

**CR 501 WTP IRON FILTER IMPROVEMENTS
ADDENDUM NO.2**

DATE: June 5, 2024

Project Number: 142173320

This addendum forms a part of the Specifications and modifies the original Document as noted. Acknowledge receipt of this Addendum in the appropriate portion of Section 00300 with the submitted bid. Failure to do so may subject the proposer to disqualification.

1. What is the engineer's estimated cost for the project?

Response: The engineer's opinion of probable cost for the project is \$2,260,000.00.

2. Can you provide the Prebid sign-in sheet?

Response: Please see attached.

3. Can you provide the current plan holder list?

Response: Please see attached current plan holder list.

4. I can't seem to locate the soil borings. Will they be provided?

Response: See attached.

5. Drawing M-01 – M-03 does not match the site pipe drawing C-01 for the 10" Drainage line? Should we just relocate the 10" line where it ties into the drawings on M-01 - M-03? Also, what is depicted on the 10" drain line on the horizontal going to the pond? There is something drawn, but no callouts for what they are.



Response: Please see revised sheet C-01 and M-01 through M-03.

6. In section 25 31 00 there are three I&C companies listed, TLS Automation, PCS Services and Star Controls. Star and PCS said they are no-bids. I do not know how to get in touch with TLS. Can you furnish by addendum a contact number for them? I am afraid we will not have a quote from one of the named companies come bid day.

Response: Contact Ron Robinette: (321) 229-7643

ATTACHMENTS: Pre-Bid Meeting Sign-in Sheet dated May 30, 2024.
CR 501 Water Treatment Plant geotechnical Report.pdf
CR 501 WTP Soil Borings.pdf
Revised Sheets C-01; M-01- M-03.

END OF SECTION

Name/Signature	Company	Email	Phone #
✓ WASE WOOD 	MTS	wwood@mts-florida.com	321-299-2395
✓ Jackson Little 	Garnet	jlittle@garnet.com	601-513-9855
Kyle Harberlin	Garnet	Kyle.Harberlin@garnet.com	214-986-56707
Maddie Montgomery	SGS Contracting	seth@sgscsi.com	352-745-6950
Joe Fisher	Petticoat-Schmitt	jfisher@petticoatschmitt.com	904-854-7423
Dennis Mc Gee	Commerce Controls Inc	dmcgee@commercecontrols.com	941-416-5062
Greg Doan	TLC Diversified	bids@tlcdiv.com	941-722-0621
Brack Southwick	WEISS CONSTRUCTORS	bsouthwick@weissconstruction.com	904.982.1516
REED CARTER	FLORIDA DESIGN CONTRACTORS	RCARTER@FLORIDADESIGNCONTRACTORS.COM	941-448-1040
Corey Lawler	Sawcross Inc.	CoreyL@sawcross.com	912-245-1725

CR 501 WTP Iron Filter Improvements

#	Company Name	First Name	Last Name	Phone	E-Mail	Date	Pre-Bid Mtg Attendance	Addendum 1 emailed	Addendum 2 emailed	Addendum 3 emailed
1	Mid State Builders Exchange, Inc.	Hugh	McNichols	352-351-5292	hugh@midstatebx.com	5/15/2024		24-May		
2	Razorback LLC	Danielle	Rattee	727-938-9500	danielle@razorbackllc.com	5/16/2024		24-May		
3	Allied Solution Enterprise	Jason	Collier	877-328-4432	contracts@alliedsolutionenterprise.com	5/16/2024		24-May		
4	Construct Connect	Grace	Wilson		Grace.Wilson@ConstructConnect.com>			24-May		
5	Weiss Constructors	Mark	Heath	239-270-5907	mheath@weissconstruction.com	5/22/2024		24-May		
6	RC Beach	Rick	Reiber	727-243-4897	r.reiber@rcbeach.com	5/22/2024		24-May		
7	MTS Environmental	Wade	Wood	321-299-2395	wwood@mts-florida.com	5/22/2024	5/30/2024	24-May		
	MTS Environmental				mtsenvironmental@bellsouth.net					
	MTS Environmental				drhodes@mts-florida.com					
8	Petticoat-Schmitt	Lori	Keller	904-751-0888x134	lkeller@petticoatschmitt.com	5/28/2024		28-May		
9	Prime Construction	Zach	Fields	407-856-8180 x229	<a href="mailto:Zack.Fields<zfields@primeconstructiongroup.com>">Zack Fields <zfields@primeconstructiongroup.com>	6/4/2024		4-Jun		
10	Garney	Jakson	Little	601-513-9855	jlittle@garney.com		30-May	4-Jun		
11	Garney	Kyle	Heaberlin		kyle.heaberlin@garney.com		30-May	4-Jun		
12	SGS Contracting				seth@sgscsi.com		30-May	4-Jun		
13	Petticoat-Schmitt	Joe	Fisher		jfisher@petticoatschmitt.com		30-May	4-Jun		
14	Commerce Controls Inc.	Dennis	McGee		dmcgee@commercecontrols.com		30-May	4-Jun		
15	TLC Diversified	Greg	Doan		bids@tlcdiversified.com		30-May	4-Jun		
16	Weiss Constructors	Brock	Southwick	904-982-1516	bsouthwick@weissconstruction.com		30-May	4-Jun		
17	FL Design Contractors	Reed	Carter	941-448-1040	rcarter@floridadesigncontractors.com		30-May	4-Jun		
18	Sawcross Inc	Corey	Lawler	912-245-1725	coreyl@sawcross.com		30-May	4-Jun		
19										
20										
21										
22										
23										
24										
25										
26										

May 28, 2020
Project No. 20-1729.55

Trey Clayton, E.I.
Kimley-Horn & Associates
101 East Silver Springs Boulevard, Suite 400
Ocala, Florida 34470

Reference: Proposed Water Treatment Plant DRA, CR 501, Wildwood, Florida
Soil Profiles and Permeability Testing, Proposed Drainage Retention Area

Dear Mr. Trey:

As requested, Geo-Technologies, Inc. (Geo-Tech) has performed a site exploration at the project site. Services were conducted in accordance with our conversations.

The following report summarizes our findings and evaluations. Generally accepted soils and foundation engineering practices were employed in the preparation of this report.

Geo-Tech appreciates the opportunity to provide our services for this project. Should you have any questions regarding the contents of this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,



Gerald W. Green, Jr.
Soil & Water Scientist
GWG/CAH



Purposes of Exploration

Purposes of this study were to explore the subsurface conditions in the proposed drainage retention area and provide soil profiles, estimated seasonal high water table levels, depths to confining layers and permeability rates to guide design of the drainage retention area.

Site Description

The project site is located at an existing water treatment plant directly east of County Road 501 in Wildwood, Florida. At the time of our site exploration, the project site was covered with native grasses. Boring locations were provided by the client.

Exploration Program

The geotechnical exploration program was performed on May 7, 2020 and consisted of the following:

- Two (2) direct push soil borings P-1 and P-2 to depths of approximately twenty (20) feet below existing site grade in the proposed drainage retention area (ASTM D-6282).
- Two (2) field horizontal and two (2) field vertical permeability tests in the proposed drainage retention area.

