



# Report of Subsurface Exploration and Geotechnical Engineering Evaluation

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Oconee County Maintenance and EMS Facility  
7575 Macon Highway  
Watkinsville, Georgia

Geo-Hydro Project Number 261576.20

**May 28, 2026**

**SUBMITTED TO:**

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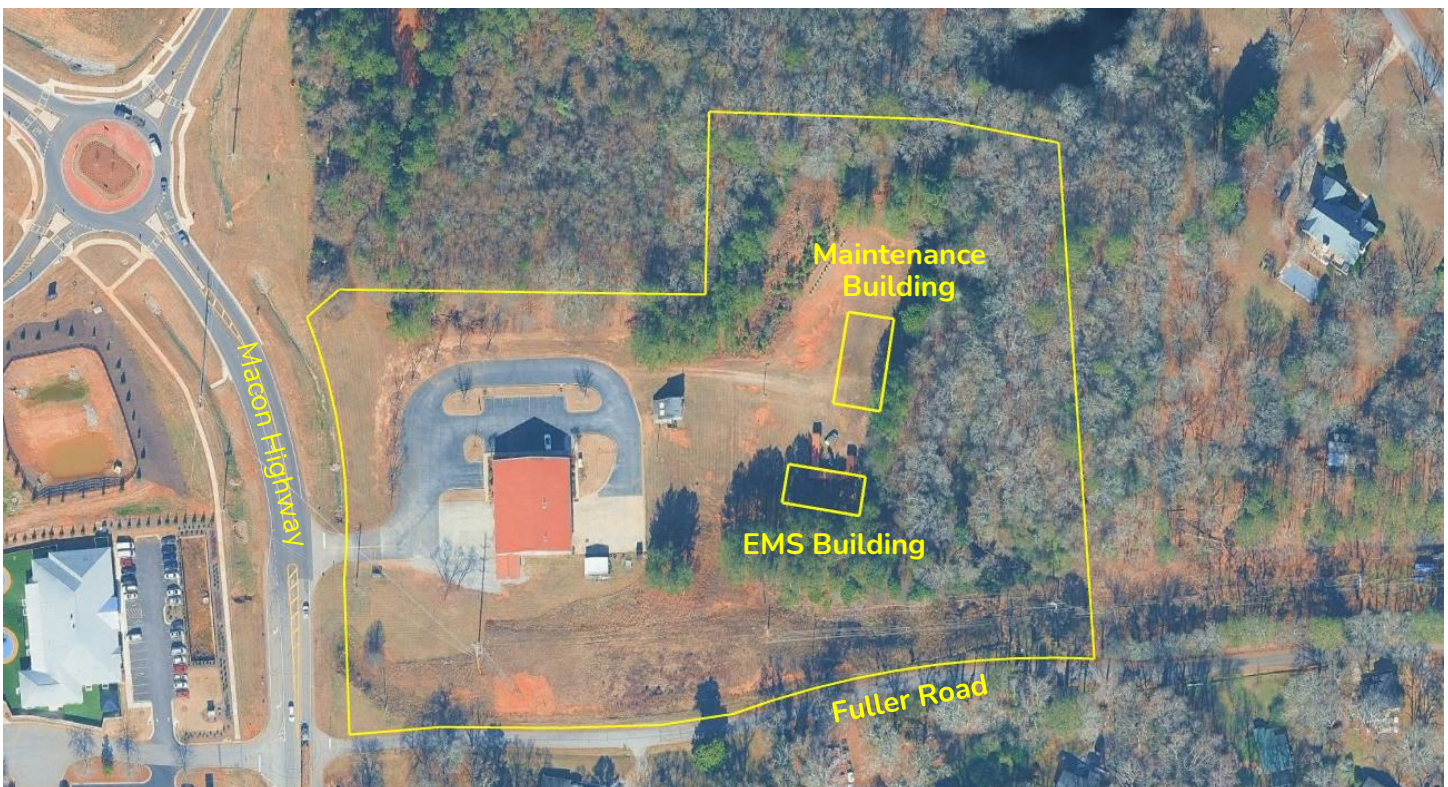
## **REPORT SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION**

**OCONEE COUNTY MAINTENANCE AND EMS FACILITY  
7575 MACON HIGHWAY  
WATKINSVILLE, GEORGIA  
GEO-HYDRO PROJECT NUMBER 261576.20**

Geo-Hydro Engineers, Inc. has completed the authorized subsurface exploration for the above referenced project. The scope of services for this project was outlined in our proposal number 261576.P0 REV 1, dated April 15, 2026.

The project consists of a new EMS building and county maintenance building with associated parking lots, access drives, and stormwater detention pond. We expect the new buildings to be single-story structures with masonry walls or a structural steel frame and metal panel walls. At the time of this report, we have not been provided structural loading information. Based on our experience with similar projects, we have assumed that column loads will not exceed 50 kips with wall loads no greater than 4 kips per lineal foot.

The project site is currently part of the existing Oconee County Fire/Rescue Station 1. The area of the planned construction is sparsely grassed with some wooded and overgrown areas. The ground surface within the construction area generally slopes down from west to east. We have assumed that site grading will include no more than 10 feet of mass excavation or structural fill placement. The annotated aerial photo below shows the approximate overall site limits (including Fire/Rescue Station 1), current site conditions, and the approximate planned building footprints.



## EXPLORATORY PROCEDURES

The subsurface exploration consisted of fifteen machine-drilled soil test borings performed at the approximate locations shown on Figure 2 included in the Appendix. The borings were located in the field by Geo-Hydro utilizing a handheld GPS unit with preloaded coordinates, and by measuring distances from site reference points. In general, the boring locations should be considered approximate.

Standard penetration testing, as outlined in ASTM D1586, was performed at select depth intervals in the machine-drilled soil test borings. Soil samples obtained from the drilling operation were examined and classified in general accordance with ASTM D2488 (Visual-Manual Procedure for Description of Soils). Soil classifications include the Unified Soil Classification System described in ASTM D2487 (Classification of Soils for Engineering Purposes). The soil classifications also include our evaluation of the geologic origin of the soils. Evaluations of geologic origin are based on our experience and interpolation and may be subject to some degree of error.

Descriptions of the soils encountered, groundwater conditions, standard penetration resistances, and other pertinent information are provided in the test boring records included in the Appendix.

## REGIONAL GEOLOGY

The project site is located in the Southern Piedmont Geologic Province of Georgia. Soils in this area have been formed by the in-place weathering of the underlying crystalline rock, which accounts for their classification as “residual” soils. Residual soils near the ground surface, which have experienced advanced weathering, frequently consist of red brown clayey silt (ML) or silty clay (CL). The thickness of this surficial clayey zone may range up to roughly 6 feet. For various reasons, such as erosion or local variation of mineralization, the upper clayey zone is not always present.

With increased depth, the soil becomes less weathered, coarser grained, and the structural character of the underlying parent rock becomes more evident. These residual soils are typically classified as sandy micaceous silt (ML) or silty micaceous sand (SM). With a further increase in depth, the soils eventually become quite hard and take on an increasing resemblance to the underlying parent rock. When these materials have a standard penetration resistance of 100 blows per foot or greater, they are referred to as partially weathered rock. The transition from soil to partially weathered rock is usually a gradual one, and may occur at a wide range of depths. Lenses or layers of partially weathered rock are not unusual in the soil profile.

Partially weathered rock represents the zone of transition between the soil and the indurated metamorphic rocks from which the soils are derived. The subsurface profile is, in fact, a history of the weathering process which the crystalline rock has undergone. The degree of weathering is most advanced at the ground surface, where fine grained soil may be present. And the weathering process is in its early stages immediately above the surface of relatively sound rock, where partially weathered rock may be found.

The thickness of the zone of partially weathered rock and the depth to the rock surface have both been found to vary considerably over relatively short distances. The depth to the rock surface may frequently range from the ground surface to 80 feet or more. The thickness of partially weathered rock, which overlies the rock surface, may vary from only a few inches to as much as 40 feet or more.

## SOIL TEST BORING SUMMARY

Starting at the ground surface, all borings encountered approximately 2 to 4 inches of topsoil. Detailed measurements necessary for quantity estimation were not performed for this project. For planning purposes, we recommend assuming a surface material thickness of 6 inches in grassed/landscaped areas.

Beneath the surface materials, all borings except B-13 encountered fill materials classified as silty sand, sandy clay, and clayey sand with varying amounts of rock fragments and organic content extending to depths ranging from about 3 to 18 feet. Standard penetration test resistances recorded in the fill ranged from 4 blows per foot to greater than 100 blows per foot. It should be noted that rock fragments and other hard inclusions will artificially amplify the standard penetration test resistance and such elevated values are not a reliable indicator of the consistency or engineering properties of the fill.

Beneath the surface materials or fill materials, all borings encountered residual soils typical of the Piedmont region. The residual soils were classified as clayey silt, sandy silt, silty clay, clayey sand, and silty sand with varying mica content. Standard penetration test resistances recorded in the residual soils ranged from 10 to 28 blows per foot.

Partially weathered rock was encountered in boring B-8 at a depth of about 18 feet. Partially weathered rock is locally defined as residual material with a standard penetration test resistance of 100 blows per foot or greater. Auger was encountered in borings B-2 and B-3 at depths of 18 and 13 feet, respectively. Auger refusal is the condition that prevents further advancement of the boring using conventional soil drilling techniques. In a residual profile, the material causing auger refusal may consist of a boulder, a lens or layer of rock, the upper surface of relatively massive rock, or other hard material.

At the time of drilling, groundwater was not encountered in the test borings. The borings were backfilled with soil cuttings after the final groundwater level check. It should be noted that groundwater levels will fluctuate several feet depending on yearly and seasonal rainfall variations and other factors and may rise in the future.

