26 | - | NE | 2.0 |
| BB-27 | - | NE | 2.0 |
| BB-28 | - | 1.0 | 1.0 |
| BB-29 | - | 3.6 | 3.0 |
| BB-30 | - | 2.0 | 1.5 |
| BB-31 | - | NE | 2.0 |
| BB-32 | - | NE | 1.5 |
| BB-33 | - | 3.0 | 2.5 |
| BB-34 | - | 3.0 | 2.5 |
| BB-35 | - | NE | 3.0 |
| BB-36 | - | NE | 2.0 |
| PB-1 | - | 3.5 | 2.0 |
| PB-2 | - | 3.0 | 2.0 |

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| PB-3 | - | NE | 2.5 |
| PB-4 | - | 3.3 | 2.0 |
| PB-5 | - | 1.0 | 1.0 |
| PB-6 | - | 3.0 | 2.0 |
| PB-7 | - | 3.0 | 2.5 |
| PB-8 | - | NE | 1.0 |
| AB-1 | - | 6.4 | 5.0 |
| AB-2 | - | 6.5 | 5.0 |
| AB-3 | - | 6.7 | 5.0 |
| AB-4 | - | 6.2 | 5.0 |
| HA-1 | - | 3.2 | 2.0 |
| HA-2 | - | 3.3 | 2.0 |
| HA-3 | - | 3.8 | 3.0 |
| HA-4 | - | 4.0 | 2.0 |
| HA-5 | - | 3.7 | 3.0 |
| HA-6 | - | 3.8 | 3.0 |
| HA-7 | - | 4.0 | 3.0 |
| HA-8 | - | 3.8 | 2.0 |
| HA-9 | - | 3.8 | 2.0 |
| HA-10 | - | 3.5 | 2.5 |
| HA-11 | - | 3.0 | 1.0 |
| HA-12 | - | 3.0 | 2.5 |
| HA-13 | - | 1.3 | 1.0 |
| HA-14 | - | 3.6 | 2.0 |
| HA-15 | - | NE | 2.0 |
| HA-16 | - | NE | 2.0 |
| HA-17 | - | 1.0 | 1.0 |
| HA-18 | - | 3.6 | 2.0 |
| HA-19 | - | 4.0 | 2.0 |
| HA-20 | - | 3.7 | 3.0 |
| HA-21 | - | 1.0 | 1.0 |
| HA-22 | - | 1.0 | 1.0 |
| HA-23 | - | 1.0 | 1.0 |
| HA-24 | - | NE | 2.0 |
| HA-25 | - | 3.0 | 2.0 |
| HA-26 | - | 3.3 | 2.0 |
| HA-27 | - | 3.3 | 2.5 |
| HA-28 | - | NE | 2.0 |
| HA-29 | - | 2.9 | 2.0 |
| HA-30 | - | 3.0 | 2.5 |

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| HA-31 | - | 2.9 | 2.0 |
| HA-32 | - | 1.0 | 1.0 |
| HA-33 | - | 2.0 | 1.5 |

[1] - North American Vertical Datum, ground elevations not available at time of drilling

[2] - Below Ground Surface

[3] - Seasonal High Groundwater Table

NE - Not encountered in the first 10 feet (SPT boring) or boring termination (auger borings)

# APPENDIX A

## Soil Survey Map

# Custom Soil Resource Report
## Soil Map


Map Scale: 1:4,550 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pasco County, Florida
Survey Area Data: Version 20, Aug 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 8, 2019—Feb 28, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| 1 | Wauchula fine sand, 0 to 5 percent slopes | 36.6 | 63.6% |
| 2 | Pomona fine sand | 1.6 | 2.7% |
| 10 | Wabasso-Wabasso, wet, fine sand, 0 to 2 percent slopes | 1.5 | 2.6% |
| 16 | Zephyr muck | 14.3 | 24.8% |
| 18 | Electra Variant fine sand, 0 to 5 percent slopes | 3.6 | 6.2% |
| 48 | Lochloosa fine sand, 0 to 5 percent slopes | 0.1 | 0.1% |
| **Totals for Area of Interest** | | **57.6** | **100.0%** |

# APPENDIX B

## SPT Boring Logs and Auger Boring Profiles

# DRILL HOLE LOG
## BORING NO.: BB-1

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 4.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, brown, fine SAND | | 1 | 1 1 1 | 2 | |
| | | SC | Very Loose, brown, clayey SAND | | 2 | 2 1 2 | 3 | |
| 5 | | | Loose, gray brown, with small roots | | 3 | 2 3 4 | 7 | |
| | | CL | Medium, gray brown, CLAY with cemented silt | | 4 | 8 3 4 | 7 | |
| | | | Stiff, gray | | 5 | 4 6 5 | 11 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 4 3 2 | 5 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 7 4 5 | 9 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-2

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very loose, brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 3 3 | 6 | |
| 5 | | | Medium-Dense | | 3 | 4 6 6 | 12 | |
| | | | | | 4 | 6 6 9 | 15 | |
| | | | | | 5 | 6 6 8 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 5 5 8 | 13 | |
| 15 | | | | | | | | |
| | | | | | 7 | 6 5 5 | 10 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 18 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-3

**Project No.:** 21-5233
**Date:** 10/18/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, gray, fine SAND | | 1 | 1 2 2 | 4 | |
| | | SP-SM | Loose, gray brown, fine SAND with silt | | 2 | 3 2 3 | 5 | |
| 5 | | SC | Medium-Dense, brown, clayey SAND | | 3 | 4 6 8 | 14 | |
| | | | Gray | | 4 | 8 8 9 | 17 | |
| | | | | | 5 | 9 9 10 | 19 | |
| 10 | | | | | | | | |
| | | CL | Orange, CLAY (weight of hammer (WOH):(13.5-16)) | | 6 | 0 0 0 | 0 | |
| 15 | | | LIMESTONE | | 7 | 7 15 8 | 23 | |
| | | | | | 8 | 7 16 29 | 45 | |
| 20 | | | End of boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at 10 feet*

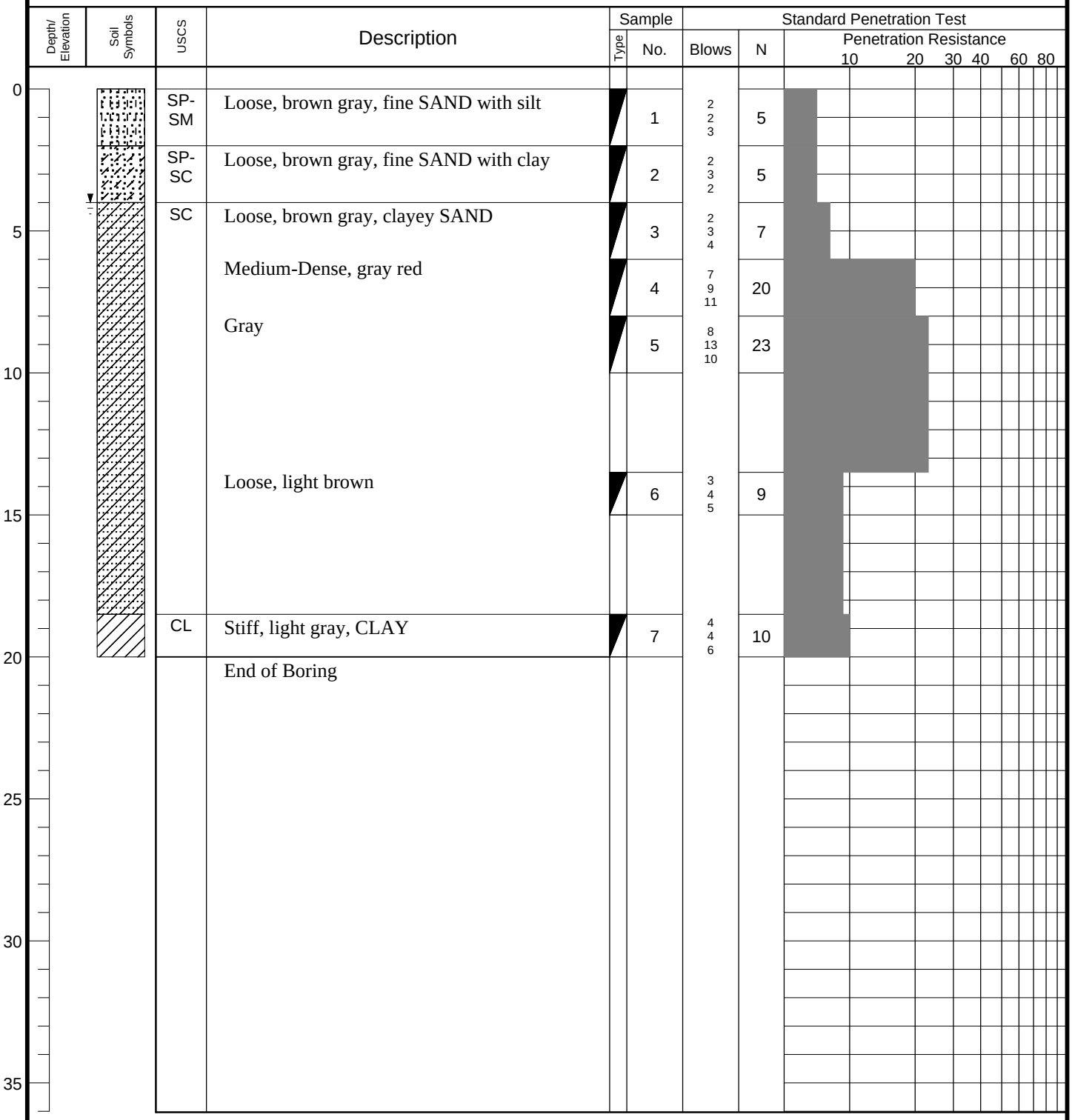
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-4

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 4.0'




**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-5

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, brown, fine SAND with clay nodules | | 1 | 1 1 2 | 3 | |
| | | SC | Loose, gray, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Medium-Dense, gray orange | | 3 | 3 8 6 | 14 | |
| | | | | | 4 | 5 6 6 | 12 | |
| | | CL | Stiff, gray orange, CLAY | | 5 | 4 6 8 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 1 1 1 | 2 | |
| 15 | | | | | | | | |
| | | | | | 7 | 2 3 5 | 8 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

# DRILL HOLE LOG
## BORING NO.: BB-6

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.5'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, gray brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | CL | Medium, brown, CLAY | | 2 | 2 2 3 | 5 | |
| | | | Stiff | | 3 | 5 5 5 | 10 | |
| 5 | | | | | 4 | 7 6 7 | 13 | |
| | | | Very Stiff, orange brown | | 5 | 6 8 9 | 17 | |
| 10 | | | | | | | | |
| | | | Medium, light brown | | 6 | 2 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With limestone | | 7 | 3 3 4 | 7 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

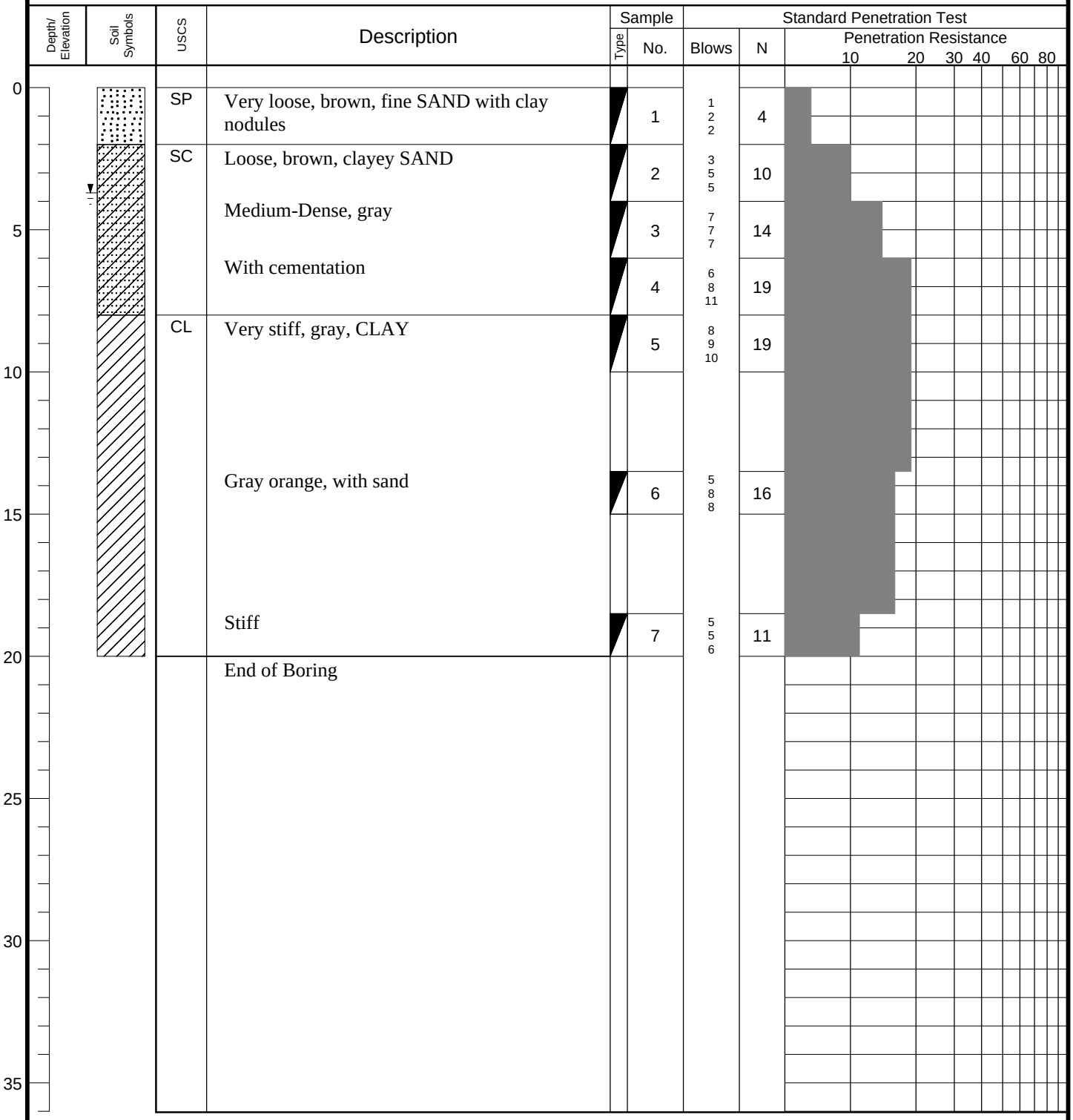
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-7

