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Orange Park, Florida 32065
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GENERAL CONTRACTOR
CGC027983
ROOFING CONTRACTOR
CCC1330165

RFI'S FOR "D" WARE HOUSE

1. Sheet T-1 Civil Coversheet shows a Landscape Architect – Mr. Jonathan Daniels. However, we do not have any Landscape Drawings.

I'll leave that to Al to answer.

Landscape Architect got deathly ill and hasn't finished up yet. Landscape & Irrigation drawings will be forwarded when received.

2. Sheet C-1 calls for a new 12' Gravel Drive from the new parking lot back to the existing residence. No details of this drive are included. What kind of Gravel? Subbase? Please advise.

Again, something for Al to answer.

5" FDOT #67 stone on compacted subbase (exist. soil materials)

3. Sheet A9.1 shows wood trim details. Considering there are painted and stained doors. Please advise on trim finish. Paint Grade? Stain Grade?

I am assuming paint-grade, as the lowest cost option. You might want to include a price to delete all window and door trim and just use the hollow-metal door frames and corner beads at the windows with some sort of sill, like Corian, as the Base Option. I thought the wood trim would dress it up a bit and that can be an add-on. Also I will be revising the drawings to delete the chair rail. I don't think she's that concerned about dolling up the place on the Day One.

4. Is there a preferred type of Toilet Partitions this owner desires? So many different types.

Let's assume the least expensive option and maybe give her some upgrade options. Laminate is a safe assumption, in stock colors.

5. Sheet A6.1 – Interior Elevations shows kitchen casework. Please confirm plastic laminate boxes and tops?

Yes, laminate. Plain old standard commercial casework.

6. *Sheet A6.1 – Shows handicap sink with no top. Floor plan and Bldg. cut show casework tops. Please confirm finishes.*

Interior Elevation 8 only shows the ADA stall. We can assume a hanging laminate top for the non-ADA lavatories. Something drop-in like American Standard Aqualyn, or Kohler Brookline. Just provide something standard commercial and that will work.

7. *Please provide some guidance on plumbing fixtures or we may end up with garbage. No garbage please. If you insist:*

- *Sinks (Drop in/Finish) Am Std Aqualyn, 4" centers, with Am Std Colony PRO single-handle faucet*
- *Toilets (Standard Tank/Tank Flush Valve)(All "Comfort-ADA Type) Am Std Cadet 3 1.28 gpf with elongated bowl*
- *Any Preferred or special trim? Not really*

8. *Drawing A2.1 – Shows a roll up counter door. Elevation 1 on A6.1 does not indicate this. A4.1 Section D shows a roll up door. Is OH counter door required? Manual? Electric? Finish/Brand? This door is not indicated on the door schedule. Please advise.*

She would like a rolling counter door/shutter. I will add it to the Door Schedule. Assume a manual non-fire rated counter door equal to Cornell, no sill, face-of-wall guides.

9. *On Sheet A2.1 – Items in the kitchen are labeled "NIC" that are not in contract. The tables and chairs are light lines on the drawings. These are presumed to be FFE provided by owner. Please confirm.*

Tables, chairs, kitchen equipment (other than pot sink) are all FFE and by Owner.

10. *Will a Knox Box be required for Fire Department?*

I would assume so.

11. *Will metal building insulation be min. required by code?*

She would like to make sure it's well insulated and energy-efficient. Let's assume R-19 in the walls and R-30 in the roof. I will note that on the sections.

12. *Sheet A8.1 – Ceiling schedule shows a 2x2 acoustical tile ceiling. Square edge? Tegular? Any preference on tile spec? Please advise.*

I would price standard commercial 2x2. You might want to give upgrade prices for tegular edge.

13. *Sheet A8.1 – Does not call out what ceiling is. It is presumed this is metal building ceiling panels. Is this a correct assumption.*

You mean for porte cochere? The rest of the spaces have ceiling materials and heights noted. I would assume EIFS (now that she has settled on EIFS)

14. *Has a soils report been procured on this project? Structural indicates it is contractor responsibility. We need this information for bidding purposes. We bid a sandy soil project yesterday with a water table between 2'-3'. Don't want an 'unforeseen' change order. Please advise.*

Structural based their design on "poor soil" and a low bearing capacity. You might want to give a price to get a boring in the building area, unless AI is already getting soil borings and a perc test for his pond. He usually asks me if I want to add one in the building area. I think a single 20-25 foot penetration test would tell us all we need to know.

Geotech test for pond design has been performed. Attached.

15. *On drawings A3.2 & A4.1 – The Porte Cochere columns appear to be boxed out. Please confirm design intent.*

Yes, we will be boxing them out and using EIFS. I was able to get her to decide on that yesterday.

16. *A3.1 – South Elevation does not appear to be metal panels. Please confirm front desired finish.*

That was up in the air until my meeting yesterday. She opted for EIFS with some surface-mounted foam pilasters. I will modify the elevations and provide some details on that. I assume we would put the Densglass and foam right over the metal building wall panels? Is that what y'all did at Hagan Ace Blanding? I know you changed things but I was never given detailed information on what you changed it to.

17. *A3.2 calls for an exhaust fan. However, nothing is shown. Please provide some direction.*

Stray note. Please ignore. However we will have exhaust fans in the restrooms (plumbing design is not in my scope) and I would highly recommend that turn and go to a wall jack on the outside wall rather than to the roof. I hate roof penetrations.

18. *Are window treatments required on this project? Please advise.*

Not on the interior, she said they already are making plans for that. However some blocking should be included on the interior for hanging curtains and such. On the exterior we will have a Fypon window pediment that I will call out on the revised elevation. No louvers or anything like that.

19. *Have energy calcs been procured on this project? Please advise.*

No MEP scope in my contract. I would get your mechanical sub to include that in his price and scope.

20. *Will low voltage (phones, internet) be a part of this contract? Or will owner be handling themselves? Please advise.*

We will need to discuss that with her. She may just have a wifi (WAP, wireless access point) in the ceiling, or she may want some empty data boxes around the walls. She did mention wanting to mount a TV in the meeting room and a motorized screen in the middle of the north wall (we're deleting the center 5 windows on the north wall opposite the entry doors). Again, I think if your sub can give some pricing options (cost per drop for an empty box) it might help her with the decision making.

21. *Drawing C-2 shows connecting the downspouts on the back (north) side of the building to storm drain. However, the downspouts on the front (south) side of the building have no storm drain provisions. Please verify this was the design intent.*

The usual disconnect between Al and me. I like to always pipe my downspouts (because Al hates me dumping unplanned surface drainage on his design) and all building have downspouts, so... we'll need to get Al to answer this one.

My early design concerns always center around where it's going, but less on how it's getting there. However, it is critically important to keep Brian happy. ;) So, please see attached revised sht. C-2 showing collection piping for south side. Plan from Brian's version of # & location of downspouts, not mine.

Also, don't know which version you are pricing, but the pump size was in error on sht. C-5 on an early version. Please see the attached. Note that this may affect your electrical as well.

April 2, 2019



Wood Environment & Infrastructure Solutions, Inc.
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Jacksonville, Florida 32258
Phone: 904.396.5173 • Fax: 904.396.5703
www.woodplc.com

Mr. Allyn C. Tidball, P.E.
2276 Laurel Grove Lane
Orange Park, Florida 32073

Subject: **Report of Geotechnical Services**
AKA D. Ware House Stormwater Pond
1167 Kingsley Avenue
Orange Park, Florida
Wood Project No. 6734-19-9981

Dear Mr. Tidball:

Wood Environment & Infrastructure Solutions, Inc. (Wood) has performed geotechnical services for the subject project in general accordance with our Professional Services Agreement dated February 8, 2019. This report summarizes the results of our field and laboratory activities. The assessment of site environmental conditions or the presence of pollutants in the soil, rock or groundwater of the site was beyond our proposed scope of services. Our scope also did not include engineering evaluation of the data obtained, recommendations for pond design, or the preparation of design drawings or specifications. The proposed building and pavements are also beyond our proposed scope.

Project Information

You provided project information during the period of November 5, 2018, through March 8, 2019. We were furnished with the following project-pertinent documents:

- Site Plan (Sheet C-1)
"D. Ware House" A Private Club for AKA Sorority, Inc.
1167 Kingsley Avenue
Orange Park, Florida
Prepared by: Allyn C. Tidball, P.E.
Dated: January 7, 2019
- Preliminary Site Plan #4 (Sheet PR-4)
"D. Ware House" A Private Club for AKA Sorority, Inc.
1167 Kingsley Avenue
Orange Park, Florida
Prepared by: Allyn C. Tidball, P.E.
Dated: January 20, 2019



As shown on the attached Site Location Map, the subject site is located on the north side of Kingsley Avenue and on the east side of DeBarry Avenue in Orange Park, Florida. We understand a stormwater pond will be constructed in the northwestern portion of this property.