For more detailed descriptions of subsurface conditions, please refer to the test boring records included in the Appendix.

## TEST BORING SUMMARY

| BORING | BOTTOM OF FILL<br>(FEET) | GROUNDWATER<br>AT TIME OF<br>DRILLING (FEET) | TOP OF PWR<br>(FEET) | AUGER REFUSAL<br>(FEET) | BORING<br>TERMINATION<br>(FEET) |
|--------|--------------------------|----------------------------------------------|----------------------|-------------------------|---------------------------------|
| B-1    | 6                        | NE                                           | NE                   | NE                      | 20                              |
| B-2    | 8                        | NE                                           | NE                   | 18                      | 18                              |
| B-3    | 8                        | NE                                           | NE                   | 13                      | 13                              |
| B-4    | 18                       | NE                                           | NE                   | NE                      | 20                              |
| B-5    | 13                       | NE                                           | NE                   | NE                      | 20                              |
| B-6    | 13                       | NE                                           | NE                   | NE                      | 20                              |
| B-7    | 3                        | NE                                           | NE                   | NE                      | 20                              |
| B-8    | 6                        | NE                                           | 18                   | NE                      | 20                              |
| B-9    | 18                       | NE                                           | NE                   | NE                      | 20                              |
| B-10   | 13                       | NE                                           | NE                   | NE                      | 20                              |
| B-11   | 6                        | NE                                           | NE                   | NE                      | 20                              |
| B-12   | 6                        | NE                                           | NE                   | NE                      | 20                              |

| BORING | BOTTOM OF FILL<br>(FEET) | GROUNDWATER<br>AT TIME OF<br>DRILLING (FEET) | TOP OF PWR<br>(FEET) | AUGER REFUSAL<br>(FEET) | BORING<br>TERMINATION<br>(FEET) |
|--------|--------------------------|----------------------------------------------|----------------------|-------------------------|---------------------------------|
| B-13   | NE                       | NE                                           | NE                   | NE                      | 20                              |
| B-14   | 3                        | NE                                           | NE                   | NE                      | 20                              |
| B-15   | 6                        | NE                                           | NE                   | 5*                      | 20                              |

All depths should be considered approximate

NE: Not Encountered

PWR: Partially Weathered Rock

\*Initially encountered auger refusal at 5 feet. Offset 5 feet north. Offset boring was extended to the planned depth of 20 feet

## EVALUATIONS AND RECOMMENDATIONS

The following evaluations and recommendations are based on the information available on the proposed construction, the data obtained from the soil test borings, and our experience with soils and subsurface conditions similar to those encountered at this site. Because the exploration represents a statistically small sampling of subsurface conditions, it is possible that conditions may be encountered during construction that are substantially different from those indicated by the test borings. In these instances, adjustments to the design and construction may be necessary.

### Geotechnical Considerations

The following geotechnical characteristics of the site should be considered for planning and design:

- Fill materials were encountered in all borings except B-13 extending to depths ranging from about 3 to 18 feet. Borings B-4, B-5, B-6, and B-10 encountered noticeable organics within the fill mass at depths ranging from about 13 to 18 feet. Additionally, some of the fill in borings B-3, B-9, and B-15 contained abundant rock fragments which artificially elevated the recorded standard penetration test resistances. Such elevated values are not a reliable indicator of the consistency or engineering properties of the fill. We expect that any fill encountered on site during construction will be highly variable, and it is likely that some management of poor-quality or loose fill will be necessary during construction. Any loose, unstable fill material that cannot be readily densified in place should be removed and replaced with well compacted structural fill.
- Groundwater was not encountered in the test borings at the time of drilling. We do not expect groundwater to be a hindrance for design or construction. However, the contractor must be prepared to manage surface runoff during wet weather conditions and subsurface drainage will be necessary behind all below-grade structures, including foundation walls.
- Partially weathered rock was encountered in boring B-8 at a depth of 18 feet. The results of the borings indicate generally favorable excavation conditions for the planned construction. However, it is important to note that the depth to rock or partially weathered rock may vary drastically over relatively short distances, and it would not be unusual for rock or partially weathered rock to occur at shallower elevations between or around some of the soil test borings.
- Based on the results of the soil test borings, most excavated fill materials and residual soils should be reusable as structural fill. However, organic debris and other refuse (borings B-4, B-5, B-6, and B-10) may render some excavated materials unsuitable if the debris cannot be segregated. Additionally, organic materials such as topsoil in excess of about 5 to 6 percent by weight (ASTM D2974) will also make excavated materials unsuitable for reuse. Routine adjustment of moisture content will be required to allow proper placement and compaction of excavated materials.

- Borings B-1, B-2, B-4, and B-5 were located within the maintenance building footprint and borings B-6, B-7, B-8, and B-9 were located within the proposed EMS building footprint. The maintenance building footprint contains fill materials extending to depths ranging from about 6 to 18 feet, while fill materials within the EMS building footprint extended to depths ranging from about 3 to 18 feet. The erratic composition as well as the erratic and in many instances loose consistency of the fill represents a high risk of excessive total and differential settlement for the planned buildings. Without improvement, the existing fill cannot be relied upon to support building foundations and floor slabs.
- To manage the marginal fill materials and mitigate the risk of excessive foundation settlement, we suggest a partial excavation and replacement approach to remove some of the existing fill within each building pad and replace the excavated materials with new structural fill or the fill excavated from the pads. The new or reused fill would be adjusted for moisture content and properly placed and compacted. We recommend extending the remedial excavation to a depth of 8 feet below planned subgrade elevation, and roughly 10 feet laterally beyond the building limits.
- After proper preparation of the building pads (undercut/replace) and thorough evaluation of foundation excavations, it is our opinion that the planned buildings can be supported using a monolithic reinforced concrete floor system with foundation turndown. Conventional shallow foundations and slab-on-grade floors are also feasible, but considering the depth and variability of the fill that will be left in place under the new building pads, a monolithic floor with foundation turndowns is a better match for the site conditions.

For planning purposes, we recommend using an allowable bearing pressure of 2,000 psf. This allowable bearing pressure is based on column loads no greater than 50 kips and wall loads not exceeding 4 kips per lineal foot.

- On January 1, 2026, Georgia adopted the 2024 version of the International Building Code( IBC), which references ASCE 7-22 regarding many subjects including seismic design. Following the guidelines outlined in IBC 2024 (ASCE 7-22) the *Default Seismic Site Class* should be used for the project. The seismic design parameters are as follows:  $S_S=0.27$ ,  $S_1=0.093$ ,  $S_{DS}=0.22$ ,  $S_{D1}=0.13$ . The *Seismic Design Category (SDC)* for the site is **B**.

The following sections provide recommendations regarding these issues and other geotechnical aspects of the project.

### Existing Fill Materials

Fill materials were encountered in all borings except B-13 extending to depths ranging from about 3 to 18 feet. Borings B-4, B-5, B-6, and B-10 encountered noticeable organics within the fill mass at depths ranging from about 13 to 18 feet. Additionally, some of the fill in borings B-3, B-9, and B-15 contained abundant rock fragments which artificially elevated the recorded standard penetration test resistances. Such elevated values are not a reliable indicator of the consistency or engineering properties of the fill.

There are a few important facts that should be considered regarding existing fill materials and the limitations of subsurface exploration.

- The quality of existing fill materials can be highly variable, and test borings are often not able to detect all of the zones or layers of poor quality fill materials.
- Layers of poor quality fill materials that are less than about 2.5 to 5 feet thick may often remain undetected by soil test borings due to the discrete-interval sampling method used in this exploration.

- The interface between existing fill materials and the original ground surface may include a layer of organic material that was not properly stripped off during the original grading. Depending on its relationship to site hardscapes or pavements, an organic layer might adversely affect support of the site features. If such organic layers are encountered during construction, it may be necessary to “chase out” the organic layer by excavating the layer along with the overlaying soils.
- Subsurface exploration is simply not capable of disclosing all conditions that may require remediation.

## General Site Preparation

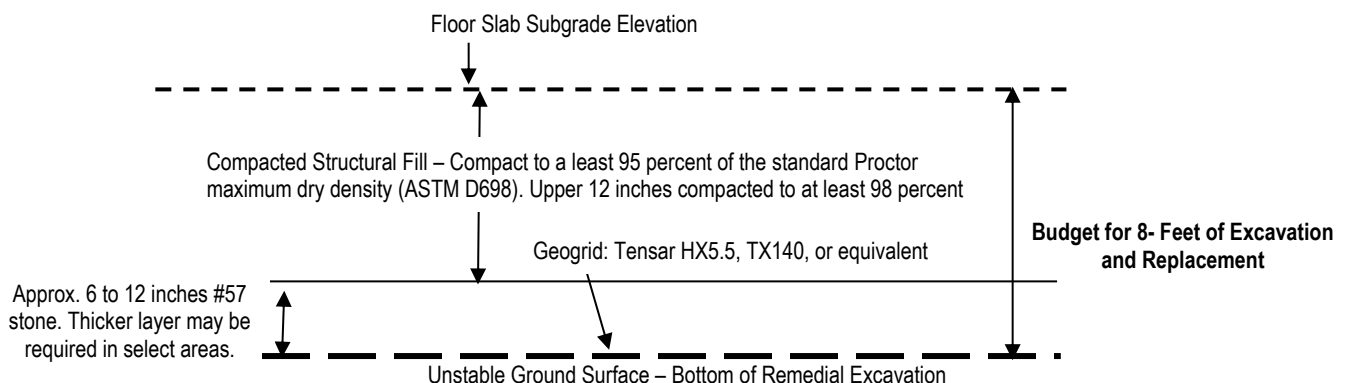
Vegetation, topsoil, trash, pavements, demolition debris, and other deleterious materials should be removed from the proposed construction area. All existing utilities should be excavated and removed unless they are to be incorporated into the new construction. Additionally, site clearing, grubbing, and stripping should be performed only during dry weather conditions. Operation of heavy equipment on the site during wet conditions could result in excessive rutting and mixing of topsoil and debris with underlying soils. All excavations resulting from rerouting of underground utilities and demolition of foundation and other below-grade structures should be backfilled in accordance with the *Structural Fill* section of this report.