Direct Push Sampling Description

The Direct Push (DP) soil sampling method (ASTM D-6282) consists of advancing a sampling device into subsurface soils by applying static pressure, by applying impacts, or by applying vibration, or any combination thereof, to the above ground portion of the sampler extensions until sampler has been advanced to the desired sampling depth. The sampler is recovered from the borehole and the sample removed from the sampler. The sampler is cleaned and the procedure repeated for the next desired sampling interval.

Sampling can be continuous for full depth borehole logging or incremental for specific interval sampling. Samplers used can be protected type for controlled specimen gathering or unprotected for general soil specimen collection. Direct push methods of soil sampling are used for geologic investigation, soil chemical composition studies, and water quality investigations. Continuous sampling is used to provide a lithological detail of the subsurface strata and to gather samples for classification and index.

Samples recovered during performance of our direct push borings were visually classified in the field and were transported to our laboratory for further analysis.

Findings

Boring locations and general subsurface conditions found in our soil borings are graphically presented on the soil profiles in Appendix I. Horizontal lines designating the interface between differing materials found represent approximate boundaries. Transition between soil layers is typically gradual.

Soils found at boring location P-1 generally consisted of a surficial layer of fine sand to approximately fourteen (14) feet thick underlain by clayey sand to the depths pushed.

Soils found at boring location P-2 generally consisted of a surficial layer of fine sand to approximately three (3) feet thick underlain by clayey sand and slightly clayey sand to the depths pushed.

Ground water table levels were not found at our boring locations at the time of drilling.

Seasonal High Water Table Levels

Estimated seasonal high water table levels were found at depths ranging from approximately three (3) to five (5) feet below existing site grade. Estimated seasonal high water table levels are indicated on the soil profiles at the appropriate depths.

Confining Layers

Confining layers were not found to the depths pushed.

Permeability

Two (2) field horizontal and two (2) vertical permeability tests were performed adjacent to our soil boring locations at depths ranging from approximately two (2) to three (3) feet below existing site grade. Resulting coefficients of horizontal and vertical permeabilities are noted on the soil profiles and in Table 1 below.

Table 1 Results of Permeability Testing

Boring No.	Depth of Test (feet)	KH Rate (feet/day)	Kv Rate (feet/day)
P-1	3.0	23.9	13.3
P-2	2.0	29.2	17.9

Geo-Tech utilizes the U.S. Department of the Navy, Naval Facilities Engineering Command (1974) Standard methods for performing variable head tests to determine and calculate hydraulic conductivities.

Measured permeability rates should not be used for design purposes without an appropriate safety factor. Actual pond exfiltration rates will depend on many factors such as ground water mounding, pond bottom siltation, construction technique, and the amount of soil compaction during construction.

Closure/General Qualifications

This report has been prepared in order to aid evaluation of the project site and to aid various design professionals in design of the drainage retention area. The scope is limited to the specific project and the location described herein, and our description of the project represents our understanding of the significant aspects relevant to soil characteristics.

Analyses submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Map, and from any other information discussed in this report. This report does not reflect any variations, which may occur between these borings. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is a well known fact that variations in soil and rock conditions exist on most sites between boring locations, and also such situations as groundwater levels vary from time to time. The nature and extent of variations may not become evident until the course of construction.

APPENDIX I
SOIL PROFILES

Log of Borehole: P-1

GEO-TECH, INC.

ENGINEERING CONSULTANTS

1016 SE 3rd Avenue
Ocala, Florida
352.694.7711

WWW.GEOTECHFL.COM

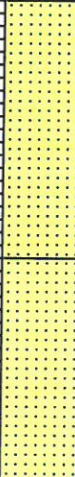


Project: PROP. WATER TREATMENT PLANT DRA, CR 501, WILDWOOD Project No: 20-1729.55

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN & ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
1		FINE SAND BROWN TO LIGHT BROWN FINE SAND (SP)	5.0	1	FIELD HORIZONTAL PERMEABILITY RATE AT APPROX. 3.0 FEET = 23.9 FEET/DAY FIELD VERTICAL PERMEABILITY RATE AT APPROX. 3.0 FEET = 13.3 FEET/DAY ESHWTL AT APPROX. 5.0 FEET
2					
3					
4					
5					
6		FINE SAND BROWN AND GREY FINE SAND (SP)	14.0	2	
7					
8					
9					
10					
11					
12					
13					
14		CLAYEY SAND GREY AND BROWN CLAYEY SAND (SC)	20.0	3	CONFINING LAYER GREATER THAN DEPTH PUSHED
15					
16					
17					
18					
19					
20					
21		End of Borehole			
22					
23					

Ground Water Depth: GREATER THAN DEPTH PUSHED

Drill Date: MAY 7, 2020

Drilled By: RD/DF

Drill Method: ASTM D-6282

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 1 OF 2

Log of Borehole: P-2

GEO-TECH, INC.

ENGINEERING CONSULTANTS

1016 SE 3rd Avenue
Ocala, Florida
352.694.7711

WWW.GEOTECHFL.COM

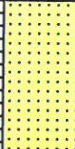




Project: PROP. WATER TREATMENT PLANT DRA, CR 501, WILDWOOD Project No: 20-1729.55

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN & ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Depth/Elev.	Number	Remarks
0		Ground Surface	0.0		
0 - 3		FINE SAND BROWN FINE SAND (SP)	3.0	1	FIELD HORIZONTAL PERMEABILITY RATE AT APPROX. 2.0 FEET = 29.2 FEET/DAY FIELD VERTICAL PERMEABILITY RATE AT APPROX. 2.0 FEET = 17.9 FEET/DAY ESHWTL AT APPROX. 3.0 FEET
3 - 5		CLAYEY SAND GREY CLAYEY SAND (SC)	5.0	2	
5 - 11		CLAYEY SAND GREY AND BROWN CLAYEY SAND (SC)	11.0	3	
11 - 14		SLIGHTLY CLAYEY SAND BROWN AND GREY SLIGHTLY CLAYEY SAND (SP-SC)	14.0	4	
14 - 20		CLAYEY SAND GREY CLAYEY SAND (SC)	20.0	5	
20 - 23		End of Borehole			CONFINING LAYER GREATER THAN DEPTH PUSHED