Field Services

As requested, two engineering technicians from our office performed the following scope of field services on March 18, 2019, at the subject site:

- Drilled one manual auger boring (P-1) to a depth of 8 feet below the existing ground surface at the requested location
- Estimated the depth to the seasonal high groundwater level at the boring location
- Conducted vertical and horizontal field permeability (hydraulic conductivity) tests adjacent to Auger Boring P-1 at depths of approximately 4½ to 5 feet each below the existing ground surface

The attached Field Exploration Plan presents the approximate location of the auger boring and the field hydraulic conductivity tests. The attached Auger Boring Record presents the material descriptions for each soil type encountered as well as the depth of the groundwater level in the auger boring at the time of drilling. The estimated depth to the seasonal high groundwater level is also presented on the attached Auger Boring Record. The results of the field hydraulic conductivity tests are presented in the following table:

Table 1: Field Hydraulic Conductivity Test Results								
Test No.	Test Type	Casing Length (ft)			Depth Range of Slotted Section (ft)	Hydraulic Conductivity, k		
		Below Grade	Above Grade	Total		cm/sec	in/hr	ft/day
P-1	Vertical	4.7	2.3	7.0	N/A	1.1×10^{-2}	15.4	30.9
	Horizontal	5.7	1.9	7.6	4.5 to 5.0	1.2×10^{-3}	1.73	3.46

The ground surface elevation at the auger boring location was neither furnished to us nor established by our field representatives. Brief descriptions of the exploratory drilling, testing, and sampling techniques used are presented in the attached Field and Laboratory Procedures.

Laboratory Testing

In order to aid in classifying the soils, a laboratory grain size distribution test was conducted on a



Allyn C. Tidball, P.E.
AKA D. Ware House Stormwater Pond
Report of Geotechnical Services

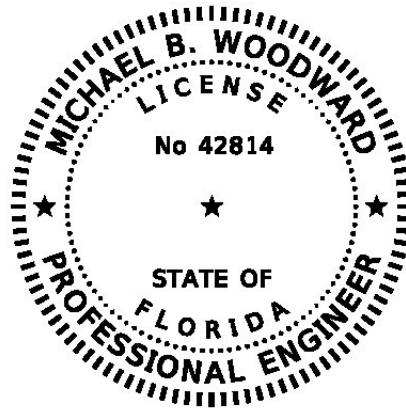
representative soil sample obtained from the auger boring. The results of this test are presented on the attached Grain Size Distribution Report. A brief description of the laboratory test procedure is presented in the attached Field and Laboratory Procedures section.

We have enjoyed assisting you and look forward to serving as your geotechnical consultant on the remainder of this project and on future projects. Please contact us if you have any questions concerning this report.

Sincerely,

Wood Environment & Infrastructure Solutions, Inc.
Florida Board of Professional Engineers Certificate of Authorization No. 5392

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY



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.

*WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
6256 GREENLAND ROAD
JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION 5392
MICHAEL B. WOODWARD, P.E. NO. 42814*

Corey T. Chascin, E.I.
Project Geotechnical Engineer

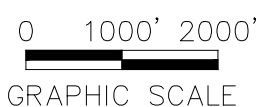
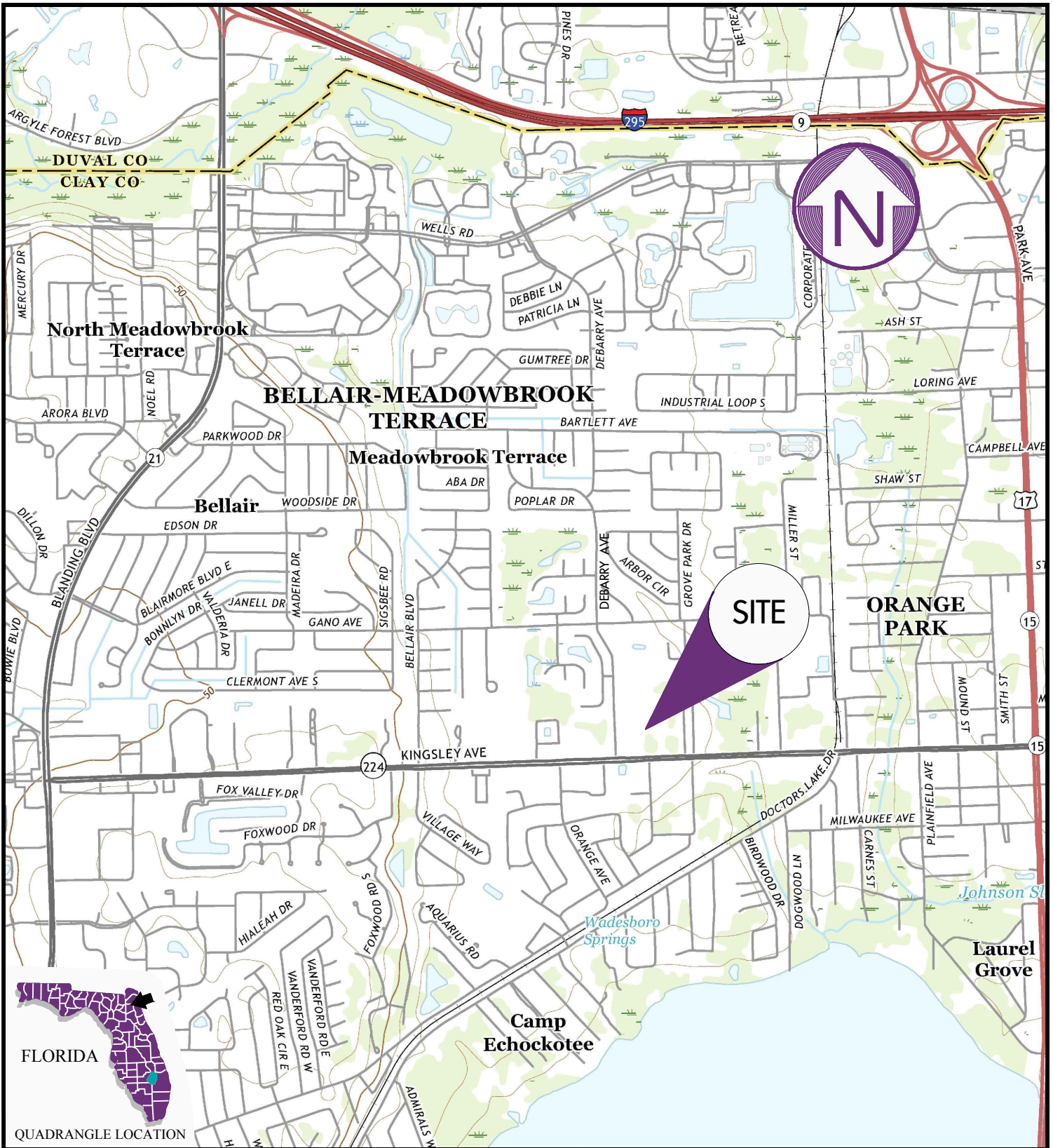
Michael B. Woodward, P.E.
Principal Geotechnical Engineer
Florida License No. 42814

- Attachments:
- Site Location Map
 - Field Exploration Plan
 - Auger Boring Record
 - Grain Size Distribution Report
 - Field and Laboratory Procedures
 - Key to Symbols and Descriptions

Distribution: Mr. Allyn C. Tidball, P.E. (email)
File (1)



ATTACHMENTS



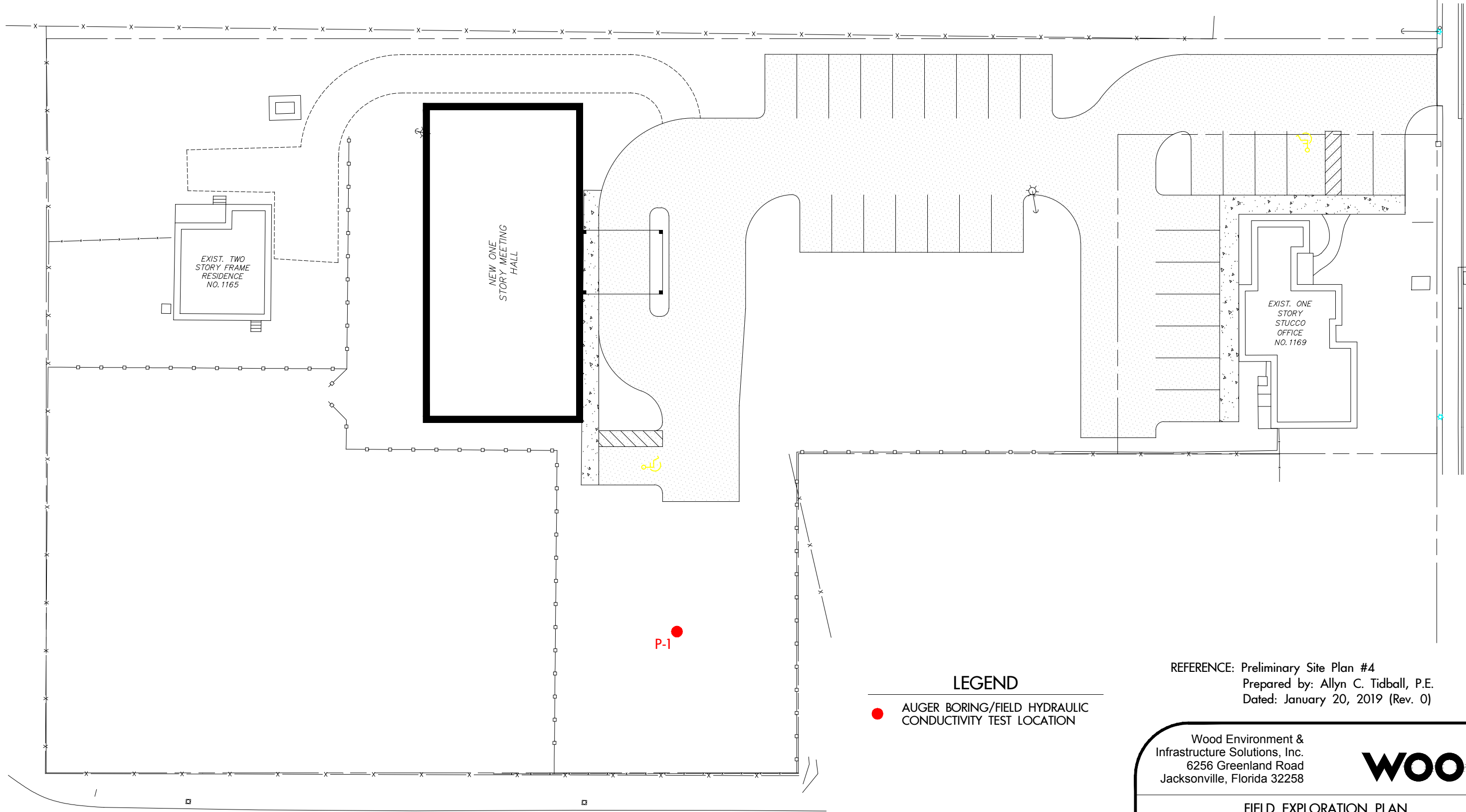
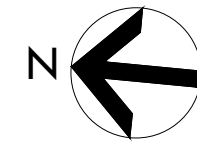
REFERENCE: Topographic Map; Orange Park, Florida
 U.S. Geological Survey
 Dated: 2018

