To:	Susan Grant, Acting City Manager
From:	Alan Dodd, Director – Public Works
Date:	June 3, 2024
Re:	Change Order # 4 for Project #12765 PO 6189

Job Description:	Project #12765, Prospect Lake Clean Water Center
Contractor:	Prospect Lake Water, L.P.
Amount:	Total amount of Change Order # 4 $3,275,339 plus 0 additional days
Funding:	*10-494-7999-536-60-6599-P12765*

The City is responsible for constructing the Infrastructure Obligations outlined in Annex B-1 of the Comprehensive Agreement for the Prospect Lake Clean Water Center (PLCWC). This includes a 54-inch feedstock watermain to supply raw water for treatment. The design is complete, and the City has requested a proposal from Prospect Lake Water L.P. (Project Company) to build the project, including Bid Alternates 1 and 2, in case the existing watermains cannot be isolated. If the alternates are unused, the cost will be credited back to the City. The cost deviation is within the acceptable range defined by the Association for the Advancement of Cost Engineering and acceptable to City Staff.

NEW AND EXISTING CONTRACT ITEMS ARE UTILIZED – TOTAL ADDITIVE COST $3,275,339

Item No. 1	New Item #1 – Construction of 54-inch Feedstock Watermain and Project Company Administration Fees Adjust Contact Item – Lump Sum **ADDITION** $3,275,339

NET AMOUNT OF THIS CHANGE ORDER	**$3,275,339**
ADDITIONAL CONTRACT TIME BEING REQUESTED–	**ZERO (0) CALENDAR DAYS**
THE TOTAL AMOUNT OF THIS CHANGE ORDER	**$3,275,339**

This change Order provides for all costs and schedule adjustments associated with completing the work, including materials, labor, equipment, bond, insurance, overhead, profit, impacts, and any and all related items or associated costs incurred or resulting from the items listed above, and is provided in accordance with Article VIII – Changes in the Work of the Contract.

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first written below.

(Vendor)

Approved: _____

Michael Albrecht, President

_____

Print Name and Title

C: Scott Teschky , Division Manager – Engineering
Daniel Fisher, Senior Project Manager
Financial Administrator
Project File

IN WITNESS OF THE FOREGOING, the Parties have set their hands and seals the day and year first written above.

CITY

CITY OF FORT LAUDERDALE, a Florida municipal

By: _____
SUSAN GRANT
Acting City Manager

Date: _____

ATTEST:

By: _____
DAVID R. SOLOMAN
City Clerk

Approved as to Legal Form and Correctness:
THOMAS J. ANSBRO, City Attorney

By:_____
RHONDA MONTOYA HASAN
Senior Assistant City Attorney

CHANGE ORDER SUMMARY SHEET

ORIGINAL CONTRACT AMOUNT (PO 6189 + 6191)		$411,567,380
COST OF CHANGE ORDERS ON PO 6189 TO DATE		$2,153,922
COST OF THIS CHANGE ORDER		$3,275,339
COST OF CHANGE ORDERS ON PO 6191 TO DATE		$3,431,125
COST OF THIS CHANGE ORDER		$0
	TOTAL:	**$420,427,776**
ORIGINAL CONTRACT TIME		1,278 calendar days
TIME ADDED TO DATE		0 calendar days
TIME ADDED TO THIS CHANGE ORDER		0 calendar days
	TOTAL:	**1,278** calendar days

SCHEDULE OF CHANGE ORDERS TO DATE ON PO 6189

C.O.#	DATE	DESCRIPTION	AMOUNT OF COST OR CREDIT
1	8/23/2023	PFAS	$371,644
2	10/23/2023	Temporary Power for Construction	$445,504
3	12/3/2023	OCCT Construction Updates	$1,336,774

SCHEDULE OF CHANGE ORDERS TO DATE ON PO 6191

C.O.#	DATE	DESCRIPTION	AMOUNT OF COST OR CREDIT
1	12/19/2023	Administration and Nano Building	$4,167,756
2	4/9/2024	Administration Building Deduction	$(736,631)

Dated as of May 22, 2024

City of Fort Lauderdale, Florida
100 N Andrews Avenue Fort Lauderdale, FL 33301-1016
Attn: City Manager and Public Works Director
Phone: 954-828-5000

With a copy to:

City of Fort Lauderdale, Florida
100 N Andrews Avenue Fort Lauderdale, FL 33301-1016
Attn: City Attorney
Phone: 954-828-5000

VIA ELECTRONIC MAIL

RE: Prospect Lake Clean Water Center Project – City-Initiated Changes

CHANGE PROPOSAL

Reference is hereby made to that certain Comprehensive Agreement, dated as of February 14, 2023 (as amended or otherwise modified from time to time, the "Comprehensive Agreement") between, *inter alia*, Prospect Lake Water, L.P. (the "Project Company" or "we") and the City of Fort Lauderdale, Florida (the "City" or "you"). Except as otherwise expressly provided herein, capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the Comprehensive Agreement, and, if not defined therein, the DB Contract.

We acknowledge that we are in receipt of your Request for Change Proposal – City Obligations: 54-inch feedstock watermain dated April 1, 2024 (the "Request for Change Proposal") and, further to our subsequent discussions with you and your consultants, we understand that at this time the City has requested the Project Company to implement the City Changes described in Section 1 (*Description of City Changes*) below. This is a Change Proposal under Section 8.04(a) of the Comprehensive Agreement, which relates to such City Changes. Upon the City's execution and delivery of this Change Proposal (such date, the "Effective Date"), this Change Proposal shall (a) constitute the agreement of the City and the Project Company required by Section 8.02(c) (*City-Initiated Changes*) of the Comprehensive Agreement in respect of such City Changes, (b) amend the Comprehensive Agreement and become a valid and binding part of the Comprehensive Agreement, and all other terms and conditions of the Comprehensive Agreement shall remain in full force and effect, as amended by this Change Proposal, and (c) supersede all prior agreements and arrangements between the Parties, whether oral or in writing, regarding the subject matter of this Change Proposal, including that certain Change Order No. 4 for Project No. 12765, dated June 3, 2024.

1. Description of City Changes

In the Request for Change Proposal, you instruct us to prepare a proposal to install the 54-inch Feedstock Water main set out in Annex B-1 (*City Infrastructure Obligations*) to the Comprehensive Agreement as a City Infrastructure Obligation (the "Feedstock Water Main").

Attached to this Change Proposal as Annex I is the DB Contractor's proposal to undertake and complete the Feedstock Water Main in accordance with the scope, timeline and assumptions set out therein (the "FWM SOW").

By executing and delivering this Change Proposal, you acknowledge and agree, consistent with Attachment 1A to the FWM SOW, that:

(a) your representation on April 25, 2024 that there are valves at each end of the interconnecting pipe that can be closed to remove the pipe in between and allow the Feedstock Water Main to be installed is true and correct;

(b) no permits from FDEP are required for the performance of the FMW SOW that have not already been obtained by the City, all of which permits are in full force and effect. Any such FDEP permit shall constitute a permit that the City is responsible for obtaining and maintaining and be deemed specified in Section 4.01(c) to the Comprehensive Agreement;

(c) (i) the City has commissioned the FWM Design (as defined in Attachment 1A to the FWM SOW) from a service provider selected by the City in the City's discretion; (ii) Project Company shall have no liability or responsibility for any defect, flaw, inoperability, inadequacy, errors, omissions or other adverse condition or aspect of the FWM Design; (iii) Project Company shall retain all of the Project Company's rights under the Comprehensive Agreement in connection with a Relief Event set out in clause (xviii) of the definition of Relief Event, except to the extent arising from the Project Company's failure to comply with the FWM SOW; and (iv) from and after the Effective Date, the definition of Work in the Comprehensive Agreement shall include the FWM Work (as defined in Attachment 1A to the FWM SOW) but shall continue to exclude all other City Infrastructure Obligations;

(d) the Project Company shall provide written notice to the City when the Project Company believes it has completed the FWM Work in accordance with this Change Proposal ("**FWM Completion Notice**"). Within five Business Days following delivery of the FWM Completion Notice, the City will inspect the FWM Work and (i) deliver to the Project Company the City's written acknowledgment that the FWM Work has been completed, or (ii) notify the Project Company in writing that the FWM Work has not been completed, stating in detail the reasons therefor. In the case of (ii), the Project Company may withdraw the FWM Completion Notice and resubmit such notice at a later date; *provided, that* if the Project Company does not agree with such written notice provided by the City, the Project Company may refer the disagreement for resolution in accordance with the Dispute Resolution Procedure; and

(e) this Change Proposal amends Annex B-1 (*City Infrastructure Obligations*) to the Comprehensive Agreement to reduce the scope thereof and transfer such reduced scope to Annex B-2 (*City Enabling Work*) to the Comprehensive Agreement providing for the enabling works to be performed by the Project Company at the request of the City. Therefore, on and after the Effective Date, Annex B-1 (*City Infrastructure Obligations*) to the Comprehensive Agreement shall be in effect in the form attached here to as Annex II and Annex B-2 (*City Enabling Work*) to the Comprehensive Agreement shall be in effect in the form attached here to as Annex III.

2. Description of the Impact on the Project of the Requested City Changes

a. Extra Work Costs

The Extra Work Costs associated with the Project Company's performance of the FWM SOW shall consist of:

- The DB Contractor's cost in the amounts set out in Annex I, a breakdown of which is set out in Annex I, as follows:
    - The "Base Bid" for the FWM SOW: **$3,071,452**; *plus*
        - Should the City select "Bid Alternate No. 1": **$108,298**; and/or
        - Should the City select "Bid Alternate No. 2": **$50,589** (it being understood that DB Contractor's cost shall include only any such "Bid Alternate" selected by the City.
- the Project Company's administrative costs in the amount of **$45,000.**

The Project Company will invoice the City for the FWM SOW Extra Work Costs in accordance with Section 10.04(a)(iv) (*Availability Payment Impacts; Monetary Compensation*) of the Comprehensive Agreement.

b. Completion Deadlines

No changes to the Scheduled Commercial Operation Date or the Commercial Operation Longstop Date are proposed in connection with Project Company's performance of the FWM SOW.

[*Signature Page Follows*]

Very truly yours,

PROSPECT LAKE WATER, L.P.

By: 

Name: Michael Albrecht
Title: President
Date: May 31, 2024

The City hereby confirms its election of [Bid Alternate(s) No. [___]] [none of the Bid Alternates] identified in Annex I to this Change Proposal.

Accepted and agreed:

CITY OF FORT LAUDERDALE

By: _____

Name:
Title:
Date:

Annex I
DB Contractor's Proposal for the Feedstock Water Main

[*Attached*.]

August 30th, 2024 LTR No. LTR0057B – Kiewit to Project Co.

Prospect Lake Water, L.P.
c/o Ridgewood Infrastructure
14 Philips Parkway
Montvale, NJ 07645
Attn: Legal Department

With copy to the addressees listed in Schedule 1

Via Email

Subject: Prospect Lake Clean Water Center Design Build Contract
Response to Scope Change Order Proposal Request – City Obligations: 54 –Inch Feedstock Watermain

Dear Maria,

Reference is hereby made to that certain Design-Build Contract, dated as of February 14, 2023 (as amended or otherwise modified from time to time, the "DB Contract") between Prospect Lake Water, L.P. ("Project Company") and Kiewit Water Facilities Florida Co. ("Kiewit"). Except as otherwise expressly provided herein, capitalized terms used and not defined herein shall have the meanings ascribed to such terms in the DB Contract and, if not defined therein, in the Comprehensive Agreement.

This letter ("Scope Change Order Proposal Response") is in response to Project Company's Scope Change Order Proposal Request for the 54-inch Feedstock Water Delivery and Feedstock Water Connection at Project boundary TP-01 per Annex B-1(City Infrastructure Obligations) in the Comprehensive Agreement, sent to Kiewit on April 15th, 2024.

Section 10.03(b) (*Procedure for Scope Changes*) of the Design Build Agreement states that *"Design-Build Contractor shall promptly review the Scope Change Order Proposal Request and notify Project Company in writing of the options for implementing the proposed Scope Change (including, if possible, any option that does not involve an extension of time) and the effect, if any, each such option would have on the DB Contract Price, the Guaranteed Substantial Completion Date, the Project Progress Milestone Dates, the Payment Schedule, the Project Schedule, and the Performance Criteria"*.

Kiewit hereby agrees to perform the Scope Change identified in Attachment 1 to this Scope Change Order Proposal Response in accordance with the terms and conditions set out herein, including the other attachments hereto.

Change to the DB Contract Price

Attachment 1 to this letter defines the detailed scope of work associated with this Scope Change including the pricing summary and supporting information. In accordance with Sections 2.09(e) and (f) (*Comprehensive Agreement; Equivalent Project Relief*) and Section 10.06 (*Price Change*) of the DB Contract, (a) DB Contractor will not be entitled to receive any increase in the DB Contract Price in respect of this Scope Change until Project Company has received such amount from the City and (b) Project Company shall pay such amount to DB Contractor promptly, and in any event no later than five (5) Business Days, after receipt of the corresponding payment from the City.

Base Bid (Inclusive of Material Escalation)	$ 3,071,452
Bid Alternate No. 1	$ 108,298
Bid Alternate No. 2	$ 50,859

Change to Guaranteed Substantial Completion Date

- There is no change to the Guaranteed Substantial Completion Date associated with this Scope Change

Change to the Project Progress Milestone Dates

- There is no change to the Project Progress Milestone Dates associated with this Scope Change.

Change to the Payment Schedule

- The revised Payment Schedule will be provided once the referenced change order is fully executed.

Change to the Project Schedule

- There is no change to the Project Schedule associated with this Scope Change.

Change to the Performance Criteria

- There is no change to the Performance Criteria associated with this Scope Change.

Other Information Pursuant to Section 8.04 (*Procedures for Implementing Changes to the Work*) of the Comprehensive Agreement

This cost of materials included in this Scope Change Order Proposal Request is valid through December 31st, 2024, but in order to maintain the current project schedule we must receive approval no later than November 1st, 2024.

If you have questions or comments about this information, please contact me at Matthew.Allen@Kiewit.com.

KIEWIT WATER FACILITIES FLORIDA CO.
5757 Blue Lagoon Dr., Suite 200, Miami, Florida, 33126

Sincerely,

Matthew Allen
Project Manager
Kiewit Water Facilities Florida Co.