We recommend that areas to receive structural fill be proofrolled prior to placement of structural fill. Areas of proposed excavation should be proofrolled after rough finished subgrade is achieved. Proofrolling should be performed with multiple passes in at least two directions using a fully loaded tandem axle dump truck weighing at least 18 tons. Proofrolling must be avoided within 10 feet of rights-of-way, utility easements, or any hardscapes to remain. If low consistency soils are encountered that cannot be adequately densified in place, such soils should be removed and replaced with well compacted fill material placed in accordance with the Structural Fill section of this report. Proofrolling should be observed by Geo-Hydro to determine if remedial measures are necessary.

## Building Pads – Partial Excavation and Replacement of Fill Materials

The following describes the excavation and replacement approach to allow conventional shallow foundation support.

- Excavate the approximate area of the proposed building footprints to a depth of 8 feet below planned subgrade elevation or until residual soils are encountered, whichever occurs first. The test borings show varying fill depths within the building footprints ranging from about 3 to 18 feet below current grades. It is unlikely that the bottom of the resulting remedial excavations will be flat. Temporary excavation slopes should have a gradient no steeper than 1.5H:1V. Depending on conditions at the time of excavation, a flatter slope gradient may be necessary to maintain safe working conditions.



- The resulting excavation bottom should be stabilized as necessary by placing a Tensar HX5.5 or TX-140 geogrid (or approved equivalent) and about 6 to 12 inches of #57 stone to provide a relatively unyielding working surface on which to place new structural fill. Please refer to the Structural Fill section of this report for recommendations regarding the nature, placement, and compaction of backfill materials.

After proper preparation of the building pads (undercut/replace) and thorough evaluation of foundation excavations, it is our opinion that the planned buildings can be supported using a monolithic reinforced concrete floor system with foundation turndown. Conventional shallow foundations and slab-on-grade floors are also feasible, but considering the depth and variability of the fill that will be left in place under the new building pads, a monolithic floor with foundation turndowns is a better match for the site conditions.

During site preparation, burn pits or trash pits may be encountered. Any buried debris or trash found during the construction operation should be thoroughly excavated and removed from the site.

## Groundwater

At the time of drilling, groundwater was not encountered in the test borings. Based on the results of the test borings, we do not expect groundwater to be a hinderance to site development and construction. It is important to note that the groundwater level will fluctuate over time depending on local rainfall amounts and other factors and may be encountered at higher elevations during site grading. Regardless of groundwater conditions, the contractor should be prepared to manage runoff during wet weather conditions, and subsurface drainage will be necessary behind all below-grade structures including foundation walls.

## Excavation Characteristics

Partially weathered rock was encountered in boring B-8 at a depth of about 18 feet. Materials causing auger refusal consistent with mass rock were encountered in borings B-2 and B-3 at depths of 18 and 13 feet, respectively. Boring B-15 initially encountered materials causing auger refusal at a depth of 5 feet. However, a boring offset reached the target depth of 20 feet. The results of the borings indicate generally favorable excavation conditions for the planned construction.

It is important to note that the depth to rock or partially weathered rock may vary drastically over relatively short distances, and it would not be unusual for rock or partially weathered rock to occur at elevations between or around some of the soil test borings.

For construction bidding and field verification purposes it is common to provide a verifiable definition of rock in the project specifications. The following are typical definitions of mass rock and trench rock:

- **Mass Rock:** Material which cannot be excavated with a single-tooth ripper drawn by a crawler tractor having a minimum draw bar pull rated at 56,000 pounds (Caterpillar D-8K or equivalent) and occupying an original volume of at least one cubic yard.
- **Trench Rock:** Material occupying an original volume of at least one-half cubic yard which cannot be excavated with a hydraulic excavator having a minimum flywheel power rating of 123 kW (165 hp); such as a Caterpillar 322C L, John Deere 230C LC, or a Komatsu PC220LC-7; equipped with a short tip radius bucket not wider than 42 inches.

The foregoing definitions are based on large equipment typically utilized for mass grading. Retail excavations for building foundations, retaining walls, and underground utilities are often performed with smaller equipment such as rubber-tired backhoe/loaders or even mini-excavators. Contractors will often request additional payment for mobilizing larger equipment than that which was anticipated during preparation of their

construction bid. The amount of additional compensation, if any, and the minimum equipment size necessary to qualify for any additional compensation should be defined before the start of construction.

### **Reuse of Excavated Materials**

Based on the results of the soil test borings, residual soils should be reusable as structural fill. Whether excavated fill materials can be reused will depend on the composition of the fill. Organic debris and other refuse may render some excavated materials unsuitable if the debris cannot be segregated. Additionally, organic materials in excess of about 5 to 6 percent by weight (ASTM D2974) will also make excavated materials unsuitable for reuse. Soft, unstable fill soils free of deleterious materials may be reusable after routine moisture adjustment. Routine adjustment of moisture content will be required to facilitate the reuse of excavated fill and residual soils.

It is important to establish as part of the construction contract whether soils having elevated moisture content will be considered suitable for reuse. We often find this issue to be a point of contention and a source of delays and change orders. From a technical standpoint, soils with moisture contents wet of optimum as determined by the standard Proctor test (ASTM D698) can be reused provided that the moisture is properly adjusted to within the workable range. From a practical standpoint, wet soils can be very difficult to dry in small or congested sites, and such difficulties should be considered during planning and budgeting. A clear understanding by the general contractor and grading subcontractor regarding the reuse of excavated soils will be important to avoid delays and unexpected cost overruns.

### **Structural Fill**

Materials selected for use as structural fill should be free of organic debris, waste construction debris, and other deleterious materials. The material should not contain rocks having a diameter over 4 inches. It is our opinion that the following soils represented by their USCS group symbols will typically be suitable for use as structural fill and are usually found in abundance in the Piedmont: (SM), (ML), and (CL). The following soil types are typically suitable but are not abundant in the Piedmont: (SW), (SP), (SC), (SP-SM), and (SP-SC). The following soil types are considered unsuitable: (MH), (CH), (OL), (OH), and (Pt).

Laboratory Proctor compaction tests and classification tests should be performed on representative samples obtained from the proposed borrow material to provide data necessary to determine acceptability and for quality control. The moisture content of suitable borrow soils should generally be no more than 3 percentage points below or above optimum at the time of compaction. Tighter moisture limits may be necessary with certain soils.

Suitable fill material should be placed in thin lifts. Lift thickness depends on the type of compaction equipment, but a maximum loose-lift thickness of 8 inches is generally recommended. The soil should be compacted by a self-propelled sheepfoot roller. Within small excavations such as in utility trenches, around manholes, above foundations, or behind retaining walls, we recommend the use of "wacker packers" or "Rammax" compactors to achieve the specified compaction. Loose lift thicknesses of 4 to 6 inches are recommended in small area fills.

We recommend that structural fill be compacted to at least 95 percent of the standard Proctor maximum dry density (ASTM D698). The upper 12 inches of floor slab subgrade soils should be compacted to at least 98 percent of the standard Proctor maximum dry density. The upper 12 inches of pavement subgrades should be compacted in accordance with Georgia DOT requirements to at least 100 percent of the standard Proctor maximum dry density (ASTM D698). Additionally, the maximum dry density of structural fill should be no less than 90 pcf. Geo-Hydro should perform density tests during fill placement.

## Earth Slopes

Temporary construction slopes should be designed in strict compliance with OSHA regulations. The exploratory boring indicates that most soils at the site are Type B and Type C as defined in 29 CFR 1926 Subpart P. This dictates that temporary construction slopes in residual soils (Type B) for excavation depths of 20 feet or less above the groundwater level should be no steeper than 1H:1V. Temporary excavation slopes in fill materials (Type C), or in any soil type extending below the groundwater level, must be no steeper than 1.5H:1V. Temporary construction slopes should be closely observed on a daily basis by the contractor's "competent person" for signs of mass movement: tension cracks near the crest, bulging at the toe of the slope, etc. The responsibility for excavation safety and stability of construction slopes should lie solely with the contractor.

We recommend that extreme caution be observed in trench excavations. Several cases of loss of life due to trench collapses in Georgia point out the lack of attention given to excavation safety on some projects. We recommend that applicable local and federal regulations regarding temporary slopes and shoring and bracing of trench excavations be closely followed.

Formal analysis of slope stability was beyond the scope of work for this project. Based on our experience, permanent cut or fill slopes should be no steeper than 2H:1V to maintain long term stability and to provide ease of maintenance. The crest or toe of cut or fill slopes should be no closer than 10 feet to any foundation. The crest or toe should be no closer than 5 feet to the edge of any pavements. Erosion protection of slopes during construction and during establishment of vegetation should be considered an essential part of construction.

## Earth Pressure (Cast-in-Place Structures)

Three earth pressure conditions are generally considered for retaining wall design: "at rest", "active", and "passive" stress conditions. Retaining walls which are rigidly restrained at the top and will be essentially unable to rotate under the action of earth pressure (such as basement or foundation walls) should be designed for "at rest" conditions. Retaining walls which can move outward at the top as much as 0.5 percent of the wall height (such as free-standing walls) should be designed for "active" conditions. For the evaluation of the resistance of soil to lateral loads the "passive" earth pressure must be calculated. It should be noted that full development of passive pressure requires deflections toward the soil mass on the order of 1.0 percent to 4.0 percent of total wall height.

