Geotechnical Investigation





New Convenience Store 7822 North Davis Hwy Pensacola, Escambia County, Florida

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MDM ENG #18012



ALT Pensacola

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December 2021

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GEOTECHNICAL INVESTIGATION

ALT Pensacola New Convenience Store 7822 North Davis Hwy Pensacola, Escambia County, Florida MDM Project #18012 December 1, 2021

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PURPOSE AND SITE DESCRIPTION

This geotechnical investigation was completed in order to provide information on subsurface conditions at the above referenced property to aid in foundation and structure designs during redevelopment of the site as a retail gasoline station and convenience store. The site is comprised of two parcels on the east side of North Davis Highway on the north side of Atwood Drive. The parcels are currently utilized as a bank building and a retail gasoline station.

GEOTECHNICAL INVESTIGATION

On November 16, 2021, MDM Services, Inc. conducted two standard penetration test (SPT) borings (SPT-1 and SPT-2) to investigate soil conditions for proposed redevelopment at the property referenced above. The SPTs were performed in general accordance with ASTM Standard D1586. Also on November 16, 2021, MDM conducted a Double Ring Infiltration

Test (DRT), in order to evaluate drainage characteristics of site soils. The DRT test was performed in general accordance with ASTM Standard D3385. The test locations are depicted on the proposed development layout on Figure 1 (Appendix A). Logs for each SPT boring and the DRT test are compiled in Appendix B. All depths as referenced are below the existing grade on the date of testing. Appendix C contains a map and summary report of the soil distribution on the site, as obtained from the Natural Resources Conservation Service. Appendix D contains direct push soil boring logs and boring locations that were completed as part of a contamination assessment at the site in May 2017. These boring logs are included to depict the lithology, which is relatively consistent, throughout the site.

Soil Survey Report

Based on the Natural Resources Conservation Service soil survey for Escambia County, the site is covered by mapped soil units: Urban land (map symbol 22), and Bonifay loamy sand, 0 to 5 percent slopes (,ap symbol 38). Urban land areas are soils that have been modified or covered by pavement to the extent that they cannot be described by a typical section or conditions. Bonifay loamy sands are well drained soils typically comprised of loamy sand from the ground surface to 54 inches depth, and sandy clay loam to 80 inches depth or more. The water table typically occurs at 42 to 60 inches depth. The capacity of the most limiting soil layer to transmit water is described as moderately high at 0.20 to 0.58 in/hr. The site area soil map and soil unit descriptions are compiled in Appendix C.

Subsurface Conditions

From review of the two SPT boring logs (Appendix B), the lithology at the site consists primarily of silty sand from the ground surface to a depth of 8 feet, underlain by low plasticity sandy clay extending to the boring termination depths at 15 to 20 feet below existing grade. Density readings were collected in the hand cleared intervals (depths less than 5 feet) utilizing a static hand cone penetrometer. The readings were collected in kg/cm². The boring logs portray the penetrometer reading (Q), along with an inferred N-value using a conversion factor of N = Q/4 for the penetrometer readings. The penetrometer readings indicate bearing resistance in the upper 4 feet of soil ranging from 15 to 45 kg/cm². The recorded SPT blow counts and penetrometer readings yielded N-values ranging from 2 to 35 blows per foot, indicating very loose to medium relative densities for the shallow granular silty sand soils, and very stiff to hard consistencies for the deeper cohesive sandy clay soils.

Groundwater Conditions

Saturated soils were encountered in boring SPT-1 at a depth ranging of 16 feet below grade. Water levels measured in 2017/2018 in monitoring wells in the area of the proposed new tank were 15 feet below grade. The estimated seasonal high water table is estimated to occur at 12 feet below grade.

Based on the characteristics of the site lithology, the site is suitable for the proposed development, provided site soils are adequately compacted and the facility construction is in accordance with the recommendations provided herein.