Accepted and Agreed:

Prospect Lake Water, L.P.
Name:
Title:
Date:

Schedule 1 – Additional Addressees
Attachments:

1. Scope of Work & Pricing Summary
2. Updated Project Progress Milestone Dates – NOT USED
3. Updated Payment Schedule – NOT USED
4. Updated Project Schedule – NOT USED
5. Updated Performance Criteria – NOT USED

Schedule 1 – Additional Addressees

Prospect Lake Holdings, L.P.
c/o Ridgewood Infrastructure
14 Philips Parkway
Montvale, NJ 07645-1811
Attn: Legal Department
Phone: 201-447-9000
Email: mhaggerty@ridgewood.com

White & Case LLP
1221 Avenue of the Americas
New York, NY 10020
Attn: Dolly Mirchandani
Email: dolly.mirchandani@whitecase.com

IDE PLCWC, Inc.
c/o IDE Americas Inc.
5050 Avenida Encinas, Suite 250
Carlsbad, CA 92008
Attn: Lihy Teuerstein
Phone: 6194870760
Email: Lihyt@ide-tech.com

IDE Americas Inc.
5050 Avenida Encinas, Suite 250
Carlsbad, CA 92008
Attn: Lihy Teuerstein
Phone: 6194870760
Email: Lihyt@ide-tech.com

Attachment 1 – Scope of Work and Pricing Summary

[*Attached*]

KIEWIT WATER FACILITIES FLORIDA CO.
5757 Blue Lagoon Dr., Suite 200, Miami, Florida, 33126

Attachment 2 – Updated Project Progress Milestone Dates

[*Not Used*]

Attachment 3 – Updated Payment Schedule

[Not Used]

Attachment 4 – Updated Project Schedule

[*Not Used*]

Attachment 5 – Updated Performance Criteria

[*Not Used*]

Kiewit Water Facilities Florida Co.
5757 Blue Lagoon Dr. Suite 200
Miami, FL 33126

SCOPE CHANGE ORDER PROPOSAL

Prospect Lake Clean Water Center - Design-Build Contract

Kiewit PCO NO. 16
Wednesday, August 28, 2024

Scope Change Order Proposal
City Obligations: 54 –Inch Feedstock Watermain

BASE BID	
BASE BID	**$ 3,071,452**
BID ALTERNATE NO. 1	
BID ALT NO 1.	**$ 108,298**
BID ALTERNATE NO. 2	
BID ALT NO 2.	**$ 50,859**

SCOPE OF WORK	
INCLUDED SCOPE	**EXCLUDED SCOPE**
BASE BID BASED OFF OF CITY OF FORT LAUDERDALE **PROJECT #12765 FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT 100% SUBMITAL PACKAGE** DATED 2/16/2024.	FDEP PERMITS TO CONSTRUCT RAW WATER MAIN TO BE OBTAINED BY OTHERS.
BID ALTERNATE NO. 1 CONTRACTOR SHALL COORDINATE WITH THE CITY OF FORT LAUDERDALE TO SHUT DOWN RAW WATER WELLS TO INSTALL 30" X 30" DI TEE. IF CITY IS UNABLE TO SHUT DOWN RAW WATER WELLS CONTRACTOR SHALL ELIMINATE 30"X30" TEE AND INSTALL A 30" TAPPING SLEEVE AND TAPPING VALVE.	
BID ALTERNATE NO. 2 CONTRACTOR SHALL COORDINATE WITH THE CITY OF FORT LAUDERDALE TO SHUT DOWN RAW WATER WELLS TO INSTALL 24" X 24" LINE STOP IN ORDER TO INSTALL THE 24" X 24" DI TEE.	

* SEE ATTACHMENT 1A FOR CLARIFICATIONS TO THE BID DOCUMENTS PROVIDED BY CHEN MOORE AND THE CITY OF FORT LAUDERDALE DATED 4/25/24.

Attachment 1A

Additional Clarifications on Scope of Work for Installation of the 54-inch Feedstock Water Main (the "FWM Work")

1. **Feedstock Water Main Design (the "FWM Design"):** Attachment 1B hereto contains the drawings for the FWM Design. In the case of any conflicts between the FWM Design and this Attachment 1A, this Attachment 1A shall prevail. Kiewit and the Project Company acknowledge and agree that:
    a. the City has commissioned the FWM Design from a service provider selected by the City in the City's discretion as part of the City Infrastructure Obligations under the Comprehensive Agreement;

    b. Kiewit assumes no liability or responsibility for any defect, flaw, inoperability, inadequacy, errors, omissions or other adverse condition or aspect of the FWM Design; and
    c. From and after the effective date of the Scope Change Order associated with the FWM Work, the definition of Work in the DB Contract shall include the FWM Work but shall continue to exclude all other City Infrastructure Obligations.

2. **Engineering Standard:** In the performance of the FWM Work, Kiewit shall comply with the City Engineering Standard Details as applicable, which are available on the date hereof at: https://www.fortlauderdale.gov/government/departments-a-h/development-services/building-services/engineering-permits/city-engineering-standard-details.

    The Parties acknowledge and agree that the City Engineering Standard Details shall constitute Applicable Law and Project Requirements solely with respect to the FWM Work and shall not apply to the Project.

    No other standards are included in the refence to "City of Fort Lauderdale Design Standards and Specifications (Latest Version)" in General Note no. 38 in the FWM Design.

3. **Sequence of Work:** Notwithstanding anything to the contrary in the FWM Design, Kiewit shall determine the sequence of work in accordance with the Project Requirements and shall be allowed to remove or leave in place the existing interconnecting pipe at its sole discretion; *provided that* Kiewit shall be entitled to rely on the City's response on April 25, 2024 that there are valves at each end of the interconnecting pipe that can be closed and that closure of the valves is adequate to sufficiently stop the flow to allow for removal of the pipe in between and allow the Feedstock Water Main to be installed.

4. **SWPPP:** The site-specific stormwater pollution prevention plan (SWPPP) for the FWM Work will be an extension of the SWPPP for the Project and covered under the notice of intent (NOI) for the Project.

5. **Silt Fence:** No silt fence shall be required as part of the FWM Work to the extent silt fence is installed by Kiewit as part of the Project in the area where the 54-inch ductile iron pipe (DIP) is to be installed in accordance with the FWM Design.

6. **Corrosion Protection Measures:** Note on Water Separation no. 10 in the FWM Design does not require cathodic protection or any additional corrosion protection measures unless explicitly called out in the design.

7. **Bacteriological Sampling Points:** The FWM includes three bacteriological sampling points, one at each connection point to existing pipe and one at the north end of the pipe.

8. **Cast Iron Products:** No H-20 loading is required as the FWM Work is not being undertaken on a roadway.

9. **Metallic Warning Tape Specification 2320:** Kiewit shall use the 7900 EMS Warning Tape in accordance with the specifications attached hereto as Attachment 1C.

10. **Geotechnical Investigation Report:** The FWM Work is based on the information contained in the Geotechnical Investigation. If conditions differ materially from the conditions identified in the Geotechnical Investigation, Kiewit shall be entitled to claim a Relief Event in accordance with the terms of the Comprehensive Agreement. The Report of Geotechnical Exploration dated February 18, 2024, which is referenced in Earthwork Note No. 20 of the FWM Design, is attached hereto as Attachment 1D.

11. **Non-Public Access Areas: Kiewit shall undertake the FWM Work in non-public access areas and, therefore:**

    a. Notwithstanding anything to the contrary in the FWM Design, Kiewit shall not be required to provide a plan for staging or storage of materials or a plan demonstrating path of construction equipment travel;

    b. General Notes no. 33, 34 and 36 in the FWM Design shall not apply;

    c. The references to the manual on uniform traffic control devices (latest version), the Florida Department of Transportation design standards and specifications (latest edition) and the Broward County Traffic Engineering Division in General Note no. 38 in the FWM Design shall not apply.

    d. Notwithstanding anything to the contrary in the FWM Design, Kiewit shall not be required to submit a maintenance of traffic (MOT) plan and shall have no responsibility in respect of maintenance of access for such non-public access areas.

12. **Pavement Restoration:** Kiewit shall not be required to undertake pavement restoration and restoration of pavement markings if the FWM Work is performed prior to the installation of the road that is part of the Project.

13. **Grass Areas Restoration:** Notwithstanding anything to the contrary in the FWM Design, the FWM Work does not comprise any grass area restoration.

14. **Pavement Preparation:** Notwithstanding anything to the contrary in the FWM Design, the lift thickness and compaction requirements set out therein shall not apply to the extent Kiewit performs pavement preparation at the time Kiewit installs pavement for the Project.

15. **Access to City's Facilities:** Notwithstanding anything to the contrary in the FWM Design, Kiewit is required to maintain access only to the City's facilities on the site where the Feedstock Water main is to be located in accordance with the FWM Design.

16. **As-Built Drawings:** Any as-built drawings required to be submitted by Kiewit pursuant to the FWM Design shall consist of a redline mark-up of the drawings included in the FWM Design, which redline shall be certified by a state of Florida-registered surveyor and mapper. Signed and Sealed Hard Copies of Complete As-Built Drawings shall be the responsibility of the Engineer.

17. **Utilities:** If Kiewit encounters any utilities that are not specified in the FWM Design, or if the required depths and separation to existing utilities for the pipe routing are not as specified in the FWM Design, Kiewit shall be entitled to claim a Relief Event in accordance with the terms of the Comprehensive Agreement.

18. **Drawing D-3:** Drawing no. D-3 in the FWM Design Plan does not apply as there shall be no meter.

19. **Hazardous Materials:** General Note no. 44 in the FWM Design shall not apply. For the avoidance of doubt, Kiewit's rights and obligations with respect to hazardous materials will be as set out in the Comprehensive Agreement and the DB Contract.

20. **Shop Drawings:** The shop drawings required by General Note no. 24 in the FWM Design shall be limited to shop drawings for valves, piping, fittings, backfill and tracer wire.

21. **FDEP Permits:** Kiewit shall not be required to procure any FDEP permit required for the performance of the FWM Work.

22. **Excavated Material:** Notwithstanding anything to the contrary in the FWM Design, Kiewit may use excavated materials elsewhere in the performance of the DB Work for the Project or distribute excavated materials on the Site in the manner specified in the Comprehensive Agreement.

23. **Completion Timeline:** The completion of this feedstock water main scope of work is required no later than July of 2025 per our current CPM schedule. This Raw Water line provides the flushing water for some of the initial commissioning activities. The current quoted procurement durations for ductile iron pipe, valves, and fittings are up to 6 months from date of purchase order. To meet this July commissioning schedule, a fully approved and executed change order must be received no later than November 1st, 2024. The FWM Work, including procurement of materials is scheduled to be completed within 270 calendar days from execution of this Change Order, subject to the rights and remedies of the parties under the DB Contract to Changes, Relief Events, and extension of time, as may be applicable during performance. Kiewit shall provide written notice to the Project Company when Kiewit believes it has completed the FWM Work in accordance with this Scope Change Order ("**FWM Completion Notice**"). Within five Business Days following delivery of the FWM Completion Notice, the Project Company will inspect the FWM Work and (i) deliver to Kiewit the Project Company's written acknowledgment that the FWM Work has been completed, or (ii) notify Kiewit in writing that the FWM Work has not been completed, stating in detail the reasons therefor. In the case of (ii), Kiewit may withdraw the FWM Completion Notice and resubmit such notice at a later date; *provided, that* if Kiewit does not agree with such written notice provided by the Project Company, Kiewit may refer the disagreement for resolution in accordance with Article XIX (*Dispute Resolution*) of the DB Contract.

Attachment 1B

FWM Design

[*Attached*]

THIS ITEM HAS BEGIN 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.

CHEN MOORE & ASSOCIATES
500 WEST CYPRESS CREEK ROAD, SUITE 630
FT. LAUDERDALE, FL 33309

DANIEL EDUARDO DAVILA LICENSE No. 63014 STATE OF FLORIDA PROFESSIONAL ENGINEER

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

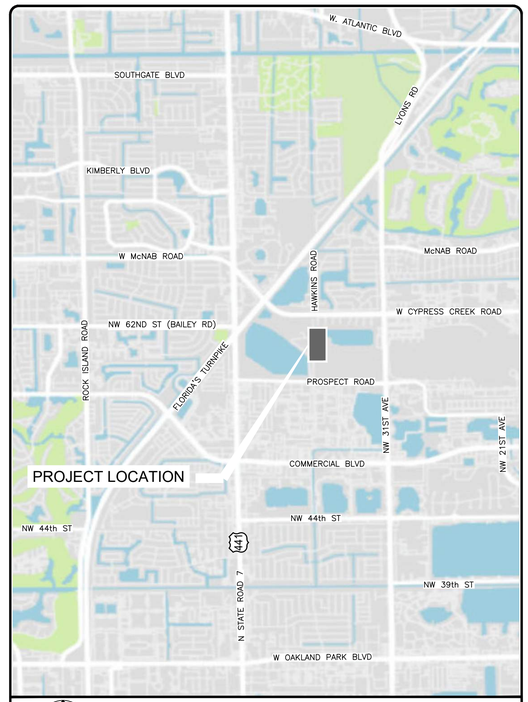
DRAWING INDEX

CITY OF FORT LAUDERDALE

PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

FORT LAUDERDALE, FLORIDA

cma
chen moore and associates
500 West Cypress Creek Road,
Suite 630
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com



LOCATION SKETCH

PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

FORT LAUDERDALE CITY COMMISSION

DEAN J. TRANTALIS	MAYOR
JOHN C. HERBST	COMMISSIONER - DISTRICT I
STEVE GLASSMAN	COMMISSIONER - DISTRICT II
PAMELA BEASLEY-PITTMAN	VICE MAYOR / COMMISSIONER - DISTRICT III
WARREN STURMAN	COMMISSIONER - DISTRICT IV

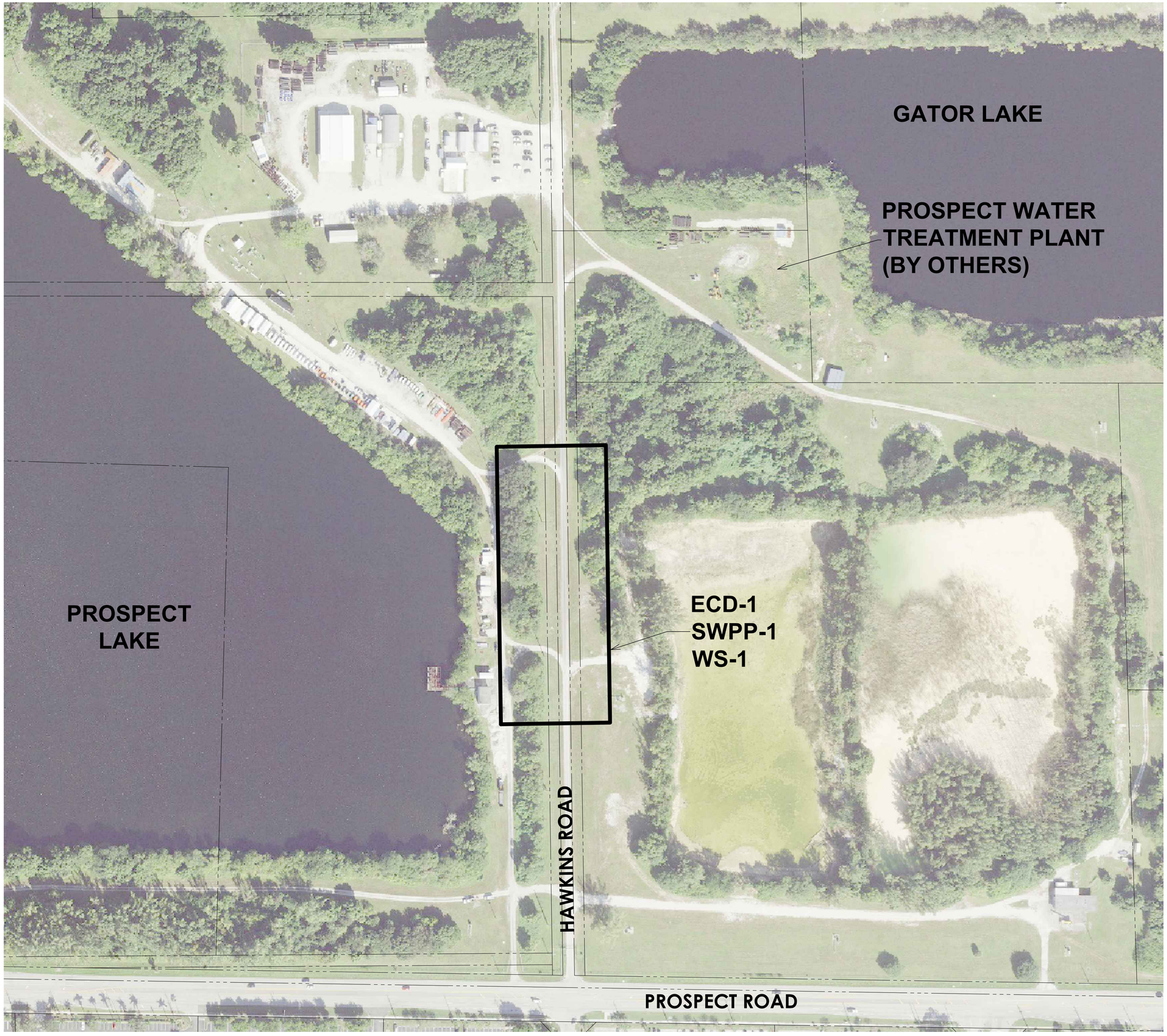
PROJECT MANAGER	JOB TITLE	PHONE NO.