Earth pressure may be evaluated using the following equation:

$$p_h = K (D_w Z + q_s) + W_w(Z-d)$$

where:  $p_h$  = horizontal earth pressure at any depth below the ground surface (Z).

$W_w$  = unit weight of water

$Z$  = depth to any point below the ground surface

$d$  = depth to groundwater surface

$D_w$  = wet unit weight of the soil backfill (depending on borrow sources). The wet unit weight of most residual soils may be expected to range from approximately 115 to 125 pcf. Below the groundwater level,  $D_w$  must be the buoyant weight.

$q_s$  = uniform surcharge load (add equivalent uniform surcharge to account for construction equipment loads)

$K$  = earth pressure coefficient as follows:

| <u>Earth Pressure Condition</u> | <u>Coefficient</u> |
|---------------------------------|--------------------|
| At Rest ( $K_o$ )               | 0.53               |
| Active ( $K_a$ )                | 0.36               |
| Passive ( $K_p$ )               | 2.8                |

The groundwater term,  $W_w(Z-d)$ , should be used if no drainage system is incorporated behind retaining walls. If a drainage system is included which will not allow the development of any water pressure behind the wall, then the groundwater term may be omitted. The development of excessive water pressure is a common cause of retaining wall failures. Drainage systems should be carefully designed to ensure that long term permanent drainage is accomplished.

The above design recommendations are based on the following assumptions:

- Horizontal backfill
- 95 percent standard Proctor compactive effort on backfill (ASTM D698)
- No safety factor is included

For convenience, equivalent fluid densities are frequently used for the calculation of lateral earth pressures. For "at rest" stress conditions, an equivalent fluid density of 66 pcf may be used. For the "active" state of stress an equivalent fluid density of 45 pcf may be used. These equivalent fluid densities are based on the assumptions that drainage behind the retaining wall will allow *no* development of hydrostatic pressure; that native sandy silts or silty sands will be used as backfill; that the backfill soils will be compacted to 95 percent of standard Proctor maximum dry density; that backfill will be horizontal; and that no surcharge loads will be applied.

For analysis of sliding resistance of the base of a cast-in-place concrete retaining wall, the coefficient of friction may be taken as 0.4 for the soils at the project site. This is an ultimate value, and an adequate factor of safety should be used in design. Customarily, retaining wall design includes a factor of safety which affects the global design. Using that design approach, it is not necessary to reduce the coefficient of friction as a design input. Such a reduction, coupled with the global factor of safety applied to the wall design, would place an unreasonable reduction in the calculation of the frictional resistance.

The force that resists base sliding is calculated by multiplying the normal force on the base by the coefficient of friction. Full development of the frictional force could require deflection of the base of roughly 0.1 to 0.3 inches.

## Foundation Design

After proper preparation of the building pads (undercut/replace) and thorough evaluation of foundation excavations, it is our opinion that the planned buildings can be supported using a monolithic reinforced concrete floor system with foundation turndown. Conventional shallow foundations and slab-on-grade floors are also feasible, but considering the depth and variability of the fill that will be left in place under the new building pads, a monolithic floor with foundation turndowns is a better match for the site conditions.

For planning purposes, we recommend using an allowable bearing pressure of 2,000 psf. This allowable bearing pressure is based on column loads no greater than 50 kips and wall loads not exceeding 4 kips per lineal foot. If a modulus of subgrade reaction is required for design of the monolithic floor slab with turndowns, we recommend using a modulus of subgrade reaction of 65 pci.

In addition, we recommend a minimum width of 24 inches for column footings and 18 inches for continuous wall footings to prevent general bearing capacity failure. Load-bearing perimeter turndowns should have a

minimum flat bearing width of 16 inches. Footings and turn downs should bear at a minimum depth of 18 inches below the prevailing exterior ground surface elevation to avoid potential problems due to frost heave. The recommended allowable bearing pressure is based on an estimated maximum total foundation settlement no greater than approximately 1 inch, with anticipated differential settlement between adjacent columns not exceeding about ½ inch. If the architect or structural engineer determines that the estimated total or differential settlement cannot be accommodated by the proposed structure, please contact us.

Foundation bearing surface evaluations should be performed in all footing excavations prior to placement of reinforcing steel. Geo-Hydro should perform these evaluations to confirm that the design allowable soil bearing pressure is available. Foundation bearing surface evaluations should be performed using a combination of visual observation, hand augering, and portable dynamic cone penetrometer testing (ASTM STP-399).

Because of natural variation, it is possible that some of the soils at the project site may have an allowable bearing pressure less than the recommended design value. Likewise, existing fill materials can be highly variable, and may have an allowable bearing pressure less than the recommended design value. Therefore, foundation bearing surface evaluations will be critical to aid in the identification and remediation of these situations.

Remedial measures should be based on actual field conditions. However, in most cases we expect the use of the stone replacement technique to be the primary remedial measure. Stone replacement involves the removal of soft or loose soils, followed by replacement with well-compacted graded aggregate base (GAB) meeting Georgia DOT specifications for gradation. Stone replacement is generally performed to depths ranging from a few inches to as much as 2 times the footing width, depending on the actual conditions. Although the prepared building pads should require no remedial work to support the building foundations, for budgetary purposes, we suggest considering a contingency sufficient to treat roughly 5 percent of the foundation excavations using stone replacement extending to a depth of 3 feet below bearing elevation. The actual quantity of stone replacement will be different and may exceed the provided estimate.

### Seismic Design

On January 1, 2026, Georgia adopted the 2024 version of the International Building Code (IBC), which references ASCE 7-22 regarding many subjects including seismic design. Following the guidelines outlined in IBC 2024 (ASCE 7-22) the *Default Seismic Site Class* should be used for the project. The seismic design parameters are as follows:  $S_S=0.27$ ,  $S_1=0.093$ ,  $S_{DS}=0.22$ ,  $S_{D1}=0.13$ . The *Seismic Design Category (SDC)* for the site is **B**.

Based on the information obtained from the soil test borings, it is our opinion that the potential for liquefaction of the residual soils at the site due to earthquake activity is relatively low.

### Floor Slab Subgrade Preparation

The soil subgrade in the area of concrete slab-on-grade support is often disturbed during foundation and superstructure construction. We recommend that the floor slab subgrade be evaluated by Geo-Hydro immediately prior to beginning floor slab construction. If low consistency soils are encountered which cannot be adequately densified in place, such soils should be removed and replaced with well-compacted fill material placed in accordance with the *Structural Fill* section of this report or with well-compacted graded aggregate base (GAB).

Assuming that the top 12 inches of floor slab subgrade soils are compacted to at least 98 percent of the standard Proctor maximum dry density, we recommend that a modulus of subgrade reaction of 120 pci be used for design.

## Moisture Control for Concrete Slabs

To prevent the capillary rise of groundwater from adversely affecting the concrete slab-on-grade floor system, we recommend that all slab-on-grade construction be underlain by a minimum 4-inch thickness of open-graded stone. Use of #57 crushed stone meeting Georgia DOT specifications for gradation is suggested. The stone should be covered by a vapor retarder consisting of polyethylene sheeting at least 10 mils thick.

The ambulance bays and maintenance bays must be treated as pavement areas. However, a vapor retarder must be installed over the crushed stone base for the ambulance bay and maintenance bay concrete slabs. Pavement design recommendations are provided in the following sections of this report.

## Flexible Pavement Design

Based on our experience with similar projects, assuming standard pavement design parameters, and contingent upon proper pavement subgrade preparation, we recommend the following pavement sections:

### Entrance/Exit Driveways and Truck Traffic Areas<sup>1</sup>

| Material                                                                             | Thickness (inches) |
|--------------------------------------------------------------------------------------|--------------------|
| Asphaltic Concrete 9.5mm Superpave Type II                                           | 2                  |
| Asphaltic Concrete 19mm Superpave                                                    | 2                  |
| Graded Aggregate Base (GAB) (Base Course)                                            | 8                  |
| Subgrade compacted to at least 100% standard Proctor maximum dry density (ASTM D698) | 12                 |

### Automobile Parking Stalls and Automobile Traffic Only

| Material                                                                             | Thickness (inches) |
|--------------------------------------------------------------------------------------|--------------------|
| Asphaltic Concrete 9.5mm Superpave Type II                                           | 2                  |
| Graded Aggregate Base (GAB) (Base Course)                                            | 6                  |
| Subgrade compacted to at least 100% standard Proctor maximum dry density (ASTM D698) | 12                 |

Similar to floor slab subgrades, pavement subgrades generally deteriorate due to construction activities between the time of general site preparation and pavement construction. The top 12 inches of pavement subgrade soils must be compacted to at least 100 percent of the standard Proctor maximum dry density (ASTM D698). It is likely that scarification and moisture adjustment will be required to achieve the recommended subgrade compaction level. Allowances for pavement subgrade preparation should be considered for budgeting and scheduling.

GAB must be compacted to at least 100 percent of the modified Proctor maximum dry density (ASTM D1557).

All pavement construction should be performed in general accordance with Georgia DOT specifications. Proper subgrade compaction, adherence to Georgia DOT specifications, and compliance with project plans and specifications, will be critical to the performance of the constructed pavement.