Wood Environment &
 Infrastructure Solutions, Inc.
 6256 Greenland Road
 Jacksonville, Florida 32258



SITE LOCATION MAP
 AKA D. Ware House Stormwater Pond
 1167 Kingsley Avenue
 Orange Park, Florida

DRAWN: JP	DATE: 4/2/19	SCALE: 1"=2000'
CHECKED: MBW	PROJ. NO. 6734-19-9981	APPROX.

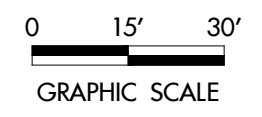


KINGSLEY AVENUE


LEGEND

- AUGER BORING/FIELD HYDRAULIC CONDUCTIVITY TEST LOCATION

REFERENCE: Preliminary Site Plan #4
 Prepared by: Allyn C. Tidball, P.E.
 Dated: January 20, 2019 (Rev. 0)



Wood Environment & Infrastructure Solutions, Inc.
 6256 Greenland Road
 Jacksonville, Florida 32258



FIELD EXPLORATION PLAN
 AKA D. Ware House Stormwater Pond
 1167 Kingsley Avenue
 Orange Park, Florida

DRAWN: JP	DATE: 4/2/19	SCALE: 1"=30'
CHECKED: MBW	PROJ. NO. 6734-19-9981	APPROX.

AUGER BORING RECORD

AKA D. Ware House Stormwater Pond
 1167 Kingsley Avenue
 Orange Park, Florida
 Wood Project No. 6734-19-9981
 Date Performed: March 18, 2019

Auger Boring No.	Depth (feet)	Material Description
P-1	0.0 - 0.8	Brown fine SAND (SP) with traces of silt and roots
	0.8 - 1.3	Gray fine SAND (SP) with a trace of silt
	1.3 - 3.0	Light brown fine SAND (SP) with a trace of silt
	3.0 - 3.3	Brown silty fine SAND (SM)
	3.3 - 4.5	Orangish brown silty fine SAND (SM) with a trace of partially cemented fragments
	4.5 - 5.3	Light orangish brown fine to medium SAND with clay (SP-SC)
	5.3 - 6.0	Orange and gray clayey fine to medium SAND (SC)
	6.0 - 6.8	Red and orange clayey fine to medium SAND (SC)
	<u>6.8 - 8.0</u>	Light red, orange, and gray clayey fine SAND (SC)
	A.B.T. ¹	GWL ² : 6.0 feet at TOD ³ ESHGWL ⁴ : 1.3 feet
Reviewed by:	<i>MFW</i>	
Date:	4/2/2019	

Notes:

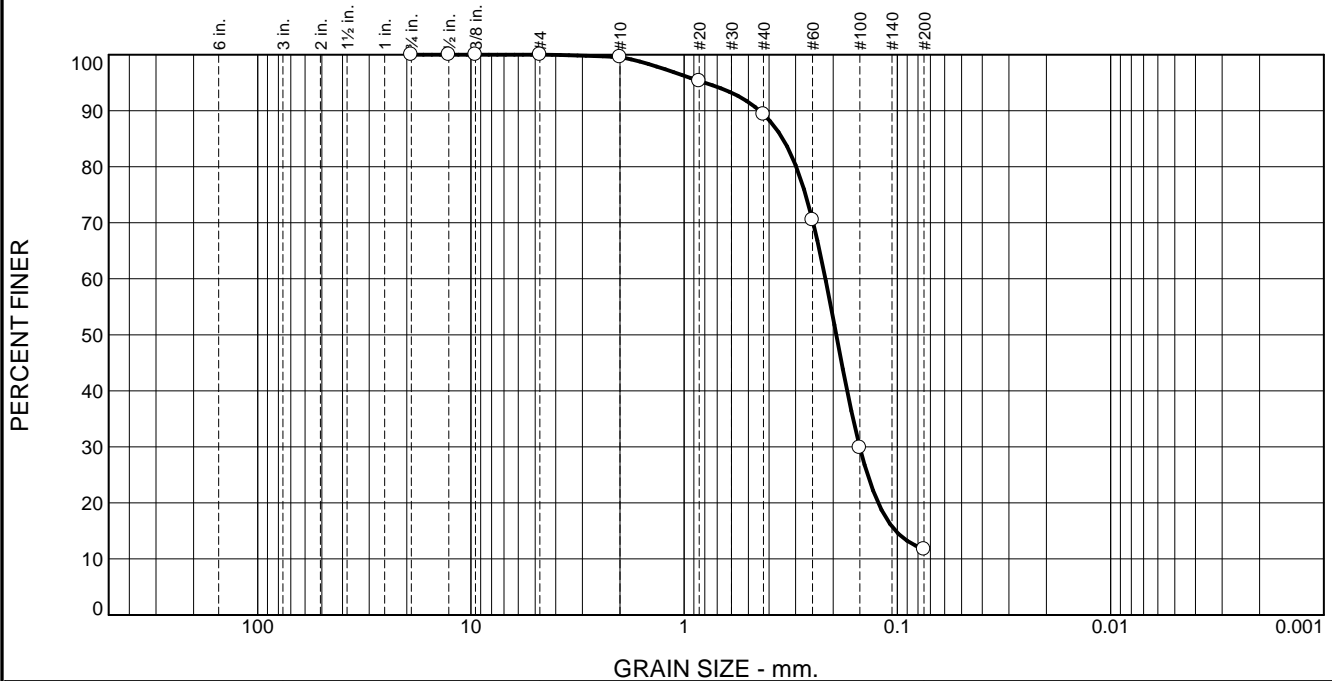
¹A.B.T. - Auger Boring Terminated

²GWL - Groundwater Level (depth below existing ground surface)

³TOD - Time of Drilling

⁴ESHGWL - Estimated Seasonal High Groundwater Level (depth below existing ground surface)

Grain Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	10.2	77.7	11.7	

Test Results (ASTM D6913 & ASTM D1140)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
#4	100.0		
#10	99.6		
#20	95.3		
#40	89.4		
#60	70.5		
#100	29.9		
#200	11.7		

Material Description

Light orangish brown fine to medium SAND with clay

Atterberg Limits (ASTM D 4318)

PL= _____ LL= _____ PI= _____

Classification

USCS (D 2487)= SP-SC AASHTO (M 145)= _____

Coefficients

D₉₀= 0.4432 D₈₅= 0.3448 D₆₀= 0.2176
D₅₀= 0.1935 D₃₀= 0.1503 D₁₅= 0.1019
D₁₀= _____ C_u= _____ C_c= _____

Remarks

Date Received: 4/1/19 Date Tested: 4/2/19

Tested By: C. Martin

Checked By: Corey T. Chascin, E.I.

Title: Project Engineer

* (no specification provided)

Source of Sample: P-1 Depth: 4.5'- 5.3' Date Sampled: 3/18/19
Sample Number: 6

<p>Wood E&I</p> <p>Jacksonville, Florida</p>	<p>Client: Allyn C. Tidball, P.E.</p> <p>Project: AKA D. Ware House Stormwater Pond</p> <p>Project No: 6734199981</p>
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FIELD AND LABORATORY PROCEDURES

Field Procedures

Auger Boring (Manual) – The auger boring was advanced manually by the use of a bucket-type hand auger. The soils encountered were identified, in the field, from cuttings brought to the surface by the augering process. Representative soil samples were placed in plastic bags and transported to our laboratory where they were examined by an engineer in order to confirm the field classifications. The boring was performed in accordance with ASTM D1452.

Seasonal High Groundwater Level Estimation - The depth to the seasonal high groundwater level was estimated at the boring location. The position of the seasonal high groundwater level was estimated by closely observing the soil cuttings for changes in root and organic content, soil stratification and subtle changes in soil coloration or mottling or the presence of a polychromatic matrix (two or more colors arranged in a splotchy pattern) which are indicative of the seasonal high water table. The method used to estimate the seasonal high groundwater level is similar to that prescribed by the United States Department of Agriculture Soil Conservation Service. It should be noted that this methodology does not consider recent or future site drainage improvements or man-induced activities which may impact the groundwater level at the site.