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-25
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.7'




**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-8

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 4.1'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, brown, fine SAND with fine roots | | 1 | 2 2 2 | 4 | |
| | | | Loose, light brown, with fine roots | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Loose, gray brown, clayey SAND (-200=32.4%) (Moisture Content=16.3%) Medium-Dense | | 3 | 2 2 6 | 8 | |
| | | | | | 4 | 4 5 9 | 14 | |
| | | | | | 5 | 5 10 9 | 19 | |
| 10 | | | | | | | | |
| | | CH | Medium-Dense, gray, CLAY with cementation (-200=53.8%) (Moisture Content=21.5%) (LL=52 PI=33) | | 6 | 5 10 8 | 18 | |
| 15 | | | | | | | | |
| | | ML | Stiff, gray, SILT | | 7 | 5 8 6 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15'*

# DRILL HOLE LOG
## BORING NO.: BB-9

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance 10 20 30 40 60 80 |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | CL | Medium, brown, CLAY | | 2 | 3 3 5 | 8 | |
| 5 | | | Stiff, gray brown | | 3 | 5 5 7 | 12 | |
| | | | Medium, light brown | | 4 | 3 3 4 | 7 | |
| | | | Stiff | | 5 | 4 4 5 | 9 | |
| 10 | | | | | | | | |
| | | | With cementation | | 6 | 4 4 5 | 9 | |
| 15 | | | | | | | | |
| | | | With limestone | | 7 | 7 7 7 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-10

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.4'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very loose, gray, fine SAND with silt and fine roots | | 1 | 2 2 2 | 4 | |
| | | SP-SC | Loose, brown gray, fine SAND with clay | | 2 | 2 3 3 | 6 | |
| 5 | | SC | Medium-Dense, gray, clayey SAND | | 3 | 6 8 10 | 18 | |
| | | | Dense, gray brown | | 4 | 12 19 15 | 34 | |
| | | | | | 5 | 13 18 19 | 37 | |
| 10 | | | | | | | | |
| | | ML | Stiff, gray, calcareous SILT with limestone | | 6 | 3 4 5 | 9 | |
| 15 | | | | | | | | |
| | | SM | Loose, gray, silty SAND | | 7 | 3 6 4 | 10 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 18 feet*

# DRILL HOLE LOG
## BORING NO.: BB-11

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 4.2'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, brown, fine SAND | | 1 | 1 2 2 | 4 | |
| | | SC | Very loose, brown, clayey SAND | | 2 | 2 1 2 | 3 | |
| 5 | | | Loose, gray brown | | 3 | 2 3 3 | 6 | |
| | | | Medium-Dense | | 4 | 4 5 6 | 11 | |
| | | | | | 5 | 5 10 11 | 21 | |
| 10 | | | | | | | | |
| | | CL | Very stiff, gray orange, CLAY | | 6 | 6 7 9 | 16 | |
| 15 | | | | | | | | |
| | | | with limestone | | 7 | 5 8 8 | 16 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

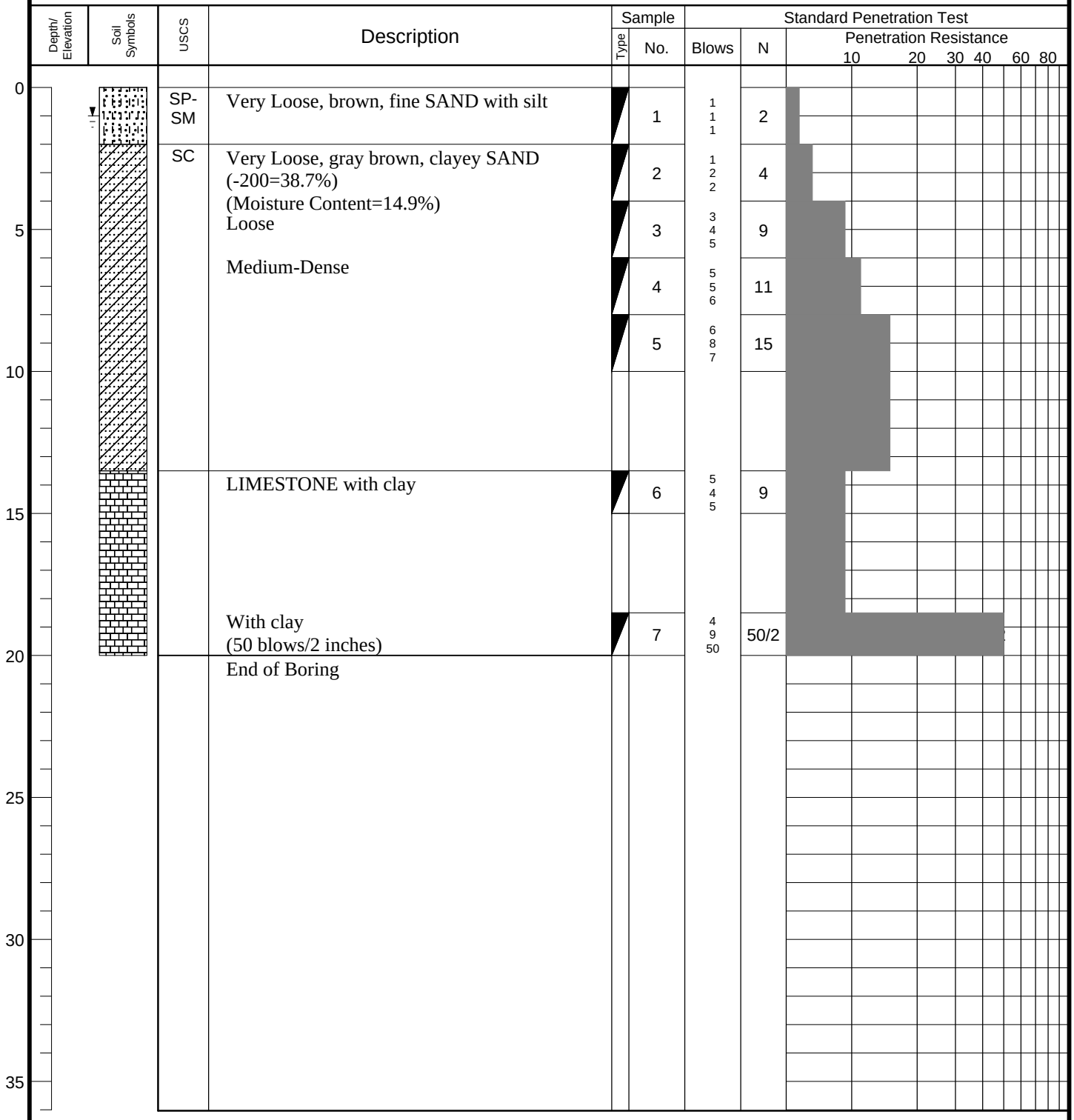
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-12

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 1.0'




*loss of circulation at 15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-13

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 2 1 | 3 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 1 2 3 | 5 | |
| 5 | | CL | Medium, gray, CLAY with sand | | 3 | 2 2 3 | 5 | |
| | | SC | Loose, brown, clayey SAND | | 4 | 4 4 6 | 10 | |
| | | | Medium-Dense | | 5 | 7 9 8 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 4 3 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 5 10 21 | 31 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-14

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Very Loose, brown, clayey SAND (-200=22.7%) | | 1 | 1 1 2 | 3 | |
| | | | Loose (-200=22.2%) | | 2 | 2 2 3 | 5 | |
| 5 | | | | | 3 | 3 4 3 | 7 | |
| | | | | | 4 | 4 4 4 | 8 | |
| | | SP-SM | Loose, gray brown, fine SAND with silt | | 5 | 3 4 6 | 10 | |
| 10 | | | | | | | | |
| | | CL | Medium, gray brown, CLAY | | 6 | 2 3 3 | 6 | |
| 15 | | | | | | | | |
| | | | | | 7 | 2 2 3 | 5 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-15

**Project No.:** 21-5233
**Date:** 9/29/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.3'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 3 | 4 | |
| | | SP | Loose, brown, fine SAND | | 2 | 1 2 3 | 5 | |
| 5 | | SC | Loose, light brown, clayey SAND (-200=24.3%) | | 3 | 3 4 3 | 7 | |
| | | CL | Stiff, light brown, CLAY with sand | | 4 | 4 4 6 | 10 | |
| | | | | | 5 | 4 5 6 | 11 | |
| 10 | | | | | | | | |
| | | | Medium, light orange brown | | 6 | 3 3 3 | 6 | |
| 15 | | | | | | | | |
| | | | Light gray brown | | 7 | 2 3 4 | 7 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

Penetration Resistance: 10 20 30 40 60 80

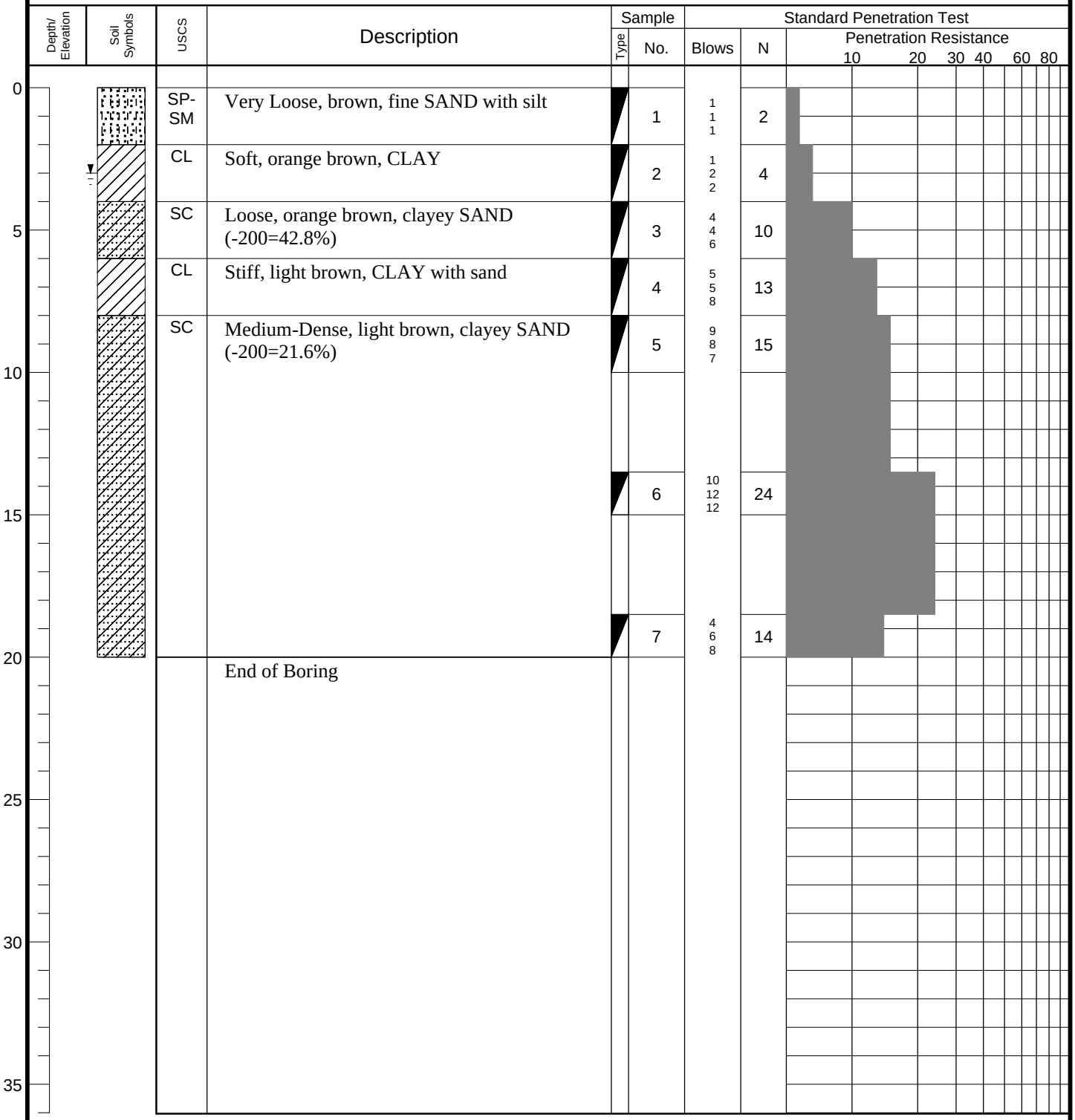
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-16

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'




**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-17

**Project No.:** 21-5233
**Date:** 9/29/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.3'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | | | | 2 | 2 2 2 | 4 | |
| 5 | | CL | Medium, brown, CLAY | | 3 | 2 3 4 | 7 | |
| | | | Stiff | | 4 | 3 5 6 | 11 | |
| | | | Gray brown | | 5 | 4 7 8 | 15 | |
| 10 | | | | | | | | |
| | | | Medium, light brown | | 6 | 2 3 3 | 6 | |
| 15 | | | | | | | | |
| | | | Soft | | 7 | 2 2 2 | 4 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

Penetration Resistance: 10 20 30 40 60 80

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-18

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.7'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, gray brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | SP | Loose, brown, fine SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | | | 3 | 3 4 5 | 9 | |
| | | CL | Brown, CLAY<br>Stiff, orange brown | | 4 | 6 6 6 | 12 | |
| | | | Gray brown | | 5 | 5 7 8 | 15 | |
| 10 | | | | | | | | |
| | | | Very Stiff, light brown | | 6 | 5 7 9 | 16 | |
| 15 | | | | | | | | |
| | | SP | Medium-Dense, light brown, clayey SAND | | 7 | 6 9 9 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-19

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, light brown, fine SAND | | 1 | 1 2 1 | 3 | |
| | | CL | Medium, light brown, CLAY | | 2 | 1 2 4 | 6 | |
| 5 | | SC | Medium-Dense, light brown, clayey SAND (-200=35.2%) | | 3 | 3 5 7 | 12 | |
| | | | | | 4 | 5 8 9 | 17 | |
| | | | | | 5 | 7 10 9 | 19 | |
| 10 | | | | | | | | |
| | | | | | 6 | 6 10 10 | 20 | |
| 15 | | | | | | | | |
| | | CL | Very Stiff, light brown, CLAY | | 7 | 9 9 10 | 19 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-20