DATE: 02/16/2024

CAD FILE: 12765-000-014COVR

DRAWING FILE No.:

100% SUBMITTAL



GRAPHIC SCALE

0 50 100 200

1 INCH = 100 FEET

Sunshine811

Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.

Check positive response codes before you dig!

cma
chen moore and associates

500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

100% SUBMITTAL

DRAWN BY:	DATE:
JLS	02/16/2024
DESIGNED BY:	SCALE:
DB	#
CHECKED BY:	
DB	
FIELD BOOK:	#

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

KEY MAP

DRAWING #	SHT #
KEY-1	001
TOTAL:	12
CAD FILE: 12765-001-KMAP	
DRAWING FILE NO. 4-141-91	

Plot Date: 3/29/2024 5:06:12 PM Username: jspicer Layout Name: KEY-1
Folder Path: V:\Projects\2023\23-0047.00068 - Prospect Lake WTP Enabling Proj\Design\CAD\Sheets Filename: 12765-001-KMAP.dwg

GENERAL NOTES

1. LOCATIONS OF EXISTING UNDERGROUND UTILITIES WERE OBTAINED FROM AVAILABLE RECORDS. NEITHER THE CITY NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT LOCATED WHERE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING CONSTRUCTION WORK. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR. CONTRACTOR SHALL ALSO PROVIDE THE ENGINEER WITH RECORD INFORMATION ON ALL FIELD VERIFICATION MEASUREMENTS AS SPECIFIED. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLANS) EXIST WITHIN THE AREA OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE THE CONSULTANT INFORMATION ON ALL FIELD VERIFICATION MEASUREMENTS AS SPECIFIED. IF AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED CONSTRUCTION UPON EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY SO THAT APPROPRIATE MEASURES CAN BE TAKEN. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
2. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES TO PROTECT EXISTING UTILITIES WHETHER SHOWN OR NOT.
3. THE CONTRACTOR SHALL NOTIFY THE CITY IN ADVANCE OF MAKING ANY CONNECTION TO AN ACTIVE PIPELINE OR UTILITY SYSTEM.
4. ALL EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS APPROVED OTHERWISE IN WRITING BY THE UTILITY OWNERS.
5. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS TWO (2) BUSINESS DAYS PRIOR TO COMMENCING ANY PORTION OF THE WORK TO BE PERFORMED DURING OFF-PEAK HOURS (NIGHTS AND SUNDAYS).
6. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE BASED ON NAVD 1988 DATUM.
7. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROTECT ALL UTILITIES AND OTHER PROPERTY AND SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED DURING CONSTRUCTION AND SHALL REPAIR SAID DAMAGES AT THE CONTRACTOR'S EXPENSE.
8. THE CONTRACTOR WILL HOLD A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF ANY CONSTRUCTION INCLUDING A REPRESENTATIVE FROM THE RESPECTIVE ENGINEERING AND UTILITY DEPARTMENTS, OWNER AND OTHER APPLICABLE AGENCIES.
9. ALL DEVIATIONS FROM PLANS ARE TO BE APPROVED IN WRITING PRIOR TO CONSTRUCTION AND FOR ALL INSPECTIONS AND TESTING.
10. THE CITY MUST BE GIVEN A MINIMUM 48 HOURS NOTICE FOR ALL INSPECTIONS UNLESS OTHERWISE AGREED UPON.
11. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES AND IMPROVEMENTS FROM DAMAGES, DISRUPTION OF SERVICE OR DESTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
12. EXISTING SECTION CORNERS AND OTHER LAND MARKERS OR MONUMENTS LOCATED WITHIN PROPOSED CONSTRUCTION ARE TO BE MAINTAINED BY THE CONTRACTOR AND/OR RESET AFTER CONSTRUCTION UNDER CERTIFICATION BY A FLORIDA REGISTERED SURVEYOR.
13. THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE USED AS THE STANDARD FOR ANY SIGNAGE AND PAVEMENT MARKING REQUIREMENTS OF THE PROJECT.
14. THE EXISTING ELEVATIONS SHOWN HEREIN ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY SHOULD INDICATE ELEVATION AT ANY OTHER POINT OTHER THAN THAT SHOWN.
15. THE CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC (M.O.T.) FOR ANY WORK PERFORMED ON PUBLIC RIGHT-OF-WAY. NOTIFY THE CITY 48 HOURS PRIOR TO BEGIN WORK. ALL M.O.T. WORK SHALL BE AS PER FDOT INDEX NO. 600 SERIES.
16. EXISTING CONDITIONS PRESENTED ARE BASED ON A TOPOGRAPHIC SURVEY PROVIDED BY SUAREZ SURVEYING & MAPPING, INC., PROJECT 230436807 DATED 06/15/2023. ADDITIONAL INFORMATION WAS OBTAINED FROM AS-BUILTS AND RECORD DRAWINGS PROVIDED BY UTILITY COMPANIES.
17. ALL WATER METER, COMMUNICATION BOX, CABLE TV BOX, ETC, DAMAGED DURING CONSTRUCTION OF PROPOSED IMPROVEMENTS SHALL BE REPLACED WITH IDENTICAL OR BETTER AT UTILITY OWNER SATISFACTION.
18. THE WORDS 'NEW', 'PROPOSED', 'INSTALL', 'PROVIDE', OR WORDS WITH SIMILAR MEANING, ON ANY PART OF THESE CONSTRUCTION DOCUMENTS, SHALL BE INTERPRETED, UNLESS OTHERWISE SPECIFICALLY STATED, TO MEAN 'FURNISHING AND INSTALL COMPLETE IN PLACE AND READY FOR SERVICE'.
19. THESE CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY. WORK DEPICTED UNDER A PARTICULAR DISCIPLINE MAY TRIGGER WORK UNDER A DIFFERENT DISCIPLINE. SUCH WORK REQUIRED FOR THE INTENDED AND PROPER FUNCTION OF THE IMPROVEMENTS, SHALL BE CONSIDERED INCIDENTAL AND PART OF THE CONTRACTOR'S BID PRICE. NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH ITEMS.
20. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING TREES, STRUCTURES, AND UTILITIES WHICH MAY NOT BE SHOWN ON PLANS. ANY EXISTING STRUCTURE, PAVEMENT, TREES OR OTHER EXISTING IMPROVEMENT NOT SPECIFIED FOR REMOVAL WHICH IS TEMPORARILY DAMAGED, EXPOSED OR IN ANY WAY DISTURBED BY CONSTRUCTION PERFORMED UNDER THIS CONTRACT, SHALL BE REPAIRED, PATCHED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
21. CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 811 LEAST 48 HOURS PRIOR TO PERFORMING ANY DIGGING TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES.
22. EXISTING GRADES WERE TAKEN FROM THE BEST AVAILABLE DATA AND MAY NOT ACCURATELY REFLECT PRESENT CONDITIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH CURRENT SITE CONDITIONS, AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO STARTING WORK.
23. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE CODES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
24. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS FOR ALL ITEMS SHOWN WITHIN THE DESIGN PLANS.
25. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR LEAVE EXCAVATED TRENCHES, OR PORTIONS OF WORK, EXPOSED OR OPEN AT THE END OF THE WORKING DAY, WEEKENDS, HOLIDAYS OR OTHER TIMES. WHEN THE CONTRACTOR IS NOT WORKING, UNLESS OTHERWISE DETERMINED, ANY TRENCH SHALL BE COVERED, FIRMLY SECURED AND MARKED ACCORDINGLY FOR PEDESTRIAN TRAFFIC.
26. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
27. ALL EXCAVATED MATERIAL REMOVED FROM THIS PROJECT SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
28. CAST IRON PRODUCTS: HEAVY DUTY CLASSIFICATION SUITABLE FOR HIGHWAY TRAFFIC LOADS, OR 16,000 LB. WHEEL LOADS.
29. STEEL GRATING AND COVERS: TRAFFIC CLASSIFICATION H-20 AASHTO H20: 16,000 LBS OVER 8" X 20" AREA.
30. ALL STRUCTURES MUST BE CAPABLE OF SUSTAINING HEAVY TRAFFIC LOADS.
31. ALL GRASS AREAS AFFECTED BY CONSTRUCTION SHALL BE RE-SODDED AND MATCH EXISTING ADJACENT SOD.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION, INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL AND SAFETY DEVICES. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR THE RESETTING OF ALL TRAFFIC CONTROL AND INFORMATION SIGNING REMOVED DURING CONSTRUCTION PERIOD.
33. EXCAVATED OR OTHER MATERIAL STORED ADJACENT TO OR PARTIALLY UPON A ROADWAY PAVEMENT SHALL BE ADEQUATELY MARKED FOR TRAFFIC SAFETY AT ALL TIMES.
34. TEMPORARY PATCH MATERIAL MUST BE ON THE JOB SITE WHENEVER PAVEMENT IS CUT, NO PAVEMENT WORK WILL BE ALLOWED WITHOUT PROPER MATERIAL AVAILABLE FOR TEMPORARY RESTORATION.
35. CONTRACTOR SHALL MAINTAIN TRAFFIC ACCORDING TO CORRESPONDING TYPICAL CONTROL DETAIL AS OUTLINED IN FLORIDA DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
36. CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT, FIRE PROTECTION SERVICES AND WASTER/RECYCLING SERVICES TWENTY-FOUR (24) HOURS IN ADVANCE OF THE DETOUR IN ACCORDANCE WITH SECTION 336.048 OF FLORIDA STATUTES.
37. COMPLETE AS-BUILT INFORMATION RELATIVE TO LOCATION AND DEPTH OF PIPES, MANHOLES, ETC. SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR AND PROVIDED TO THE CITY PRIOR TO FINAL ACCEPTANCE OF THE WORK.
38. ALL WORK TO BE IN COMPLIANCE WITH CITY OF FORT LAUDERDALE DESIGN STANDARDS AND SPECIFICATIONS (LATEST VERSION), MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST VERSION), FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS AND SPECIFICATIONS (LATEST EDITION) AND BROWARD COUNTY TRAFFIC ENGINEERING DIVISION.
39. DURING CONSTRUCTION IF SOIL OR GROUNDWATER CONTAMINATION IS ENCOUNTERED OR A SPILL OF A HAZARDOUS MATERIAL OR OIL/GASOLINE OCCURS PLEASE STOP WORK IN THAT AREA AND IMMEDIATELY CONTACT ERMD AT 954-965-4380 OR 963-763-4128. IF SUSPECTED CONTAMINATION OR HAZARDOUS MATERIAL IS FOUND ON THE PROJECT OR ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR SHALL CEASE OPERATIONS IN THAT AREA. IMMEDIATELY NOTIFY THE CITY ENGINEER, AND PROTECT THE IMMEDIATE AREA OF SUSPECT CONTAMINATED OR HAZARDOUS MATERIAL FROM FURTHER ACCESS. THE CITY ENGINEER WILL ARRANGE FOR THE INVESTIGATION, IDENTIFICATION AND/OR REMOVAL/REMEDIATION OF THE MATERIAL IN QUESTION AS NEEDED.
40. UPON DEVELOPMENT OF A SITE-SPECIFIC STORMWATER POLLUTION PREVENTION PLAN (SWPPP), CONTRACTORS/OPERATORS MUST COMPLETE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA FOR STORMWATER DISCHARGES FROM CONSTRUCTION SITES OVER ONE ACRE. THE EPA REQUIRES 14 DAY NOTICE PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT. THE NOI MUST BE SUBMITTED ONLINE AND INFORMATION ON THIS SUBMITTAL IS AVAILABLE AT http://water.epa.gov/polwaste/npdes/stormwater/EPAs-Electronic-Construction-General-Permit-Notice-of-Intent-eNOI-Home-Page.cfm. PLEASE COPY THE CITY OF FORT LAUDERDALE ON YOUR SUBMITTAL SO THIS OFFICE IS AWARE THAT YOU HAVE APPLIED FOR THE PERMIT AND THAT CONSTRUCTION IS BEGINNING SOON.

    THE CONTRACTOR SHALL COORDINATE SELECTION AND REVIEW OF ANY PROPOSED STAGING AREAS ASSOCIATED WITH THIS PROJECT WITH THE CITY OF FORT LAUDERDALE. A STAGING PLAN WILL BE REQUIRED.
41. NO STAGING OF EQUIPMENT/VEHICLES OR MATERIALS WILL BE ALLOWED WITHIN OR ADJACENT TO PRIVATE PROPERTY OR OTHER ENVIRONMENTALLY SENSITIVE AREAS. CONTRACTOR IS REQUIRED TO PROVIDE A PLAN FOR STAGING AND/OR STORAGE OF MATERIALS.
42. IF SUSPECTED CONTAMINATION OR HAZARDOUS MATERIAL IS FOUND ON THE PROJECT OR ENCOUNTERED DURING CONSTRUCTION THE CONTRACTOR SHALL CEASE OPERATIONS IN THAT AREA. IMMEDIATELY NOTIFY THE CITY ENGINEER, AND PROTECT THE IMMEDIATE AREA OF SUSPECT CONTAMINATED OR HAZARDOUS MATERIAL FROM FURTHER ACCESS. THE CITY ENGINEER WILL ARRANGE FOR THE INVESTIGATION, IDENTIFICATION AND/OR REMOVAL/REMEDIATION OF THE MATERIAL IN QUESTION AS NEEDED.
43. CONTRACTOR SHALL PROVIDE A PLAN DEMONSTRATING PATH OF CONSTRUCTION EQUIPMENT TRAVEL.
44. THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT. SHOULD THE CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, THE CONTRACTOR SHALL REQUEST, WRITTEN PERMISSION FROM THE PROJECT ENGINEER. THE CONTRACTOR SHALL PROVIDE A COPY OF THE REQUEST TO THE CITY ENGINEER, WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE, AND PROVIDE A DESCRIPTION OF THE SPECIFIC MANNER IN WHICH THE MATERIAL WILL BE USED. THE PROJECT ENGINEER SHALL COORDINATE WITH THE CITY ENGINEER, PRIOR TO ISSUING WRITTEN APPROVAL TO THE CONTRACTOR. BECAUSE STATE LAW DOES NOT TREAT PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AS HAZARDOUS MATERIALS, SUCH PRODUCTS DO NOT REQUIRE AN MSDS SUBMITTAL. ALL BULK PETROLEUM PRODUCTS STORED ON SITE SHALL REQUIRE PROPER STORAGE WHICH INCLUDES SECONDARY CONTAINMENT.