Vertical Hydraulic Conductivity Test - To perform this field test, a 2-inch diameter solid section of PVC pipe with an open bottom was installed in a borehole augered to the requested test depth. Water was added into the pipe and the volume of water required to maintain a constant head near the top of the pipe was recorded for various time intervals until the flow rate had apparently stabilized. The vertical hydraulic conductivity was estimated using the following formula:

$$k_v = \frac{q}{5.5rh}$$

Where: k_v = vertical hydraulic conductivity
 q = constant rate of flow into the test hole necessary to maintain a given head
 r = inside radius of the casing or pipe
 h = differential head of water between water in pipe and groundwater level

NOTE: All measurement units (linear dimensions) should be consistent throughout the formula. The above discussed method of calculation is described as the open-end pipe gravity test for soil permeability in the U.S. Bureau of Reclamation Earth Manual, pages 541-543.

Horizontal Hydraulic Conductivity Test - To perform the field horizontal conductivity test, a 2-inch diameter section of PVC pipe was initially installed into the augered hole to the requested test depth. The bottom 6 inches of the pipe were slotted, and the upper portion was solid. The bottom of the pipe was sealed. Water was introduced into the test pipe and allowed to flow laterally through the slotted portion of the pipe to saturate the soils around this portion of the pipe. The pipe was then

refilled to the top with water, and measurements of the drop in the water surface from the top of the pipe were made at specific intervals. The coefficient of horizontal hydraulic conductivity of the soils in the depth range corresponding to the slotted portion of the PVC pipe was calculated using the procedure described in the "The Bouwer and Rice Slug Test - An Update," GROUND WATER, Volume 27, No. 3, May-June, 1989. The equation utilized for this calculation is as follows:

$$k_h = \frac{r_c^2 \ln\left(\frac{R_e}{r_w}\right)}{2L_e t} \ln\left(\frac{y_0}{y_t}\right)$$

Where:

k_h = horizontal hydraulic conductivity

r_c = the inside radius of the pipe or casing

L_e = length of slotted zone of pipe

t = time

y = difference in elevation between the water level in the pipe and the groundwater level

y_0 = y at time zero

y_t = y at time t




















R_e = effective radial distance over which y is dissipated

r_w = radial distance of undisturbed portion of aquifer from pipe centerline

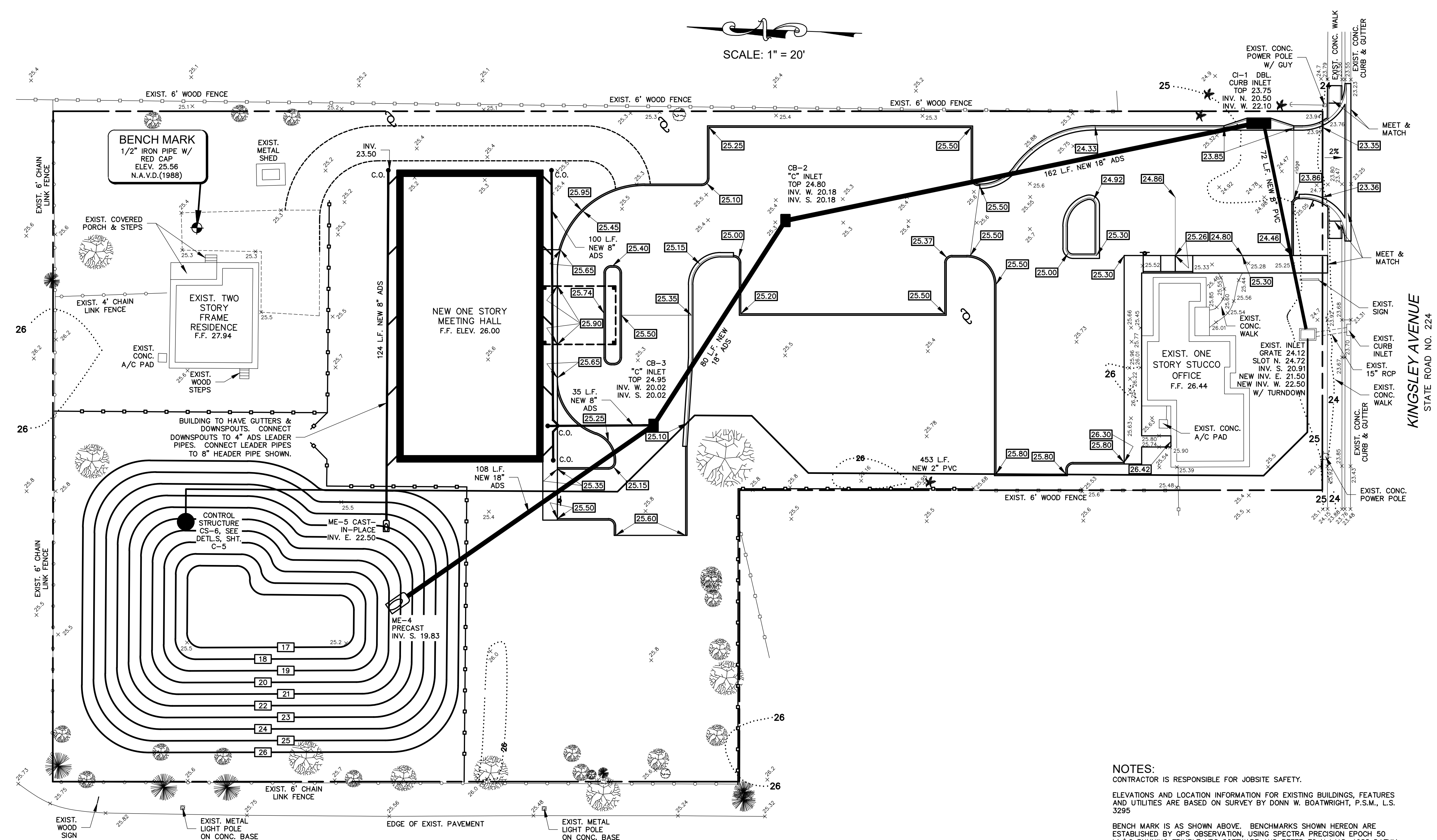
The value of the dimensionless ratio $\ln(R_e/r_w)$ is determined from graphs presented in the aforementioned reference that are based on electrical resistance network analog analyses performed by the author of the reference (Herman Bouwer).

Laboratory Procedures

Grain Size Distribution - The grain size distribution test was performed to determine the particle size and distribution of the sample that was tested. The sample was dried, weighed, and washed over a No. 200 mesh sieve. The dried sample was then passed through a standard set of nested sieves to determine the grain size distribution of the soil particles coarser than the No. 200 sieve. This test was conducted in accordance with ASTM D422.