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, gray, fine SAND | | 1 | 1 2 2 | 4 | |
| | ▽ | SP-SC | Loose, gray brown, fine SAND with clay | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Loose, gray brown, clayey SAND | | 3 | 3 4 5 | 9 | |
| | | | Medium-Dense | | 4 | 5 8 7 | 15 | |
| | | | Brown | | 5 | 6 8 6 | 14 | |
| 10 | | | | | | | | |
| | | | Gray | | 6 | 3 5 8 | 13 | |
| 15 | | | | | | | | |
| | | | | | 7 | 7 10 7 | 17 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-21

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 2.9'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, gray brown, fine SAND with silt | | 1 | 2 2 2 | 4 | |
| | | SP | Loose, light brown, fine SAND | | 2 | 2 3 4 | 7 | |
| 5 | | CL | Medium, brown, CLAY | | 3 | 2 3 4 | 7 | |
| | | | Stiff | | 4 | 4 6 5 | 11 | |
| | | | | | 5 | 6 6 7 | 13 | |
| 10 | | | | | | | | |
| | | | Light brown | | 6 | 3 5 6 | 11 | |
| 15 | | | | | | | | |
| | | | LIMESTONE with clay | | 7 | 9 7 7 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 18'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-22

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 2.3'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | SP-SC | Very Loose, brown, fine SAND with clay | | 2 | 1 2 2 | 4 | |
| 5 | | SC | Loose, gray brown, clayey SAND | | 3 | 2 3 4 | 7 | |
| | | | Medium-Dense | | 4 | 4 6 7 | 13 | |
| | | | Gray | | 5 | 5 8 7 | 15 | |
| 10 | | | | | | | | |
| | | CL | Stiff, gray, CLAY with limestone | | 6 | 7 6 6 | 12 | |
| 15 | | | | | | | | |
| | | | LIMESTONE with clay (50 blows/2 inches) | | 7 | | 50/2 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 17'*

# DRILL HOLE LOG
## BORING NO.: BB-23

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | CL | Stiff, gray brown, CLAY | | 3 | 4 5 6 | 11 | |
| | | SC | Medium-Dense, gray brown, clayey SAND | | 4 | 5 7 6 | 13 | |
| | | | | | 5 | 7 7 7 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 2 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 8 6 9 | 15 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-24

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▽ : 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Very Loose, gray brown, clayey SAND (-200=25.0%) (Moisture Content=22.0%) | | 1 | 1 1 2 | 3 | |
| | | | Loose | | 2 | 2 3 4 | 7 | |
| 5 | | CL | Stiff, brown, CLAY | | 3 | 4 6 5 | 11 | |
| | | SC | Loose, gray brown, clayey SAND | | 4 | 4 5 5 | 10 | |
| | | CL | Stiff, gray brown, CLAY | | 5 | 5 6 5 | 11 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 2 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 7 8 6 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 12'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-25

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 2.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Blows | N | Standard Penetration Test: Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, gray, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Medium-Dense, gray brown | | 3 | 4 5 6 | 11 | |
| | | CL | Stiff, gray brown, CLAY | | 4 | 5 7 6 | 13 | |
| | | | Very Stiff | | 5 | 8 8 10 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 3 4 3 | 7 | |
| 15 | | | | | | | | |
| | | | | | 7 | 5 8 7 | 15 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 13'*

# DRILL HOLE LOG
## BORING NO.: BB-26

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SC | Loose, brown, fine SAND with clay | | 1 | 1 2 3 | 5 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 3 4 6 | 10 | |
| 5 | | | Medium-Dense, gray | | 3 | 4 7 10 | 17 | |
| | | SP-SC | Medium-Dense, gray, fine SAND with clay | | 4 | 8 13 15 | 28 | |
| | | | | | 5 | 9 9 15 | 24 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 4 6 | 10 | |
| 15 | | | | | | | | |
| | | | | | 7 | 9 12 11 | 23 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 10'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-27

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | CL | Medium, brown, CLAY | | 2 | 2 2 3 | 5 | |
| 5 | | | Stiff | | 3 | 4 5 4 | 9 | |
| | | | Orange brown | | 4 | 4 7 8 | 15 | |
| | | | Very Stiff | | 5 | 6 9 8 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 3 5 15 | 20 | |
| 15 | | | | | | | | |
| | | | | | 7 | 9 13 10 | 23 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 12'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-28

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 1.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SC | Very Loose, brown, fine SAND with clay | | 1 | 2 2 2 | 4 | |
| | | SC | Loose, gray, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | | | 3 | 2 2 3 | 5 | |
| | | | Medium-Dense | | 4 | 4 8 7 | 15 | |
| | | | With shell fragments | | 5 | 7 7 7 | 14 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 3 5 | 8 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 10 7 9 | 16 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 12'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-29

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** MR
**At Completion** ▼ : 3.6'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, gray, fine SAND | | 1 | 1 1 1 | 2 | |
| | | SP-SM | Very loose, brown, fine SAND with silt and cementation | | 2 | 1 2 2 | 4 | |
| 5 | | CL | Medium, gray orange, CLAY with cementation | | 3 | 2 3 5 | 8 | |
| | | SC | Medium-Dense, brown orange, clayey SAND | | 4 | 5 8 10 | 18 | |
| | | CL | Stiff, gray, CLAY with cementation | | 5 | 6 7 8 | 15 | |
| 10 | | | | | | | | |
| | | | | | 6 | 11 11 7 | 18 | |
| 15 | | | | | | | | |
| | | | LIMESTONE | | 7 | 5 1 10 | 11 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-30

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 2.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 2 | 3 | |
| | | SC | Loose, brown, clayey SAND | | 2 | 2 2 4 | 6 | |
| 5 | | | Gray brown | | 3 | 4 4 4 | 8 | |
| | | | Medium-Dense | | 4 | 5 7 6 | 13 | |
| | | | LIMESTONE with clay | | 5 | 4 6 7 | 13 | |
| 10 | | | | | | | | |
| | | | With clay | | 6 | 6 10 9 | 19 | |
| 15 | | | | | | | | |
| | | | With clay (50 blows/3 inches) | | 7 | | 50/3 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

10 20 30 40 60 80

*Loose of circulation at 12'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-31

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SC | Very Loose, gray brown, fine SAND with clay | | 1 | 1 2 2 | 4 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Gray | | 3 | 3 4 6 | 10 | |
| | | | Medium-Dense, gray brown, with rock fragments | | 4 | 4 8 9 | 17 | |
| | | | Gray | | 5 | 9 9 9 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 2 5 5 | 10 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 15 12 13 | 25 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 15'*
**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: BB-32

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, brown, clayey SAND | | 1 | 2 2 3 | 5 | |
| | | | Gray | | 2 | 3 4 5 | 9 | |
| 5 | | CL | Stiff, gray, CLAY | | 3 | 4 4 5 | 9 | |
| | | | | | 4 | 4 6 7 | 13 | |
| | | | Very Stiff | | 5 | 7 8 9 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 5 6 6 | 12 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 9 12 10 | 22 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 15'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-33

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, gray, fine SAND | | 1 | 1 2 2 | 4 | |
| | | SP-SM | Loose, gray, fine SAND with silt | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Loose, gray brown, clayey SAND | | 3 | 3 4 5 | 9 | |
| | | | Medium-Dense, gray | | 4 | 4 6 5 | 11 | |
| | | | | | 5 | 6 7 8 | 15 | |
| 10 | | | | | | | | |
| | | CL | Stiff, gray, CLAY | | 6 | 10 7 7 | 14 | |
| 15 | | | | | | | | |
| | | SC | Medium-Dense, gray, clayey SAND | | 7 | 6 8 10 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

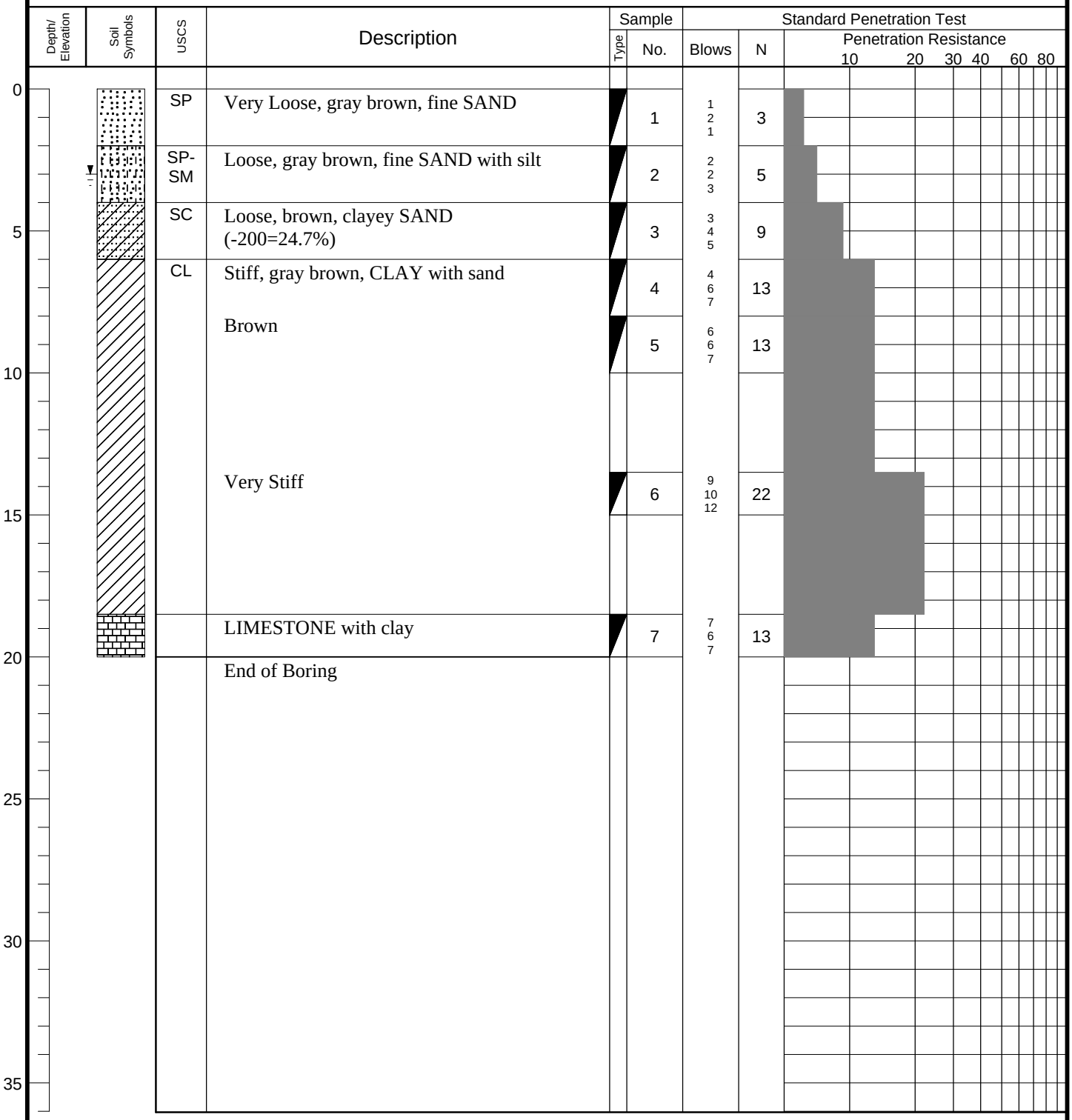
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-34

**Project No.:** 21-5233
**Date:** 9/27/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : 3.0'




**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: BB-35

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | SP-SM | Very Loose, gray, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | | Brown | | 2 | 1 2 2 | 4 | |
| 5 | | CL | Medium, gray brown, CLAY with sand | | 3 | 3 3 5 | 8 | |
| | | | Stiff, light brown | | 4 | 4 7 8 | 15 | |
| | | | Very Stiff, orange brown, with sand | | 5 | 6 7 9 | 16 | |
| 10 | | | | | | | | |
| | | | Stiff, light brown | | 6 | 3 5 6 | 11 | |
| 15 | | | | | | | | |
| | | | | | 7 | 4 5 4 | 9 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: BB-36

**Project No.:** 21-5233
**Date:** 9/29/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, brown, fine SAND | | 1 | 1 1 2 | 3 | |
| | | CL | Medium, brown, CLAY | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Loose, light brown, clayey SAND (-200=31.3%) | | 3 | 3 4 6 | 10 | |
| | | | Medium-Dense | | 4 | 6 8 9 | 17 | |
| | | | | | 5 | 7 7 10 | 17 | |
| 10 | | | | | | | | |
| | | | Dense | | 6 | 14 18 13 | 31 | |
| 15 | | | | | | | | |
| | | CL | Very Stiff, light brown, CLAY | | 7 | 7 8 10 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: PB-1

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-25
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.5'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, brown, fine SAND | | 1 | 1 1 2 | 3 | |
| | | SC | Loose, gray brown, clayey SAND (-200=36.2%) (Moisture Content=16.2%) Medium-Dense | | 2 | 2 3 5 | 8 | |
| 5 | | | | | 3 | 4 6 6 | 12 | |
| | | | | | 4 | 7 7 8 | 15 | |
| | | SM | Medium-Dense, gray brown, silty SAND | | 5 | 10 11 13 | 24 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 3 5 10 | 15 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-2

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, brown gray, fine SAND | | 1 | 2 2 1 | 3 | |
| | | SC | Very loose, brown, clayey SAND | | 2 | 2 2 2 | 4 | |
| 5 | | | Loose, orange gray (-200=43.6%) (Moisture Content=20.7%) | | 3 | 2 3 4 | 7 | |
| | | | | | 4 | 3 3 5 | 8 | |
| | | CL | Stiff, orange gray, CLAY with sand | | 5 | 4 5 5 | 10 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 6 5 15 | 20 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loss of circulation at 15 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-3

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB

**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very Loose, brown, fine SAND | | 1 | 1 2 1 | 3 | |
| | | SP-SC | Loose, light brown, fine SAND with clay | | 2 | 2 2 3 | 5 | |
| | | CL | Gray brown, CLAY | | 3 | | | |
| 5 | | | Stiff, brown | | 4 | 4 5 6 | 11 | |
| | | | | | 5 | 7 7 7 | 14 | |
| | | | Very Stiff | | 6 | 6 9 8 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 7 | 3 3 5 | 8 | |
| 15 | | | End of Boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