The following general recommendations for site development are proposed:

SITE PREPARATION

- Vegetation (if any) should be stripped from all proposed building areas, proposed pavement areas, and all areas where site drainage features are installed. Although not encountered in more than trace amounts during the geotechnical investigation, organic soils, if encountered during site construction, should also be stripped from these areas. Such stripping should be extended a minimum of 5 feet beyond these areas.
- The proposed building and paved areas of the site should be compacted with the use of a minimum 10 ton vibratory roller. The base of proposed drainage areas should not be compacted.
- Modified Proctor tests should be performed every 2000 ft² per foot of depth at the proposed building areas and every 10,000 ft² per foot of depth in proposed paved areas. A minimum density of 98 percent of the Modified Proctor maximum dry density is required to a depth of 5 feet below the base of proposed building foundation and to a depth of 3 feet below the base course in proposed paved areas. Any areas not achieving a minimum density of 98 percent of the Modified Proctor maximum dry density should be undercut and the material replaced/compacted in lifts not exceeding 1 ft. until a minimum 98 percent of the Modified Proctor maximum dry density is achieved. The proposed building and paved areas of the site may require significant compaction, which may include undercutting/lift compaction, to achieve the optimum densities throughout the recommended depth intervals.
- Imported fill material should consist of well graded sand with less than 5% organic fines. The fill should be placed in lifts not exceeding 1 ft. and compacted until a minimum density of 98 percent of the Modified Proctor maximum dry density is achieved to a depth of 5 feet below the base of proposed building foundations, and to a depth of 3 feet below the base course in proposed paved areas. Compaction tests should be performed every 2000 ft² per foot of depth in the proposed building area and every 10,000 ft² per foot of depth in proposed paved areas.

BUILDING FOUNDATIONS

- The building foundation should be installed at least 1.5 feet below the proposed finish grade of the site.
- The building foundation footings should be sized to exert a maximum pressure of 2500 psf on the compacted native sand material and/or structural fill, and should be of minimum 16 inch width. Based on the soil conditions encountered during standard penetration testing indicating soft to very stiff soils, the associated shallow soil bearing

capacities are estimated to range from >500 psf to greater than approximately 1,800 psf. Significant compaction of the shallow soils (<5 feet below grade) will be required.

- Visqueen of minimum 6 mil thickness, or equivalent vapor retarding material, should be placed beneath all building floor slabs as a means of retarding moisture and subsurface vapors.
- Stormwater drainage features should be placed as far as possible from the proposed building foundation. The minimum recommended distance for such drainage features from the building foundation is 20 feet.

CANOPY FOOTER(S)

- Based on N-values (i.e. blow counts per foot of depth) to depths of 6 feet below grade, the estimated bearing capacity of soils from ground surface to eight feet in depth for the canopy area ranges from >500 psf to greater than approximately 1,800 psf.
- At minimum, the base of the canopy footer, including a 5 foot perimeter beyond the footprint of the canopy footers, should be compacted using a vibratory plate compactor.
- The canopy footer(s) should be designed to exert a maximum pressure of 2500 psf. Provided the proposed canopy footer(s) area of the site, including the recommended 5 foot perimeter beyond this area, is properly compacted as confirmed by Modified Proctor testing per the above recommendations, the canopy footer(s) will be adequately supported for this recommended maximum pressure.

PAVEMENT AREAS

- Paved areas should have a stabilized subgrade of at least 12 inches.
- The base course above the subgrade should be a minimum thickness of 6 inches, following compaction. Based on availability in the site area, crushed rock is the recommended base course (if asphaltic concrete is the finished surface course) and should be compacted in maximum 6 inch lifts.
- The surface course of paved areas is recommended to be asphaltic concrete and have a minimum stability of 1500 pounds. The recommended minimum thickness of the surface course (finished asphalt) is 1.5 inches.
- Commercial mix concrete of minimum 3500 psi load bearing capacity may be substituted for asphaltic concrete as the surface course. The minimum recommended slab thickness is 5 inches. Welded wire mesh should be set approximately within the slab center during concrete pouring. Compacted sand may be substituted for the base course if concrete is chosen as the surface course.

UNDERGROUND STORAGE TANK (UST) INSTALLATION

The groundwater is expected to transmit slowly through the clayey soils below a depth of 8 feet. However, since the seasonal high groundwater table at the site is estimated at 12 feet below current grade, dewatering may be necessary for the UST installation. A kelley well can be utilized to dewater the UST field in conjunction with UST installation.

Groundwater effluent discharge permitting may be required for dewatering (i.e. NPDES permit, stormwater right-of-way use permit, and/or local stormwater utility agencies). Groundwater treatment may be required to prevent petroleum contaminants identified historically in the groundwater at the site from being discharged off-site.