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	Undisturbed Sample (UD)	Auger Cuttings																					
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	 GW Well graded gravels, gravel - sand mixtures, little or no fines.	 Split Spoon Sample (SS)	 Bulk Sample																						
		GRAVELS WITH FINES (Appreciable amount of fines)	 GP Poorly graded gravels or gravel - sand mixtures, little or no fines.			 Rock Core (RC)																					
		SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 Sieve Size)	CLEAN SANDS (Little or no fines)	 GM Silty gravels, gravel - sand - silt mixtures.	 Water Table at time of drilling		 Water Table after 24 hours																				
	 GC Clayey gravels, gravel - sand - clay mixtures.			WOH - Weight of Hammer	◀ 100% - Percent Loss of Drilling Fluid																						
	SANDS WITH FINES (Appreciable amount of fines)		 SW Well graded sands, gravelly sands, little or no fines.	WOR - Weight of Drill Rods	Su - undrained shear strength estimated from pocket penetrometer																						
			 SP Poorly graded sands or gravelly sands, little or no fines.	SCP - Static Cone Penetrometer Tip Resistance (kg/sq. cm)	qu - unconfined compressive strength estimated from pocket penetrometer																						
					Correlation of Penetration Resistance (N) with Relative Density and Consistency																						
					SAND & GRAVEL																						
					SILT & CLAY																						
					No. of Blows	Relative Density	No. of Blows	Consistency																			
				0 - 4	Very Loose	0 - 2	Very Soft																				
				5 - 10	Loose	3 - 4	Soft																				
				11 - 20	Firm	5 - 8	Firm																				
				21 - 30	Very Firm	9 - 15	Stiff																				
				31 - 50	Dense	16 - 30	Very Stiff																				
				Over 50	Very Dense	31 - 50	Hard																				
						Over 50	Very Hard																				
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)	 ML Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts and with slight plasticity.	Modifiers <u>These Modifiers Provide Our Estimate of The Amount of Fines (Silt or Clay Size Particles) in The Soil Sample</u> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>APPROX. FINES CONTENT</th> <th>MODIFIERS</th> <th>UNIFIED SOIL CLASSIFICATION SYMBOL</th> </tr> </thead> <tbody> <tr> <td>5% TO 12%</td> <td>WITH SILT / WITH CLAY</td> <td>SP-SM OR SP-SC</td> </tr> <tr> <td>12% TO 30%</td> <td>SILTY / CLAYEY</td> <td>SM OR SC</td> </tr> <tr> <td>30% TO 50%</td> <td>VERY SILTY / VERY CLAYEY</td> <td>SM OR SC</td> </tr> </tbody> </table>				APPROX. FINES CONTENT	MODIFIERS	UNIFIED SOIL CLASSIFICATION SYMBOL	5% TO 12%	WITH SILT / WITH CLAY	SP-SM OR SP-SC	12% TO 30%	SILTY / CLAYEY	SM OR SC	30% TO 50%	VERY SILTY / VERY CLAYEY	SM OR SC									
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		5% TO 12%					WITH SILT / WITH CLAY	SP-SM OR SP-SC																			
	12% TO 30%	SILTY / CLAYEY					SM OR SC																				
	30% TO 50%	VERY SILTY / VERY CLAYEY					SM OR SC																				
 CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.																											
 OL Organic silts and organic silty clays of low plasticity.																											
SILTS AND CLAYS (Liquid limit GREATER than 50)	 MH Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.																										
	 CH Inorganic clays of high plasticity, fat clays																										
		 OH Organic clays of medium to high plasticity, organic silts.																									
HIGHLY ORGANIC SOILS			 PT Peat and other highly organic soils.																								
BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.																											
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <th rowspan="2">SILT OR CLAY</th> <th colspan="3">SAND</th> <th colspan="2">GRAVEL</th> <th rowspan="2">Cobbles</th> <th rowspan="2">Boulders</th> </tr> <tr> <th>Fine</th> <th>Medium</th> <th>Coarse</th> <th>Fine</th> <th>Coarse</th> </tr> <tr> <td></td> <td>No.200</td> <td>No.40</td> <td>No.10</td> <td>No.4</td> <td>3/4"</td> <td>3"</td> <td>12"</td> </tr> </table> <p style="text-align: center;">U.S. STANDARD SIEVE SIZE</p> <p>Reference: The Unified Soil Classification System, Corps of Engineers, U.S. Army Technical Memorandum No. 3-357, Vol. 1, March, 1953 (Revised April, 1960)</p>							SILT OR CLAY	SAND			GRAVEL		Cobbles	Boulders	Fine	Medium	Coarse	Fine	Coarse		No.200	No.40	No.10	No.4	3/4"	3"	12"
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			KEY TO SYMBOLS AND DESCRIPTIONS																								
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>ORGANIC CONTENT</th> <th>MODIFIERS</th> </tr> </thead> <tbody> <tr> <td>1% TO 3%</td> <td>TRACE</td> </tr> <tr> <td>3% TO 5%</td> <td>SLIGHTLY ORGANIC</td> </tr> <tr> <td>5% TO 30%</td> <td>ORGANIC</td> </tr> <tr> <td>> 30%</td> <td>PEAT</td> </tr> </tbody> </table>							ORGANIC CONTENT	MODIFIERS	1% TO 3%	TRACE	3% TO 5%	SLIGHTLY ORGANIC	5% TO 30%	ORGANIC	> 30%	PEAT											
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3% TO 5%	SLIGHTLY ORGANIC																										
5% TO 30%	ORGANIC																										
> 30%	PEAT																										

SCALE: 1" = 20'



BENCH MARK
1/2" IRON PIPE W/
RED CAP
ELEV. 25.56
N.A.V.D.(1988)

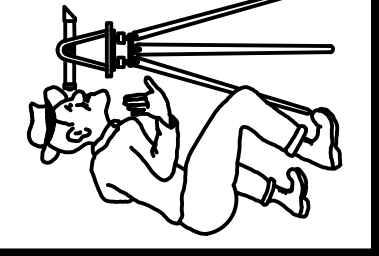
BENCH MARK
1/2" IRON PIPE W/
RED CAP
ELEV. 25.24
N.A.V.D.(1988)

KINGSLEY AVENUE
STATE ROAD NO. 224

GRADING &
DRAINAGE PLAN

"D. Ware House"
A PRIVATE CLUB FOR
AKA SORORITY, INC.
1167 Kingsley Avenue
Orange Park, FL

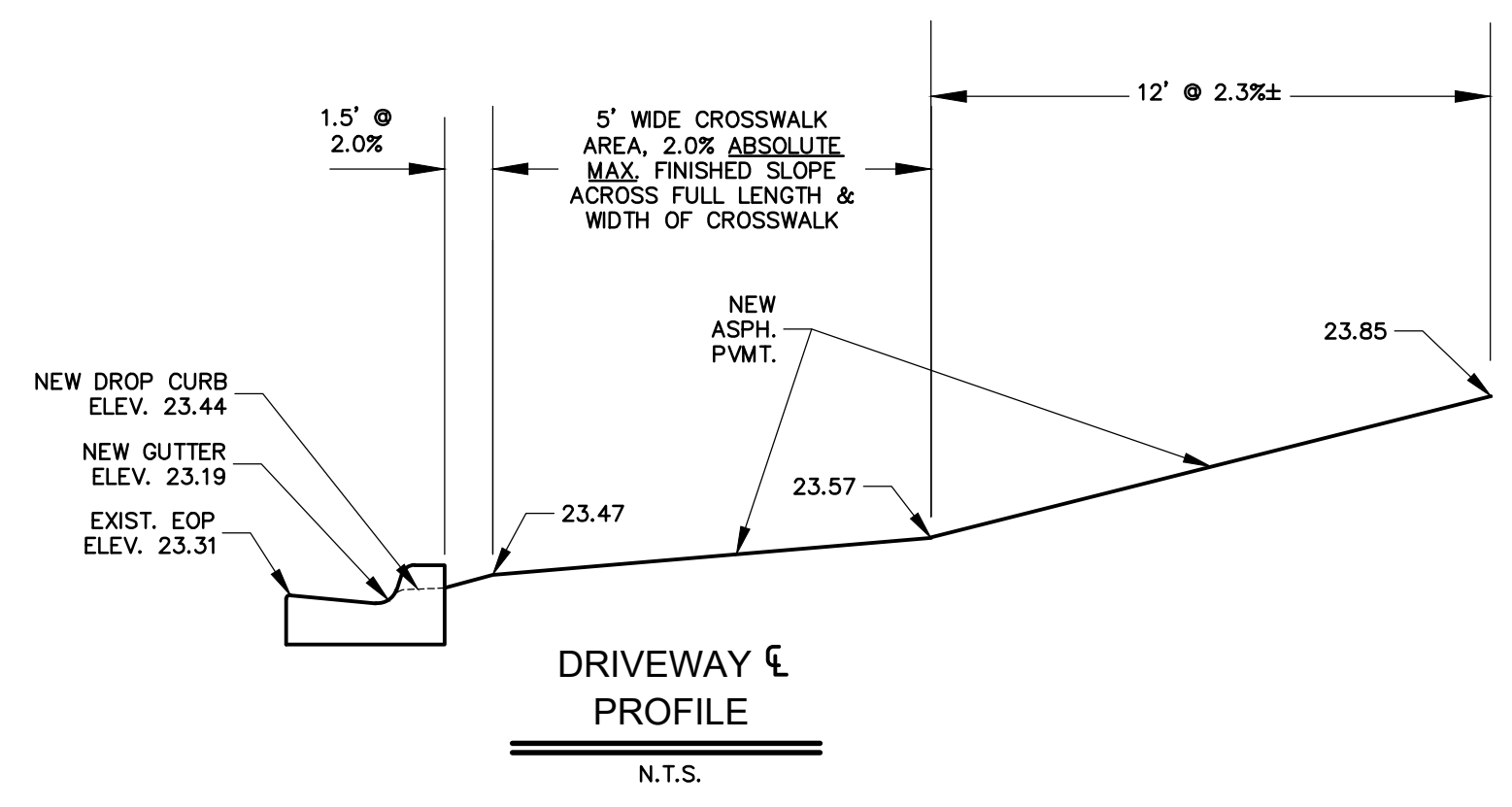
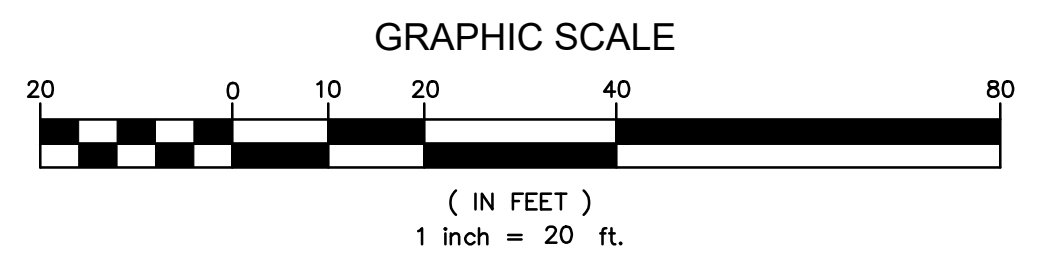
Allyn C. Tidball, P.E.
Civil Engineering-Site Investigation
2276 Laurel Grove Lane
Orange Park, Florida 32073
(904)-264-3760
ATidball@AllynCTidballPE.com