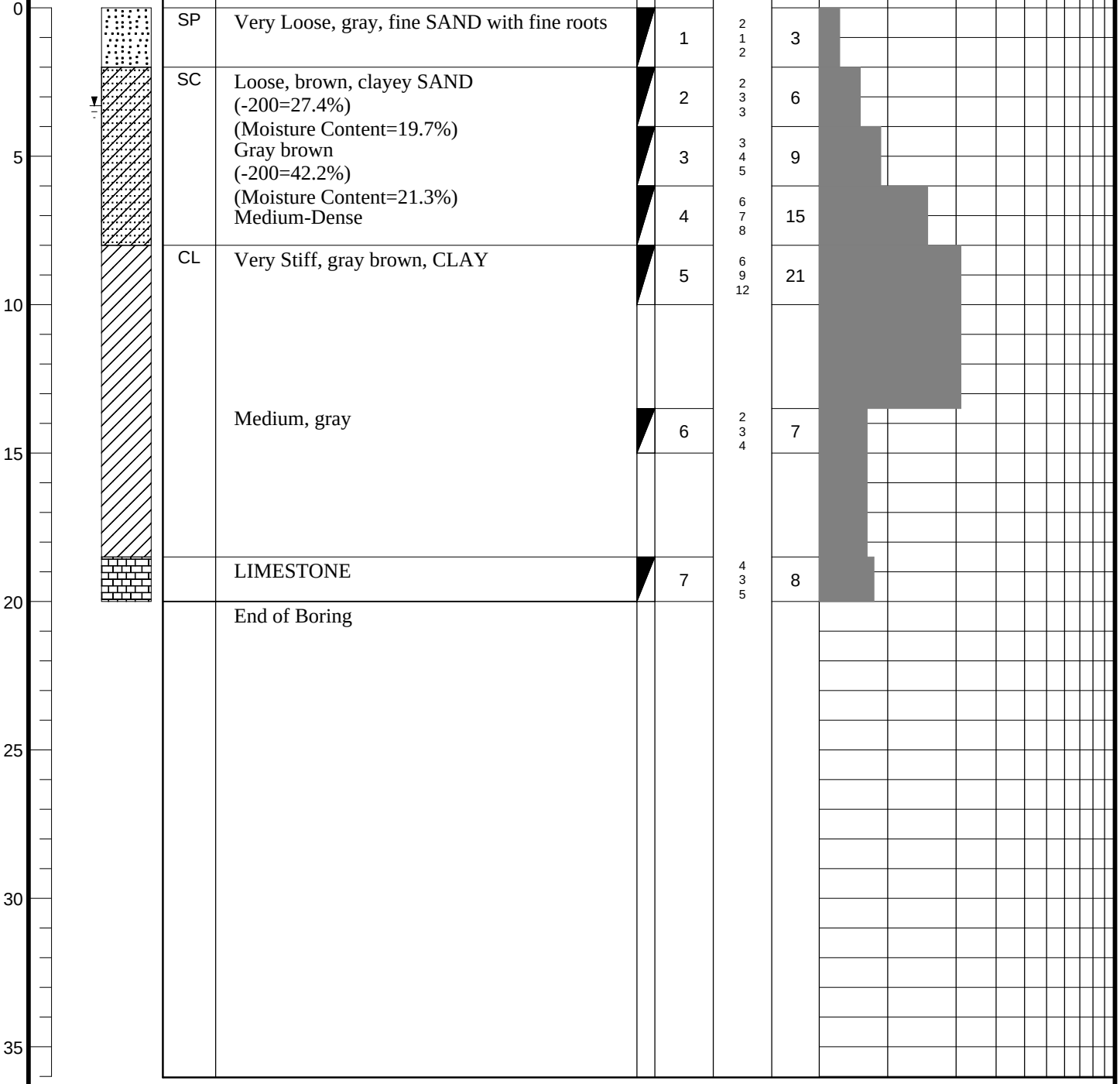
*Loose of circulation at 11'*
**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: PB-4

**Project No.:** 21-5233
**Date:** 10/4/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** d-25
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** MR
**At Completion** ▼ **:** 3.3'




This information pertains only to this boring and should not be interpreted as being indicative of the site.

# DRILL HOLE LOG
## BORING NO.: PB-5

**Project No.:** 21-5233
**Date:** 9/24/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Blows | N | Standard Penetration Test: Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Very loose, brown, fine SAND | | 1 | 1 1 2 | 3 | |
| | | SP-SC | Very loose, brown gray, fine SAND with clay | | 2 | 2 2 2 | 4 | |
| 5 | | | Medium-dense | | 3 | 4 5 7 | 12 | |
| | | SC | Medium-dense, brown gray, clayey SAND | | 4 | 7 7 7 | 14 | |
| | | | (-200=43.5%)<br>(Moisture Content=21.5%) | | 5 | 6 8 10 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE | | 6 | 5 7 10 | 17 | |
| 15 | | | | | | | | |
| | | | | | 7 | 9 9 13 | 22 | |
| 20 | | | | | | | | |
| | | | NO RECOVERY | | 8 | | | |
| 25 | | | End of boring | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 11'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-6

**Project No.:** 21-5233
**Date:** 9/23/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 550
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** AJ
**At Completion** ▼ : 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 2 2 2 | 4 | |
| | | SC | Loose, gray brown, clayey SAND | | 2 | 2 2 3 | 5 | |
| 5 | | | Gray<br>(-200=36.0%)<br>(Moisture Content=17.4%) | | 3 | 3 3 4 | 7 | |
| | | CL | Stiff, gray, CLAY | | 4 | 4 6 7 | 13 | |
| | | SC | Medium-Dense, brown, clayey SAND | | 5 | 5 7 6 | 13 | |
| 10 | | | | | | | | |
| | | | LIMESTONE<br>(50 blows/3 inches) | | 6 | | 50/3 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

Penetration Resistance: 10 20 30 40 60 80

*Loose of circulation at 13'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-7

**Project No.:** 21-5233
**Date:** 9/30/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ **:**

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ **:** 3.0'

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Very Loose, brown, fine SAND with silt | | 1 | 1 1 1 | 2 | |
| | | SP-SC | Very Loose, light brown, fine SAND with clay | | 2 | 1 2 1 | 3 | |
| 5 | | CL | Medium, gray, CLAY | | 3 | 2 3 5 | 8 | |
| | | | Stiff | | 4 | 4 4 5 | 9 | |
| | | | | | 5 | 6 7 6 | 13 | |
| 10 | | | | | | | | |
| | | | LIMESTONE (50 blows/1 inch) | | 6 | | 50/1 | |
| 15 | | | End of boring | | | | | |
| 20 | | | | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

*Loose of circulation at 13'*

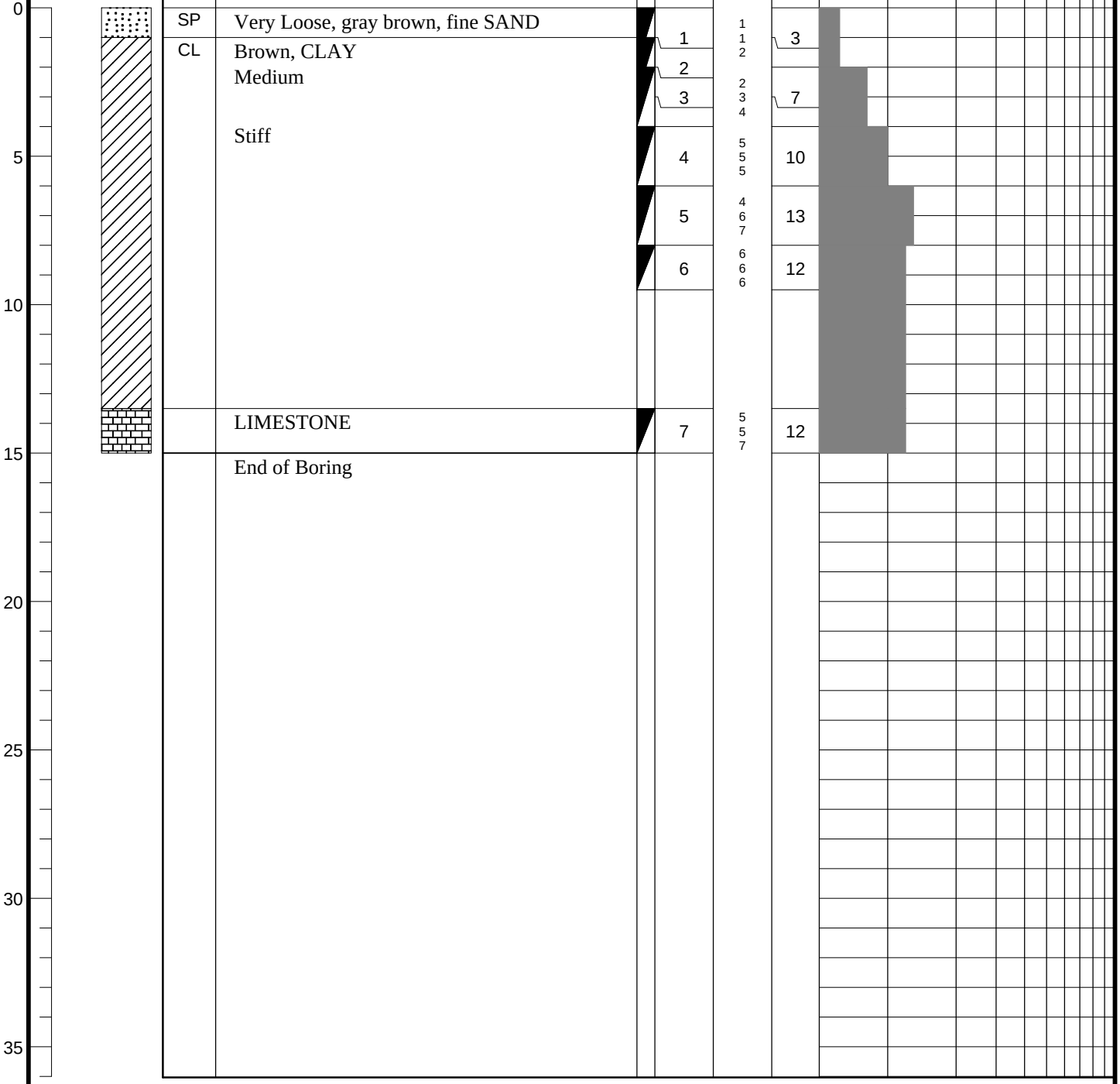
**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-8

**Project No.:** 21-5233
**Date:** 10/1/2021

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** D-50
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE




*Loose of circulation at 12'*
**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

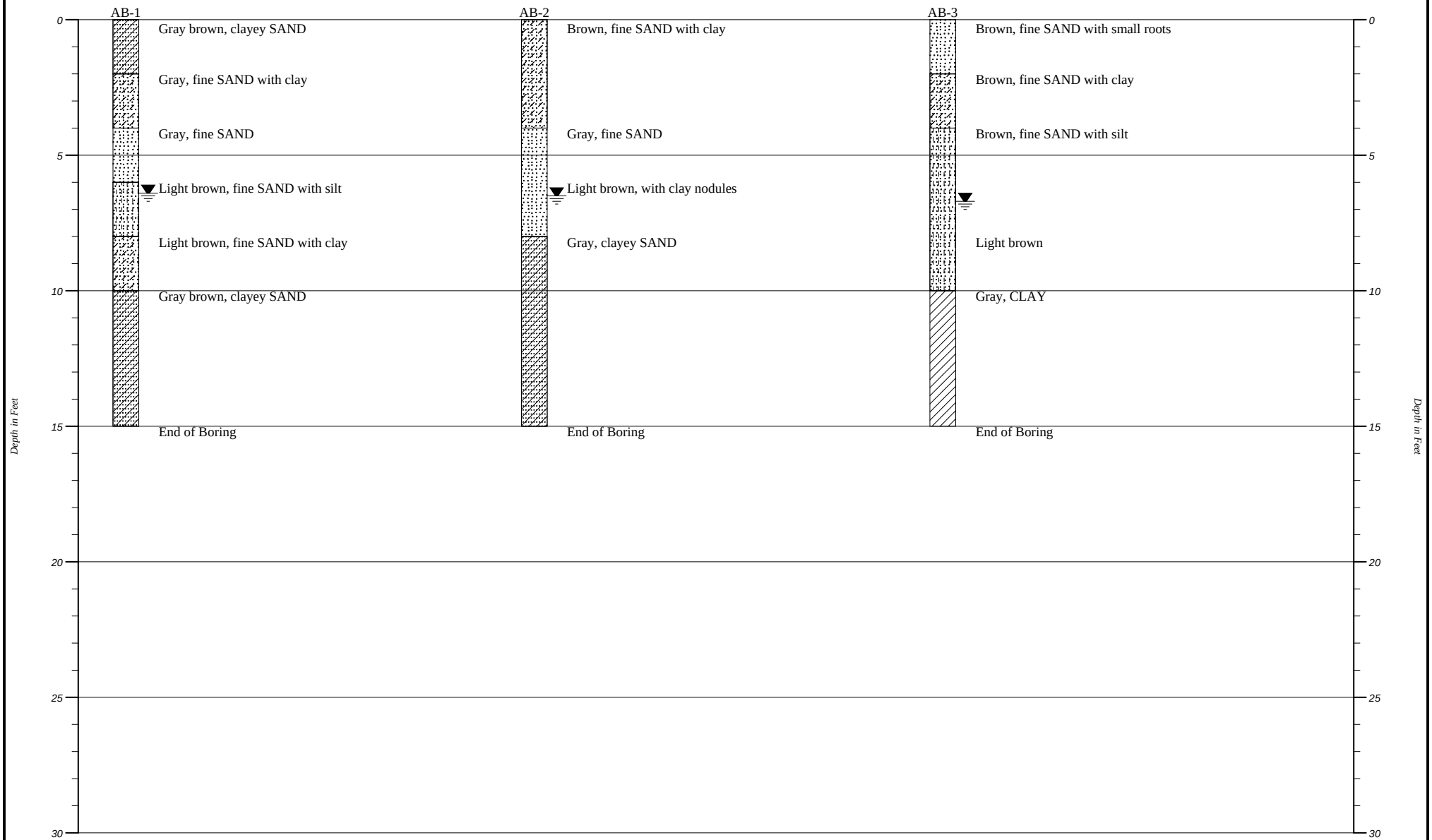
# KEY TO SYMBOLS

| Symbol | Description |
|---|---|
| **Strata symbols** | |
|  | Poorly graded sand |
|  | Clayey sand |
|  | Low plasticity clay |
|  | Limestone |
|  | Poorly graded sand with silt |
|  | Poorly graded sand with clay |
|  | High plasticity clay |
|  | Silt |
|  | Silty sand |
|  | Blank |
| **Misc. Symbols** | |
|  | Water table at boring completion |
| **Soil Samplers** | |
|  | Standard penetration test |