Sheet piling is additionally recommended in association with UST installation, with sheet installation depth and bracing configuration determined by a qualified shoring contractor, following review of the standard penetration test data as presented herein. If sheet piling is installed, wellpoints of the above recommended dewatering system should be alternately installed both inside and outside of the shoring, around the complete perimeter of the UST excavation. If sheet piling is not installed, the UST excavation sidewalls should be sloped a minimum of $1\frac{1}{2}$ to 1 (i.e. 1.5 ft. horizontal to 1 ft. vertical), in accordance with OSHA recommendations for Type C soils.

INFILTRATION TESTING

One Double Ring Infiltration Test (DRT) was performed at 6 inches below grade at the location depicted in Figure 1 (Appendix A). The test results are compiled in Appendix B. As indicated, the vertical infiltration rate was determined to be 0.77 in/hr within the surficial silty sand soils. Based on the SPT boring data and a review of published water table data in the area of the subject property, the estimated seasonal high water table is approximately 12 feet below existing grade at the location of the DRT test.

Should you have any questions on the recommendation included herein please contact the signatories at the telephone number or email address listed below.

Respectfully submitted,

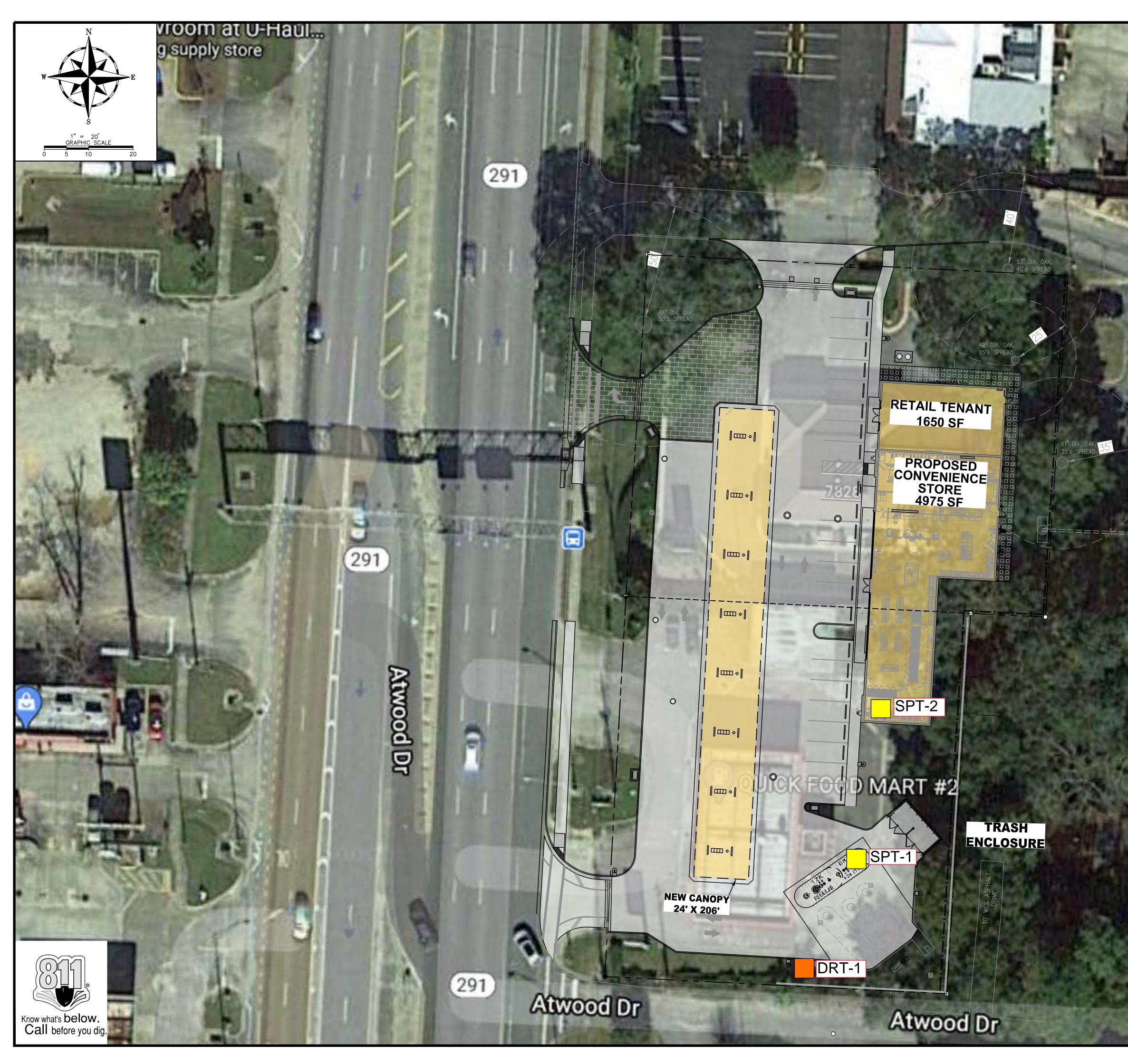
MDM Services, Inc.