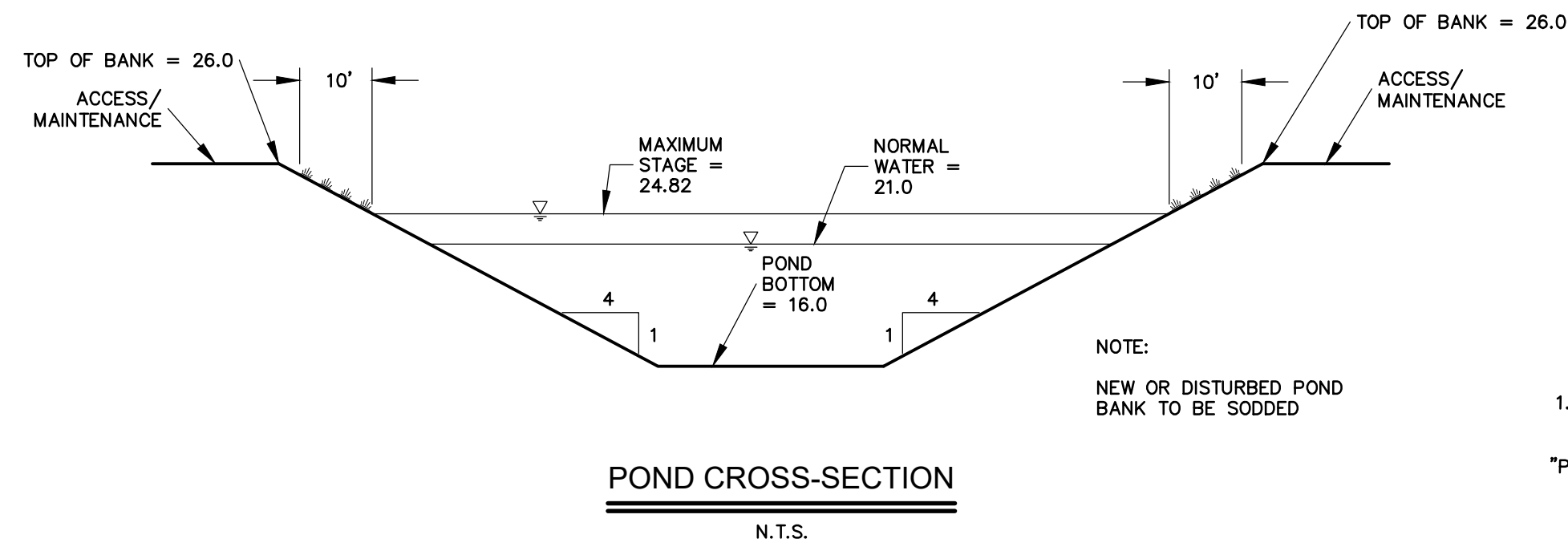


SHEET
C-2

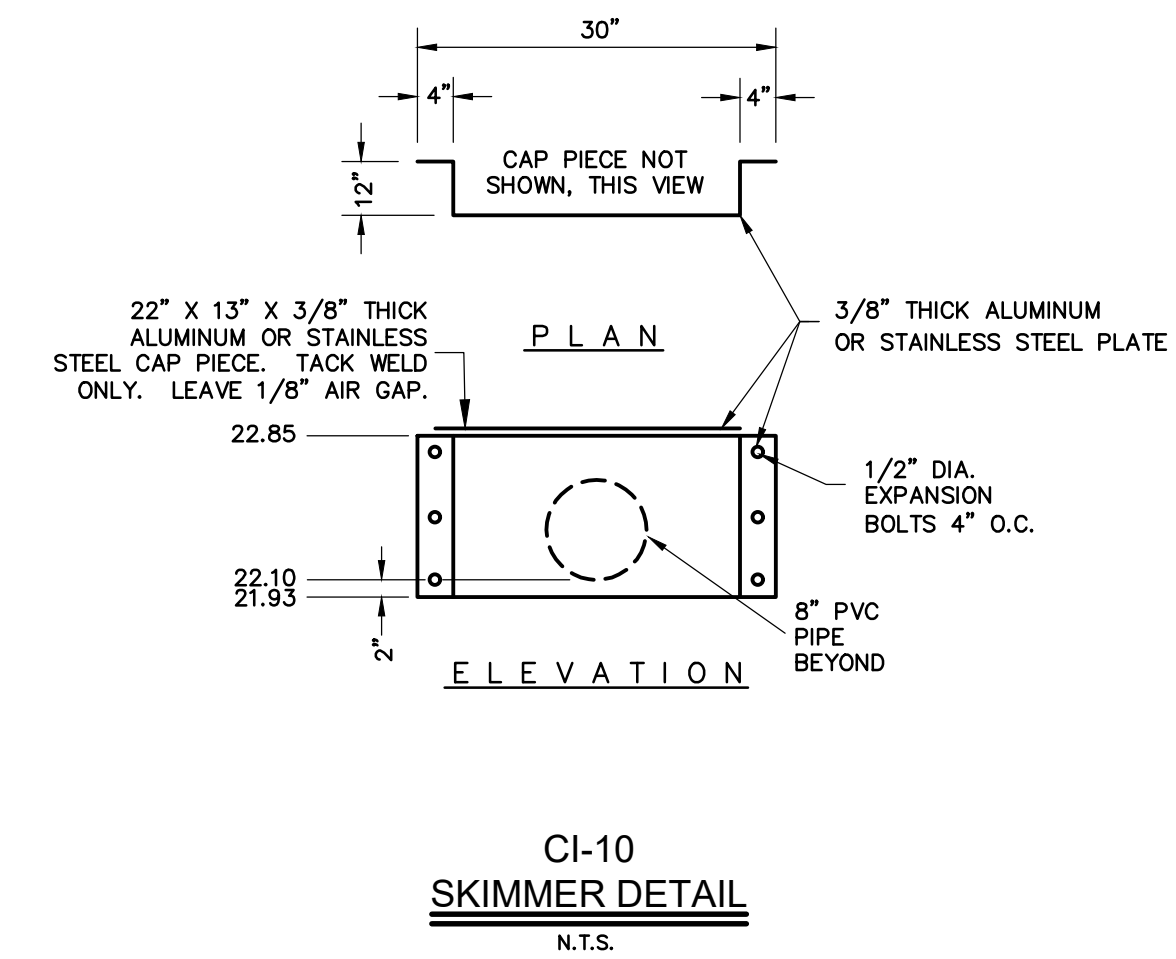
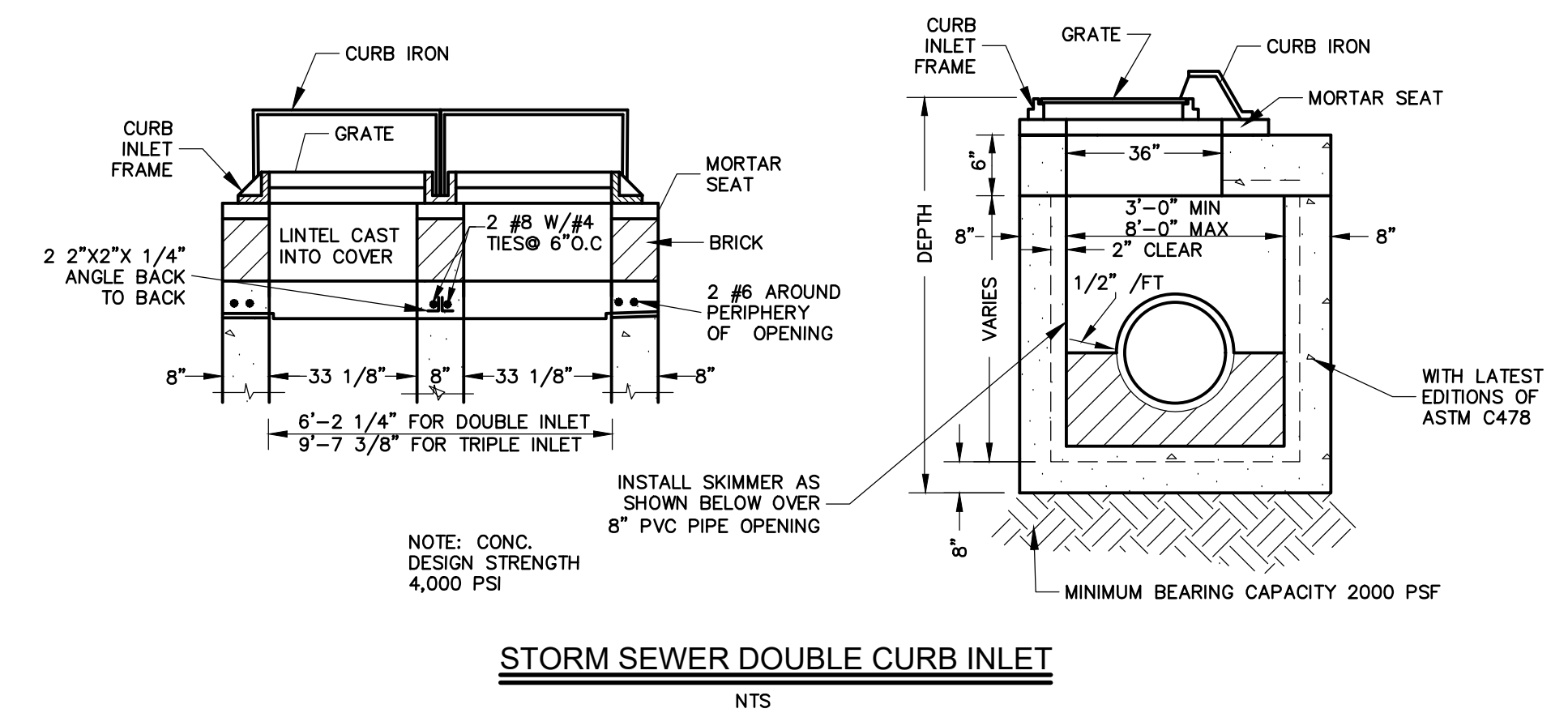
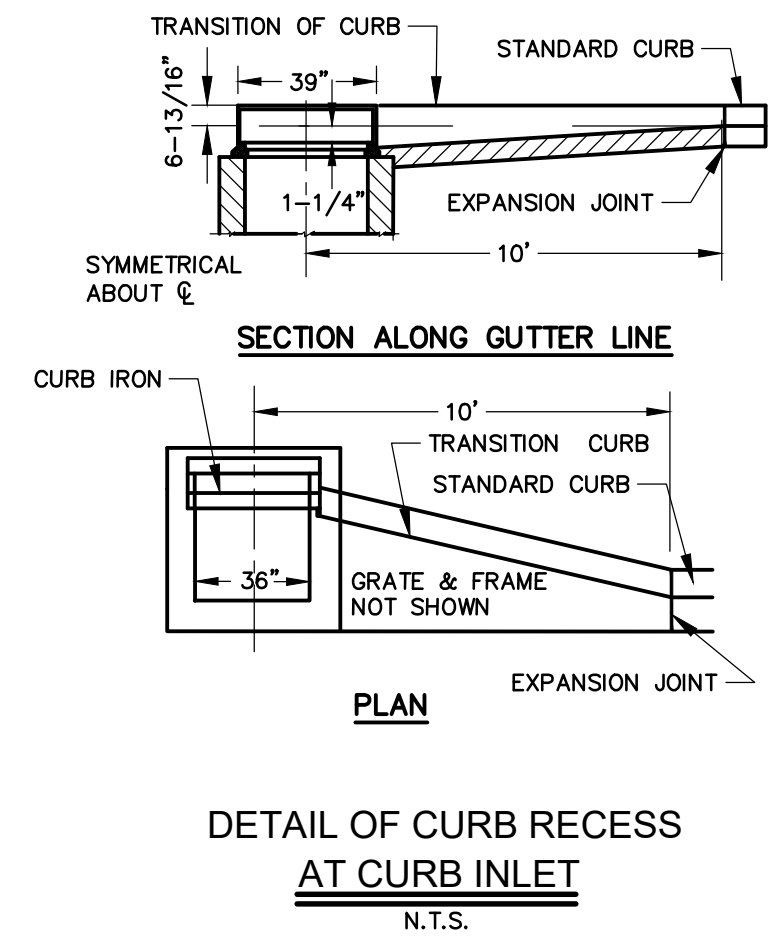
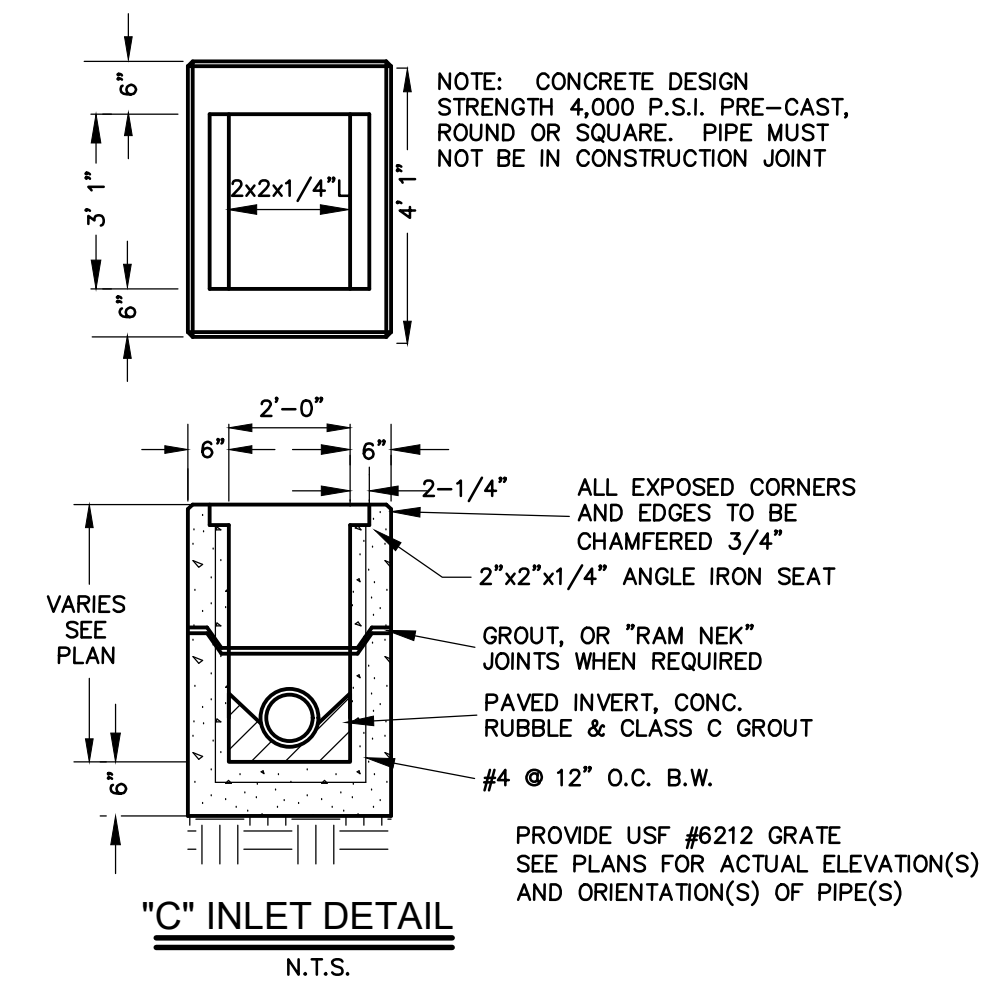
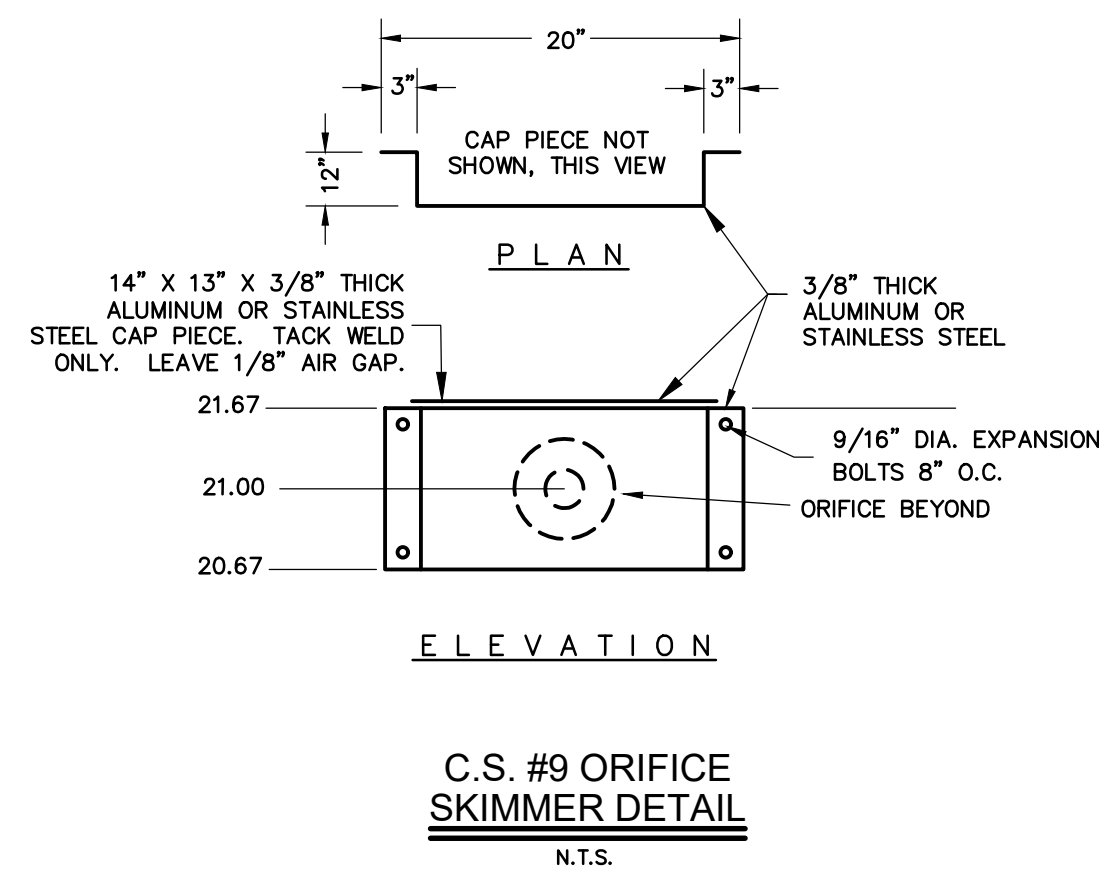
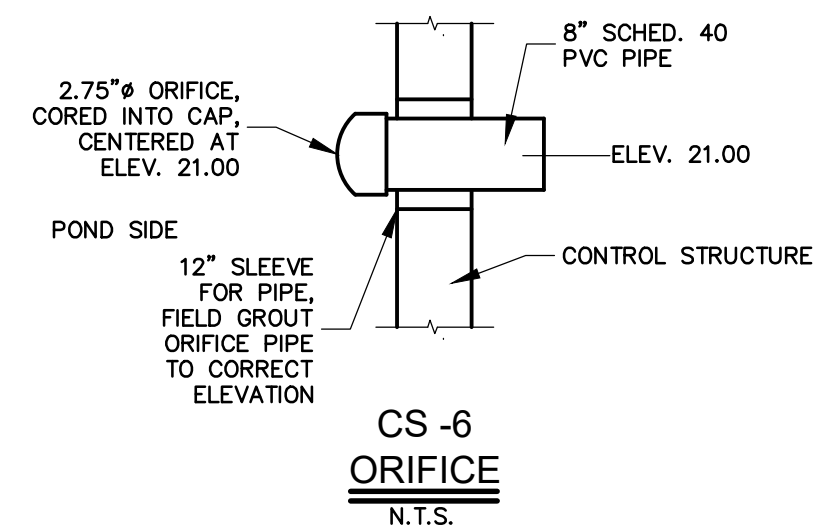
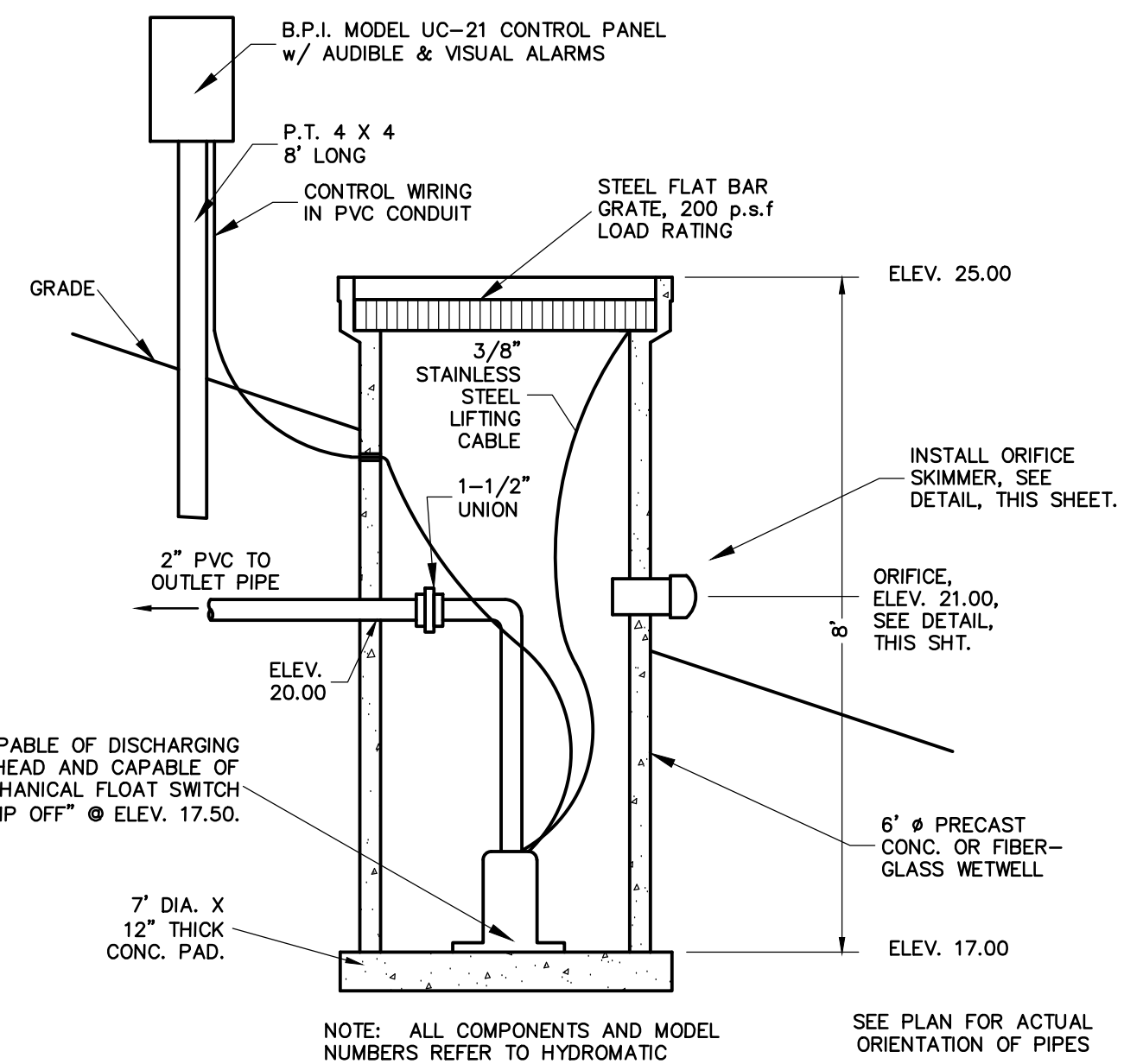
NOTES:
CONTRACTOR IS RESPONSIBLE FOR JOBSITE SAFETY.
ELEVATIONS AND LOCATION INFORMATION FOR EXISTING BUILDINGS, FEATURES AND UTILITIES ARE BASED ON SURVEY BY DONN W. BOATWRIGHT, P.S.M., L.S. 3295
BENCH MARK IS AS SHOWN ABOVE. BENCHMARKS SHOWN HEREON ARE ESTABLISHED BY GPS OBSERVATION, USING SPECTRA PRECISION EPOCH 50 L1/L2 RUNNING TRIMBLE VRS SOFTWARE AND REFER TO N.A.V.D. 1988 DATUM.
THE PROPERTY SHOWN HEREON APPEARS TO LIE IN FLOOD ZONE "X" (AREA OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS DETERMINED BY THE FLOOD INSURANCE RATE MAP NUMBER 12019C0090E REVISED MARCH 17, 2014 FOR CLAY COUNTY FLORIDA.
ELEVATIONS SHOWN AT CURB REFER TO GUTTER FLOWLINE OR TOP OF ASPHALT ELEVATIONS. TOP OF CURB ELEVATION IS 6" = 0.5' HIGHER.
CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR, LICENSED BY THE STATE OF FLORIDA, TO PERFORM LAYOUT OF ALL NEW SITE FEATURES, ESPECIALLY CURBS. ELECTRONIC COPIES OF CIVIL PLANS WILL BE PROVIDED FOR THIS PURPOSE.
CONTRACTOR IS RESPONSIBLE FOR LAYOUT ACCURACY.
CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO EXCAVATION FOR STRUCTURES OR PIPING. REPORT ANY CONFLICTS TO THE ENGINEER IMMEDIATELY.
ANY PIPES, CABLES OR CONDUIT CUT OR DAMAGED WILL BE REPAIRED BY THE CONTRACTOR AND ANY ASSOCIATED COST BORN BY THE CONTRACTOR. ANY UTILITY RELOCATION WORK WILL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
CONTRACTOR TO ADJUST ALL VALVE BOXES, CLEANOUTS, JUNCTION BOXES, ETC. TO NEW ELEVATIONS.
ALL DEMOLISHED OR STRIPPED MATERIALS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFFSITE.
ALL AREAS UNDER NEW BUILDING AND PAVEMENT ARE TO BE STRIPPED TO A MINIMUM OF 6". MAJOR ROOTS ARE TO BE REMOVED TO FULL DEPTH.
FILL UNDER NEW BUILDING, PAVEMENT OR CURBS IS TO BE "SP" SAND MATERIALS COMPACTED TO 98% MODIFIED PROCTOR DENSITY. DISTURBED EARTH OR FILL IN ALL OTHER AREAS IS TO BE COMPACTED TO 90% MODIFIED PROCTOR DENSITY. EXISTING ONSITE MATERIALS ARE SUITABLE FOR USE AS FILL UNDER PAVEMENT.
THE CONTRACTOR SHALL ENGAGE THE SERVICES OF AN INDEPENDENT TESTING LABORATORY, PAID FOR BY THE CONTRACTOR, TO TEST SOILS, LIMEROCK, ASPHALT AND CONCRETE AS INSTALLED TO ENSURE COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. COPIES OF ALL TEST REPORTS ARE TO BE PROVIDED TO THE ENGINEER IN A TIMELY MANNER.
IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE CAREFULLY INSPECTED THE SITE DURING THE BIDDING PERIOD TO DETERMINE THE EXTENT AND NATURE OF THE WORK AND THE CONDITIONS UNDER WHICH IT MUST BE PERFORMED.