Ground Water Depth: GREATER THAN DEPTH PUSHED

Drill Date: MAY 7, 2020

Drilled By: RD/DF

Drill Method: ASTM D-6282

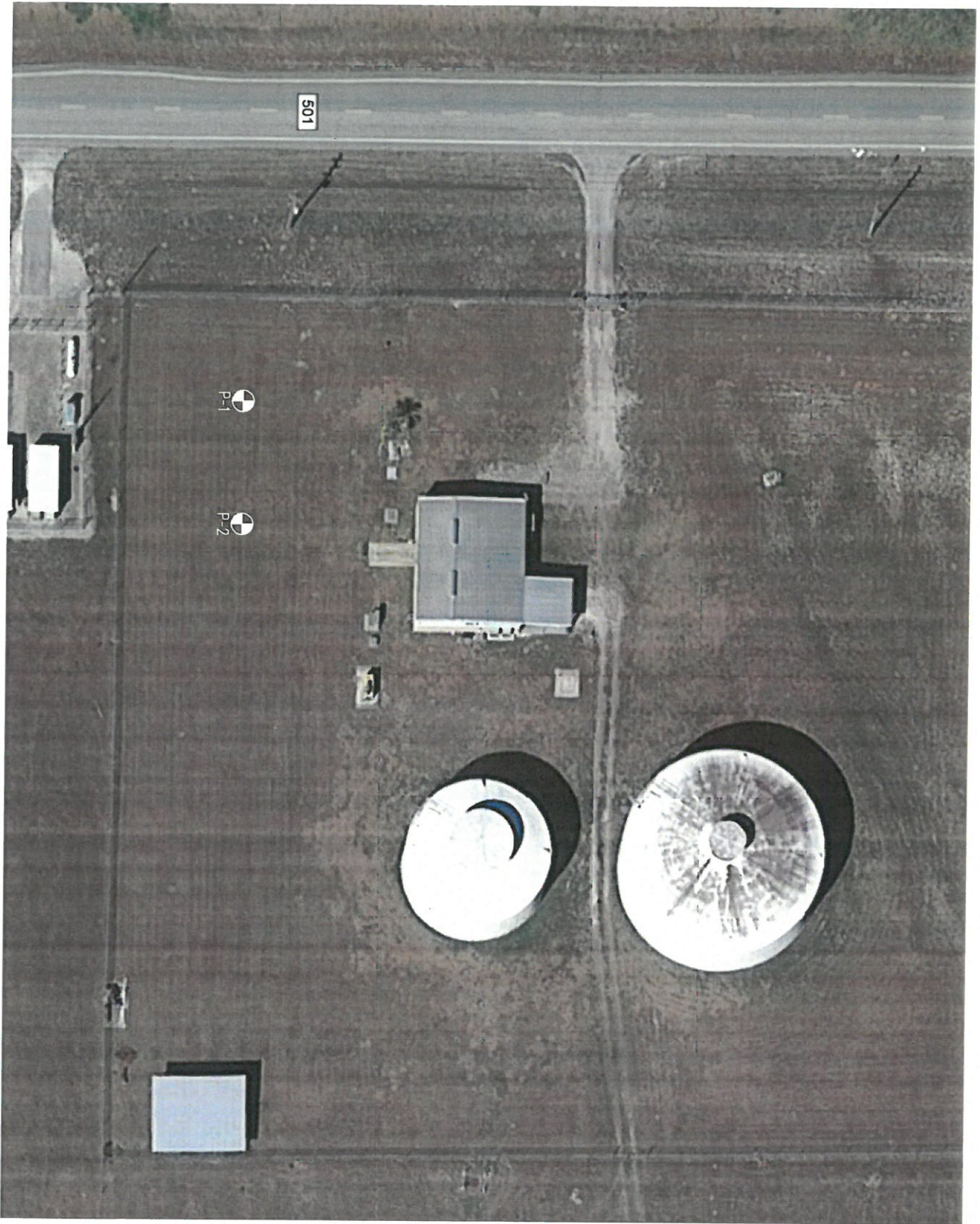
Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 2 OF 2

APPENDIX II
BORING LOCATION MAP



⊕ = APPROXIMATE AUGER BORING LOCATION



KIMLEY-HORN & ASSOCIATES, INC.
PROPOSED WATER TREATMENT PLANT DRA
COUNTY ROAD 501
WILDWOOD, FLORIDA

GEO-TECH, INC.

■ GEOTECHNICAL ■ ENVIRONMENTAL
■ CONSTRUCTION MATERIALS TESTING ■ GEOPHYSICAL EXPLORATION
1016 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

BORING LOCATION MAP

PROJECT NO.
20-1729.55

SCALE: NTS

DATE: 5-18-20

FIGURE: 1

January 7, 2020
Project No. 19-1729.46

Lewis Bryant
Kimley-Horn and Associates, Inc.
101 East Silver Springs Boulevard, Suite 400
Ocala FL 34470

Reference: Proposed Water Treatment Plant Additions, County Road 501, Wildwood, Florida
Geotechnical Site Exploration

Dear Mr. Bryant:

As requested, Geo-Technologies, Inc. (Geo-Tech) has performed a site exploration at the project site. Services were conducted in accordance with our Proposal No. 10068 dated October 8, 2019.

The following report summarizes our findings, evaluations and recommendations. Generally accepted soils and foundation engineering practices were employed in the preparation of this report.

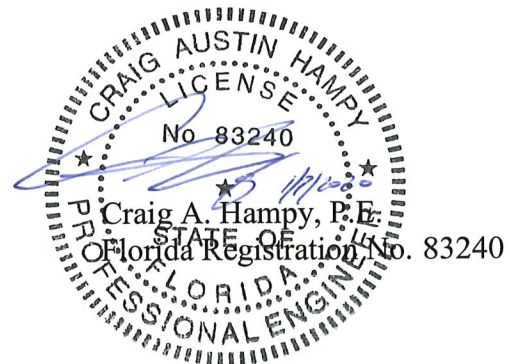
Proposed finish floor elevations and loading conditions had not been established at the time of this report. The design of foundation systems for this project was not included in Geo-Tech's scope of services.

Geo-Tech appreciates the opportunity to provide our services for this project. Should you have any questions regarding the contents of this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,



Gerald W. Green, Jr.
Soil & Water Scientist
GWG/CAH/ds



Purposes

Purposes of this study were to explore the subsurface conditions in the proposed water treatment plant addition areas and provide geotechnical engineering site preparation recommendations to guide design and construction of the foundations systems.

Site Description

The project site is located on the east side of County Road 501 approximately one-half (½) of a mile north of the intersection located at County Road 501 and County Road 470 in Wildwood, Florida. At the time of our site exploration, the project site consisted of an existing water treatment plant.

Exploration Program

Field exploration services for the geotechnical exploration consisted of the following:

- Four (4) Standard Penetration Test (SPT) borings (B-1 thru B-4) to depths of approximately fifteen (15) feet below existing site grade in the proposed tank foundation areas (ASTM D-1586). SPT borings were performed on November 15, 2019.
- Four (4) Standard Penetration Test (SPT) borings (B-5 thru B-8) to depths ranging from approximately eleven (11) to fifteen (15) feet below existing site grade in the proposed iron filter foundation areas (ASTM D-1586). SPT borings were performed on November 15, 2019.

Standard Penetration Testing Description

A Standard Penetration Test (SPT) boring (ASTM D-1586) is defined as a standard split-barrel sampler driven into the soil by a one hundred and forty (140) pound hammer falling thirty (30) inches. The number of blows required to drive the sampler one (1) foot, after seating six (6) inches, is designated resistance, or “N”-Value is an index to soil strength and consistency.

Samples recovered during performance of our SPT borings were visually classified in the field and representative portions of the samples were placed in containers and transported to our laboratory for further analysis.

Findings

Boring locations and general subsurface conditions found in our soil borings B-1 thru B-8 are graphically presented on the soil profiles in Appendix I. Horizontal lines designating the interface between differing materials found represent approximate boundaries. Transition between soil layers is typically gradual.

Soils found at our boring location B-1 generally consisted of a surficial layer of very loose to loose fine sand approximately thirteen and one-half (13½) feet thick underlain by medium dense slightly clayey sand to the depths drilled.

Soils found at our boring locations B-2 thru B-8 generally consisted of a surficial layer of fine sand ranging from approximately four (4) to six (6) feet thick underlain by clayey sand to the depths drilled.