Connoll

Joel M. Cornwall, P.G.

MDM Services, Inc. 1055 Kathleen Road, Lakeland, FL 33805. Tel (863)646-9130 ext 105 Fax (863)648-1106 Joel.cornwall@mdmservices.com Richard R. Morris, P.E. Florida License No. 34748 State of Florida Engineering Business Certificate of Authorization No. 4857

This item has been digitally signed and sealed by Richard R. Morris on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies. **APPENDIX** A



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Confort Int - Uni	EB #004857 Phone: (863) 646-9130
	DAIMIAN D LESLIE, P.E. FL. REG #73113 6,622 SQ. FT. BUILDING SITE DESIGNATIONS: NEW CONVENIENCE STORE
1916	SCALE: AS NOTED MDM JOB # 18012 DATE: 11-06-2020 Image: SLO/DDB DRAWN BY: SLO/DDB File NAME: CHECKED BY: File NAME:
Atwood Dr	DRAWING TITLE: Test Locations

APPENDIX B



BORING LOG SPT-1

PROJECT NUMBER 18012 PROJECT NAME ALT Pensacola Inc. LOCATION 7822 North Davis Hwy CITY/COUNTY/ST Pensacola, Florida DRILLING DATE 11/16/2021 DRILLING METHOD SPT TOTAL DEPTH 20 ft. DIAMETER 3 in. EST. WT 16 ft DRILLING CO. MDM Services, Inc. DRILL RIG Geoprobe 6620 DRILLER D. S. Houck COMPLETION Backfilled LOGGED BY M. Alexander

СОММЕ	COMMENTS Proposed UST Location, Southeast Portion of Site							
Sample Type	Depth (ft)	Blow Counts	N-value	Graphic Log	Material Description	nscs	Moisture	
Hand Auger		20 (kg/cm2)	5*		SILTY SAND, Medium Brownish, Fine-grained, Silty	SM	D	
	1 	35 (kg/cm2)	9*					
	- 2	30 (kg/cm2)	7*					
	3	45 (kg/cm2)	12*					
	- 4 	ND	ND					
SS	- - - - - -	2,1,1,1	2					
	- 7 - 8	3,5,5,10	10		SANDY CLAY, Orangish Brown, dense	CL	M	
	- 9 - 10	11,17,18,15	31					
	11 12	13,17,18,17	35					
	- 13 - 14	7,10,11,11	21					
	15 16	8,10,12,9	22		SANDY CLAY, Orange/Tan, dense	CL	W	
	17 18	10,12,15,19	27					
	- 19 	12,15	27					
					Termination Depth at: 20 ft *N-value approximated from static hand cone penetrometer			



BORING LOG SPT-2

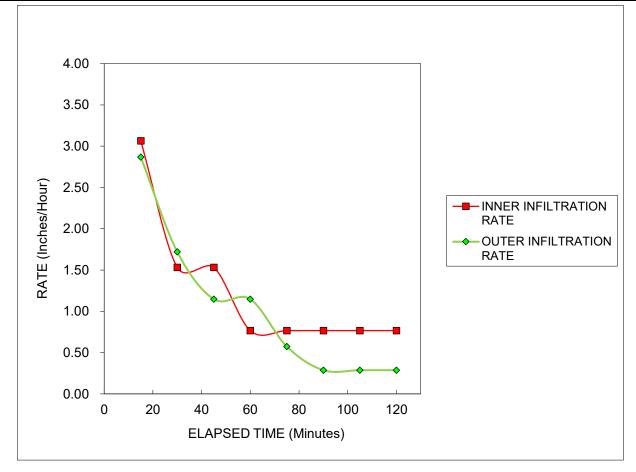
PROJECT NUMBER 18012 PROJECT NAME ALT Pensacola Inc. LOCATION 7822 North Davis Hwy CITY/COUNTY/ST Pensacola, Florida DRILLING DATE 11/16/2021 DRILLING METHOD SPT TOTAL DEPTH 15 ft. DIAMETER 3 in. DRILLING CO. MDM Services, Inc. DRILL RIG Geoprobe 6620 DRILLER D. S. Houck COMPLETION Backfilled LOGGED BY M. Alexander