<sup>1</sup> Concrete pavement should be used in ambulance and maintenance bay aprons

## Concrete Pavement

We recommend the following concrete pavement sections for this project:

### **Ambulance and Maintenance Bays and Aprons, Truck Traffic Areas, Dumpster Approach and Collection Zone**

| Material                                                                                | Thickness (inches) |
|-----------------------------------------------------------------------------------------|--------------------|
| Concrete (min. 570 psi flexural strength at 28 days)                                    | 7                  |
| Graded Aggregate Base (GAB) (Base Course)                                               | 6                  |
| Subgrade compacted to at least 100% standard<br>Proctor maximum dry density (ASTM D698) | 12                 |

### **Automobile Parking Stalls and Automobile Traffic Only**

| Material                                                                                | Thickness (inches) |
|-----------------------------------------------------------------------------------------|--------------------|
| Concrete (min. 570 psi flexural strength at 28 days)                                    | 5                  |
| Graded Aggregate Base (GAB) (Base Course)                                               | 5                  |
| Subgrade compacted to at least 100% standard<br>Proctor maximum dry density (ASTM D698) | 12                 |

A 570 psi or greater flexural strength concrete mix with 4 to 6 percent air entrainment should be used. The flexural strength requirement is approximately equivalent to a 4,000 psi compressive strength mix. The concrete pavement should be underlain by a minimum of 5 or 6 inches of compacted graded aggregate base (GAB), depending on the specific traffic area. GAB should be compacted to at least 100 percent of the modified Proctor maximum dry density (ASTM D1557). The top 12 inches of soil subgrade should be compacted to at least 100 percent of the standard Proctor maximum dry density (ASTM D698).

The concrete pavement may be designed as a “plain concrete pavement” with no reinforcing steel, or reinforcing steel may be used at joints. Construction joints and other design details should be in accordance with guidelines provided by the Portland Cement Association and the American Concrete Institute.

In general, all pavement construction should be in accordance with Georgia DOT specifications. Proper subgrade compaction, adherence to Georgia DOT specifications, and compliance with project plans and specifications are critical to the performance of the constructed pavement.

### *Pavement Design Limitations*

*The pavement sections discussed above are based on our experience with similar projects. After traffic information has been developed, we recommend that you allow us to review the traffic data and revise our recommendations as necessary.*

## **PAVEMENT MATERIALS TESTINGS**

To aid in verifying that the pavement system is installed in general accordance with the design considerations, the following materials testing services are recommended:

- Density testing of subgrade materials.
- Proofrolling of pavement subgrade materials immediately prior to placement of graded aggregate base (GAB). This proofrolling should be performed the same day GAB is installed.
- Density testing of GAB and verification of GAB thickness. In-place density should be verified using the sand cone (ASTM D1556) or Nuclear Density Gauge method (ASTM D6938).

- Coring of the pavement to verify thickness and density (asphalt pavement only).
- Preparation and testing of beams and cylinders for flexural and compressive strength testing (Portland cement concrete only). The total number of test specimens required will depend on the number of concrete placement events necessary to construct the pavement.

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We appreciate the opportunity to serve as your geotechnical consultant for this project and are prepared to provide any additional services you may require. If you have any questions concerning this report or any of our services, please call us.

Sincerely,

**GEO-HYDRO ENGINEERS, INC.**



**Max Beaham**  
Staff Engineer

[max.beaham@geohydro.com](mailto:max.beaham@geohydro.com)



**Luis E. Babler, P.E.**  
Chief Engineer

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## **APPENDIX**

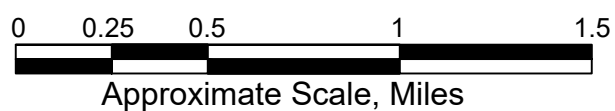
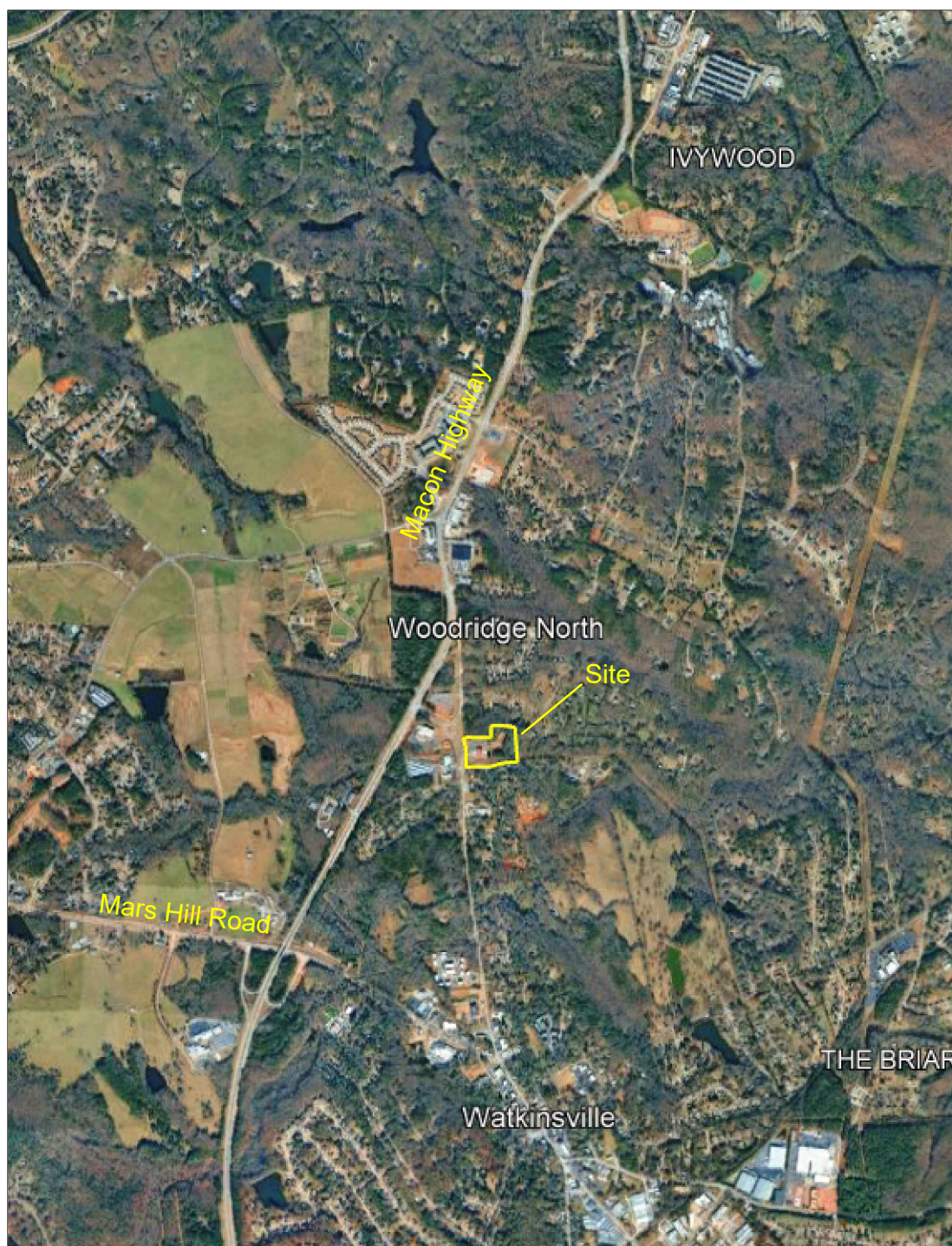
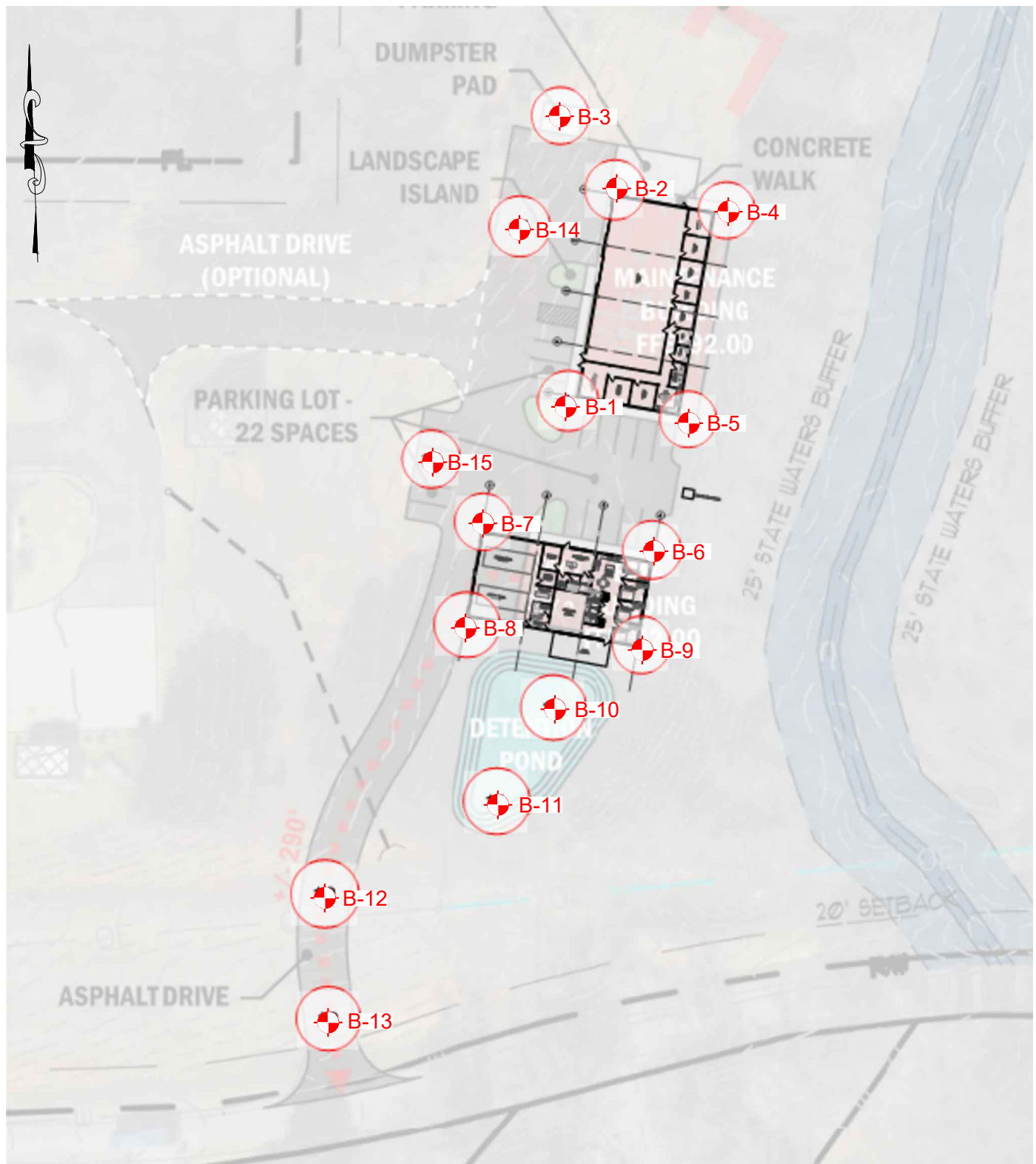