Ground water table levels were not found at our boring locations at the time of drilling. In Geo-Tech's opinion, ground water levels are not expected to influence near surface construction. After periods of prolonged rainfall water may become perched above the clayey soils and deeper foundation systems may encounter a perched water condition.

Evaluations and Recommendations

Geo-Tech recommends that due to the very loose soil conditions in the proposed tank and filter areas, the existing sand soils should be removed to a depth of four (4) feet below the bottom of footings and floor slabs. The excavation should then be proof-rolled in accordance with the Proof-Rolling section of this report, and sand soils should be replaced in accordance with the Structural Fill Specifications and Compaction of Fill Soils sections of this report.

Based on the soil borings performed, the shallow clayey sand soils found at our boring locations appear to be moderately plastic and will typically exhibit moderate shrink/swell behavior with moisture content changes. Generally, these clay soils will swell upon wetting and shrink upon drying thus causing movement of structures placed on them.

The foundation system may utilize a monolithic thickened edge slab or a perimeter footing and finish site grades should be selected so that the **bottom of the foundation and slabs** are at least two (2) feet above the underlying unsuitable clayey soils.

In Geo-Tech's opinion, there are three (3) suitable options for the site:

Option 1: Excavate the clayey soils to create the minimum buffer between the foundation and floor slabs and the top of the clayey soils. If excavating for the foundation system to provide the recommended separation, excavation should extend a minimum of two (2) feet beyond each side of the footing. Care should be taken to ensure the foundation system bears in the backfilled area(s).

The depth of excavation should be controlled so that a "bathtub effect" that will trap water is not created. The bottom of the undercut should be graded to drain to a positive gravity outfall. If it is not feasible to have a positive gravity outfall, an underdrain should be placed in the bottom of the excavation to drain stormwater that may accumulate in the excavation.

Structural fill should be placed in accordance with the Structural Fill Material and Compaction of Fill Soils sections of this report.

We wish to emphasize that the excavation and replacement of the underlying clay soils from beneath the structure is not a guarantee that the deeper clays will not cause foundation movements. However, the risk is reduced significantly.

Option 2: Raise the existing site grade to provide the recommended separation. However, prior to importing and placing fill soils to raise the existing site grade the structure area should be proof-rolled to increase the density of the near surface soils. Proof-rolling should occur after stripping and grubbing.

Structural fill should be placed in accordance with the Structural Fill Material and Compaction of Fill Soils sections of this report.

Option 3: Combine Options 1 and 2 in order to attain the desired finish floor elevation.

Recommended Site Preparation

Stripping and Grubbing

The “footprint” of the proposed structure, plus an additional horizontal margin of ten (10) feet, should be stripped of the existing vegetation, stumps, surface debris, or other deleterious materials as found. Expect clearing and grubbing to depths of about eight (8) to twelve (12) inches. Deeper clearing and grubbing depths may be encountered in heavily vegetated areas where major root systems are found. Actual depth(s) of stripping and grubbing must be determined by visual observation and judgment during the earthwork operation.

Proof-Rolling

If utilizing Option 2 in the Recommendations section of this report, proof-rolling of the cleared surface is recommended to: 1) locate any soft areas or unsuitable surface or near surface soils; 2) increase the density of the near surface soils; and 3) prepare the existing surface for the addition of fill soils (if required). Proof-rolling of the areas should consist of at least ten (10) passes of a self-propelled static compactor. Each pass of the compactor should overlap the preceding pass by thirty (30) percent to insure complete coverage. If deemed necessary, in areas continuing to “yield,” remove all deleterious material and replace with a clean, compacted sand backfill. Proof-rolling should occur after cutting and before filling. Vibratory compaction equipment should not be used within one hundred (100) feet of neighboring structures.

Structural Fill Material

Structural fill material should be free of organic material such as roots and/or vegetation. Geo-Tech recommends using sand fill with between three (3) to twelve (12) percent by dry weight of material passing the U.S. Standard No. 200 sieve size. All structural fill should be pre-qualified prior to importing and placing.

Upper fine sands found on site should meet these requirements and can be used if kept separate from the clayey soils during the earthwork phase of construction. Clayey soils are typically not used for structural fill due to inherent nature to retain moisture and the natural weight of the material makes compaction requirements difficult to achieve. However, the clayey soils can be utilized for other non-structural grading as desired.

Compaction of Fill Soils

Structural fill should be placed in level lifts not thicker than twelve (12) inches (uncompacted). Each lift in the proposed construction areas should be compacted to at least ninety-five (95) percent of the maximum density as determined by the Modified Proctor Test Method (ASTM D-

1557) maximum dry density value. If hand-held compaction equipment is used, reduce the uncompacted lift thickness to six (6) inches. Filling and compaction operation should continue in lifts until the desired elevation is attained.

Foundation Support

Foundations for the proposed structure may consist of shallow foundations placed on compacted engineered fill material. Such footings may be designed for maximum allowable soils contact pressures of two thousand (2,000) pounds per square foot. For purposes of confinement, exterior footings should be embedded at least twenty-four (24) inches below the lowest adjacent grade as measured to the base of the footing. Interior footings should be embedded a minimum of eighteen (18) inches below the lowest adjacent grade as measured to the base of the footing.

Moisture entry from the underlying subgrade soils should be minimized. An impervious membrane placed between the subgrade soils and floor slab will help to accomplish this. A polyethylene film (six [6] mil) is commonly used for this purpose. Care should be used so that the membrane is not punctured when placing reinforcing steel (or mesh) and concrete.

Quality Control

Geo-Tech recommends establishing a comprehensive quality control program to insure that site preparation and foundation construction is conducted according to the plans and specifications. Materials testing and inspection services should be provided by Geo-Technologies, Inc. An engineering technician should be on-site to monitor all stripping and grubbing, to verify that all deleterious materials have been removed.

Density testing should be performed during backfill and below all footings and floor slabs to check the required compaction. Field density values should be compared to laboratory proctor moisture-density results for each different natural and fill soil encountered.

If excavating to attain the recommended separation, Geo-Tech recommends that we be notified to verify the depth of excavation, daylight gravity drain (if required), compaction of backfill and foundation is properly located within boundaries of excavation.

Geotechnical engineering design does not end with the advertisement of construction documents. The design is an on going process throughout construction. Because of Geo-Tech's familiarity with the site conditions and the intent of the engineering design, we are most qualified to address problems that might arise during construction in a timely and cost effective manner.

Closure/General Qualifications

This report has been prepared in order to aid evaluation of the project site. The scope is limited to the specific project and the location described herein, and our description of the project represents our understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in present project concepts as outlined in this report are planned, we should be informed so the changes can be reviewed and the conclusions of this report modified as necessary in writing by the soils and foundation engineer.

It is recommended that all construction operations dealing with earthwork and foundations be reviewed by our soil engineer to provide information on which to base a decision whether the

design requirements are fulfilled in the actual construction. Evaluations and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Map, and from any other information discussed in this report. This report does not reflect any variations, which may occur between these borings. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. Variations in soil and rock conditions exist on most sites between boring locations. Groundwater levels may also vary from time to time. The nature and extent of variations may not become evident until the course of construction. If variations then appear evident, it will be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of any variations.