DEMOLITION NOTES

1. DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND DISPOSE OF CHEMICALS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS BEFORE PROCEEDING WITH DEMOLITION OPERATIONS.
2. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
3. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR IN-USE FACILITIES WITHOUT PERMISSION FROM OWNER, THE CITY AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS AS REQUIRED BY GOVERNING REGULATIONS. AN MOT PLAN WILL BE REQUIRED FOR SAFE PEDESTRIAN AND VEHICULAR ACCESSIBILITY.
4. CONDUCT DEMOLITION OPERATIONS TO SAFELY PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA.
5. ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, BARRIERS, RAILINGS, ETC. WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
6. PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.
7. ADJACENT IMPROVEMENTS SHALL BE CLEANED OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
8. FOR SELECTIVE DEMOLITION, USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING. TEMPORARILY COVER OPENINGS TO REMAIN.
9. DEMOLISH CONCRETE IN SMALL SECTIONS. CUT CONCRETE AT JUNCTURES WITH CONSTRUCTION TO REMAIN, USING POWER-DRIVEN MASONRY SAW OR HAND TOOLS; DO NOT USE POWER-DRIVEN IMPACT TOOLS.
10. INFORMATION SHOWN ON THE DRAWINGS AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE DATA AVAILABLE TO THE ENGINEER; HOWEVER, THIS INFORMATION IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION, CHARACTER, AND DEPTH OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSIST THE UTILITY COMPANIES, BY EVERY MEANS POSSIBLE, TO DETERMINE SAID LOCATIONS AND THE LOCATIONS OF RECENT ADDITIONS TO THE SYSTEMS NOT SHOWN.
11. REMOVAL, DEMOLITION, HAULING, AND DISPOSAL SHALL COMPLY WITH REGULATIONS BY F.D.E.P., E.P.A., AND ANY OTHER AUTHORITY HAVING JURISDICTION.
12. ALL EXISTING STREET LIGHTING WILL REMAIN IN PLACE AND REMAIN IN SERVICE DURING CONSTRUCTION OPERATIONS. CONTRACTOR SHALL USE CARE TO ENSURE EXISTING CONDUIT, PULLBOXES, AND CONTROL ARE NOT DAMAGED DURING DEMOLITION OPERATIONS.
13. CONTRACTOR TO PROVIDE TEMPORARY PARKING IF DRIVEWAY IS OBSTRUCTED DURING CONSTRUCTION.

EARTHWORK NOTES

1. THE CONTRACTOR'S BID FOR EARTHWORK SHALL INCLUDE THE EXCAVATION, REMOVAL AND DISPOSAL OF ALL MATERIALS, OF WHATEVER CHARACTER, WITHIN THE LIMITS OF CONSTRUCTION.
2. ALL TOPSOIL THAT IS SUITABLE FOR LANDSCAPING OR SODDING OPERATIONS MAY BE STOCKPILED NEARBY FOR SUCH USE IF APPROVED BY THE CITY.
3. WHERE MUCK, ROCK, CLAY, OR OTHER MATERIAL WITHIN THE LIMITS OF CONSTRUCTION IS UNSUITABLE IN ITS ORIGINAL POSITION THE CONTRACTOR SHALL EXCAVATE SUCH MATERIAL IN ITS ENTIRETY AND BACKFILL WITH GRANULAR MATERIAL COMPACTED TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180, METHOD 'D'. GRANULAR BACKFILL TO BE TYPE D (COURSE ROCK BACKFILL): CRUSHED ROCK OR GRAVEL WITH 100% PASSING A 1-INCH SIEVE AND NOT MORE THAN 10% PASSING A NUMBER 4 SIEVE; OR BETTER.
4. THE CONTRACTOR SHALL MAKE THEIR OWN ESTIMATE ON THE VOLUME OF MATERIAL ACTUALLY REQUIRED TO OBTAIN THE CROSS SECTIONS OR GRADES AS SHOWN ON THE PLANS.
5. THE CONTRACTOR SHALL REMOVE ALL MUCK, YIELDING MATERIAL ROOTS, VEGETATION AND OTHER DEGRADABLE MATERIAL IN ITS ENTIRETY, WITHIN THE PAVEMENT UNITS AND BELOW ALL STRUCTURES AND UTILITIES TO FULL EXCAVATED TRENCH WIDTH. SAID MATERIAL SHALL BE REPLACED WITH CLEAN ORGANIC FREE MATERIAL WITH ROCKS SMALLER THAN ONE INCH IN DIAMETER COMPACTED TO NOT LESS THAN 98% MAXIMUM DENSITY AT OPTIMUM MOISTURE. AASHTO T-180 METHOD "D" WITH MAXIMUM LIFTS OF TWELVE INCHES COMPACTED THICKNESS.
6. TRENCH BACKFILL AND COMPACTION SHALL FOLLOW THE DETAILS SHOWN WITHIN THE DESIGN PLANS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING APPROPRIATE SAFETY PRECAUTIONS DURING EXCAVATION AND TRENCHING OPERATIONS AS REQUIRED BY THE "TRENCH SAFETY ACT".
8. THIS WORK SHALL INCLUDE THE EXCAVATION OF WHATEVER SUBSTANCES THAT SHALL BE ENCOUNTERED TO THE DEPTHS AS SHOWN ON THE PLANS. EXCAVATED MATERIALS NOT REQUIRED FOR FILL OR BACKFILL SHALL BE REMOVED FROM THE WORK SITE AS DIRECTED BY THE ENGINEER AND SHALL BE CONSIDERED TO BE A PART OF THE BID PRICE OF THE UTILITY PIPE FOR WHICH EXCAVATION AND BACKFILL IS REQUIRED.
9. WATER SHALL NOT BE PERMITTED TO ACCUMULATE IN THE EXCAVATED AREA. IT SHALL BE REMOVED BY PUMPING OR OTHER MEANS AS APPROVED BY THE ENGINEER. THE REMOVAL OF WATER SHALL BE CONSIDERED TO BE A PART OF THE BID PRICE OF THE UTILITY PIPE FOR WHICH EXCAVATION AND BACKFILL IS REQUIRED. CONTRACTOR TO OBTAIN DEWATERING PERMITS FROM APPLICABLE JURISDICTIONAL AGENCIES (SFWMD, ETC.) IF REQUIRED.
10. IF THE BOTTOM OF THE TRENCH IS ROCK, THE EXCAVATION SHALL BE CARRIED EIGHT INCHES BELOW THE INVERT OF THE PIPE AND BACKFILLED WITH THOROUGHLY COMPACTED SAND, GRAVEL, OR OTHER SUITABLE MATERIAL APPROVED BY THE ENGINEER.
11. ROCK EXCAVATION SHALL INCLUDE ANY ROCK ENCOUNTERED WHICH CANNOT BE REMOVED WITH A 3/4 YARD BACKHOE UNDER NORMAL OPERATING CONDITIONS. ROCK EXCAVATION SHALL BE INCIDENTAL TO CONSTRUCTION OF ALL PIPING SYSTEMS AND NO SEPARATE PAYMENT WILL BE MADE.
12. WHENEVER IT IS NECESSARY, IN THE INTEREST OF SAFETY, TO BRACE OR SHORE THE SIDES OF THE TRENCH, SUCH BRACING OR SHORING SHALL BE CONSIDERED TO BE PART OF THE BID PRICE OF UTILITY PIPE FOR WHICH EXCAVATION AND BACKFILL IS REQUIRED.
13. THE CONTRACTOR SHALL FURNISH, PUT IN PLACE AND MAINTAIN SUCH SHEETING, BRACING, AS MAY BE REQUIRED TO SUPPORT THE SIDE OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH CAN IN ANY WAY DAMAGE THE WORK OR ENDANGER ADJACENT STRUCTURES.
14. IF FIELD CONDITIONS, TYPE OF SHEETING OR CONSTRUCTION METHODS MAKE REMOVAL OF SHEETING IMPRACTICABLE, AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR MAY LEAVE ALL SHEETING IN PLACE. THE ENGINEER MAY REQUIRE SHEETING TO BE CUT OFF AT ANY SPECIFIED ELEVATION BUT IN NO CASE WILL ANY SHEETING BE LEFT CLOSER THAN TWO (2) FEET BELOW THE NATURAL SURFACE, NOR CUT OFF BELOW THE ELEVATION OF THE TOP OF THE PIPE.
15. AFTER PIPES, STRUCTURES, AND OTHER APPURTENANCES HAVE BEEN INSTALLED, THE TRENCH OR OPENING SHALL BE BACKFILLED WITH MATERIAL IN CONFORMANCE WITH THE DETAILS SHOWN WITHIN THE DESIGN PLANS.
16. IN AREAS WHERE PAVEMENTS ARE TO BE CONSTRUCTED OVER THE PIPE. THE REMAINDER OF THE TRENCH SHALL BE PLACED IN SIX INCH LAYERS (COMPACTED THICKNESS) AND SHALL BE COMPACTED TO 98 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. CONTRACTOR WILL BE RESPONSIBLE FOR CORRECTING DAMAGE FROM SETTLEMENT IN THE BACKFILLED AREAS WHETHER UNDER THE PAVEMENT OR OTHERWISE.
17. IN AREAS WHERE NO PAVEMENT IS TO BE CONSTRUCTED, THE BACKFILL ABOVE THE TWELVE INCH LINE ABOVE THE PIPE SHALL BE COMPACTED TO A FIRMNESS APPROXIMATELY EQUAL TO THAT OF THE SOIL ADJACENT TO THE PIPE TRENCH.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SAFETY BARRIER AND PROTECTIVE STEEL PLATE COVERINGS FOR OPEN TRENCHES.
19. SOIL BORING INFORMATION WILL BE PROVIDED TO THE CONTRACTOR. THE SOIL BORING DATA PROVIDED IS FOR THE CONTRACTOR'S INFORMATION. THE ENGINEER DOES NOT MAKE ANY REPRESENTATION REGARDING EXISTING SUBSOIL CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ADDITIONAL SOIL BORINGS TO VERIFY THE LIMITS OF UNSUITABLE MATERIAL ON-SITE.
20. SEE SOILS EVALUATION OF THE PROJECT AREA ON GEOTECHNICAL INVESTIGATION REPORT PERFORMED BY PAN GEO CONSULTANTS, JANUARY 2024.

AS-BUILT DRAWINGS

1. CONTRACTOR TO SUBMIT AS-BUILT DRAWINGS TO THE CITY OF FORT LAUDERDALE FOR REVIEW AND APPROVAL.
2. FINAL AS-BUILT DRAWINGS TO BE SUBMITTED TO THE CITY OF FORT LAUDERDALE IN THE FOLLOWING FORMAT:
    - THREE (3) SIGNED AND SEALED HARD COPIES
    - ONE (1) ELECTRONIC FILE (PDF, CAD)

NOTES ON WATER SEPARATION

1. WATER MAIN SHOULD CROSS ABOVE ALL OTHER UTILITIES. WHEN WATER MAIN MUST BE BELOW OTHER UTILITIES, THE MINIMUM SEPARATION IS TWELVE (12) INCHES UNLESS NOTED BELOW.
2. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER MAIN OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR A MINIMUM OF TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE IF ENOUGH COVERAGE IS ACHIEVED.
3. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY SEWER LATERAL SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLY TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE IF ENOUGH COVERAGE IS ACHIEVED.
4. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST TWELVE (12) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE IF ENOUGH COVERAGE IS ACHIEVED.
5. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM OTHER PIPELINE.
6. ALL CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPE CENTERED ON CROSSING).
7. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER OR STORM WATER FORCE MAIN.
8. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6) FEET, AND PREFERABLY TEN (10) FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURIZED SANITARY SEWER OR WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER.
9. NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE, STORM SEWER MANHOLE, OR INLET STRUCTURE.
10. ALL D.I.P. SHALL BE PRESSURE CLASS 350 OR HIGHER, ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN.

TESTING / WATER MAIN

1. PVC AND DIP WATER MAINS SHALL BE TESTED IN ACCORDANCE WITH A.N.S.I. / A.W.W.A. STANDARDS C-600-10, LATEST REVISION.
2. HYDROSTATIC TESTS SHALL BE CONDUCTED AS FOLLOWS: AFTER A NEW PRESSURE MAIN HAS BEEN LAID AND BACKFILLED, IT SHALL BE PUMPED TO A PRESSURE OF 150 P.S.I. AND SHALL NOT VARY BY MORE THAN ±5 P.S.I. FOR THE TWO (2) HOUR DURATION OF THE TEST. ALL VISIBLE LEAKS SHALL BE STOPPED BY APPROVED METHODS. A LEAKAGE TEST SHALL THEN BE CONDUCTED AT THE ABOVE MENTIONED PRESSURE AND NO INSTALLATION WILL BE ACCEPTABLE BY THE ENGINEER UNTIL THE LEAKAGE IS LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FOLLOWING FORMULA:

$$Q = \frac{LD\sqrt{P}}{148,000}$$

A.N.S.I./ A.W.W.A. C600 - 10 STANDARDS

3. IN WHICH Q EQUAL THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR: L = LENGTH OF LINES IN FEET: D = DIAMETER OF LINES IN INCHES: AND P IS THE AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST, IN POUNDS PER SQUARE INCH. THE TEST SHALL BE MAINTAINED FOR A TWO (2) HOUR DURATION, BUT IT MAY BE CONTINUED FOR ONE (1) ADDITIONAL HOUR IF IT BECOMES APPARENT THAT THE LEAKAGE IS EQUAL TO OR GREATER THAN THE AMOUNT ALLOWABLE. WATER SUPPLIED TO THE MAIN DURING THE TEST TO MAINTAIN THE REQUIRED PRESSURE SHALL BE MEASURED BY A 5/8 INCH METER INSTALLED. ON THE DISCHARGE SIDE OF THE TEST PUMP, OR BY PUMPING FROM A CALIBRATED CONTAINER. A HOSE BIBB CONNECTION WILL BE PROVIDED TO ACCEPT THE TEST GAUGE SUPPLIED BY THE CITY OF FORT LAUDERDALE. THE SECTION OF THE MAIN BEING TESTED SHALL BE LIMITED TO A MAXIMUM LENGTH OF 2,000 FEET, OR THE DISTANCE BETWEEN THE TWO (2) CLOSEST VALVES. WHICHEVER IS GREATER. WHEN TESTING AGAINST CLOSED METAL-SEATED VALVES, AND ADDITIONAL LEAKAGE PER CLOSED VALVE OF 0.0078 GAL/HR/IN OF NOMINAL VALVE SIZE SHALL BE ALLOWED. ANY QUESTIONS PERTAINING TO PROCEDURES USED DURING THE TEST SHALL BE DIRECTED BY THE ENGINEER.
4. STERILIZATION SHALL BE PERFORMED AFTER THE WATER MAINS HAVE SATISFIED THE LEAKAGE REQUIREMENTS. THE WATER MAINS SHALL BE FLUSHED THROUGH OPENINGS OF THE REQUIRED SIZE AS DETAILED IN A.N.S.I. / A.W.W.A. STANDARD C-651-14. THE MAIN SHALL THEN BE STERILIZED IN ACCORDANCE WITH THE PROVISIONS OF THE APPLICABLE SECTIONS OF THE ABOVE NAMED SPECIFICATIONS, ON MAIN BREAKS, CUT-INS, ETC. A LIBERAL APPLICATION OF CALCIUM HYPROCHLORITE SHALL BE APPLIED. MAINS SHALL NOT BE PUT INTO DOMESTIC SERVICE UNTIL AFTER THE NECESSARY BACTERIOLOGICAL SAMPLES HAVE BEEN APPROVED BY THE APPLICABLE REGULATORY AGENCIES.