**Notes:**

**1. Exploratory boring were performed using a 2-inch diameter split barrel sampler driven by a 140 lbs hammer (In accordance with ASTM D1586)**

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




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

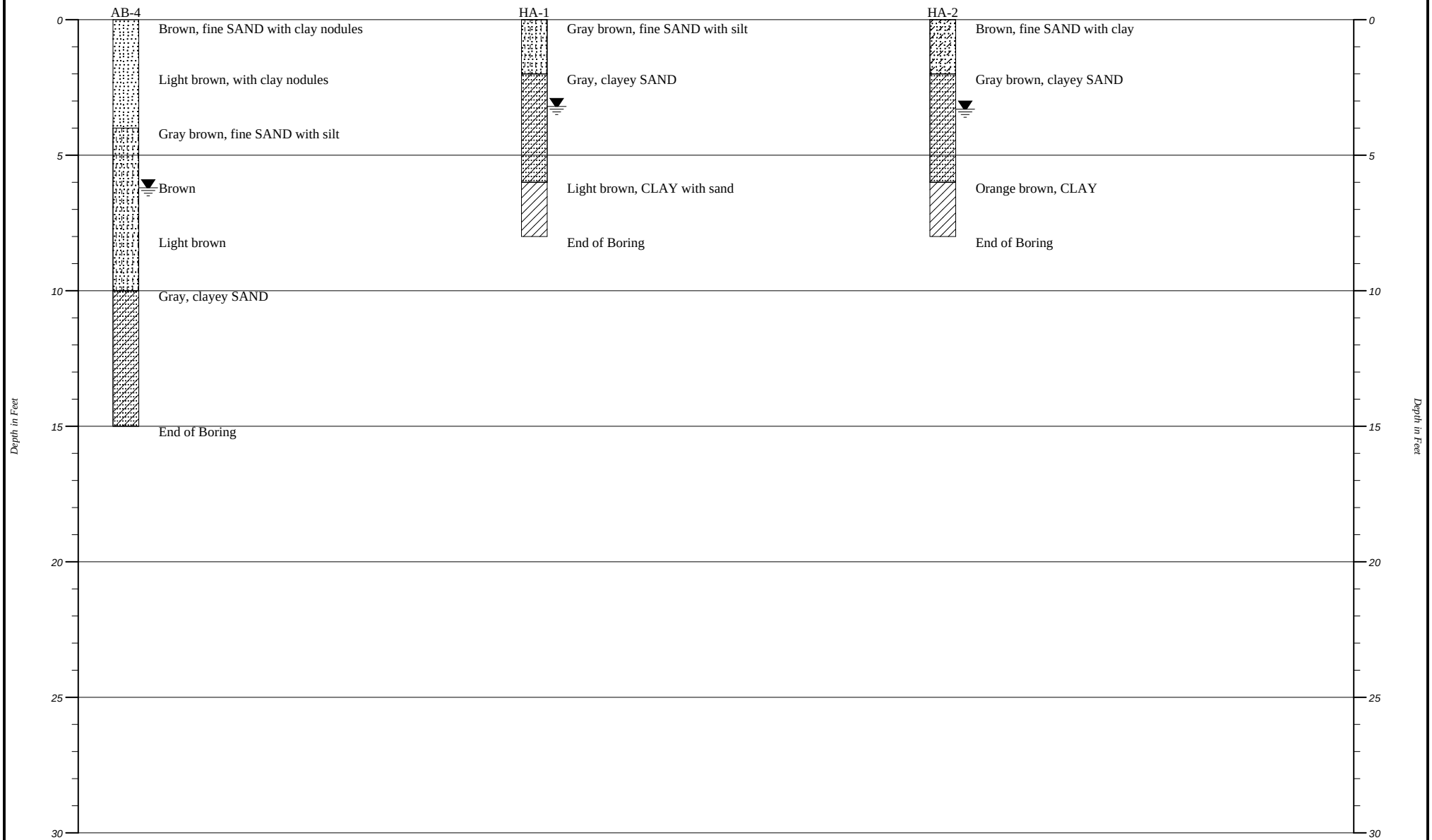
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 10/4/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 10/4/2021 |

Gagne Parcel

PROJECT NO. 21-5233


Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

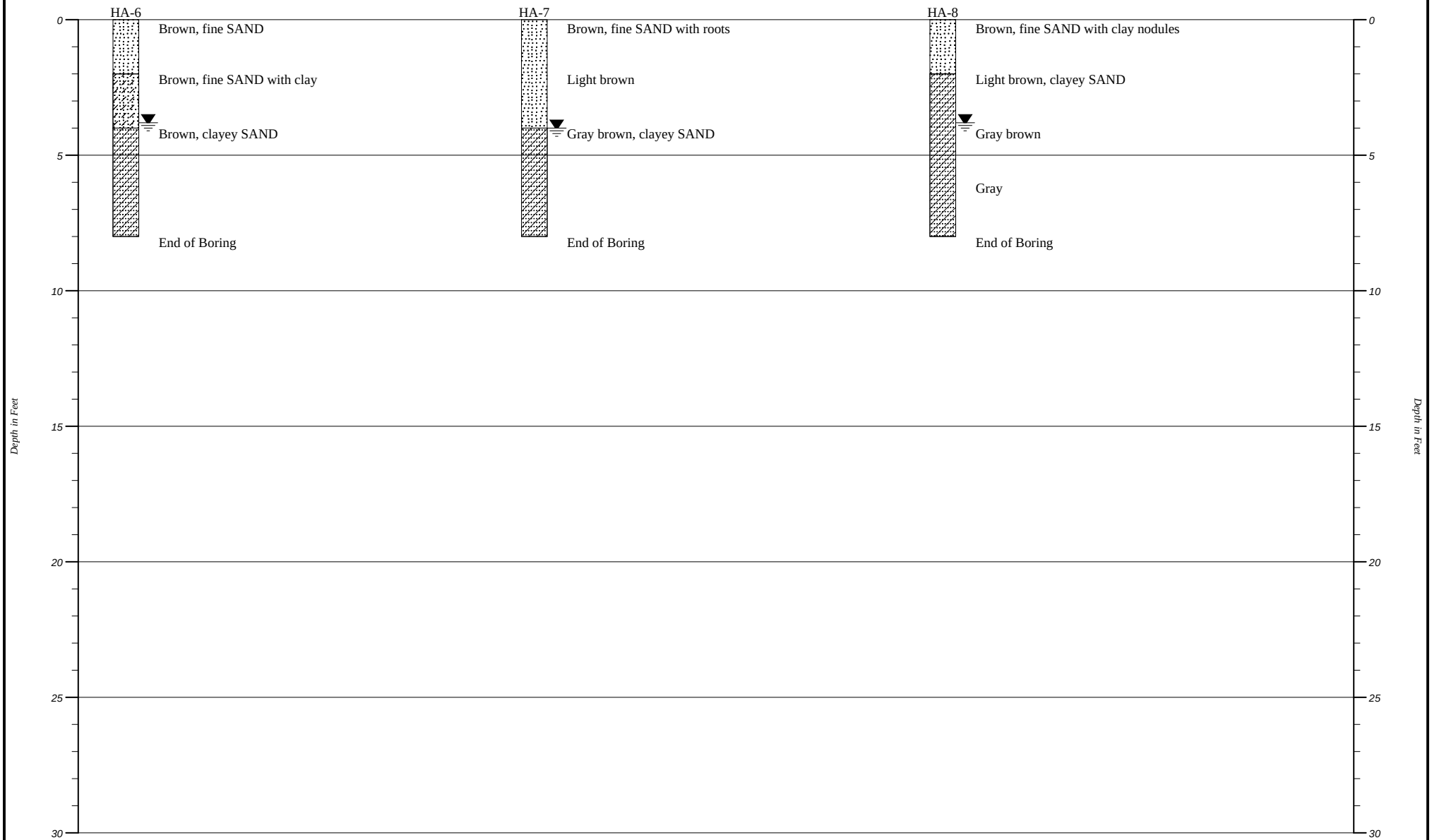
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 10/4/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

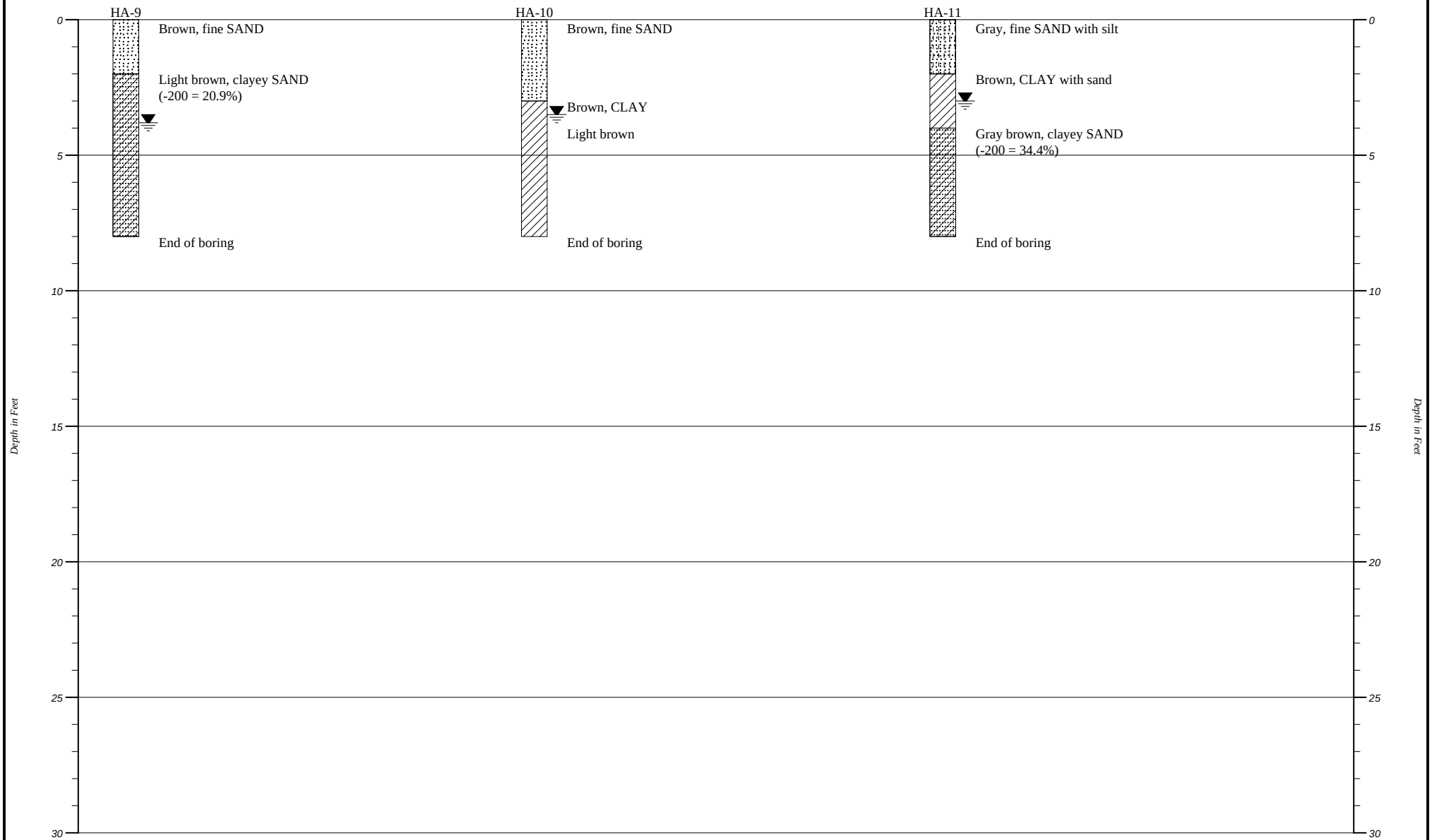
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 10/1/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

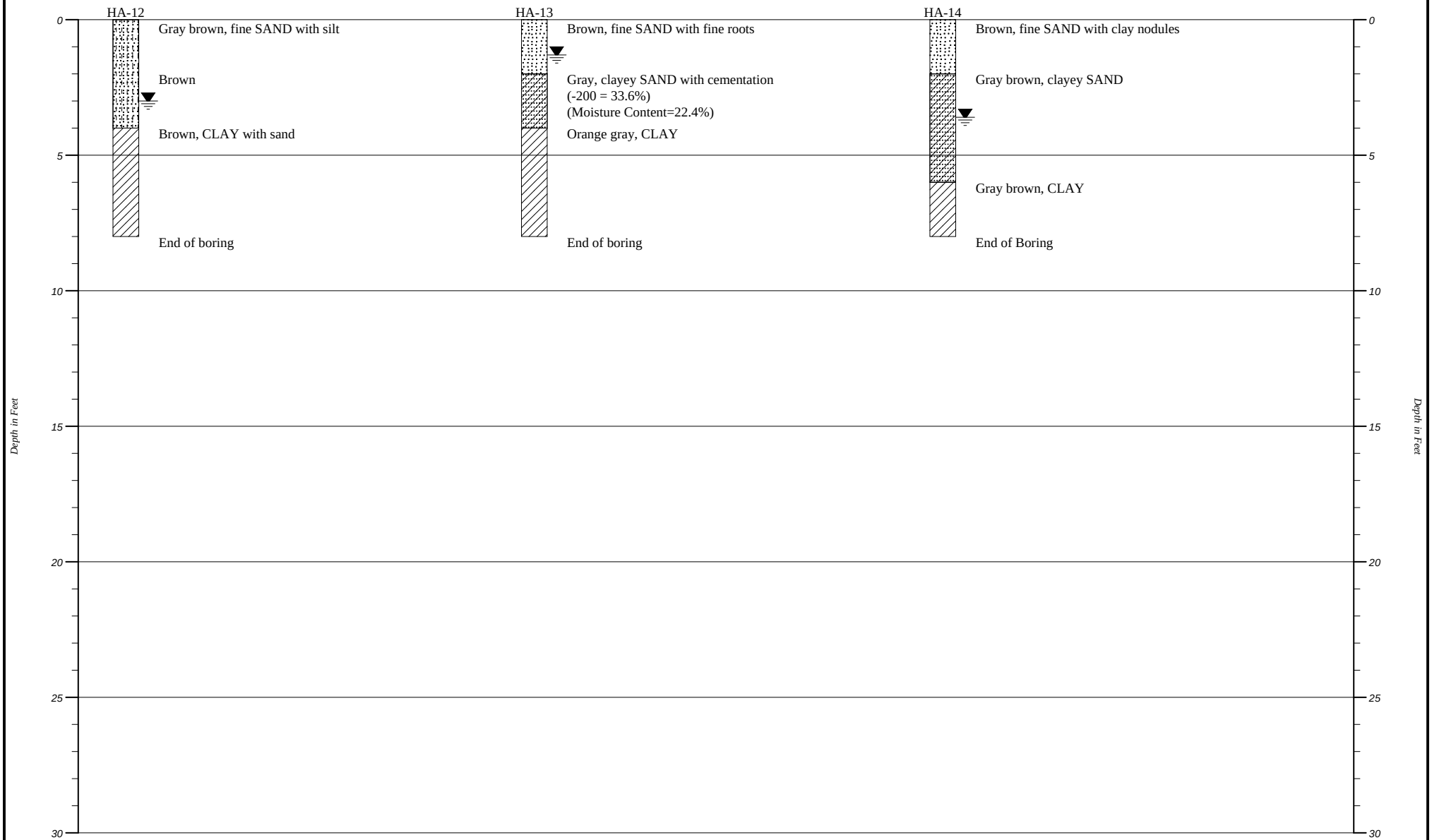
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/30/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