APPENDIX I
SOIL PROFILES

Log of Borehole: B-1

GEO-TECH, INC.

ENGINEERING CONSULTANTS

1016 SE 3rd Avenue
Ocala, Florida
352.694.7711

WWW.GEOTECHFL.COM

Project: **PROP. WATER TREATMENT PLANT ADDITIONS, CR 501**

Project No: **19-1729.46**

Boring Location: **(SEE SITE PLAN)**

Engineer: **NJH/DAC**

Client: **KIMLEY-HORN AND ASSOCIATES, INC.**

Enclosure: **SITE PLAN**

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test							
								N-Values							
								▲	0	20	40	60	80	▲	100
0		Ground Surface		0.0											
0 - 13.5		FINE SAND BROWN TO LGHT BROWN FINE SAND (SP)	VERY LOOSE		1		1		1						
1					2		1		1						
2					3		5		5						
3					4		1		1						
4					5		6		6						
5															
6															
7															
8															
9															
10															
11															
12															
13															
13.5															
14		SLIGHTLY CLAYEY SAND BROWN SLIGHTLY CLAYEY SAND (SP-SC)	MEDIUM DENSE		6		22		22						
15		End of Borehole													
16															
17															
18															
19															
20															

Ground Water Depth: **GREATER THAN 10.0 FEET**

Drill Date: **NOVEMBER 15, 2019**

Drilled By: **RD/RW**

Drill Method: **ASTM D-1586**

Remarks: **(SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW**

Soil Profile : 1 OF 8

Log of Borehole: B-2

GEO-TECH, INC.

ENGINEERING CONSULTANTS

1016 SE 3rd Avenue
Ocala, Florida
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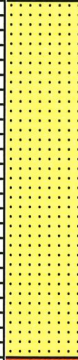

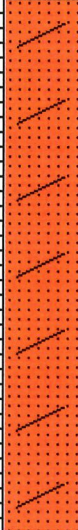


Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values										
								0	20	40	60	80	100					
0		Ground Surface		0.0														
0 - 6		FINE SAND BROWN TO LGHT BROWN FINE SAND (SP)	VERY LOOSE		1		1											
1			VERY LOOSE		2		2											
2			VERY LOOSE		3		4											
3			VERY LOOSE		4		6											
4			VERY LOOSE		5		14											
5			VERY LOOSE		6		16											
6			VERY LOOSE	6.0														
6 - 15		CLAYEY SAND BROWN CLAYEY SAND (SC)	LOOSE		4		6											
7			LOOSE		5		14											
8			LOOSE		6		16											
9			LOOSE															
10			LOOSE															
11			LOOSE															
12			LOOSE															
13			LOOSE															
14			LOOSE															
15			LOOSE	15.0	6		16											
15 - 20		End of Borehole	MEDIUM DENSE															

Ground Water Depth: GREATER THAN 10.0 FEET

Drill Date: NOVEMBER 15, 2019

Drilled By: RD/RW

Drill Method: ASTM D-1586

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 2 OF 8

Log of Borehole: B-3



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Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values										
								0	20	40	60	80	100					
0		Ground Surface		0.0														
0 - 6		FINE SAND GRAY TO LIGHT BROWN FINE SAND (SP)	VERY LOOSE		1		2	2										
6 - 14		CLAYEY SAND BROWN TO GRAY CLAYEY SAND (SC)	VERY LOOSE LOOSE MEDIUM DENSE		2		2	2										
				6.0	3		5	5										
					4		7	7										
					5		16	16										
				15.0	6		15	15										
15		End of Borehole																

Ground Water Depth: GREATER THAN 10.0 FEET

Drill Date: NOVEMBER 15, 2019

Drilled By: RD/RW

Drill Method: ASTM D-1586

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 3 OF 8

Log of Borehole: B-4

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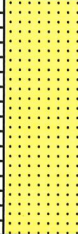
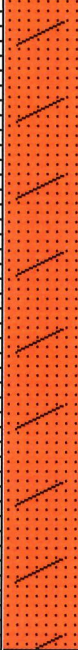
Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values									
								0	20	40	60	80	100				
0		Ground Surface		0.0													
0 - 4		FINE SAND GRAY FINE SAND (SP)	VERY LOOSE		1	1	2										
4 - 15		CLAYEY SAND LIGHT BROWN CLAYEY SAND (SC)	LOOSE LOOSE MEDIUM DENSE MEDIUM DENSE	4.0	2 3 4 5 6	1 1 1 1 1	5 7 9 14 14										
15		End of Borehole		15.0													

Ground Water Depth: GREATER THAN 10.0 FEET

Drill Date: NOVEMBER 15, 2019

Drilled By: RD/RW

Drill Method: ASTM D-1586

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 4 OF 8

Log of Borehole: B-5

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Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values									
								0	20	40	60	80	100				
0		Ground Surface		0.0													
0 - 6		FINE SAND GRAY FINE SAND (SP) WITH BURNT WOOD DEBRIS	VERY LOOSE		1		3										
1																	3
2																	
3			VERY LOOSE		2		1										1
4																	
5			VERY LOOSE		3		1										1
6				6.0													
7 - 14		CLAYEY SAND BROWN TO LIGHT BROWN CLAYEY SAND (SC)	VERY LOOSE		4		3										
7																	
8																	
9			MEDIUM DENSE		5		24										
10																	
11																	
12																	
13																	
14			MEDIUM DENSE		6		21										
15				15.0													
15		End of Borehole															
16																	
17																	
18																	
19																	
20																	

Ground Water Depth: **GREATER THAN 10.0 FEET**

Drill Date: **NOVEMBER 15, 2019**

Drilled By: **RD/RW**

Drill Method: **ASTM D-1586**

Remarks: **(SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW**

Soil Profile : **5 OF 8**

Log of Borehole: B-6

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Project: PROP. WATER TREATMENT PLANT ADDITIONS, CR 501

Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values
								▲ 0 20 40 60 80 100 ▲
0		Ground Surface		0.0				
0 - 4		FINE SAND GRAY FINE SAND (SP)	LOOSE		1		4	4
4 - 11		CLAYEY SAND BROWN CLAYEY SAND (SC)	LOOSE	4.0	2		7	7
			MEDIUM DENSE		3		14	14
			MEDIUM DENSE		4		25	25
			VERY DENSE		5		64	64
			VERY DENSE	11.0	6		50	50
11		End of Borehole						
12								
13								
14								
15								
16								
17								
18								
19								
20								

Ground Water Depth: **GREATER THAN 10.0 FEET**

Drill Date: **NOVEMBER 15, 2019**

Drilled By: **RD/RW**

Drill Method: **ASTM D-1586**

Remarks: **(SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW**

Soil Profile : 6 OF 8

Log of Borehole: B-7

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Project: PROP. WATER TREATMENT PLANT ADDITIONS, CR 501

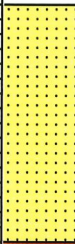







Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values									
								0	20	40	60	80	100				
0		Ground Surface		0.0													
0 - 4		FINE SAND GRAY FINE SAND (SP)	LOOSE		1		4	4									
4 - 15		CLAYEY SAND GRAY TO BROWN CLAYEY SAND (SC)	MEDIUM DENSE	4.0	2		5	5									
			LOOSE		3		14	14									
			LOOSE		4		8	8									
			MEDIUM DENSE		5		27	27									
			MEDIUM DENSE	15.0	6		23	23									
15		End of Borehole															

Ground Water Depth: GREATER THAN 10.0 FEET

Drill Date: NOVEMBER 15, 2019

Drilled By: RD/RW

Drill Method: ASTM D-1586

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 7 OF 8

Log of Borehole: B-8

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Project No: 19-1729.46

Boring Location: (SEE SITE PLAN)

Engineer: NJH/DAC

Client: KIMLEY-HORN AND ASSOCIATES, INC.