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JLS	02/16/2024
DESIGNED BY: DB	SCALE: #
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FIELD BOOK: #	

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT
WATER TREATMENT PLANT

GENERAL NOTES AND ABBREVIATION

DRAWING #	SHT #
GN-1	002
TOTAL:	12

CAD FILE:
12765–MULTI–NOTE

DRAWING FILE NO.

Plot Date: 3/29/2024 5:06:16 PM Username: jspicer Layout Name: GN-1 Filename: 12765–MULTI–NOTE.dwg
Folder Path: V:\Projects\2023\23-0047.00068 – Prospect Lake WTP Enabling Proj\Design\CAD\Sheets

ABBREVIATIONS

ABN	-	ABANDONED
ACP	-	ASBESTOS CEMENT PIPE
ACCE	-	ACCESS EASEMENT
AE	-	ANCHOR EASEMENT
AERE	-	AERIAL EASMENT
ALUM	-	ALUMINUM
ASPH	-	ASPHALT
A & UE	-	ACCESS & UTILITY EASEMENT
AVE	-	AVENUE
BCR	-	BROWARD COUNTY RECORDS
BCHCED	-	BROWARD COUNTY HIGHWAY CONSTRUCTION ENGINEERING DIVISION
BCTED	-	BROWARD COUNTY TRAFFIC ENGINEERING DEPT
BCWWS	-	BROWARD COUNTY WATER & WASTEWATER SERVICES
BE	-	BURIED ELECTRIC
BFO	-	BURIED FIBER OPTICS
BLDG	-	BUILDING
BT	-	BURIED TELEPHONE
CATV	-	CABLE TELEVISION
CAE	-	CANAL ACCESS EASEMENT
CB	-	CATCH BASIN
CCTV	-	CLOSED CIRCUIT TELEVISION
CIP	-	CAST IRON PIPE
℄	-	CENTER LINE
CLF	-	CHAIN LINK FENCE
CME	-	CANAL MAINTENANCE EASEMENT
CMP	-	CORRUGATED METAL PIPE
CO	-	CLEAN OUT
COMM	-	COMMUNICATIONS
CONC	-	CONCRETE
CORP	-	CORPORATION
CS	-	CONTROL STRUCTURE
DCR	-	DADE COUNTY RECORDS
DE	-	DRAINAGE EASEMENT
DIAM	-	DIAMETER
DIP	-	DUCTILE IRON PIPE
DWG	-	DRAWING
DWY	-	DRIVEWAY
E	-	EAST
EL	-	ELEVATION
ELEC	-	ELECTRIC
EOP	-	EDGE OF PAVEMENT
EX	-	EXISTING
FF	-	FINISHED FLOOR
FFE	-	FINISHED FLOOR ELEVATION
FH	-	FIRE HYDRANT
FM	-	FORCE MAIN
FPL & CE	-	FLORIDA POWER & LIGHT COMPANY EASEMENT
G	-	GAS
GV	-	GATE VALVE
HDPE	-	HIGH DENSITY POLYETHYLENE
IE	-	INVERT ELEVATION
IE & UE	-	INGRESS EGRESS & UTILITY EASEMENT
IEE	-	INGRESS & EGRESS EASEMENT
INSTR	-	INSTRUMENT
INV	-	INVERT
IRR	-	IRRIGATION
LB	-	LICENSED BUSINESS
LF	-	LINEAR FOOT
LGTH	-	LENGTH
MAS	-	MAINTENANCE ACCESS STRUCTURE
MAX	-	MAXIMUM
MB	-	MAIL BOX
ME	-	MAINTENANCE EASEMENT
MF	-	METAL FENCE
MH	-	MANHOLE
MIN	-	MINIMUM
MTR	-	METER
N	-	NORTH
NAVD 88	-	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD	-	NATIONAL GEODETIC VERTICAL DATUM
NO	-	NUMBER
NTS	-	NOT TO SCALE
O/H	-	OVERHEAD ELECTRIC
PB	-	PLAT BOOK
PE	-	POLYETHYLENE
PF	-	PLASTIC PICKET FENCE
PG	-	PAGE
POB	-	POINT OF BEGINNING
POC	-	POINT OF COMMENCEMENT
PROP	-	PROPOSED
PSI	-	POUNDS PER SQUARE INCH
PVC	-	POLYVINYL CHLORIDE
PVMT	-	PAVEMENT
R	-	RADIUS
RCP	-	REINFORCED CONCRETE PIPE
RE	-	RIM ELEVATION
RPM	-	REFLECTIVE PAVEMENT MARKER
RT	-	RIGHT
R/W	-	RIGHT-OF-WAY
S	-	SOUTH
SAN	-	SANITARY SEWER
SD	-	STORM DRAIN
SE	-	SEWER EASEMENT
SFWMD	-	SOUTH FLORIDA WATER MANAGEMENT DEPT
SHT	-	SHEET
SQ FT	-	SQUARE FEET
ST	-	STREET
STA	-	STATION
SWK	-	SIDEWALK
TEL	-	TELEPHONE
TH	-	TEST HOLE
TOC	-	TOP OF CURB
TOP	-	TOP OF PIPE
TYP	-	TYPICAL
UE	-	UTILITY EASEMENT
UNK	-	UNKNOWN
VCP	-	VITRIFIED CLAY PIPE
W	-	WEST
WF	-	WOOD FENCE
W/R	-	WHITE & RED
WM	-	WATER MAIN
WME	-	WATER MAIN EASEMENT
WTR	-	WATER
WWED	-	WASTEWATER ENGINEERING DEPARTMENT
WWS	-	WATER & WASTEWATER SERVICES

EXISTING STORM DRAINAGE

- EX SD — EXISTING STORM DRAIN PIPE
- EXISTING CATCH BASIN OR INLET GRATE
- EXISTING GUTTER INLET
- EXISTING ROUND CATCH BASIN
- EXISTING STORM MANHOLE
- EXISTING ENDWALL OR HEADWALL

DEMOLITION

- EXISTING ASPHALT TO BE REMOVED
- EXISTING ASPHALT TO BE MILLED
- EXISTING CONCRETE TO BE REMOVED
- EXISTING CONCRETE DRIVEWAY TO BE REMOVED
- EXISTING SPECIALTY DRIVEWAY TO BE REMOVED
- ITEM TO BE ABANDONED
- ITEM TO BE REMOVED

EXISTING WATER

- EX WM — EXISTING WATER MAIN
- ABANDONED WATER MAIN
- FUTURE WATER MAIN
- EX RCWM — EXISTING RECLAIMED WATER MAIN
- ABANDONED RECLAIMED WATER MAIN
- FUTURE RECLAIMED WATER MAIN
- EX RAW WM — EXISTING RAW WATER MAIN
- ABANDONED RAW WATER MAIN
- EXISTING PIPE (20"ø AND LARGER)
- W — EXISTING WATER METER AND SERVICE LATERAL
- EXISTING PLUG
- EXISTING CAP
- EXISTING FITTINGS
- EXISTING FIRE HYDRANT
- EXISTING SIAMESE OR FIRE DEPARTMENT CONNECTION
- EXISTING REDUCER
- EXISTING GATE VALVE
- EXISTING BUTTERFLY VALVE
- EXISTING AIR RELEASE VALVE
- EXISTING DETECTOR DOUBLE CHECK VALVE
- BFP — EXISTING BACKFLOW PREVENTER

LINE TYPES

- CENTER LINE
- RIGHT-OF-WAY LINE
- PROPERTY LINE
- EASEMENT LINE
- PROJECT BOUNDRY
- EX OE — OVERHEAD ELECTRIC LINES
- EX BE — BURIED ELECTRIC LINES
- EX CATV — CABLE TELEVISION
- EX BFO — BURIED FIBER OPTICS
- EX BT — BURIED TELEPHONE
- EX BCTEDCO — BROWARD COUNTY TRAFFIC ENGINEERING DEPARTMENT COMMUNICATIONS
- WOOD FENCE
- CHAIN LINK FENCE
- METAL FENCE

TOPOGRAPHIC SURVEY

- ANCHOR
- BOLLARD / GUARD POST
- CABLE TV RISER
- CABLE TV VAULT
- CLEANOUT
- COMMUNICATIONS VAULT
- CONCRETE LIGHT POLE
- CONCRETE POST
- CONCRETE POWER POLE
- ELECTRIC CABINET
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC OUTLET
- ELECTRIC VAULT
- ELECTRIC WIRE PULL BOX
- FIRE HYDRANT
- GAS METER
- GAS VALVE
- IRRIGATION BOX
- IRRIGATION PUMP
- IRRIGATION WELL
- LIFT STATION ANTENNA
- MAIL BOX
- METAL LIGHT POLE
- MULTI SUPPORT SIGN
- PLASTIC POST
- SANITARY SEWER MANHOLE
- SANITARY SEWER VALVE
- SIGN ON POST
- 9.95' SPOT ELEVATION
- STREET LIGHT POLE
- TELEPHONE CABINET
- TELEPHONE RISER
- TELEPHONE VAULT
- TH — TEST HOLE
- UTILITY MARKER
- VENT PIPE
- WATER METER
- WATER VALVE
- WOOD LIGHT POLE
- WOOD POWER POLE
- 300 — HORIZONTAL & VERTICAL CONTROL PT

GEOTECHNICAL

- B-1 — BORING LOCATION
- TH8 — TEST HOLE LOCATION

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ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT
WATER TREATMENT PLANT

GENERAL NOTES AND ABBREVIATION

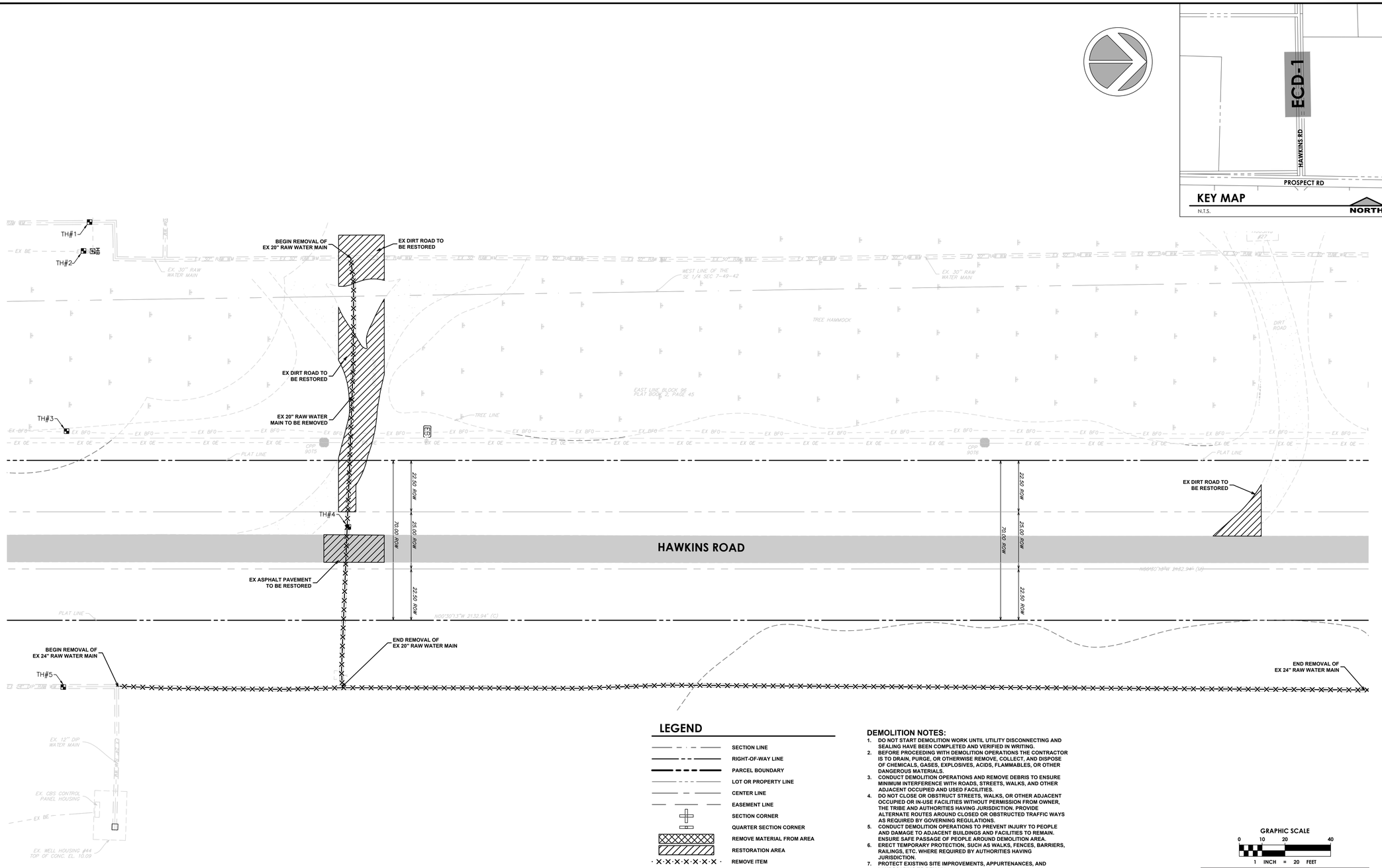
DRAWING # GN-2 | SHT # 003

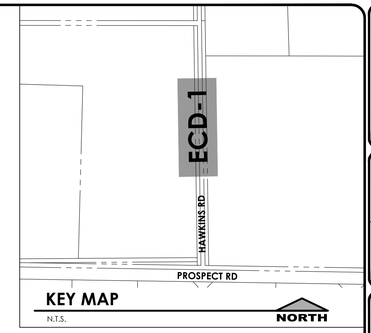
TOTAL: 12

CAD FILE: 12765-MULTI-NOTE

DRAWING FILE NO.