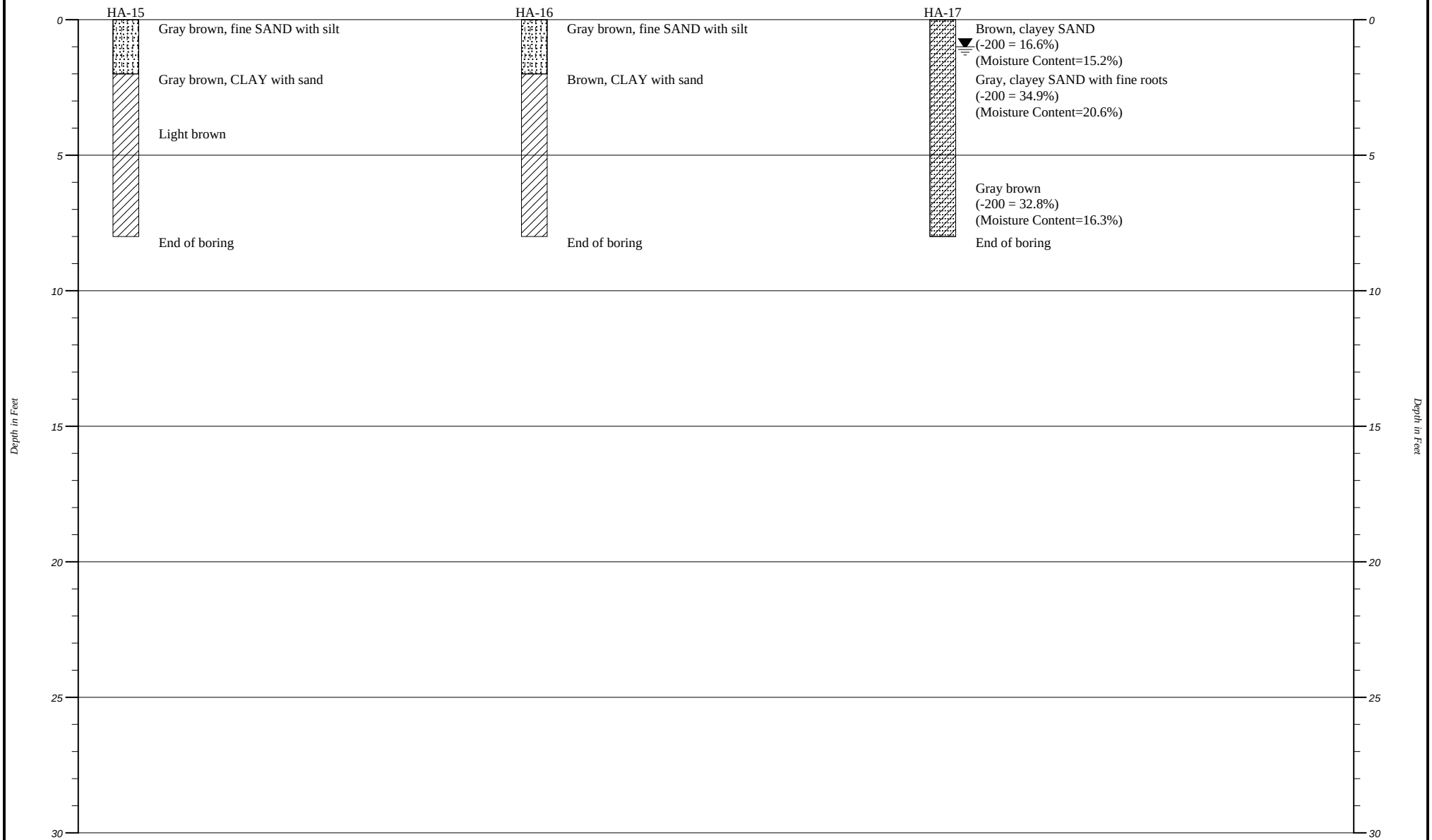
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/30/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

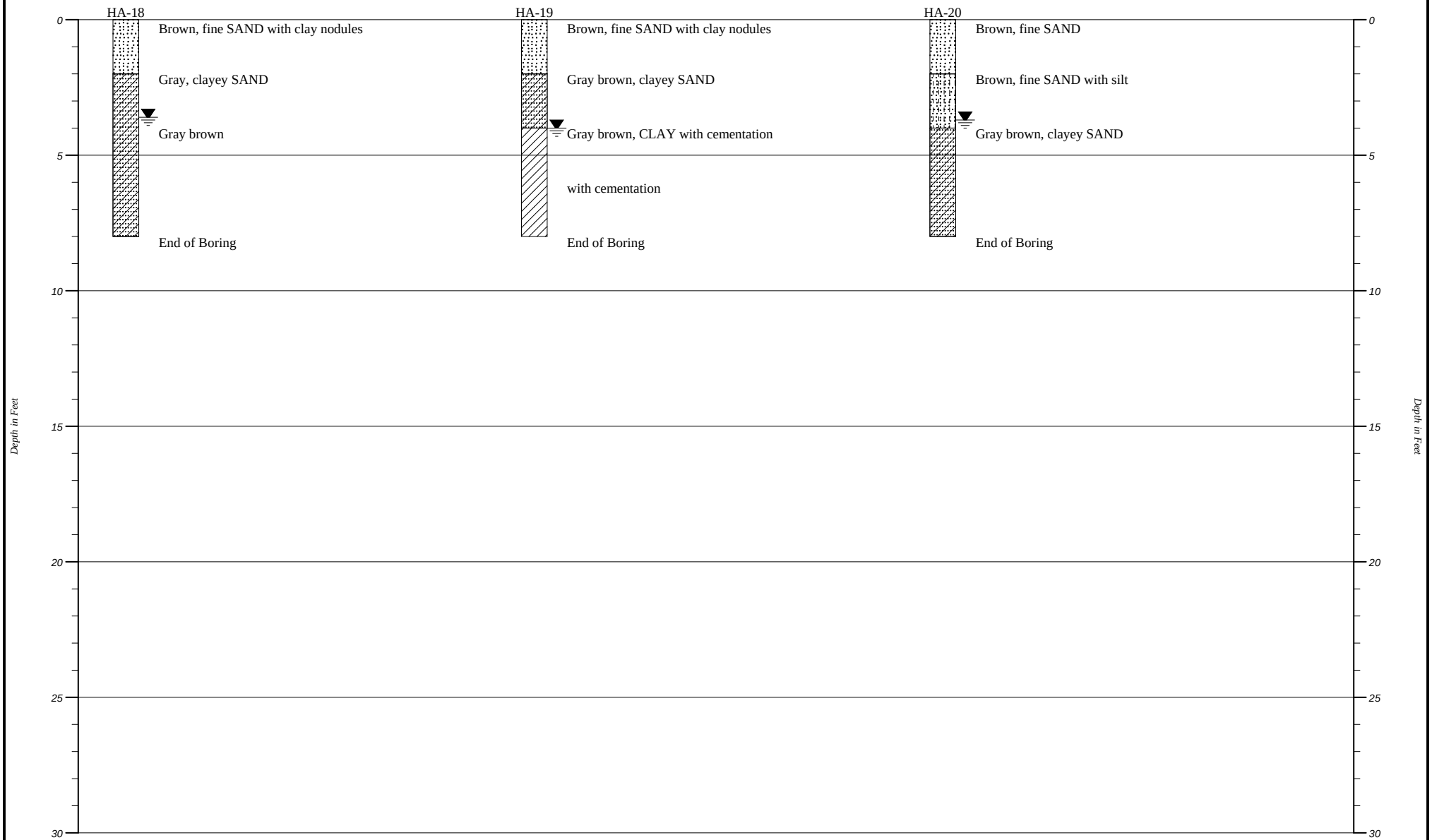
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/30/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

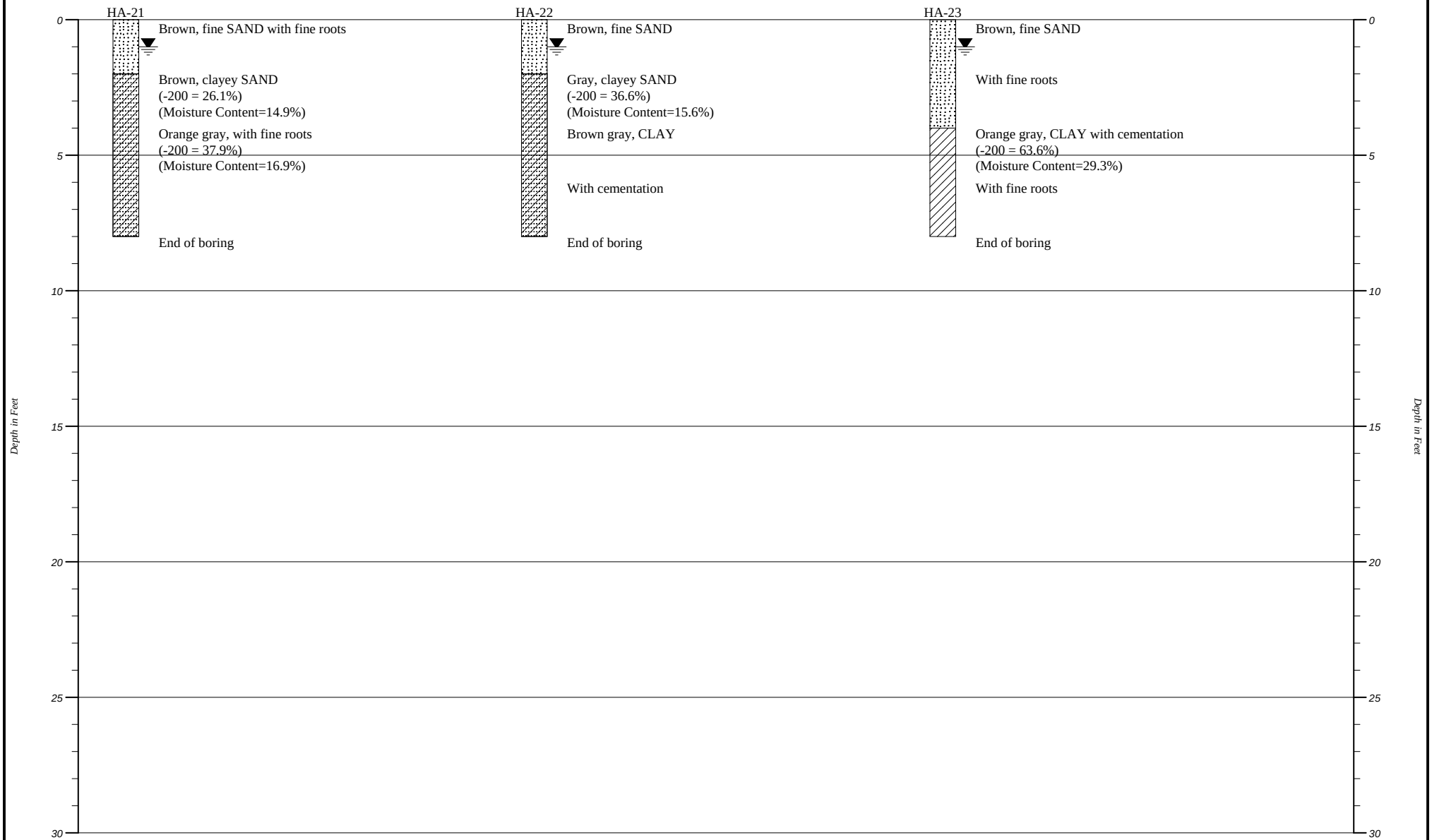
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 10/1/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