Enclosure: SITE PLAN

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values									
								0	20	40	60	80	100				
0		Ground Surface		0.0													
0 - 4		FINE SAND BROWN TO GRAY FINE SAND (SP)	LOOSE		1		5	5									
4 - 15		CLAYEY SAND BROWN TO GRAY AND BROWN CLAYEY SAND (SC)	MEDIUM DENSE	4.0	2		7	7									
			LOOSE		3		13	13									
			LOOSE		4		6	6									
			MEDIUM DENSE		5		21	21									
			MEDIUM DENSE		6		20	20									
15		End of Borehole		15.0													

Ground Water Depth: **GREATER THAN 10.0 FEET**

Drill Date: **NOVEMBER 15, 2019**

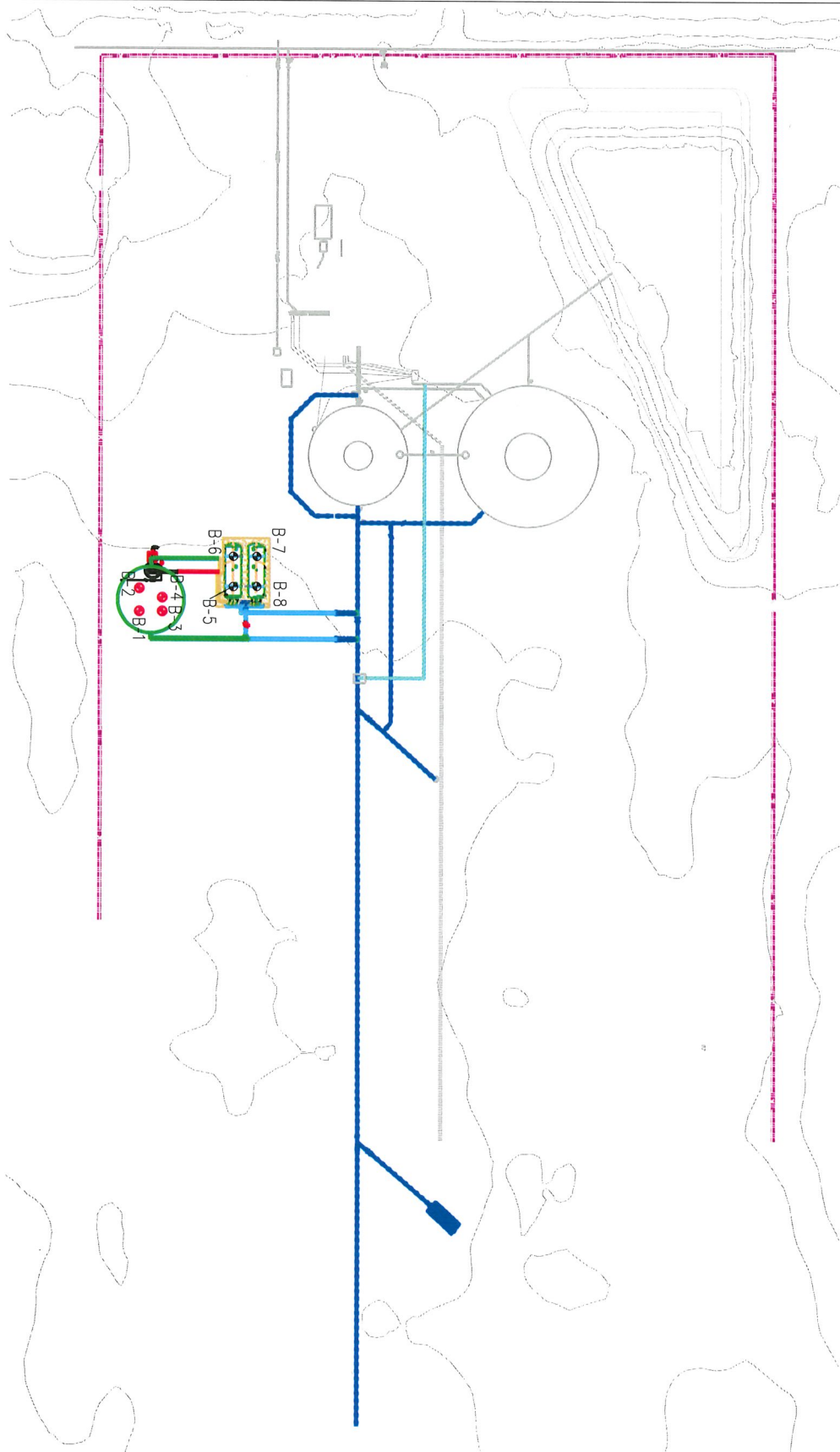
Drilled By: **RD/RW**

Drill Method: **ASTM D-1586**

Remarks: (SP) UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 8 OF 8

APPENDIX II
BORING LOCATION MAP



☐ = APPROXIMATE STANDARD PENETRATION TEST (SP1) BORING LOCATION

KIMLEY-HORN AND ASSOCIATES, INC.
PROPOSED WATER TREATMENT PLANT ADDITIONS
COUNTY ROAD 501
WILDWOOD, FLORIDA

BORING LOCATION MAP

GEO-TECH, INC.

■ GEOTECHNICAL ■ ENVIRONMENTAL
■ CONSTRUCTION MATERIALS TESTING ■ GEOPHYSICAL EXPLORATION
1016 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