Plot Date: 3/29/2024 5:06:17 PM Username: jspicer Layout Name: GN-2
Folder Path: V:\Projects\2023\23-0047.00068 - Prospect Lake WTP Enabling Proj\Design\CAD\Sheets Filename: 12765-MULTI-NOTE.dwg





LEGEND

- SECTION LINE
- RIGHT-OF-WAY LINE
- PARCEL BOUNDARY
- LOT OR PROPERTY LINE
- CENTER LINE
- EASEMENT LINE
- SECTION CORNER
- QUARTER SECTION CORNER
- REMOVE MATERIAL FROM AREA
- RESTORATION AREA
- REMOVE ITEM
- ABANDON ITEM
- PIPE BURST

EXISTING CONDITIONS NOTES:

1. EXISTING CONDITIONS PRESENTED ARE BASED ON A TOPOGRAPHIC SURVEY PROVIDED BY SUAREZ SURVEYING & MAPPING INC., PROJECT NUMBER 23043680? ON 06/15/2023. ADDITIONAL INFORMATION WAS OBTAINED FROM AS-BUILTS AND RECORD DRAWINGS PROVIDED BY UTILITY COMPANIES, G.I.S. INFORMATION AND FIELD VISITS.
2. ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. NATIONAL GEODETIC SURVEY (NGS) BENCHMARK USED:
   DESIGNATION = CITY OF FORT LAUDERDALE BM 872
   DESCRIPTION = MAG NAIL IN BRASS DISC STAMPED CITY OF FORT LAUDERDALE.
   ELEVATION = 8.93' NAVD 88
4. CONTRACTOR IS TO PROTECT ALL EXISTING TREES, SIGNS, AND ABOVE GROUND UTILITIES NOT IMPACTED BY THIS PLAN.

DEMOLITION NOTES:

1. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTING AND SEALING HAVE BEEN COMPLETED AND VERIFIED IN WRITING.
2. BEFORE PROCEEDING WITH DEMOLITION OPERATIONS THE CONTRACTOR IS TO DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND DISPOSE OF CHEMICALS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS.
3. CONDUCT DEMOLITION OPERATIONS AND REMOVE DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
4. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER ADJACENT OCCUPIED OR IN-USE FACILITIES WITHOUT PERMISSION FROM OWNER, THE TRIBE AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS AS REQUIRED BY GOVERNING REGULATIONS.
5. CONDUCT DEMOLITION OPERATIONS TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN. ENSURE SAFE PASSAGE OF PEOPLE AROUND DEMOLITION AREA.
6. ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, BARRIERS, RAILINGS, ETC. WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION.
7. PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.
8. ADJACENT IMPROVEMENTS SHALL BE CLEANED OF DUST, DIRT, AND DEBRIS CAUSED BY DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
9. FOR SELECTIVE DEMOLITION, USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING OR CHOPPING. TEMPORARILY COVER OPENINGS TO REMAIN
10. DEMOLISH CONCRETE IN SMALL SECTIONS. CUT CONCRETE AT JUNCTURES WITH CONSTRUCTION TO REMAIN, USING POWER-DRIVEN MASONRY SAW OR HAND TOOLS; DO NOT USE POWER-DRIVEN IMPACT TOOLS.
11. INFORMATION SHOWN ON THE DRAWINGS AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE DATA AVAILABLE TO THE ENGINEER; HOWEVER, THIS INFORMATION IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION, CHARACTER, AND DEPTH OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL ASSIST THE UTILITY COMPANIES, BY EVERY MEANS POSSIBLE, TO DETERMINE SAID LOCATIONS AND THE LOCATIONS OF RECENT ADDITIONS TO THE SYSTEMS NOT SHOWN.
12. REMOVAL, DEMOLITION, HAULING, AND DISPOSAL SHALL COMPLY WITH REGULATIONS BY F.D.E.P., E.P.A., AND ANY OTHER AUTHORITY HAVING JURISDICTION.
13. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
14. ALL EXISTING PATHWAY AND STREET LIGHTING WILL REMAIN IN PLACE AND REMAIN IN SERVICE DURING CONSTRUCTION OPERATIONS.

GRAPHIC SCALE
0 10 20 40
1 INCH = 20 FEET

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REVISIONS			
NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

EXISTING CONDITION AND DEMOLITION PLAN

DRAWING #	SHT #
ECD-1	004
TOTAL:	12
CAD FILE: 12765-005-DEMO	
DRAWING FILE NO.	

Plot Date: 3/29/2024 5:06:27 PM Username: jspicer Layout Name: ECD-1
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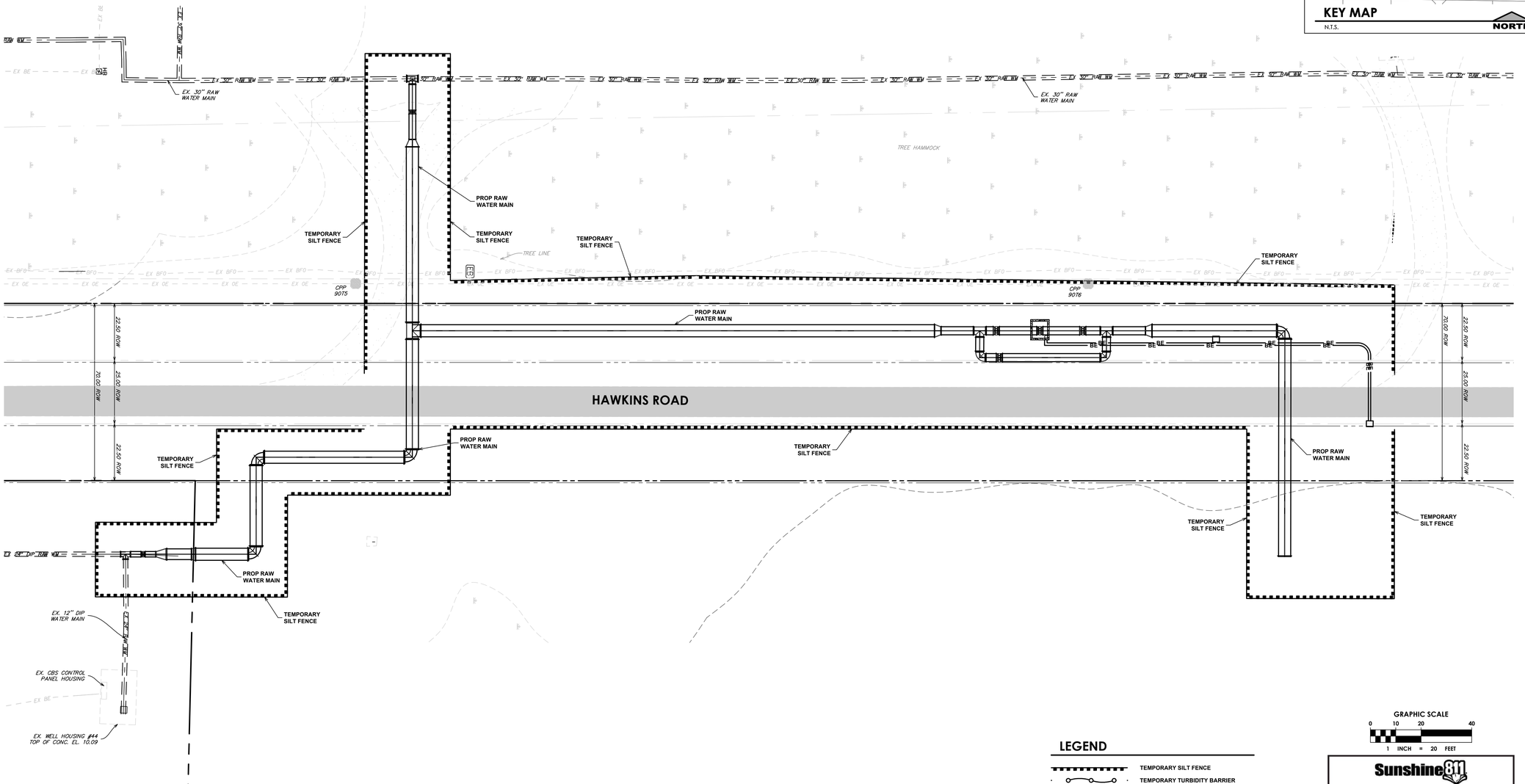

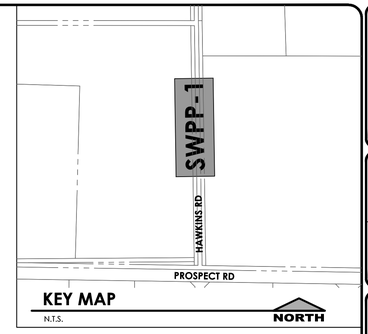

KEY MAP
N.T.S.
NORTH

LEGEND

- TEMPORARY SILT FENCE
- TEMPORARY TURBIDITY BARRIER
- TEMPORARY ROCK BAGS
- TEMPORARY HAYBALES
- TEMPORARY FILTER FABRIC INLET PROTECTION

NOTE:

ADJUST SILT FENCE AND SWPP AS NECESSARY. CONTRACTOR TO IMPLEMENT BEST MANAGEMENT PRACTICES DURING CONSTRUCTION.

GRAPHIC SCALE
0 10 20 40
1 INCH = 20 FEET

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NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

STORMWATER POLLUTION PREVENTION PLAN

DRAWING #	SHT #
SWPP-1	005
TOTAL:	12
CAD FILE: 12765-006-SWPP	
DRAWING FILE NO.	

Plot Date: 3/29/2024 5:06:42 PM Username: jspicer Layout Name: SWPP-1
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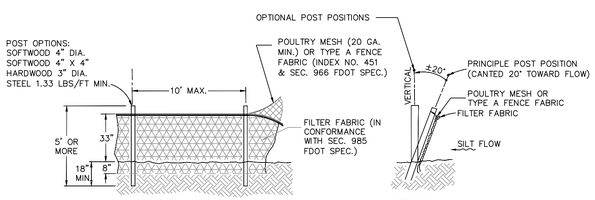

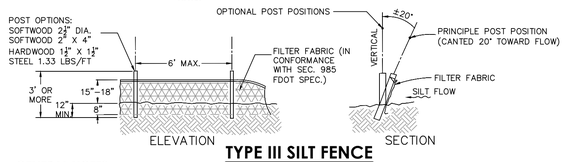

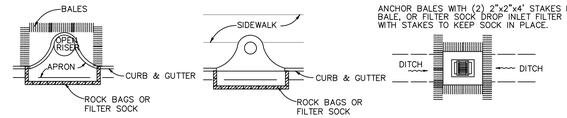

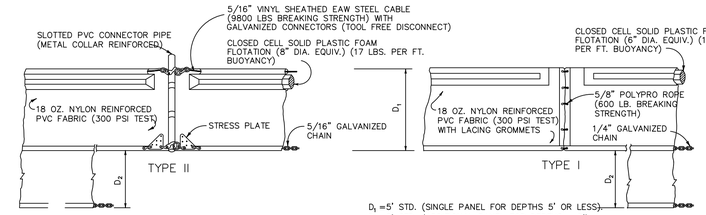

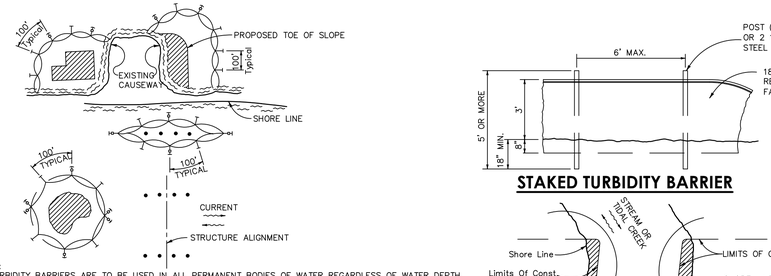

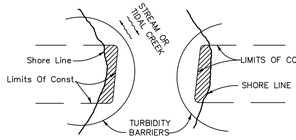

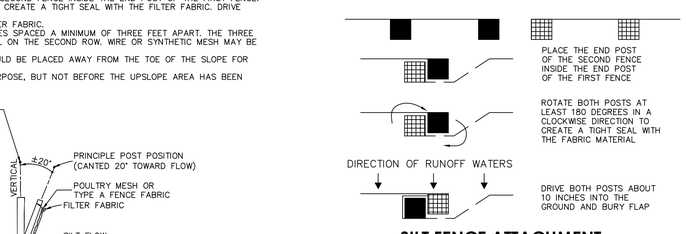

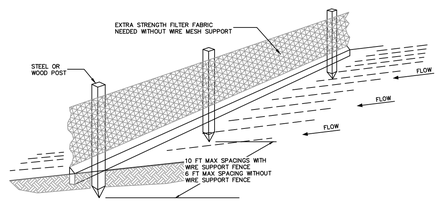

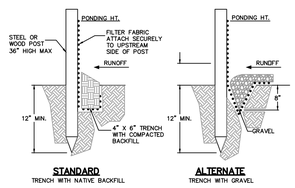

STORMWATER POLLUTION PREVENTION GENERAL NOTES

GENERAL EROSION SITES

1. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPOSED OF THIS DRAWING (SITE MAP), THE STANDARD DETAILS AND THE PLAN NARRATIVE INCLUDED IN SPECIFICATIONS PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH THE STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND BECOME FAMILIAR WITH THEIR CONTENTS.
3. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS INDICATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
4. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
5. THE CONTRACTOR SHALL PROTECT INLETS AND OTHER SITE APPURTENANCES FROM SEDIMENTATION USING PROTECTION AS DETAILED IN THESE SHEET AND IN FDOT INDEX NO. 104.
6. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
7. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BUOYS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN–UP FUEL OR CHEMICAL SPILLS AND LEAKS.
10. DUST ON THE SITE SHALL BE CONTROLLED BY WATERING. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TONIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE INITIATED AS SOON AS PRACTICABLE.
13. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 30 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
14. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS, REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
15. THE CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCES AT POINTS OF INGRESS AND EGRESS ONTO ANY ROADWAY OPEN TO PUBLIC USE WITHIN THE PROJECT AREA. THESE LOCATIONS AND THE METHOD OF STABILIZATION SHALL BE INCLUDED IN THE EROSION CONTROL PLAN. THE CONTRACTOR SHALL PROVIDE #57 ROCK AT CONSTRUCTION ENTRANCE TWELVE FEET WIDE AND FIFTY FEET LONG MINIMUM. THE CONTRACTOR SHALL ROUTINELY REMOVE EXCESS SEDIMENT FROM THE ROADWAY AND OTHER REQUIRED AREAS PROMPTLY.
16. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
17. ALL MATERIAL SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
18. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE. ON–SITE AND OFF–SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE TO WITH GENERAL PERMIT REQUIREMENTS.
19. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
20. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
21. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUNMOUS PAVING FOR ROAD CONSTRUCTION.
22. CONTRACTOR SHALL PROVIDE TREE PROTECTION MEASURES AS NEEDED.
23. DEWATERING IS NOT ANTICIPATED FOR THE INSTALLATION OF UTILITIES.
24. ALL WORK SHALL BE IN COMPLIANCE WITH NPDES.

MAINTENANCE

1. ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
2. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
3. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
4. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED SEDIMENT SHALL BE REMOVED FROM THE FENCES WHEN IT REACHES ONE–HALF THE HEIGHT OF THE SILT FENCE.
5. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
6. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING ON THE TEMPORARY PARKING AS CONDITIONS DEMAND.
7. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
8. IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR IS TO CEASE OPERATIONS IN THAT AREA. THE CONTRACTOR SHALL CONTACT THE ENGINEER WHO WILL NOTIFY THE BROWARD COUNTY ENVIRONMENTAL PROTECTION AND GROWTH MANAGEMENT DEPARTMENT.