Hand Auger 1 15 (kg/cm2) 4* 2 (kg/cm2) 6* 2 (kg/cm2) 6* 2 (kg/cm2) 10* 4	Hand	Depth (ft)	Blow Counts	N-value	Graphic Log	Material Description	nscs	Moisture
25 (kg/cm2) 6" 30 (kg/cm2) 8" 31 40 (kg/cm2) 40 (kg/cm2) 10" 41 ND ND ND 55 2,1,1,4 6 7 3,6,5,5 11 8 9 9,12,12,12 24 10 11 11,12 29 12 13 6,15,11,12 26 14 10 15 1 16 1 17 1	Auger		15 (kg/cm2)	4*		SILTY SAND, Dark Brown, Fine-grained, Silty	SM	D
30 (kg/cm2) 3" 4 ND ND 5 2.1.1.4 2 6 7 3.6.5.5 11 8 9 9.12.12.12 24 10 11 12.19.10.15 29 12 13 6.15.11.12 26 14 12 13 6.15.11.12 26 14 15 Termination Depth at: 15 ft 11 16 17 10 11 Nubure approximated from static hand cone penetrometer		- 1 - -	25 (kg/cm2)	6*				
40 (kg/cm2) 10° 5 2.1.1.4 2 6 7 3.6.5.5 11 8 9 9.12.12.12 24 10 11 12.19.10.15 29 11 12.19.10.15 29 13 6.15.11.12 26 14 15 Termination Depth at: 15 ft 16 17 10		_	30 (kg/cm2)	8*				
ND ND ND SS 5 2,1,1,4 2 6 21,1,4 2 7 3,6,5,5 11 8 9 9,12,12,12 24 10 11 12,19,10,15 29 12 13 6,15,11,12 26 14 16 16 Termination Depth at: 15 ft 17 18 N-value approximated from static hand cone penetrometer		-	40 (kg/cm2)	10*				
SS 2,1,1,4 2 6 3,6,5,5 11 7 3,6,5,5 11 8 9 9,12,12,12 24 10 11 12,19,10,15 29 12 13 6,15,11,12 26 14 16 16 16 17 16 16 N-value approximated from static hand cone penetrometer			ND	ND				
3,6,5,5 11 8 9 9 9,12,12,12 10 11 11 12,19,10,15 12 13 6,15,11,12 26 14 14 15 16 17 10	SS	6	2,1,1,4	2				
9,12,12,12 24 10 11 11 12,19,10,15 12 13 6,15,11,12 26 14 15 15 Termination Depth at: 15 ft 16 N-value approximated from static hand cone penetrometer 17 10			3,6,5,5	11		SANDY CLAY, Orangish Brown, dense	CL	M
12 12,19,10,15 29 13 6,15,11,12 26 14 15 16 17 16 *N-value approximated from static hand cone penetrometer		-	9,12,12,12	24				
6,15,11,12 26 -14 -14 15 -15 -16 -16 -17 -17			12,19,10,15	29				
Termination Depth at: 15 ft 16 17		 14	6,15,11,12	26				
- 17		15 - -						
						*N-value approximated from static hand cone penetrometer		
		- 17 - -						
		- 18						

DOUBLE RING INFILTROMETER

ALT Pensacola Inc. 7822 North Davis Highwy Pensacola, FL DATE: 11/16/21 ENG. PROJECT # 18012 WEATHER: Partly cloudy WATER TABLE(WT): 16 FT TEST DEPTH: 0.5' BGS

	INNER RI	NG	ANNULAR SPACE BETWEEN RINGS		
ELAPSED	WATER QUAN	INFIL. RATE	WATER QUAN	INFIL. RATE	
TIME/MINs	(Cu In)	(In/Hr)	(Cu In)	(In/Hr)	
15	86.63	3.07	216.56	2.87	
30	43.31	1.53	129.94	1.72	
45	43.31	1.53	86.63	1.15	
60	21.66	0.77	86.63	1.15	
75	21.66	0.77	43.31	0.57	
90	21.66	0.77	21.66	0.29	
105	21.66	0.77	21.66	0.29	
120	21.66	0.77	21.66	0.29	