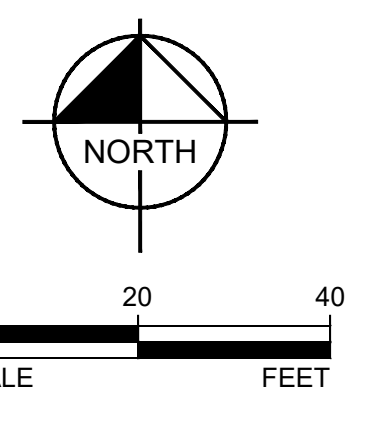
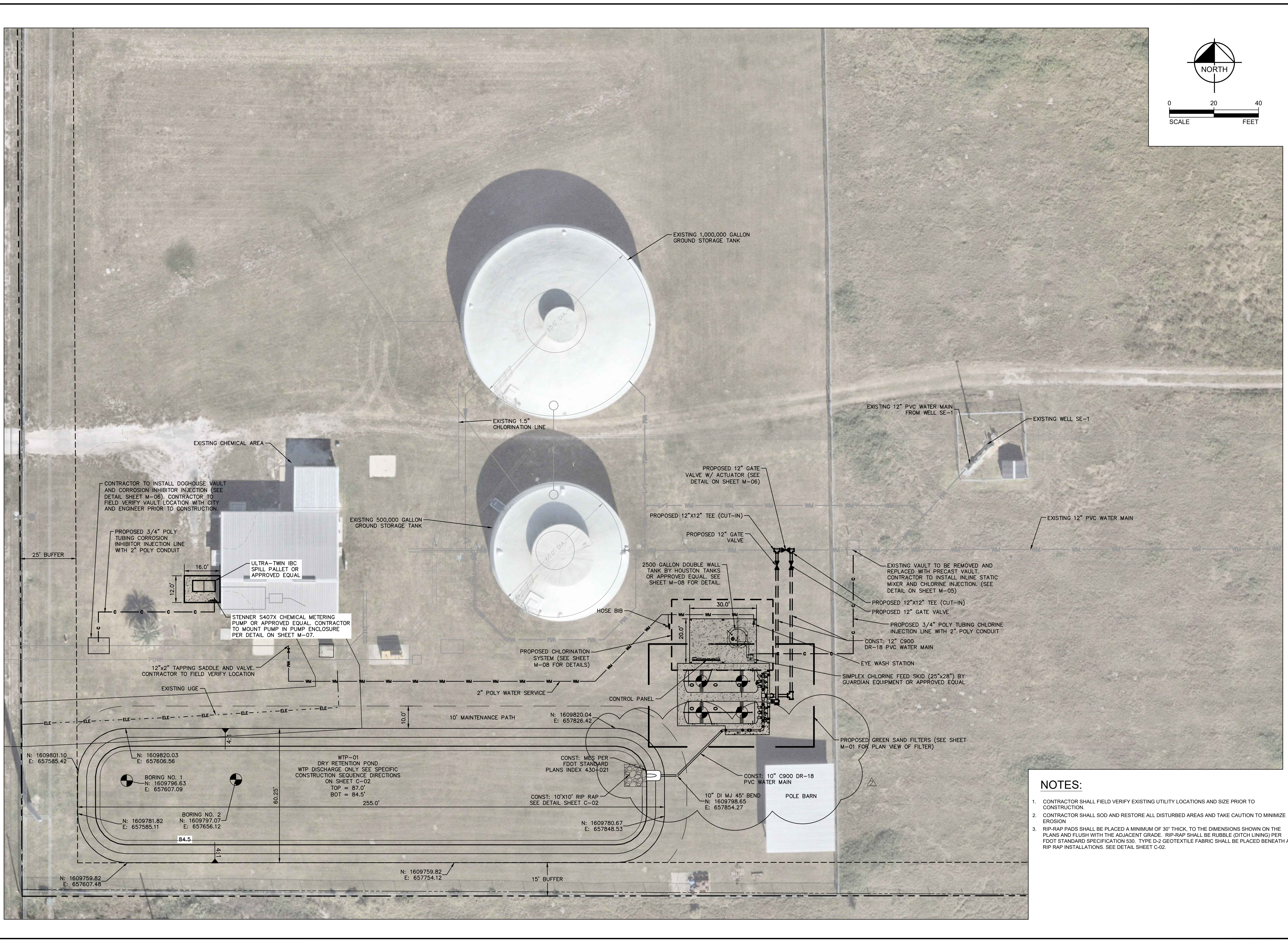
PROJECT NO.
19-1729.46

SCALE: NTS

DATE: 1-6-20

FIGURE: 1

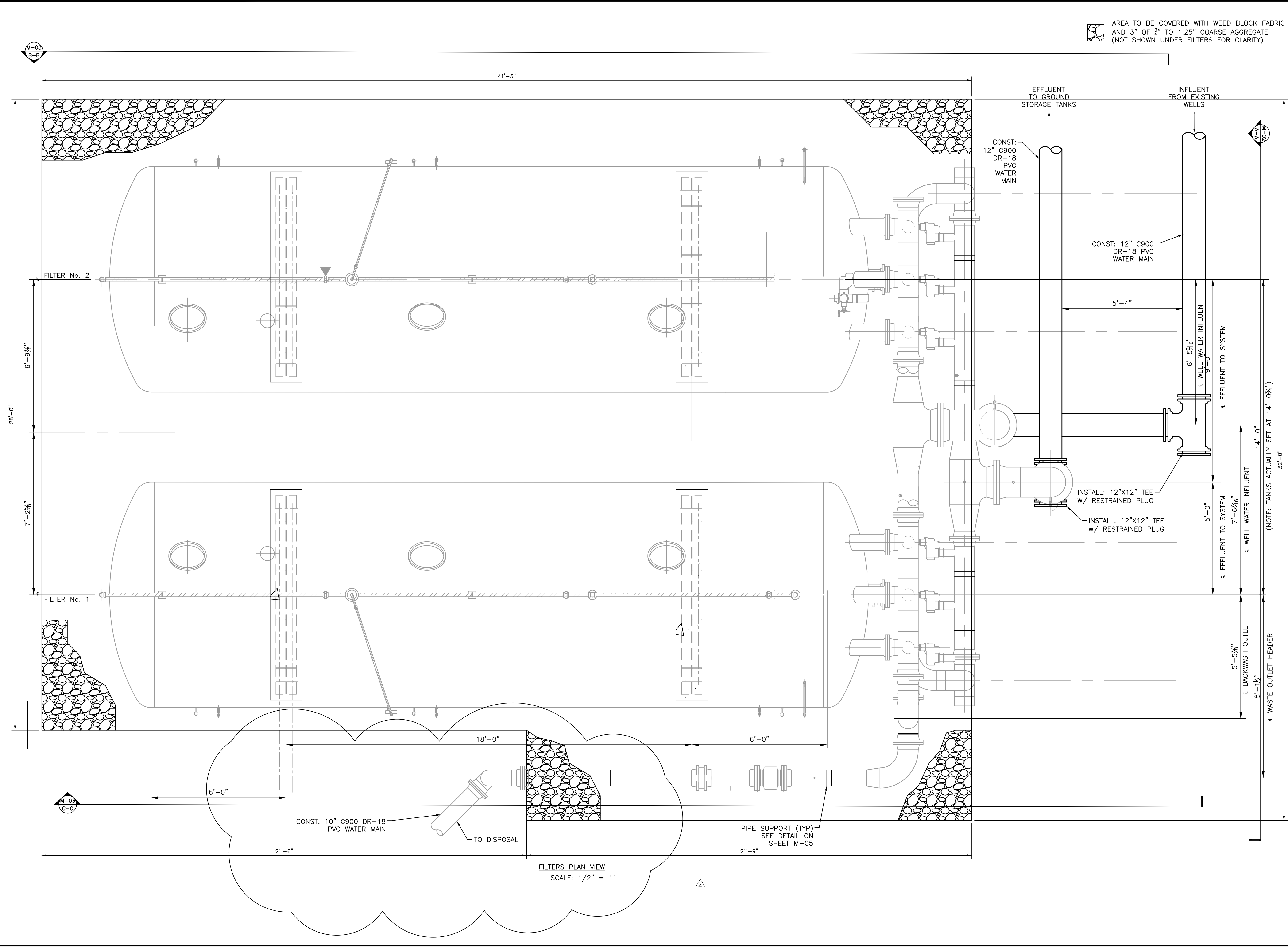
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- NOTES:**
- 1. CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITY LOCATIONS AND SIZE PRIOR TO CONSTRUCTION.
 - 2. CONTRACTOR SHALL SOD AND RESTORE ALL DISTURBED AREAS AND TAKE CAUTION TO MINIMIZE EROSION.
 - 3. RIP-RAP PADS SHALL BE PLACED A MINIMUM OF 30' THICK, TO THE DIMENSIONS SHOWN ON THE PLANS AND FLUSH WITH THE ADJACENT GRADE. RIP-RAP SHALL BE RUBBLE (DITCH LINING) PER FDOT STANDARD SPECIFICATION 530. TYPE D-2 GEOTEXTILE FABRIC SHALL BE PLACED BENEATH ALL RIP-RAP INSTALLATIONS. SEE DETAIL SHEET C-02.