- LEGEND**
- x15.0 EXISTING SPOT ELEVATION
 - 14.50 FINISHED SPOT ELEVATION
 - 17 EXIST. CONTOUR
 - 18 PROPOSED CONTOUR
 - EXIST. STORM DRAIN
 - PROPOSED STORM DRAIN
 - EXIST. CATCH BASIN
 - PROPOSED CATCH BASIN
 - NEW DRAINAGE SWALE
 - ridge DRAINAGE RIDGE





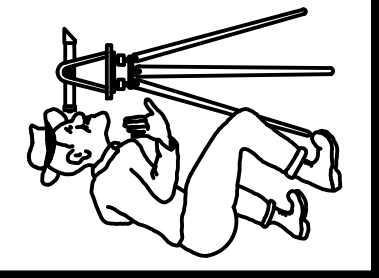
1.0 H.P. HYDROMATIC PUMP, CAPABLE OF DISCHARGING 110 GPM AT 4.8 FT. OF HEAD AND CAPABLE OF CONTINUOUS OPERATION. MECHANICAL FLOAT SWITCH "PUMP ON" @ ELEV. 20.50, "PUMP OFF" @ ELEV. 17.50.



DRAINAGE DETAILS

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PRELIMINARY - NOT FOR CONSTRUCTION

SHEET C-5

REV.	DATE	DESCRIPTION
0	4/24/19	INITIAL ISSUE