Figure 1: Site Location Plan

Oconee County Maintenance and EMS Facility  
7575 Macon Highway  
Watkinsville, Georgia  
Geo-Hydro Project Number 261576.20



LEGEND:  Soil Test Boring



Approximate Scale: 1"= 70'

Figure 2: Boring Location Plan

Oconee County Maintenance and EMS Facility  
7575 Macon Highway  
Watkinsville, Georgia  
Geo-Hydro Project Number 261576.20

## Symbols and Nomenclature

### Symbols

|                                                                                   |                                                                                      |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  | Thin-walled tube (TWT) sample recovered                                              |
|  | Thin-walled tube (TWT) sample not recovered                                          |
| •                                                                                 | Standard penetration resistance (ASTM D1586)                                         |
| 50/2"                                                                             | Number of blows (50) to drive the split-spoon a number of inches (2)                 |
| 65%                                                                               | Percentage of rock core recovered                                                    |
| RQD                                                                               | Rock quality designation - % of recovered core sample which is 4 or more inches long |
| GW                                                                                | Groundwater                                                                          |
|  | Water level at least 24 hours after drilling                                         |
|  | Water level one hour or less after drilling                                          |
| ALLUV                                                                             | Alluvium                                                                             |
| TOP                                                                               | Topsoil                                                                              |
| PM                                                                                | Pavement Materials                                                                   |
| CONC                                                                              | Concrete                                                                             |
| FILL                                                                              | Fill Material                                                                        |
| RES                                                                               | Residual Soil                                                                        |
| PWR                                                                               | Partially Weathered Rock                                                             |
| SPT                                                                               | Standard Penetration Testing                                                         |

### Penetration Resistance Results

|                    | Number of Blows, N | Approximate<br>Relative Density |
|--------------------|--------------------|---------------------------------|
| Sands              | 0-4                | very loose                      |
|                    | 5-10               | loose                           |
|                    | 11-20              | firm                            |
|                    | 21-30              | very firm                       |
|                    | 31-50              | dense                           |
|                    | Over 50            | very dense                      |
|                    | Number of Blows, N | Approximate<br>Consistency      |
| Silts and<br>Clays | 0-1                | very soft                       |
|                    | 2-4                | soft                            |
|                    | 5-8                | firm                            |
|                    | 9-15               | stiff                           |
|                    | 16-30              | very stiff                      |
|                    | 31-50              | hard                            |
|                    | Over 50            | very hard                       |

### Drilling Procedures

Soil sampling and standard penetration testing performed in accordance with ASTM D 1586. The standard penetration resistance is the number of blows of a 140-pound hammer falling 30 inches to drive a 2-inch O.D., 1.4-inch I.D. split-spoon sampler one foot. Rock coring is performed in accordance with ASTM D 2113. Thin-walled tube sampling is performed in accordance with ASTM D 1587.

# B-1

## Test Boring Record



|                                                            |                                               |                              |
|------------------------------------------------------------|-----------------------------------------------|------------------------------|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |                                               | Project No: <b>261576.20</b> |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |                                               | Date: <b>4/28/26</b>         |
| Method: <b>HSA- ASTM D1586</b>                             | GWT at Drilling: <b>Not Encountered</b>       | G.S. Elev:                   |
| Driller: <b>FD (Auto-Hammer)</b>                           | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> | Logged By: <b>MB</b>         |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                      | N  | Standard Penetration Test<br>(Blows/Foot) |    |    |    |    |    |    |    |    |    |     |
|---------------|---------------|-----|--------|------------------------------------------------------------------|----|-------------------------------------------|----|----|----|----|----|----|----|----|----|-----|
|               |               |     |        |                                                                  |    | 0                                         | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
|               |               |     |        | Topsoil (Approximately 2 inches)                                 |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Loose red-brown clayey fine sand (SC) with rock fragments (FILL) | 7  |                                           | ●  |    |    |    |    |    |    |    |    |     |
|               | 5             |     |        |                                                                  | 7  |                                           | ●  |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Very stiff red-brown micaceous fine sandy clay (CL) (RESIDUUM)   | 17 |                                           |    | ●  |    |    |    |    |    |    |    |     |
|               |               |     |        | Stiff red-brown and black micaceous fine sandy silt (ML)         | 14 |                                           |    | ●  |    |    |    |    |    |    |    |     |
|               | 10            |     |        |                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                  | 12 |                                           |    | ●  |    |    |    |    |    |    |    |     |
|               | 15            |     |        |                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                  | 13 |                                           |    | ●  |    |    |    |    |    |    |    |     |
|               | 20            |     |        | Boring Terminated at 20 feet                                     |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 25            |     |        |                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |

Remarks:

# B-2

## Test Boring Record



|                                                            |  |  |  |                                               |  |                              |  |
|------------------------------------------------------------|--|--|--|-----------------------------------------------|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |  |                                               |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |  |                                               |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  |  | GWT at Drilling: <b>Not Encountered</b>       |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                             | N  | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|-------------------------------------------------------------------------|----|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 3 inches)                                        |    |                                           |
|               |               |     |        | Firm to stiff red-brown fine sandy clay (CL) with rock fragments (FILL) |    |                                           |
|               | 5             |     |        |                                                                         | 8  |                                           |
|               |               |     |        | Firm red-brown clayey fine sand (SC) (FILL)                             | 12 |                                           |
|               |               |     |        |                                                                         | 18 |                                           |
|               |               |     |        | Very firm red-brown clayey fine sand (SC) (RESIDUUM)                    |    |                                           |
|               | 10            |     |        |                                                                         | 28 |                                           |
|               |               |     |        | Very stiff tan and gray silty clay (CL)                                 |    |                                           |
|               | 15            |     |        |                                                                         | 17 |                                           |
|               |               |     |        | Auger Refusal at 18 feet                                                |    |                                           |
|               | 20            |     |        |                                                                         |    |                                           |
|               |               |     |        |                                                                         |    |                                           |
|               | 25            |     |        |                                                                         |    |                                           |

**Remarks:**

# B-3

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                            | N     | Standard Penetration Test<br>(Blows/Foot) |    |    |    |    |    |    |    |    |    |     |   |
|---------------|---------------|-----|--------|------------------------------------------------------------------------|-------|-------------------------------------------|----|----|----|----|----|----|----|----|----|-----|---|
|               |               |     |        |                                                                        |       | 0                                         | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |   |
|               |               |     |        | Topsoil (Approximately 2 inches)                                       |       |                                           |    |    |    |    |    |    |    |    |    |     |   |
|               |               |     |        | Tan and brown silty fine sand (SM) with abundant rock fragments (FILL) | 50/4* |                                           |    |    |    |    |    |    |    |    |    |     | ● |
|               | 5             |     |        |                                                                        | 50/3* |                                           |    |    |    |    |    |    |    |    |    |     | ● |
|               |               |     |        |                                                                        | 50/2* |                                           |    |    |    |    |    |    |    |    |    |     | ● |
|               | 10            |     |        | Very stiff black and brown micaceous fine sandy silt (ML) (RESIDUUM)   | 24    |                                           |    | ●  |    |    |    |    |    |    |    |     |   |
|               |               |     |        | Auger Refusal at 13 feet                                               |       |                                           |    |    |    |    |    |    |    |    |    |     |   |
|               | 15            |     |        |                                                                        |       |                                           |    |    |    |    |    |    |    |    |    |     |   |
|               | 20            |     |        |                                                                        |       |                                           |    |    |    |    |    |    |    |    |    |     |   |
|               | 25            |     |        |                                                                        |       |                                           |    |    |    |    |    |    |    |    |    |     |   |

**Remarks:** \*Standard penetration test resistances not considered representative due to rock fragments in the fill

# B-4

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                                  | N  | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|------------------------------------------------------------------------------|----|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 3 inches)                                             |    |                                           |
|               |               |     |        | Stiff red-brown fine sandy clay (CL) with rock fragments and organics (FILL) |    |                                           |
|               | 5             |     |        |                                                                              | 13 |                                           |
|               |               |     |        |                                                                              | 8  |                                           |
|               |               |     |        |                                                                              | 6  |                                           |
|               | 10            |     |        |                                                                              | 9  |                                           |
|               |               |     |        |                                                                              |    |                                           |
|               | 15            |     |        |                                                                              | 5  |                                           |
|               |               |     |        |                                                                              |    |                                           |
|               |               |     |        | Very firm tan and gray silty fine sand (SM)<br>(RESIDUUM)                    |    |                                           |
|               | 20            |     |        | Boring Terminated at 20 feet                                                 | 22 |                                           |
|               |               |     |        |                                                                              |    |                                           |
|               | 25            |     |        |                                                                              |    |                                           |