SHEET FLOW APPLICATION: SILT FENCE

THIS SEDIMENT BARRIER USES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 cm). HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED AS DESCRIBED IN ITEM NO. 8 BELOW.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 m) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 cm). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 m).
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10cm) WIDE AND 4 INCHES (10 cm) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH (25 mm) LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 cm) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 cm) ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 cm) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABIRC SHALL NOT EXTEND MORE THAN 36 INCHES (90 cm) ABOVE THE ORIGINAL GROUND SURFACE.
7. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ITEM NO. 6 APPLYING.
8. WHEN ATTACHING TWO SLIT FENCES TOGETHER, PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS AT LEAST 180 DEGREES ON A CLOCKWISE DIRECTIONS TO CREATE A TIGHT SEAL WITH THE FILTER FABRIC. DRIVE BOTH POSTS INTO THE GROUND AND BURY THE FLAP.
9. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
10. THE MOST EFFECTIVE APPLICATION CONSISTS OF A DOUBLE ROW OF SILT FENCES SPACED A MINIMUM OF THREE FEET APART. THE THREE FOOT SEPARATION IS SO THAT IF THE FIRST ROW COLLAPSES IT WILL NOT FALL ON THE SECOND ROW. WIRE OR SYNTHETIC MESH MAY BE USED TO REINFORCE THE FIRST ROW.
11. WHEN USED TO CONTROL SEDIMENTS FROM A STEEP SLOPE, SILT FENCES SHOULD BE PLACED AWAY FROM THE TOE OF THE SLOPE FOR INCREASED HOLDING CAPACITY.
12. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

TYPE IV SILT FENCE

N.T.S.

TYPE III SILT FENCE

N.T.S.

GENERAL NOTES

1. TYPE III SILT FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES.
2. TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF THE RIGHT–OF–WAY.
3. DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
4. WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGHT OF THE FENCE.

EROSION AND SEDIMENT CONTROL NOTES:

1. CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES THROUGHOUT CONSTRUCTION IN ORDER TO ENSURE POLLUTION PREVENTION. CONTRACTOR TO COMPLY WITH ALL LOCAL STATE AND OTHER GOVERNMENTAL ENVIRONMENTAL REGULATIONS THROUGHOUT CONSTRUCTION.
2. DURING CONSTRUCTION ALL CATCH BASIN INLETS WITHIN THE AFFECTED AREA SHALL BE PROTECTED TO PREVENT SEDIMENT AND DEBRIS FROM ENTERING THE CATCH BASIN.
3. SILT FENCES SHALL BE INSTALLED AS NECESSARY TO CONTROL OR PREVENT DISCHARGE OF SEDIMENT ONTO ADJACENT UNDISTURBED AREAS, OR OFF–SITE AREAS.
4. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITHIN A REASONABLE PERIOD OF TIME TO ASSURE MINIMUM EROSION OF SOILS.
5. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
6. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN AND AT LEAST ONCE A WEEK.
7. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
8. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
9. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY CITY, COUNTY, AND STATE OF FLORIDA ON SITE INSPECTION, AT NO ADDITIONAL COST TO THE OWNER.
10. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
11. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
12. BURNING OF DEBRIS WILL NOT BE ALLOWED.
13. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
14. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATER WAYS. IN ADDITION CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES IF EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF–SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC. THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES. EROSION CONTROL BARRIER SHALL BE ESTABLISHED AS THE FIRST ITEM OF WORK.
15. THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S STORMWATER PERMITTING PROGRAM APPLIES TO ALL CONSTRUCTION ACTIVITY THAT: 1) CONTRIBUTE STORMWATER DISCHARGES TO SURFACE WATER OF THE STATE OR INTO A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4); 2) DISTURBS ONE OR MORE ACRES OF LAND; OR 3) LESS THAN ONE ACRE IS INCLUDED IF THE ACTIVITY IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT WILL MEET OR EXCEED THE ONCE ACRE THRESHOLD. DISTURB INCLUDES CLEARING, GRADING AND EXCAVATING.
16. FOR CONSTRUCTION ACTIVITY THAT IS SUBJECT TO THE NPDES FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S STORMWATER PERMITTING PROGRAM, THE CONTRACTOR SHALL:
    - 16.1. OBTAIN A GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION DOCUMENT 62–621.300(4)(A).
    - 16.2. COMPLY WITH ALL REQUIREMENTS OF THE GENERIC PERMIT.
    - 16.3. DEVELOP AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
    - 16.4. COMPLETE A NOTICE OF INTENT (NOI) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FORM 62–621.300(4)(B) IN ITS ENTIRETY USING THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S WEBSITE.
17. SUBMIT COPIES OF THE SWPPP AND THE NOI TO THE ENGINEER AS INFORMATIONAL RECORDS. THESE SUBMITTALS WILL NOT BE REVIEWED BY THE ENGINEER.
18. CONTRACTOR TO CLEAN AND REPAIR ALL EXISTING STORMWATER INFRASTRUCTURE THAT IS IMPACTED BY CONSTRUCTION ACTIVITIES, BEFORE LEAVING THE JOBSITE.
19. CONTRACTOR TO REMOVE ALL FILTER FABRIC AND POLLUTION PREVENTION ITEMS BEFORE THE FINAL WALK–THROUGH.
20. DUST ABATEMENT: CONTRACTOR SHALL LIMIT THE NUMBER OF TRIPS ONLY FOR THE NECESSARY OPERATIONS TO PERFORM THE WORK. OPERATIONAL SPEED OF VEHICLES SHALL BE REDUCED WHENEVER NECESSARY TO CONTROL AND PREVENT DUST WITHIN THE SITE. CONTROLLED WATERING AND MOISTURE OF THE SURFACES AND DIRT ROADS SHALL BE APPLIED TO AVOID UNNECESSARY DUST WHEN APPLICABLE.
21. CONTRACTOR TO USE SYNTHETIC BALE BARRIERS ONLY. HAY / STRAW BALES ARE NOT ALLOWED.
22. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDICES 102, 103 AND 106, THE FDEP NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT (IF APPLICABLE), AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). FILTER FABRIC, HAY BALES, OR ROCK BAGS SHALL BE INSTALLED IN EACH INLET THROUGHOUT THE CONSTRUCTION PERIOD. A SOIL TRACKING PREVENTION DEVICE (STPD) SHALL BE CONSTRUCTED AT ALL UNSTABILIZED CONSTRUCTION ACCESS POINTS, PER FDOT INDEX NO. 106.
23. THE INTENT OF EROSION CONTROL MEASURES IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS TO BE DETERMINED BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS.
24. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
25. INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY, OR AFTER EACH RAINFALL EVENT. REPAIR, AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
26. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
27. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
28. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
29. DRAINAGE INLETS SHALL BE PROTECTED BY FILTER OR OTHER APPROVED MATERIALS.
30. ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
31. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
32. PRIOR TO CONSTRUCTION AND DURING ALL OPERATIONS THAT MAY DEGRADE WATER QUALITY, THE CONTRACTOR SHALL PRACTICE TURBIDITY CONTROLS TO PREVENT VIOLATION OF THE WATER QUALITY STANDARDS AS OUTLINED IN CHAPTER 62–302, F.A.C

SILT FENCE ATTACHMENT

N.T.S.

SILT FENCE INSTALLATION

N.T.S.

NOTES

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

FOR ADDITIONAL INFORMATION REFERENCE FDOT INDEX 104

INLET PROTECTION

N.T.S.

NOTES:

1. DURING CONSTRUCTION ALL CATCH BASIN INLETS SHALL BE PROTECTED TO PREVENT SEDIMENT AND DEBRIS FROM ENTERING THE CATCH BASIN.
2. INSTALL FILTER SOCK AT INLETS TO KEEP SILT, SEDIMENT AND CONSTRUCTION DEBRIS OUT OF THE STORM SYSTEM.
3. INSTALL FILTER SOCK AROUND THE ENTIRE CIRCUMFERENCE OF THE DROP INLET AND ALLOW FOR AT LEAST 1 FOOT OF OVERLAP ON EITHER SIDE OF THE OPENING BEING PROTECTED, OR INSTALL FILTER SOCK AROUND INLET AND ENSURE THAT THE CURB SIDE CREATES A SEAL WITH THE FILTER.
4. UNDER LOW–FLOW CONDITIONS, A 9" OR 12" SOCK DIAMETER SHOULD SUFFICE.
5. SEDIMENT COLLECTED AROUND THE OUTSIDE OF FILTER SOCK TO BE REMOVED WHEN SEDIMENT REACHES ONE–HALF OF THE SOCK HEIGHT.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

D_1 =5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D_2 =5' STD. (ADDITIONAL PANEL FOR DEPTHS 5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS

N.T.S.

NOTES:

1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. TURBIDITY BARRIERS SHALL BE OF SUFFICIENT LENGTH & DEPTH & SUFFICIENTLY STABILIZED IN ORDER TO MINIMIZE TURBIDITY.
3. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
4. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
5. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
6. FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE STANDARD SPECIFICATIONS.

TURBIDITY BARRIER APPLICATIONS

GENERAL NOTES

1. FLOATING TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER, LF.
2. STAKED TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED TURBIDITY BARRIER, LF.

WATER QUALITY

1. PRIOR TO CONSTRUCTION AND DURING ALL OPERATIONS THAT MAY DEGRADE WATER QUALITY, THE CONTRACTOR SHALL PRACTISE TURBIDITY CONTROLS TO PREVENT VIOLATIONS FO THE WATER QUALITY STANDARDS AS OUTLINED IN CHAPTER 62–302, F.A.C

LEGEND

- ● PILE LOCATIONS
- ▨ DREDGE OR FILL AREA
- ⊸ MOORING BUOY W/ANCHOR
- ⊣ ANCHOR
- ⬭ BARRIER MOVEMENT DUE TO CURRENT ACTION

TURBIDITY BARRIER

N.T.S.

STAKED TURBIDITY BARRIER

NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS, HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIER AND/OR STAKED TURBIDITY BARRIER. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

BARRIER FOR PAVED DITCH

N.T.S.

SILT FENCE APPLICATIONS

N.T.S.

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CHECKED BY:	
DB	
FIELD BOOK:	
#	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT
WATER TREATMENT PLANT

STORMWATER POLLUTION PREVENTION DETAILS

DRAWING #	SHT #
SWPP-2	006
TOTAL:	12

CAD FILE:
12765–MULTI–DETL
DRAWING FILE NO.

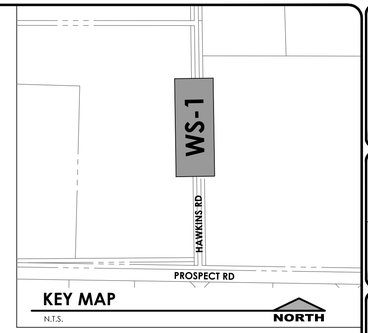
Plot Date: 3/29/2024 5:06:47 PM Username: jspicer Layout Name: SWPP–2 Filename: 12765–MULTI–DETL.dwg
Folder Path: V:\Projects\2023\23–0047.00068 – Prospect Lake WTP Enabling Proj\Design\CAD\Sheets

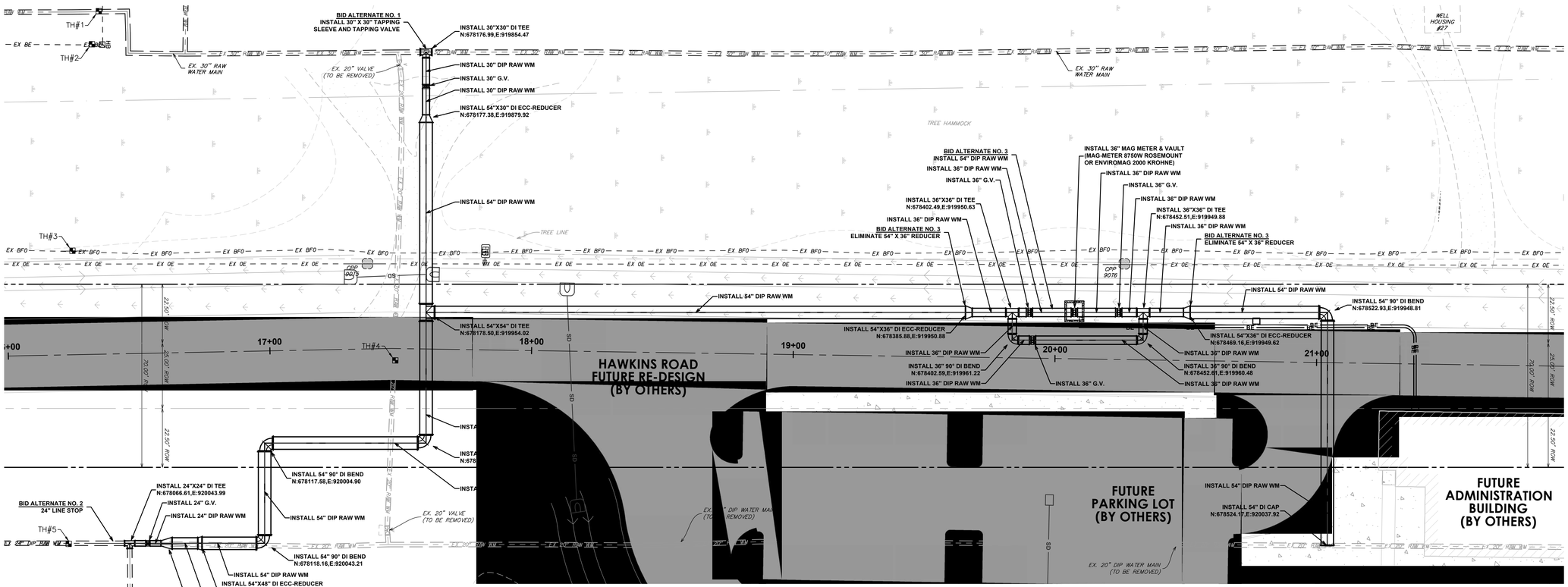
BID ALTERNATE NOTES:

BID ALTERNATE NO. 1: CONTRACTOR SHALL COORDINATE WITH THE CITY OF FORT LAUDERDALE TO SHUT DOWN RAW WATER WELLS TO INSTALL 30" X 30" DI TEE. IF CITY IS UNABLE TO SHUT DOWN RAW WATER WELLS, CONTRACTOR SHALL ELIMINATE 30" X 30" TEE AND INSTALL A 30" TAPPING SLEEVE AND TAPPING VALVE.

BID ALTERNATE NO. 2: CONTRACTOR SHALL COORDINATE WITH THE CITY OF FORT LAUDERDALE TO SHUT DOWN RAW WATER WELLS TO INSTALL 24" X 24" DI TEE. IF CITY IS UNABLE TO SHUT DOWN RAW WATER WELLS, CONTRACTOR SHALL INSTALL 24" LINE STOP IN ORDER TO THE 24" X 24" DI TEE.