APPROXIMATE VERTICAL INFILTRATION RATE: 0.77 IN/HR



0-5' : Sand, medium brown, fine grained, silty (USCS = SM)

APPENDIX C



	MAP L	EGEND)	MAP INFORMATION
Area of In	terest (AOI)		Spoil Area	The soil surveys that comprise your AOI were mapped at 1:24,000.
	Area of Interest (AOI)	۵	Stony Spot	1.24,000.
Soils	Soil Map Unit Polygons	0	Very Stony Spot	Warning: Soil Map may not be valid at this scale.
~	Soil Map Unit Lines	\$	Wet Spot	Enlargement of maps beyond the scale of mapping can cause
	Soil Map Unit Points	\triangle	Other	misunderstanding of the detail of mapping and accuracy of soil
_	Point Features	, * *	Special Line Features	line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed
అ	Blowout	Water Features		scale.
\boxtimes	Borrow Pit	\sim	Streams and Canals	
*	Clay Spot	Transport	tation Rails	Please rely on the bar scale on each map sheet for map measurements.
0	Closed Depression		Interstate Highways	
X	Gravel Pit	~	US Routes	Source of Map: Natural Resources Conservation Service Web Soil Survey URL:
*	Gravelly Spot	~	Major Roads	Coordinate System: Web Mercator (EPSG:3857)
Ø	Landfill	~	Local Roads	Mana from the Web Call Survey are based on the Web Maraster
Ã.	Lava Flow	~		Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts
عليه	Marsh or swamp	Backgrou	Aerial Photography	distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more
\propto	Mine or Quarry			accurate calculations of distance or area are required.
0	Miscellaneous Water			This product is generated from the USDA-NRCS certified data as
0	Perennial Water			of the version date(s) listed below.
\sim	Rock Outcrop			Soil Survey Area: Escambia County, Florida
+	Saline Spot			Survey Area Data: Version 21, Sep 8, 2021
°.	Sandy Spot			Soil map units are labeled (as space allows) for map scales
-	Severely Eroded Spot			1:50,000 or larger.
0	Sinkhole			Date(s) aerial images were photographed: Feb 3, 2020—Feb
è	Slide or Slip			28, 2020
ø	Sodic Spot			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
22	Urban land	1.1	75.3%
38	Bonifay loamy sand, 0 to 5 percent slopes	0.4	24.7%
Totals for Area of Interest	·	1.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Escambia County, Florida

22—Urban land

Map Unit Setting

National map unit symbol: 1jv5d Elevation: 20 to 300 feet Mean annual precipitation: 60 to 68 inches Mean annual air temperature: 64 to 72 degrees F Frost-free period: 276 to 306 days Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Linear Across-slope shape: Linear Parent material: No parent material

Interpretive groups

Land capability classification (irrigated): None specified Forage suitability group: Forage suitability group not assigned (G133AA999FL) Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: Unranked

Minor Components

Lakeland

Percent of map unit: 5 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: No

Foxworth

Percent of map unit: 5 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: No

Arents

Percent of map unit: 5 percent Landform: Rises on marine terraces Landform position (three-dimensional): Rise Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: No

38—Bonifay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tsyc Elevation: 50 to 390 feet Mean annual precipitation: 45 to 73 inches Mean annual air temperature: 52 to 72 degrees F Frost-free period: 246 to 306 days Farmland classification: Farmland of local importance

Map Unit Composition

Bonifay and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonifay

Setting

Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, tread Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand E - 3 to 54 inches: loamy sand Btv - 54 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.58 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 4.0 Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s Hvdrologic Soil Group: A Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Minor Components

Troup

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve *Down-slope shape:* Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Lakeland

Percent of map unit: 4 percent Landform: Hills on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, riser *Down-slope shape:* Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Fuguay

Percent of map unit: 4 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, riser *Down-slope shape:* Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

Albany

Percent of map unit: 4 percent Landform: Ridges on marine terraces, knolls on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, talf *Down-slope shape:* Convex Across-slope shape: Linear

Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) *Hydric soil rating:* No

Blanton

Percent of map unit: 4 percent Landform: Ridges on marine terraces, knolls on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, base slope, tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No **APPENDIX D**