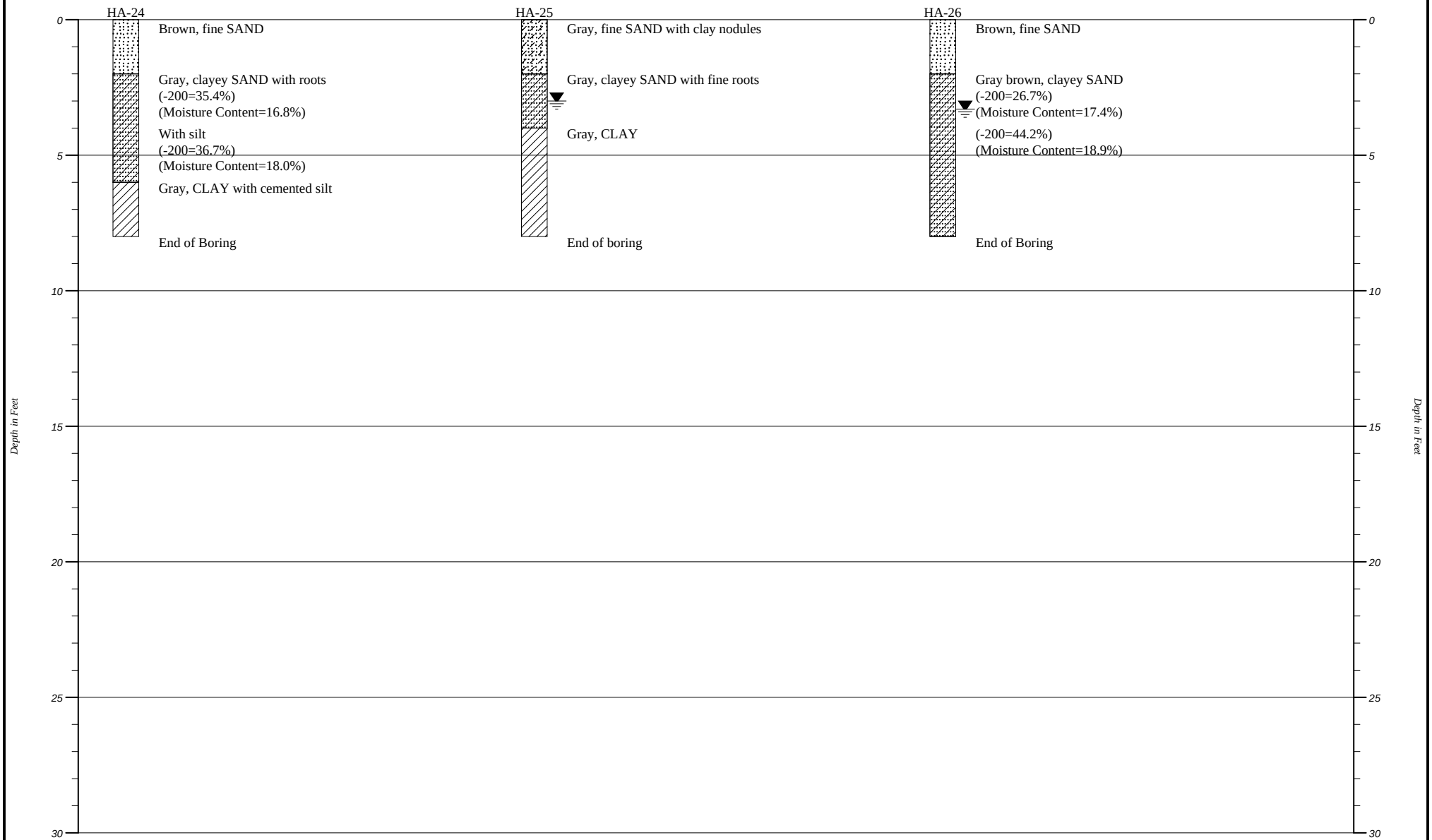
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/23/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

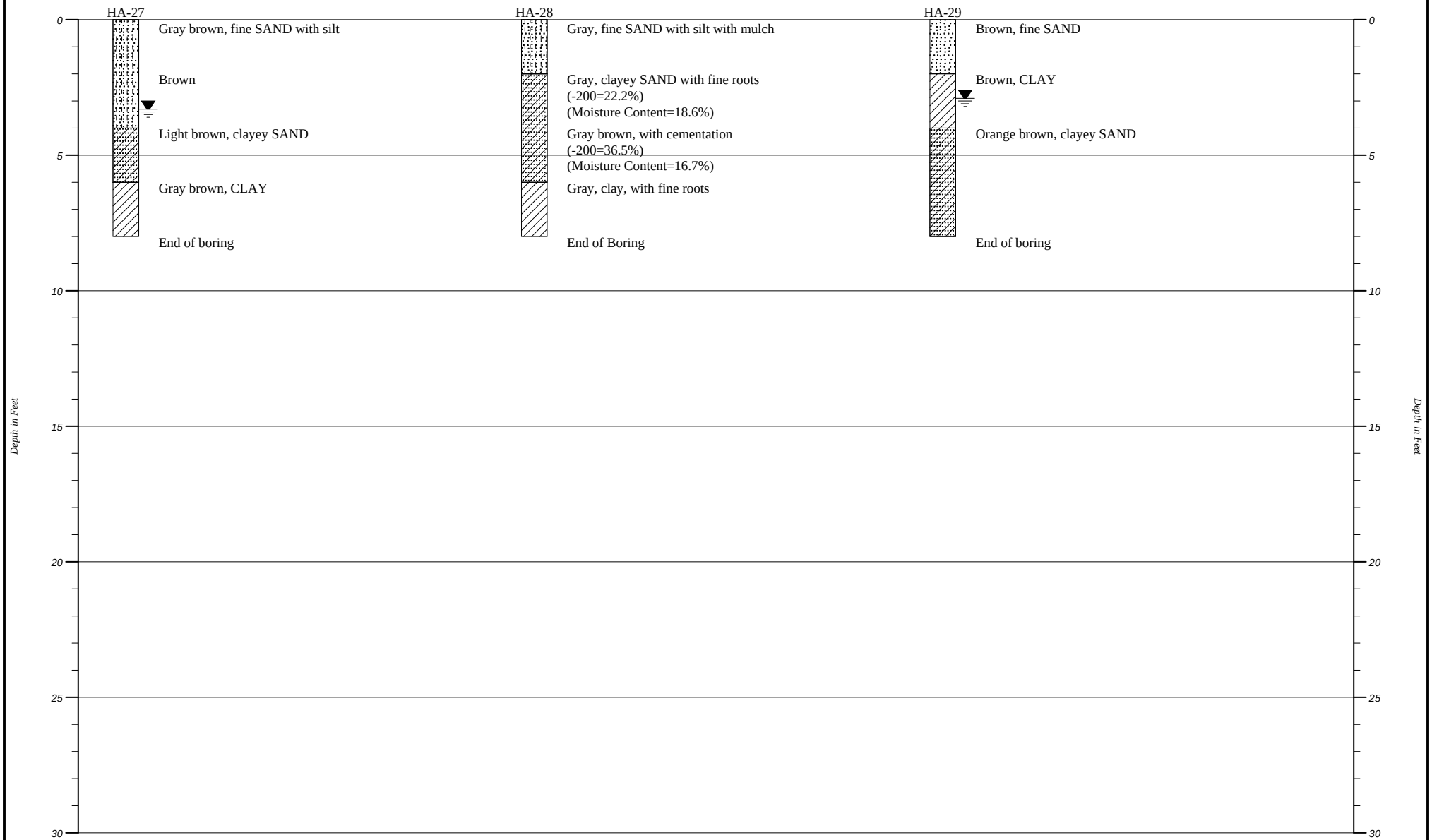
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/23/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

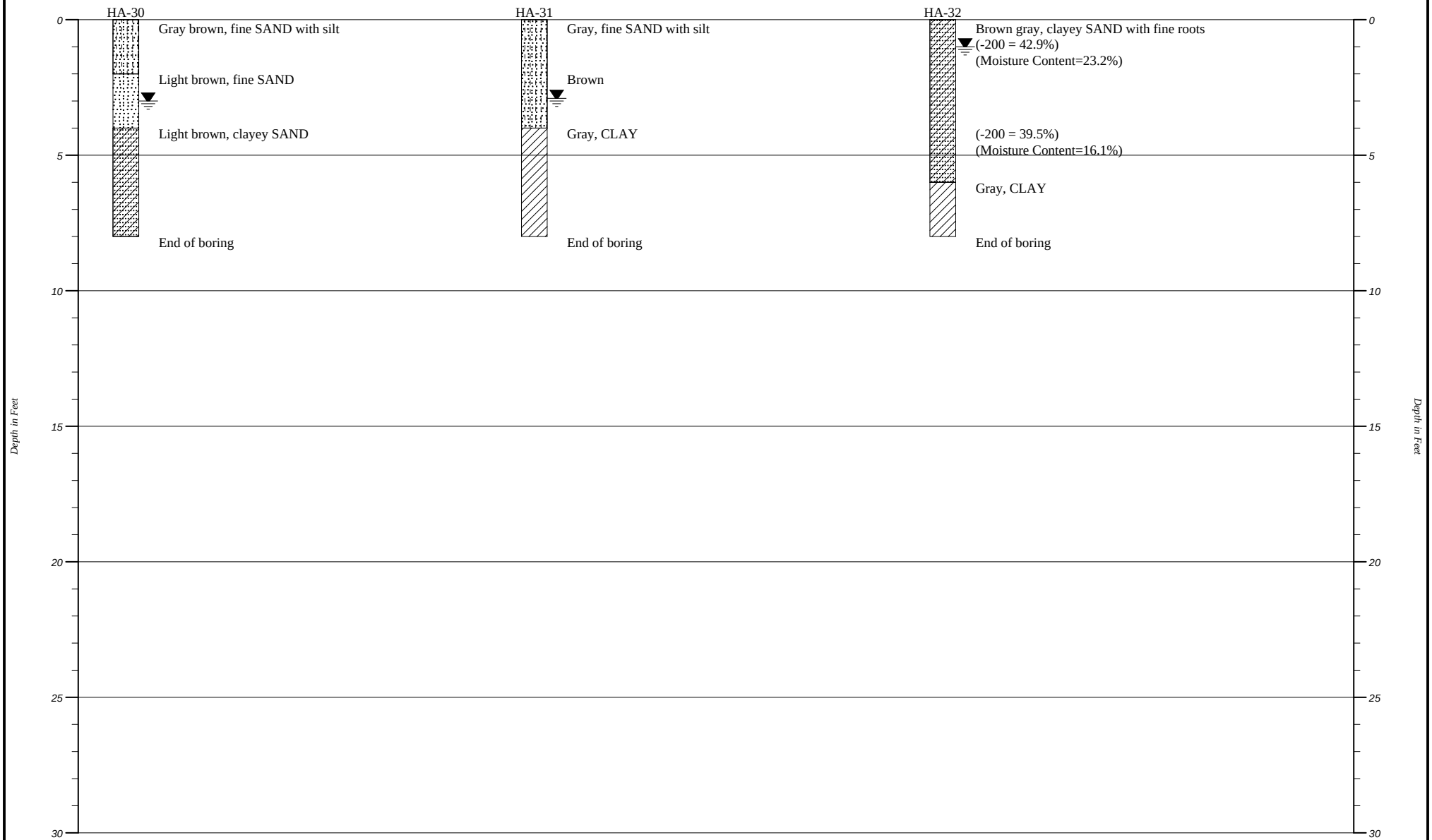
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/24/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

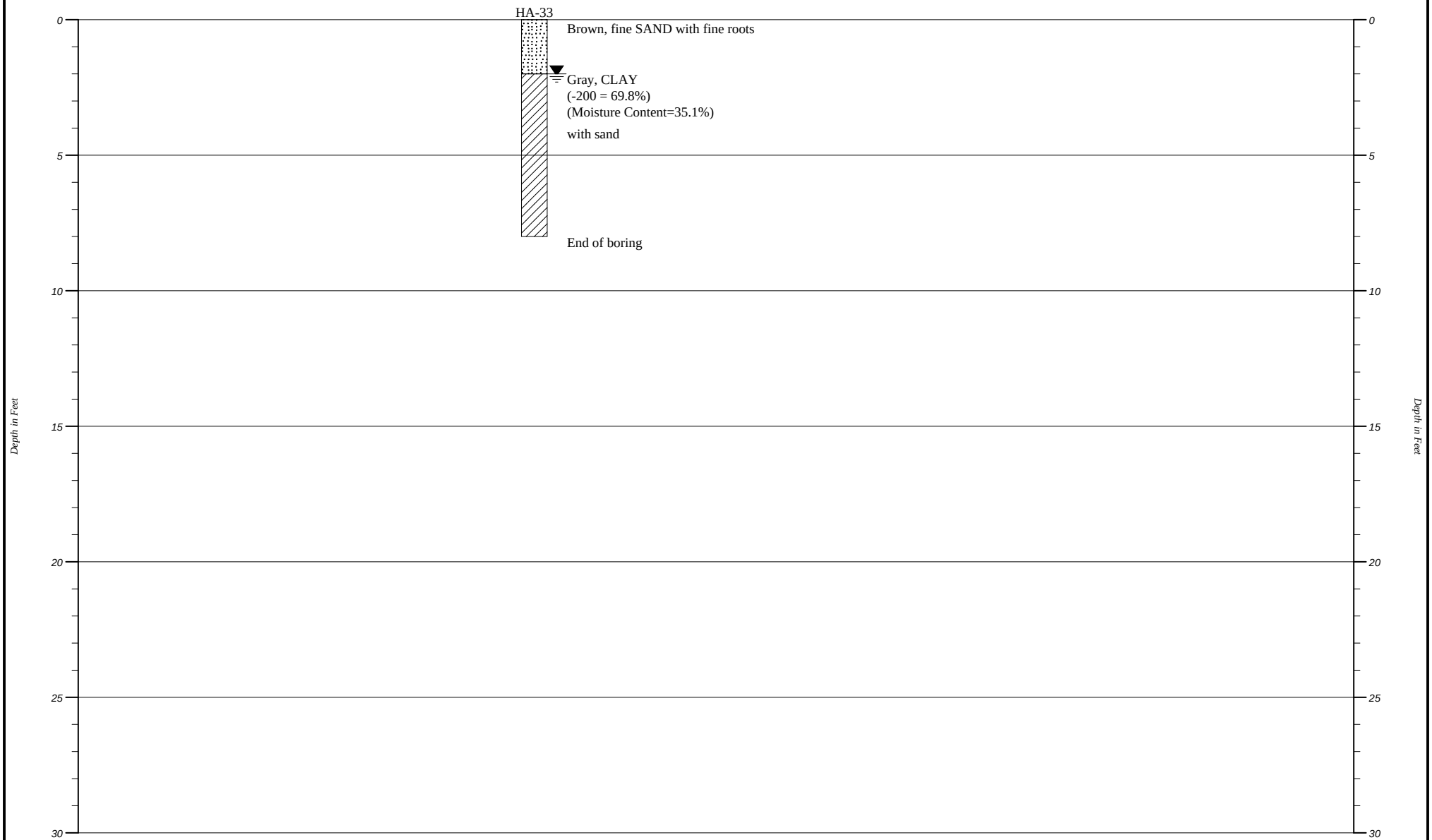
Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/24/2021 |

Gagne Parcel

PROJECT NO. 21-5233




Plan View

Strata symbols

- Clayey sand
- Poorly graded sand with clay
- Poorly graded sand
- Poorly graded sand with silt
- Low plasticity clay

Faulkner Engineering Services, Inc.