KHA PROJECT 14217.3320	DATE MAY 2024	SCALE AS SHOWN	DESIGNED BY KHA	DRAWN BY RDC	CHECKED BY PHS	DATE	REVISIONS	DATE	BY
YARD PIPING PLAN									
CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD FLORIDA									
SHEET NUMBER C-01									

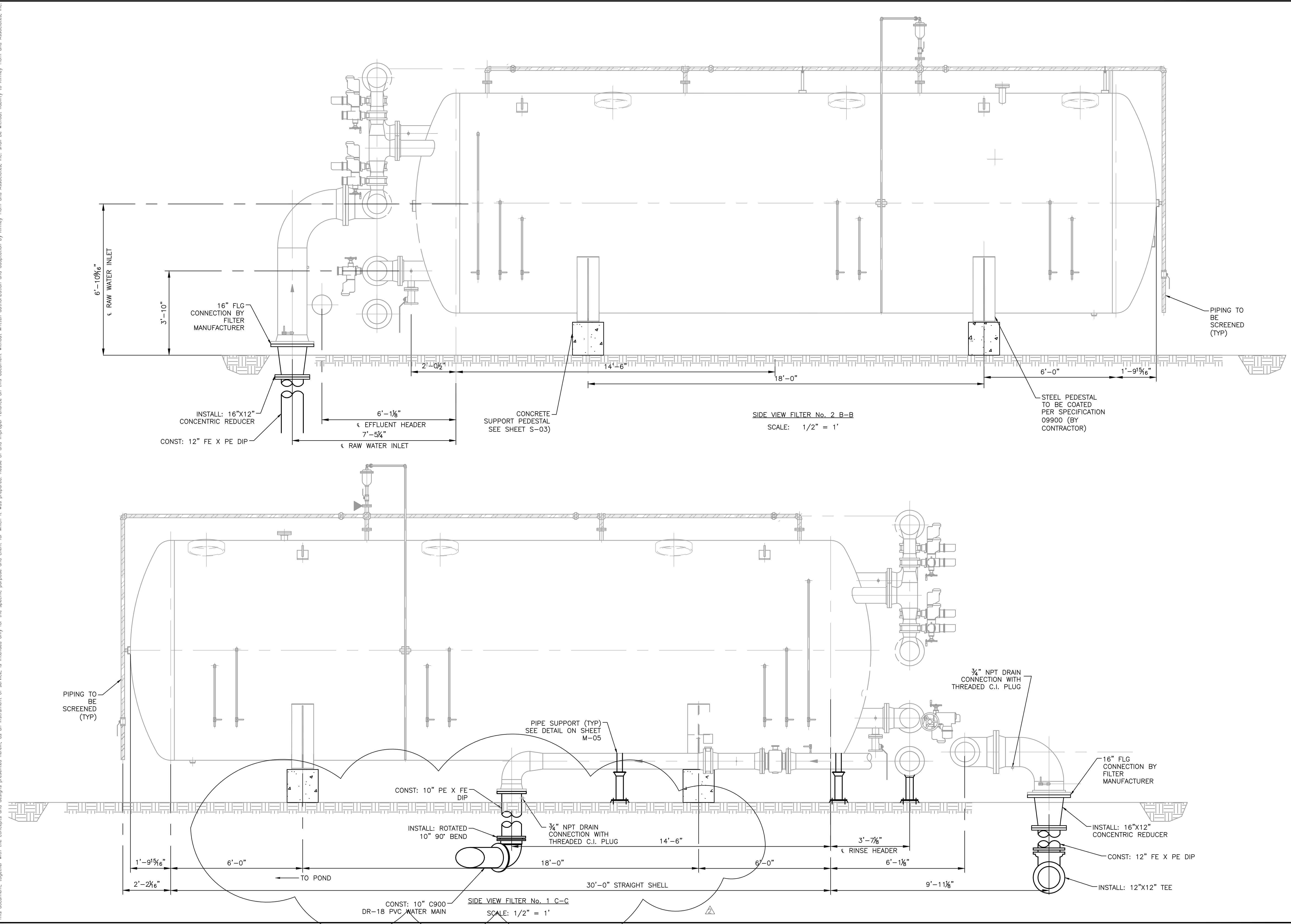




CR 501 WTP IMPROVEMENTS PREPARED FOR CITY OF WILDWOOD <small>CITY OF WILDWOOD FLORIDA</small>	SHEET NUMBER M-01									
	IRON FILTER PLAN									
	KHA PROJECT 142173320 DATE MAY 2024 SCALE AS SHOWN DESIGNED BY KHA DRAWN BY RDC CHECKED BY PHS DATE:									
LICENSED PROFESSIONAL JAMES E. CLAYTON FLORIDA LICENSE NUMBER 90813	REVISIONS <table border="1"> <tr> <th>No.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>ADDENDUM 2</td> <td>6/4/2024</td> <td>RDC</td> </tr> <tr> <td>NOT FOR CONSTRUCTION</td> <td></td> <td></td> </tr> </table>	No.	DATE	BY	ADDENDUM 2	6/4/2024	RDC	NOT FOR CONSTRUCTION		
No.	DATE	BY								
ADDENDUM 2	6/4/2024	RDC								
NOT FOR CONSTRUCTION										
Kimley-Horn <small>© 2024 KIMLEY-HORN AND ASSOCIATES, INC. 1700 SE 17TH STREET, SUITE 200, OCALA, FLORIDA 34471 PHONE: 352-438-3000 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106</small>	ADDENDUM 2 NOT FOR CONSTRUCTION									

K:\024 - Wildwood\Projects\142173320 - CR 501 WTP for EPC\CAD\Sheet\IMPROVEMENTS - IRON FILTER PLAN.dwg, LAYOUT\03 IRON FILTER SECTIONS - 04.2024.dwg (revision)

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<p>CR 501 WTP IMPROVEMENTS</p> <p>PREPARED FOR CITY OF WILDWOOD FLORIDA</p>		<p>IRON FILTER SECTIONS</p>	
		<p>KHA PROJECT 142173320</p> <p>DATE MAY 2024</p> <p>SCALE AS SHOWN</p> <p>DESIGNED BY KHA</p> <p>DRAWN BY RDC</p> <p>CHECKED BY PHS</p>	<p>LICENSED PROFESSIONAL</p> <p>JAMES E. CLAYTON</p> <p>FLORIDA LICENSE NUMBER 90613</p>
<p>SHEET NUMBER M-03</p>		<p>ADDENDUM 2</p> <p>NOT FOR CONSTRUCTION</p>	
<p>6/4/2024 RDC</p>		<p>REVISIONS</p>	<p>DATE</p> <p>BY</p>

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