**Remarks:**

# B-5

## Test Boring Record



| Project: <b>Oconee County Maintenance and EMS Facility</b> |               |     |        |                                                                                  |    | Project No: <b>261576.20</b>              |    |    |    |    |    |    |    |    |    |     |  |  |  |
|------------------------------------------------------------|---------------|-----|--------|----------------------------------------------------------------------------------|----|-------------------------------------------|----|----|----|----|----|----|----|----|----|-----|--|--|--|
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |               |     |        |                                                                                  |    | Date: <b>4/28/26</b>                      |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Method: <b>HSA- ASTM D1586</b>                             |               |     |        | GWT at Drilling: <b>Not Encountered</b>                                          |    | G.S. Elev:                                |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |               |     |        | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b>                                    |    | Logged By: <b>MB</b>                      |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Elev.<br>(Ft)                                              | Depth<br>(Ft) | GWT | Symbol | Description                                                                      | N  | Standard Penetration Test<br>(Blows/Foot) |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  |    | 0                                         | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |  |  |  |
|                                                            |               |     |        | Topsoil (Approximately 4 inches)                                                 |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Firm red-brown clayey fine sand (SC) with rock fragments (FILL)                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  | 20 |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Loose black and brown silty fine to medium sand (SM) with rock fragments (FILL)  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 5             |     |        |                                                                                  | 5  |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Firm dark red-brown fine sandy clay (CL) with organics and rock fragments (FILL) |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  | 7  |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  | 7  |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 10            |     |        |                                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Firm to very firm red-brown and white micaceous silty fine sand (SM) (RESIDUUM)  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  | 24 |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 15            |     |        |                                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 20            |     |        | Boring Terminated at 20 feet                                                     | 16 |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 25            |     |        |                                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Remarks:                                                   |               |     |        |                                                                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |

# B-6

## Test Boring Record



|                                                            |                                               |                              |
|------------------------------------------------------------|-----------------------------------------------|------------------------------|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |                                               | Project No: <b>261576.20</b> |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |                                               | Date: <b>4/28/26</b>         |
| Method: <b>HSA- ASTM D1586</b>                             | GWT at Drilling: <b>Not Encountered</b>       | G.S. Elev:                   |
| Driller: <b>FD (Auto-Hammer)</b>                           | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> | Logged By: <b>MB</b>         |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                          | N  | Standard Penetration Test<br>(Blows/Foot) |    |    |    |    |    |    |    |    |    |     |
|---------------|---------------|-----|--------|----------------------------------------------------------------------|----|-------------------------------------------|----|----|----|----|----|----|----|----|----|-----|
|               |               |     |        |                                                                      |    | 0                                         | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
|               |               |     |        | Topsoil (Approximately 3 inches)                                     |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Firm dark red-brown clayey fine sand (SC) with rock fragments (FILL) |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Soft red-brown fine sandy clay (CL) with rock fragments (FILL)       | 12 |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 5             |     |        | Stiff red-brown fine sandy clay (CL) with rock fragments (FILL)      | 4  |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Stiff red-brown fine sandy clay (CL) with rock fragments (FILL)      | 14 |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 10            |     |        | Firm red-brown clayey fine sand (SC) with organics (FILL)            | 14 |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Firm tan and gray micaceous silty fine sand (SM) (RESIDUUM)          |    |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 15            |     |        |                                                                      | 15 |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 20            |     |        | Boring Terminated at 20 feet                                         | 20 |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 25            |     |        |                                                                      |    |                                           |    |    |    |    |    |    |    |    |    |     |

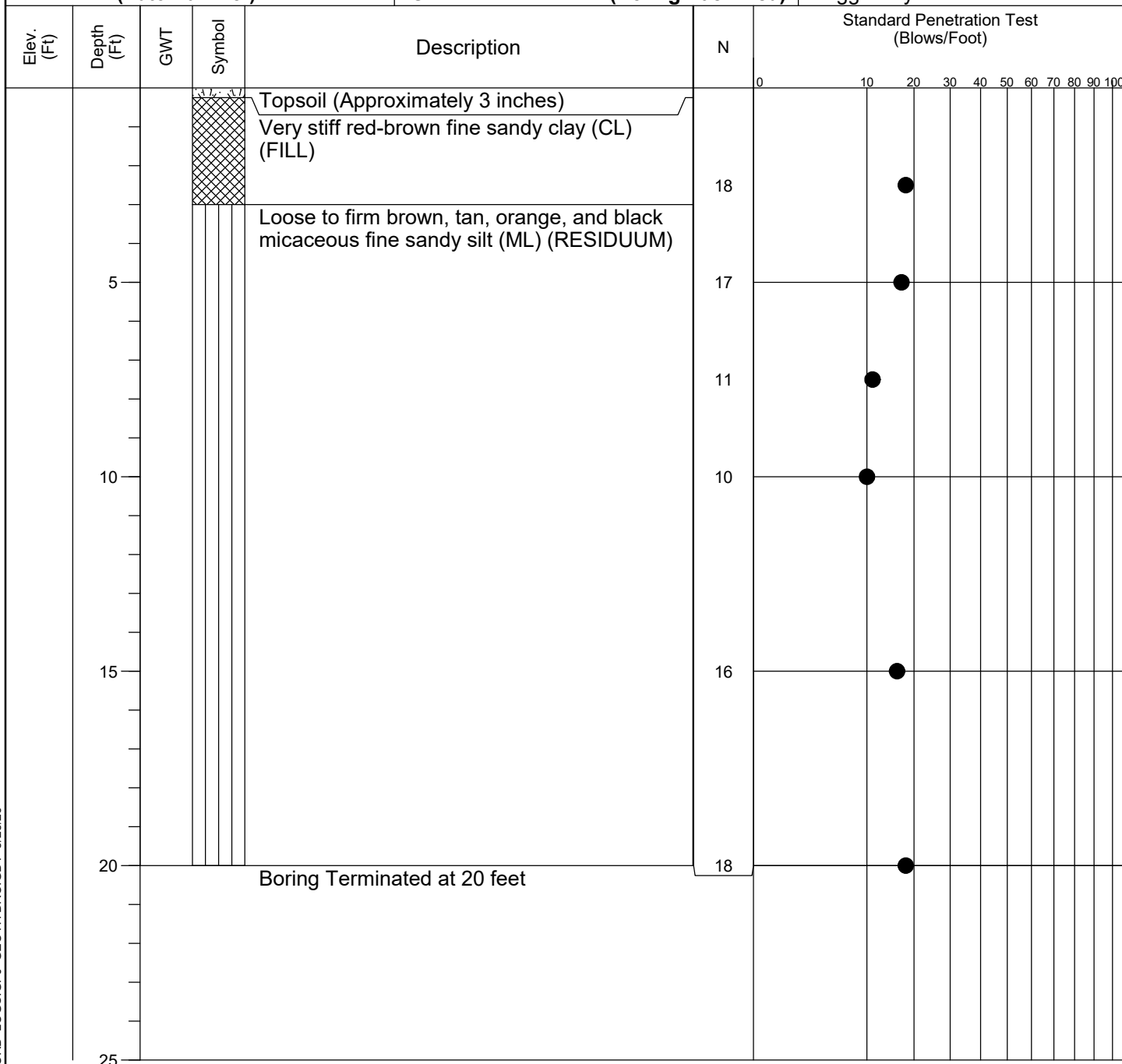
Remarks:

# B-7

## Test Boring Record



|                                                            |                                               |                              |
|------------------------------------------------------------|-----------------------------------------------|------------------------------|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |                                               | Project No: <b>261576.20</b> |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |                                               | Date: <b>4/28/26</b>         |
| Method: <b>HSA- ASTM D1586</b>                             | GWT at Drilling: <b>Not Encountered</b>       | G.S. Elev:                   |
| Driller: <b>FD (Auto-Hammer)</b>                           | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> | Logged By: <b>MB</b>         |



Remarks:

# B-8

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev. (Ft) | Depth (Ft) | GWT | Symbol | Description                                                                                | N    | Standard Penetration Test (Blows/Foot) |
|------------|------------|-----|--------|--------------------------------------------------------------------------------------------|------|----------------------------------------|
|            |            |     |        |                                                                                            |      | 0 10 20 30 40 50 60 70 80 90 100       |
|            |            |     |        | Topsoil (Approximately 2 inches)                                                           |      |                                        |
|            |            |     |        | Loose to firm red-brown clayey fine sand (SC) (FILL)                                       |      |                                        |
|            | 5          |     |        |                                                                                            | 18   |                                        |
|            |            |     |        |                                                                                            | 6    |                                        |
|            |            |     |        | Loose brown, black, and orange micaceous silty fine sand (SM) (RESIDUUM)                   |      |                                        |
|            | 10         |     |        |                                                                                            | 10   |                                        |
|            |            |     |        |                                                                                            | 10   |                                        |
|            |            |     |        | Stiff black, orange, and gray micaceous fine sandy silt (ML)                               |      |                                        |
|            | 15         |     |        |                                                                                            | 13   |                                        |
|            |            |     |        | Partially weathered rock sampled as black, orange, and gray micaceous fine sandy silt (ML) |      |                                        |
|            | 20         |     |        |                                                                                            | 50/4 |                                        |
|            |            |     |        | Boring Terminated at 20 feet                                                               |      |                                        |
|            | 25         |     |        |                                                                                            |      |                                        |

Remarks:

# B-9

## Test Boring Record



|                                                            |                                               |                              |
|------------------------------------------------------------|-----------------------------------------------|------------------------------|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |                                               | Project No: <b>261576.20</b> |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |                                               | Date: <b>4/28/26</b>         |
| Method: <b>HSA- ASTM D1586</b>                             | GWT at Drilling: <b>Not Encountered</b>       | G.S. Elev:                   |
| Driller: <b>FD (Auto-Hammer)</b>                           | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> | Logged By: <b>MB</b>         |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                             | N     | Standard Penetration Test<br>(Blows/Foot) |    |    |    |    |    |    |    |    |    |     |
|---------------|---------------|-----|--------|-------------------------------------------------------------------------|-------|-------------------------------------------|----|----|----|----|----|----|----|----|----|-----|
|               |               |     |        |                                                                         |       | 0                                         | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
|               |               |     |        | Topsoil (Approximately 4 inches)                                        |       |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Red-brown clayey fine sand (SC) with abundant rock fragments (FILL)     | 50/4* |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Firm to stiff red-brown fine sandy clay (CL) with rock fragments (FILL) |       |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 5             |     |        |                                                                         | 10    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                         | 11    |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 10            |     |        |                                                                         | 6     |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                         |       |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 15            |     |        |                                                                         | 7     |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                         |       |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 20            |     |        | Firm tan, orange, and brown micaceous silty fine sand (SM) (RESIDUUM)   | 17    |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        | Boring Terminated at 20 feet                                            |       |                                           |    |    |    |    |    |    |    |    |    |     |
|               |               |     |        |                                                                         |       |                                           |    |    |    |    |    |    |    |    |    |     |
|               | 25            |     |        |                                                                         |       |                                           |    |    |    |    |    |    |    |    |    |     |

Remarks: \*Standard penetration test resistances not considered representative due to rock fragments in the fill

# B-10

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                                           | N  | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|---------------------------------------------------------------------------------------|----|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 3 inches)                                                      |    |                                           |
|               |               |     |        | Loose to firm red-brown clayey fine sand (SC) with rock fragments and organics (FILL) |    |                                           |
|               | 5             |     |        |                                                                                       | 13 |                                           |
|               |               |     |        | Stiff red-brown fine sandy clay (CL) with abundant organics (FILL)                    |    |                                           |
|               |               |     |        | Firm red-brown clayey fine sand (SC) (FILL)                                           |    |                                           |
|               | 10            |     |        |                                                                                       | 19 |                                           |
|               |               |     |        | Firm orange and brown to brown and black micaceous silty fine sand (SM) (RESIDUUM)    |    |                                           |
|               | 15            |     |        |                                                                                       | 18 |                                           |
|               | 20            |     |        | Boring Terminated at 20 feet                                                          | 19 |                                           |
|               | 25            |     |        |                                                                                       |    |                                           |

**Remarks:**

# B-11

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                                        | N  | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|------------------------------------------------------------------------------------|----|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 4 inches)                                                   |    |                                           |
|               |               |     |        | Firm to very firm red-brown clayey fine sand (SC) (FILL)                           |    |                                           |
|               | 5             |     |        |                                                                                    | 21 |                                           |
|               |               |     |        |                                                                                    | 17 |                                           |
|               |               |     |        | Stiff to very stiff brown, tan, and gray micaceous fine sandy silt (ML) (RESIDUUM) |    |                                           |
|               | 10            |     |        |                                                                                    | 12 |                                           |
|               |               |     |        |                                                                                    | 12 |                                           |
|               | 15            |     |        |                                                                                    | 17 |                                           |
|               | 20            |     |        | Boring Terminated at 20 feet                                                       | 11 |                                           |
|               | 25            |     |        |                                                                                    |    |                                           |

**Remarks:**

# B-12

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                                                       | N  | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|---------------------------------------------------------------------------------------------------|----|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 4 inches)                                                                  |    |                                           |
|               |               |     |        | Firm red-brown clayey fine sand (SC) with rock fragments (FILL)                                   |    |                                           |
|               | 5             |     |        |                                                                                                   | 13 |                                           |
|               |               |     |        |                                                                                                   | 16 |                                           |
|               |               |     |        | Loose to firm red-brown and tan to black, tan, and gray micaceous silty fine sand (SM) (RESIDUUM) | 15 |                                           |
|               | 10            |     |        |                                                                                                   | 10 |                                           |
|               |               |     |        |                                                                                                   | 11 |                                           |
|               | 15            |     |        |                                                                                                   |    |                                           |
|               | 20            |     |        | Boring Terminated at 20 feet                                                                      | 17 |                                           |
|               |               |     |        |                                                                                                   |    |                                           |
|               | 25            |     |        |                                                                                                   |    |                                           |

**Remarks:**

# B-13

## Test Boring Record



| Project: <b>Oconee County Maintenance and EMS Facility</b> |               |     |        |                                                                   |    | Project No: <b>261576.20</b>              |    |    |    |    |    |    |    |    |    |     |  |  |  |
|------------------------------------------------------------|---------------|-----|--------|-------------------------------------------------------------------|----|-------------------------------------------|----|----|----|----|----|----|----|----|----|-----|--|--|--|
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |               |     |        |                                                                   |    | Date: <b>4/28/26</b>                      |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Method: <b>HSA- ASTM D1586</b>                             |               |     |        | GWT at Drilling: <b>Not Encountered</b>                           |    | G.S. Elev:                                |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |               |     |        | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b>                     |    | Logged By: <b>MB</b>                      |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Elev.<br>(Ft)                                              | Depth<br>(Ft) | GWT | Symbol | Description                                                       | N  | Standard Penetration Test<br>(Blows/Foot) |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        |                                                                   |    | 0                                         | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |  |  |  |
|                                                            |               |     |        | Topsoil (Approximately 4 inches)                                  |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Stiff red-brown micaceous clayey silt (ML)<br>(RESIDUUM)          | 13 |                                           | ●  |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 5             |     |        |                                                                   | 15 |                                           | ●  |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Very stiff orange-brown micaceous fine<br>sandy silt (ML)         | 16 |                                           | ●  |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 10            |     |        |                                                                   | 16 |                                           | ●  |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Firm dark brown and orange micaceous silty<br>fine sand (SM)      | 13 |                                           | ●  |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 15            |     |        |                                                                   |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            |               |     |        | Very stiff tan, brown, and gray micaceous<br>fine sandy silt (ML) | 17 |                                           | ●  |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 20            |     |        | Boring Terminated at 20 feet                                      |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
|                                                            | 25            |     |        |                                                                   |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |
| Remarks:                                                   |               |     |        |                                                                   |    |                                           |    |    |    |    |    |    |    |    |    |     |  |  |  |

# B-14

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                                     | N  | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|---------------------------------------------------------------------------------|----|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 2 inches)                                                |    | 0                                         |
|               |               |     |        | Firm red-brown clayey fine sand (SC) (FILL)                                     |    | 10                                        |
|               |               |     |        | Stiff red-brown, tan, black, and gray micaceous fine sandy silt (ML) (RESIDUUM) | 14 | 20                                        |
|               | 5             |     |        |                                                                                 | 12 | 30                                        |
|               |               |     |        | Very firm orange-brown and tan micaceous silty fine sand (SM)                   | 10 | 40                                        |
|               | 10            |     |        |                                                                                 | 28 | 50                                        |
|               |               |     |        | Black, orange, and white micaceous clayey silt (ML)                             | 11 | 60                                        |
|               | 15            |     |        |                                                                                 |    | 70                                        |
|               |               |     |        | Very firm dark brown micaceous silty fine sand (SM)                             |    | 80                                        |
|               | 20            |     |        | Boring Terminated at 20 feet                                                    | 25 | 90                                        |
|               |               |     |        |                                                                                 |    | 100                                       |
|               | 25            |     |        |                                                                                 |    |                                           |

**Remarks:**

# B-15

## Test Boring Record



|                                                            |  |  |                                               |  |  |                              |  |
|------------------------------------------------------------|--|--|-----------------------------------------------|--|--|------------------------------|--|
| Project: <b>Oconee County Maintenance and EMS Facility</b> |  |  |                                               |  |  | Project No: <b>261576.20</b> |  |
| Location: <b>7575 Macon Highway, Watkinsville, Georgia</b> |  |  |                                               |  |  | Date: <b>4/28/26</b>         |  |
| Method: <b>HSA- ASTM D1586</b>                             |  |  | GWT at Drilling: <b>Not Encountered</b>       |  |  | G.S. Elev:                   |  |
| Driller: <b>FD (Auto-Hammer)</b>                           |  |  | GWT at 24 hrs: <b>N/A (Boring Backfilled)</b> |  |  | Logged By: <b>MB</b>         |  |

| Elev.<br>(Ft) | Depth<br>(Ft) | GWT | Symbol | Description                                                                                        | N     | Standard Penetration Test<br>(Blows/Foot) |
|---------------|---------------|-----|--------|----------------------------------------------------------------------------------------------------|-------|-------------------------------------------|
|               |               |     |        | Topsoil (Approximately 3 inches)                                                                   |       |                                           |
|               |               |     |        | Very stiff red-brown clayey fine sand (SC) (FILL)                                                  |       |                                           |
|               | 5             |     |        | Red-brown clayey fine sand (SC) with abundant rock fragments (FILL)                                | 18    |                                           |
|               |               |     |        | Firm to stiff orange-brown and tan micaceous fine sandy silt (ML) (RESIDUUM)                       | 50/4* |                                           |
|               | 7             |     |        |                                                                                                    | 7     |                                           |
|               | 10            |     |        |                                                                                                    | 12    |                                           |
|               | 15            |     |        | Firm orange-brown and tan micaceous silty fine sand (SM)                                           | 16    |                                           |
|               | 20            |     |        | Initial Auger Refusal encountered at 5 feet<br>Offset 5 feet North<br>Boring Terminated at 20 feet | 18    |                                           |
|               | 25            |     |        |                                                                                                    |       |                                           |

**Remarks:** \*Standard penetration test resistances not considered representative due to rock fragments in the fill



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