GENERALIZED SOIL PROFILE

| | | |
|---|---|---|
| HORIZONTAL SCALE: | DRAWN BY/APPROVED BY PK/DF | DATE PERFORMED |
| VERTICAL SCALE: 1"=5' | | 9/24/2021 |

Gagne Parcel

PROJECT NO. 21-5233

# APPENDIX C

## Key to Soil Classification

# UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

| Major Division | | Group Symbol | Laboratory Classification Data | | Soil Description |
|---|---|---|---|---|---|
| | | | Finer than No. 200 Sieve % | Supplementary Requirements | |
| Coarse-Grained (Over 50% by Weight Coarser than No. 200 Sieve) | Gravelly Soils (Over Half of Coarse Fraction Larger than No. 4 Sieve) | GW | 0 - 5* | $C_u \geq 4$ and $1 \leq C_c \leq 3$ | Well-Graded Gravels, Sandy Gravels |
| | | GP | 0 - 5* | $C_u < 4$ and / or $1 > C_c > 3$ | Gap-Graded or Uniform Gravels, Sandy Gravels |
| | | GM | 12 or More* | PI < 4 or Below A-Line | Silty Gravels, Silty Sandy Gravels |
| | | GC | 12 of More* | PI ≥ 7 and On or Above A-Line | Clayey Gravels, Clayey Sandy Gravels |
| | Sandy Soils (Over Half of Coarse Fraction Larger than No. 4 Sieve) | SW | 0 - 5* | $C_u \geq 6$ and $1 \leq C_c \leq 3$ | Well-Graded Sands, Gravelly Sands |
| | | SP | 0 - 5* | $C_u < 6$ and / or $1 > C_c > 3$ | Gap-Graded or Uniform Sands, Gravelly Sands |
| | | SM | 12 or More* | PI < 4 or Below A-Line | Silty Sands, Silty Gravelly Sands |
| | | SC | 12 of More* | PI ≥ 7 and On or Above A-Line | Clayey Sands, Clayey Gravelly Sands |
| Fine-Grained (Over 50% by Weight Finer than No. 200 Sieve) | LOW Compressibility (Liquid Limit Less Than 50) | ML | Plasticity Chart | | Silts, Very Fine Sands, Silty or Clayey Fine Sands, Micaceous Silts |
| | | CL | Plasticity Chart | | Low Plasticity Clays, Sandy or Silty Clays |
| | | OL | Plasticity Chart, Organic Odor or Color | | Organic Silts and Clays of Low Plasticity |
| | HIGH Compressibility (Liquid Limit Greater Than 50) | MH | Plasticity Chart | | Micaceous Silts, Diatomaceous Silts, Volcanic Ash |
| | | CH | Plasticity Chart | | Highly Plastic Clays and Sandy Clays |
| | | OH | Plasticity Chart, Organic Odor or Color | | Organic Silts and Clays of High Plasticity |
| Soils with Fibrous Organic Matter | | PT | Fibrous Organic Matter, Will Char, Burn, or Glow | | Peat, Sandy Peats, and Clayey Peat |

*For Soils having 5 to 12 percent passing the No. 200 Sieve, use a dual symbol such as GW-GC.

# DRILL HOLE LOG
## BORING NO.: LS-1

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | CL | Medium, gray brown, CLAY | | 1 | 2 2 4 | 6 | |
| | | | Stiff, gray | | 2 | 3 4 5 | 9 | |
| 5 | | | | | 3 | 3 5 6 | 11 | |
| | | SP-SC | Medium-Dense, brown, fine SAND with clay | | 4 | 4 4 8 | 12 | |
| | | CL | Hard, light brown, CLAY | | 5 | 9 12 13 | 25 | |
| 10 | | | | | | | | |
| | | | Very stiff, with cementation | | 6 | 6 6 11 | 17 | |
| 15 | | | | | | | | |
| | | | LIMESTONE | | 7 | 7 8 10 | 18 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: PB-9

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance 10 20 30 40 60 80 |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP-SM | Loose, brown, fine SAND with silt | | 1 | 3 2 3 | 5 | |
| | | | | | 2 | 2 2 3 | 5 | |
| 5 | | SC | Medium-Dense, brown, clayey SAND (-200=25.2%) | | 3 | 3 6 12 | 18 | |
| | | CL | Very Stiff, gray CLAY | | 4 | 4 7 10 | 17 | |
| | | | | | 5 | 12 11 13 | 24 | |
| 10 | | | | | | | | |
| | | | Stiff, light brown | | 6 | 4 4 7 | 11 | |
| 15 | | | | | | | | |
| | | | Very Stiff | | 7 | 6 7 9 | 16 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

# DRILL HOLE LOG
## BORING NO.: PB-10

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | CL | Stiff, gray brown, CLAY with sand | | 1 | 2 3 4 | 7 | |
| | | | Gray | | 2 | 3 5 5 | 10 | |
| 5 | | | Light gray | | 3 | 3 5 7 | 12 | |
| | | | Gray brown | | 4 | 4 4 6 | 10 | |
| | | | Very Stiff | | 5 | 5 8 9 | 17 | |
| 10 | | | | | | | | |
| | | | LIMESTONE with clay | | 6 | 6 8 12 | 20 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 5 7 7 | 14 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-11

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | CL | Stiff, brown, CLAY | | 1 | 2 4 6 | 10 | |
| | | | Medium, light gray brown | | 2 | 3 3 2 | 5 | |
| 5 | | | Stiff | | 3 | 3 3 4 | 7 | |
| | | | Very Stiff, brown | | 4 | 4 7 6 | 13 | |
| | | | Light brown | | 5 | 8 8 10 | 18 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 13 7 14 | 21 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 10 11 13 | 24 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

# DRILL HOLE LOG
## BORING NO.: PB-12

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | CL | Medium, gray brown, CLAY with sand | | 1 | 3 3 3 | 6 | |
| | | | Stiff, with sand | | 2 | 3 4 5 | 9 | |
| 5 | | | Very Stiff, gray, with cementation | | 3 | 3 5 10 | 15 | |
| | | | | | 4 | 4 9 13 | 22 | |
| | | | Hard, with cementation | | 5 | 12 14 17 | 31 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 8 9 11 | 20 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 7 10 13 | 23 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-13

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | CL | Medium, gray brown, CLAY with sand | | 1 | 3 2 3 | 5 | |
| | | | Stiff, gray | | 2 | 2 6 6 | 12 | |
| 5 | | | Gray brown, with sand | | 3 | 4 4 5 | 9 | |
| | | | Light brown | | 4 | 3 5 6 | 11 | |
| | | | Very Stiff | | 5 | 7 10 13 | 23 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 5 8 9 | 17 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 6 6 7 | 13 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-14

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SC | Loose, brown, clayey SAND | | 1 | 2 2 3 | 5 | |
| | | CL | Stiff, gray brown, CLAY with sand | | 2 | 2 4 7 | 11 | |
| 5 | | | | | 3 | 2 3 8 | 11 | |
| | | | Very Stiff, brown | | 4 | 4 6 10 | 16 | |
| | | | | | 5 | 8 8 11 | 19 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 3 2 2 | 4 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 2 4 4 | 8 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

**This information pertains only to this boring and should not be interpreted as being indicative of the site.**

# DRILL HOLE LOG
## BORING NO.: PB-15

**Project No.:** 21-5233
**Date:** 2/3/2022

**Project:** Gagne Parcel
**Client:** Meritage Homes
**Location:** Pasco County, Florida
**Driller:** J&R Precision Drilling, Inc.
**Drill Rig:** CME 45
**Depth to Water>** **Initial** ▽ :

**Elevation:** NA
**Logged By:** BB
**At Completion** ▼ : * NE

| Depth/ Elevation | Soil Symbols | USCS | Description | Sample Type | Sample No. | Standard Penetration Test Blows | N | Penetration Resistance (10 20 30 40 60 80) |
|---|---|---|---|---|---|---|---|---|
| 0 | | SP | Loose, brown, fine SAND | | 1 | 2 2 2 | 4 | |
| | | CL | Stiff, gray brown, CLAY | | 2 | 3 4 3 | 7 | |
| 5 | | | Very Stiff, light brown | | 3 | 3 6 7 | 13 | |
| | | SP-SC | Medium-Dense, brown, fine SAND with clay | | 4 | 5 5 8 | 13 | |
| | | CL | Very Stiff, light brown, CLAY | | 5 | 9 11 12 | 23 | |
| 10 | | | | | | | | |
| | | | LIMESTONE, with clay | | 6 | 3 3 4 | 7 | |
| 15 | | | | | | | | |
| | | | With clay | | 7 | 3 5 6 | 11 | |
| 20 | | | End of Boring | | | | | |
| 25 | | | | | | | | |
| 30 | | | | | | | | |
| 35 | | | | | | | | |

**Groundwater not encountered at first 10 feet*
*Loss of circulation at 13.5'-15'*

# KEY TO SYMBOLS

| Symbol | Description |
|---|---|
| **Strata symbols** | |
|  | Low plasticity clay |
|  | Poorly graded sand with clay |
|  | Limestone |
|  | Poorly graded sand with silt |
|  | Clayey sand |
|  | Poorly graded sand |
| **Soil Samplers** | |
|  | Standard penetration test |

**Notes:**

1. Exploratory boring were performed using a 2-inch diameter split barrel sampler driven by a 140 lbs hammer (In accordance with ASTM D1586)

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

# Table 1 - Groundwater Data

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| BB-1 | - | 4.0 | 2.0 |
| BB-2 | - | 3.4 | 2.0 |
| BB-3 | - | 4.0 | 3.0 |
| BB-4 | - | 4.0 | 3.0 |
| BB-5 | - | 3.4 | 2.0 |
| BB-6 | - | 3.5 | 2.0 |
| BB-7 | - | 3.7 | 2.0 |
| BB-8 | - | 4.1 | 3.0 |
| BB-9 | - | NE | 2.0 |
| BB-10 | - | 3.4 | 2.0 |
| BB-11 | - | 4.2 | 2.0 |
| BB-12 | - | 1.0 | 1.0 |
| BB-13 | - | 1.0 | 1.0 |
| BB-14 | - | NE | 1.0 |
| BB-15 | - | 3.3 | 2.5 |
| BB-16 | - | 3.0 | 2.0 |
| BB-17 | - | 3.3 | 2.5 |
| BB-18 | - | 3.7 | 3.0 |
| BB-19 | - | 3.0 | 2.0 |
| BB-20 | - | 3.0 | 2.5 |
| BB-21 | - | 2.9 | 2.0 |
| BB-22 | - | 2.3 | 1.5 |
| BB-23 | - | 1.0 | 1.0 |
| BB-24 | - | 1.0 | 1.0 |
| BB-25 | - | 2.0 | 1.5 |
| BB-26 | - | NE | 2.0 |
| BB-27 | - | NE | 2.0 |
| BB-28 | - | 1.0 | 1.0 |
| BB-29 | - | 3.6 | 3.0 |
| BB-30 | - | 2.0 | 1.5 |
| BB-31 | - | NE | 2.0 |
| BB-32 | - | NE | 1.5 |
| BB-33 | - | 3.0 | 2.5 |
| BB-34 | - | 3.0 | 2.5 |
| BB-35 | - | NE | 3.0 |
| BB-36 | - | NE | 2.0 |
| PB-1 | - | 3.5 | 2.0 |
| PB-2 | - | 3.0 | 2.0 |

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| PB-3 | - | NE | 2.5 |
| PB-4 | - | 3.3 | 2.0 |
| PB-5 | - | 1.0 | 1.0 |
| PB-6 | - | 3.0 | 2.0 |
| PB-7 | - | 3.0 | 2.5 |
| PB-8 | - | NE | 1.0 |
| PB-9 | - | NE | 2.0 |
| PB-10 | - | NE | 1.0 |
| PB-11 | - | NE | 1.0 |
| PB-12 | - | NE | 1.0 |
| PB-13 | - | NE | 0.5 |
| PB-14 | - | NE | 2.0 |
| PB-15 | - | NE | 2.0 |
| LS-1 | - | NE | 1.0 |
| AB-1 | - | 6.4 | 5.0 |
| AB-2 | - | 6.5 | 5.0 |
| AB-3 | - | 6.7 | 5.0 |
| AB-4 | - | 6.2 | 5.0 |
| HA-1 | - | 3.2 | 2.0 |
| HA-2 | - | 3.3 | 2.0 |
| HA-3 | - | 3.8 | 3.0 |
| HA-4 | - | 4.0 | 2.0 |
| HA-5 | - | 3.7 | 3.0 |
| HA-6 | - | 3.8 | 3.0 |
| HA-7 | - | 4.0 | 3.0 |
| HA-8 | - | 3.8 | 2.0 |
| HA-9 | - | 3.8 | 2.0 |
| HA-10 | - | 3.5 | 2.5 |
| HA-11 | - | 3.0 | 1.0 |
| HA-12 | - | 3.0 | 2.5 |
| HA-13 | - | 1.3 | 1.0 |
| HA-14 | - | 3.6 | 2.0 |
| HA-15 | - | NE | 2.0 |
| HA-16 | - | NE | 2.0 |
| HA-17 | - | 1.0 | 1.0 |
| HA-18 | - | 3.6 | 2.0 |
| HA-19 | - | 4.0 | 2.0 |
| HA-20 | - | 3.7 | 3.0 |
| HA-21 | - | 1.0 | 1.0 |
| HA-22 | - | 1.0 | 1.0 |

| Boring | Ground Elevation | Existing Groundwater Table | Estimated SHGWT[3] from Field Exploration |
|---|---|---|---|
| | (feet, NAVD 1988)[1] | (feet, bgs)[2] | (feet, bgs)[2] |
| HA-23 | - | 1.0 | 1.0 |
| HA-24 | - | NE | 2.0 |
| HA-25 | - | 3.0 | 2.0 |
| HA-26 | - | 3.3 | 2.0 |
| HA-27 | - | 3.3 | 2.5 |
| HA-28 | - | NE | 2.0 |
| HA-29 | - | 2.9 | 2.0 |
| HA-30 | - | 3.0 | 2.5 |
| HA-31 | - | 2.9 | 2.0 |
| HA-32 | - | 1.0 | 1.0 |
| HA-33 | - | 2.0 | 1.5 |

[1] - North American Vertical Datum, ground elevations not available at time of drilling

[2] - Below Ground Surface

[3] - Seasonal High Groundwater Table

NE - Not encountered in the first 10 feet (SPT boring) or boring termination (auger borings)