BID ALTERNATE NO. 3: CONTRACTOR SHALL ELIMINATE THE MASTER METER VAULT, 36" MAG METER, 36" DIP RAW WM, 36" DIP FITTINGS, 36" GATE VALVES AND ELECTRICAL ASSOCIATED WITH THE MAG METER INSTALLATION. CONTRACTOR SHALL INSTALL 54" DIP RAW WM BETWEEN N:678385.88, E:919950.88 AND N:678469.16, E:919949.62.





VACUUM TEST HOLE DATA TABLE

NO.	GROUND EL.	COVER	ELEV TOP	DIRECTION	DESCRIPTION
1	7.87	3.65	4.22	S-N	30" DIP WATER
2	7.60	1.30	6.30	E-W	2" PVC (GRAY) ELEC
3	7.15	1.30	5.85	S-N	2" PVC (ORANGE) FIBER OPTIC
4	7.51	3.96	3.55	E-W	20" DIP WATER
5	10.16	5.53	4.63	S-N	24" DIP WATER

LEGEND

S#	SAMPLE POINT
WM	PROPOSED WATER MAIN
RCWM	PROPOSED RECLAIMED WATER MAIN
RAW WM	PROPOSED RAW WATER MAIN
	PROPOSED MAIN (20"Ø AND LARGER)
FIRE	PROPOSED FIRE LINE
	PROPOSED FLUSHING VALVE OUTLET OR BLOWOFF
	PROPOSED PLUG
	PROPOSED CAP
	PROPOSED FITTINGS
	PROPOSED FIRE HYDRANT
	PROPOSED SIAMESE OR FIRE DEPARTMENT CONNECTION
	PROPOSED REDUCER
	PROPOSED TAP SLEEVE AND VALVE
	PROPOSED GATE VALVE
	PROPOSED BUTTERFLY VALVE
	PROPOSED AIR RELEASE VALVE
	PROPOSED WATER METER AND SERVICE LATERAL
	PROPOSED BACKFLOW PREVENTER
	TEST HOLE

WATER NOTES:

1. CONTRACTOR SHALL PLAN ALL UTILITY CROSSINGS TO CONFIRM HORIZONTAL AND VERTICAL SEPARATIONS PRIOR TO CONSTRUCTION.
2. WATER LINES SHALL BE LAID WITH A MINIMUM SIX (6) FOOT LATERAL SEPARATION FROM OBSTRUCTIONS (I.E. CULVERTS, STRUCTURES, ETC.) AND A MINIMUM TEN (10) FOOT CLEARANCE FROM TREES.
3. WATER MAIN SHALL CROSS OVER DRAINAGE & SEWER LINES UNLESS OTHERWISE SPECIFIED ON PLAN.
4. THE EXISTING WATER MAINS THAT ARE TO BE REMOVED SHALL REMAIN ACTIVE UNTIL A CLEARANCE LETTER HAS BEEN ISSUED AND THE NEW WATER MAINS ARE ACTIVATED.
5. CONTRACTOR TO PROVIDE DETAILED AS-BUILTS SURVEYS THAT CLEARLY DEFINE THE AREAS OF WORK COMPLETED UNDER THIS CONTRACT INCLUDING BUT NOT LIMITED TO TOP OF PIPE ELEVATION, TOP OF ALL FITTINGS, ETC.
6. ALL DUCTILE IRON PIPE SHALL BE CLASS 350 IN ACCORDANCE WITH ANSI/AWWA C150/A21.50 "THICKNESS DESIGN OF DUCTILE-IRON PRESSURE PIPE"
7. ALL DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS OF ANSI/AWWA C151/A21.51 "DUCTILE IRON PIPE, CENTRIFUGALLY CAST, FOR WATER."
8. RESTRAINED JOINT FITTINGS AND THE RESTRAINING COMPONENTS SHALL BE MANUFACTURED OF DUCTILE IRON PER GRADE 70-50-05 IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF ANSI/AWWA C110/A21.10 AND/OR C153/ A21.53
9. RESTRAINED PUSH-ON JOINTS FOR PIPE AND FITTINGS SHALL UTILIZE INDIVIDUAL DUCTILE-IRON LOCKING SEGMENTS THAT ARE INSERTED THROUGH A SINGLE SLOT IN THE BELL FACE AND CAN BE EASILY REMOVED. THE PRESSURE RATING OF THE JOINT SHALL EQUAL THE PRESSURE RATING OF THE PIPE WHEN DEFLECTED TO ITS MAXIMUM JOINT DEFLECTION.
10. RESTRAINED JOINT PIPE SHALL BE U.S. PIPE'S HDSS PIPE, AND FITTINGS SHALL BE U.S. PIPE'S TR FLEX OR HP LOK® OR APPROVED EQUAL.
11. RESTRAINT OF FIELD CUT PIPE SHALL BE PROVIDED WITH U.S. PIPE'S HDSS PIPE FIELD WELDMENTS OR APPROVED EQUAL.
12. PUSH-ON JOINTS FOR RESTRAINED JOINT FITTINGS SHALL BE IN ACCORDANCE WITH ANSI/AWWA C111/A21.11
13. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CEMENT LINED IN ACCORDANCE WITH ANSI/AWWA C104/A21.4 "CEMENT MORTAR LINING FOR DUCTILE-IRON PIPE AND FITTINGS FOR WATER."
14. PUSH-ON JOINTS FOR DUCTILE IRON PIPE SHALL BE IN ACCORDANCE WITH ANSI/AWWA C111/A21.11 "RUBBER-GASKET JOINTS FOR DUCTILE-IRON PIPE AND FITTINGS."
15. CEMENT MORTAR LINING AND SEAL COATING FOR PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH ANSI/AWWA C104/A21.4.
16. ASPHALTIC OUTSIDE COATING SHALL BE IN ACCORDANCE WITH ANSI/AWWA C151/A21.51 FOR PIPE AND ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53 FOR FITTINGS.
17. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE ZINC COATED.

VALVES

TAPPING VALVES SHALL BE MUELLER H667 OR APPROVED EQUAL.

TAPPING SLEEVES SHALL BE MUELLER H615 OR APPROVED EQUAL.

GATE VALVES 3" OR LESS SHALL BE NIBCO T-133 OR T-136 WITH MALLEABLE HAND WHEELS. NO SUBSTITUTIONS ALLOWED.

GATE VALVES 4" OR LARGER SHALL MEET A.W.W.A. C-500-02 SPECIFICATION (LATEST REVISION). VALVES SHALL BE MUELLER CO. OR APPROVED EQUAL.

ALL VALVES SHALL BE FURNISHED WITH EXTENSION TYPE CAST IRON VALVE BOXES OF PROPER LENGTH FOR PIPE DEPTH. ALL BOXES SHALL CONFORM WITH A.W.W.A. SPECIFICATIONS WITH A SHAFT OF NO LESS THAN 5 INCHES AND HAVE THE WORD "WATER" CAST IN THE COVER. BASE OF VALVE BOX SHALL HAVE A FLARED SECTION TO FIT OVER STUFFING BOX OF VALVE.

TESTING, DISINFECTION

PIPE SHALL BE TESTED UNDER CONSTANT PRESSURE OF 150 P.S.I. FOR A MINIMUM TEST PERIOD OF 2 HOURS AND SHALL NOT EXCEED THE LEAKAGE REQUIREMENTS AS PER A.N.S.I./A.W.W.A. SPECIFICATIONS OF C-600-05 LEAKAGE FORMULA: Q = (LD P)/ 148,000
Q = QUANTITY OF MAKEUP WATER, (IN GALLONS PER HOUR)
L = LENGTH OF PIPE SECTION BEING TESTED, (IN FEET).
D = NOMINAL DIAMETER OF THE PIPE, (IN INCHES).
P = AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST, (IN POUNDS PER SQUARE INCH GAUGE).

THE CITY OF FORT LAUDERDALE PUBLIC SERVICES DEPARTMENT WILL TAKE ALL BACTERIOLOGICAL TESTS, TO BE SCHEDULED VIA INSPECTOR. IF OTHERWISE SPECIFIED IN CONTRACT DETAILED SPECIFICATION AND/OR AUTHORIZED BY THE ENGINEER OF RECORD, BACTERIOLOGICAL TESTS MAY BE PERFORMED BY A CERTIFIED ENVIRONMENTAL TESTING LABORATORY.

DISINFECTION OF MAINS SHALL COMPLY WITH A.N.S.I./A.W.W.A. C-651-05 STANDARD. BACTERIOLOGICAL SAMPLING POINTS SHALL BE DESIGNATED ON THE ENGINEERING PLANS. MINIMUM ONE SAMPLING POINT AT EACH END. MAXIMUM SPACE BETWEEN SAMPLING POINTS IS 1200 FEET.

CONNECTION

ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE UNDER THE DIRECTION OF THE CITY OF FORT LAUDERDALE.

THERE SHALL BE NO CONNECTION TO AN EXISTING WATER MAIN UNTIL PRESSURE AND BACTERIOLOGICAL TESTS HAVE BEEN CONDUCTED AND THE RESULTS ARE APPROVED AND ACCEPTED BY THE CITY OF FORT LAUDERDALE.

GRAPHIC SCALE
0 10 20 40
1 INCH = 20 FEET

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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT
WATER TREATMENT PLANT

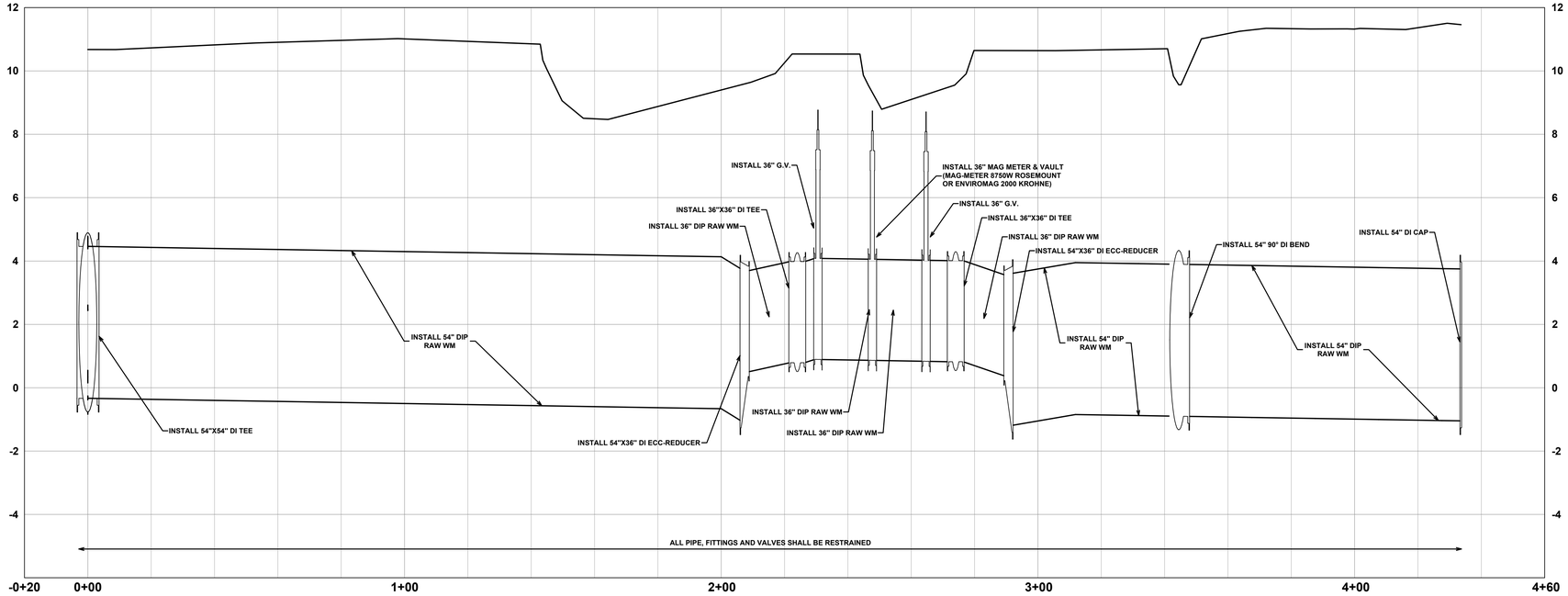
WATER MAIN PLAN

DRAWING # WS-1 | SHT # 007
TOTAL: 12
CAD FILE: 12765-MULTI-PLAN
DRAWING FILE NO. 4-141-91

Plot Date: 3/29/2024 5:06:52 PM Username: jspicer Layout Name: WS-1
Folder Path: V:\Projects\2023\23-0047.00068 - Prospect Lake WTP Enabling Proj\Design\CAD\Sheets Filename: 12765-MULTI-PLAN.dwg

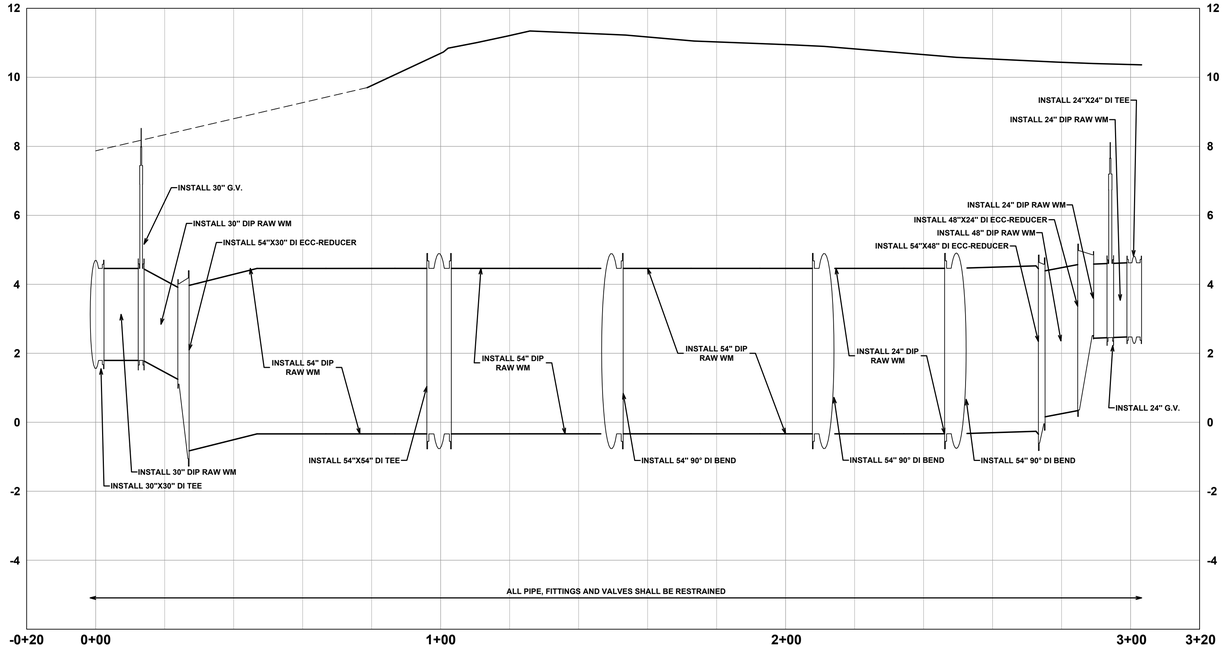
Pipe Run for Prop Raw Water S-N

SCALE: 1"=20' HORZ | 1"=2' VERT



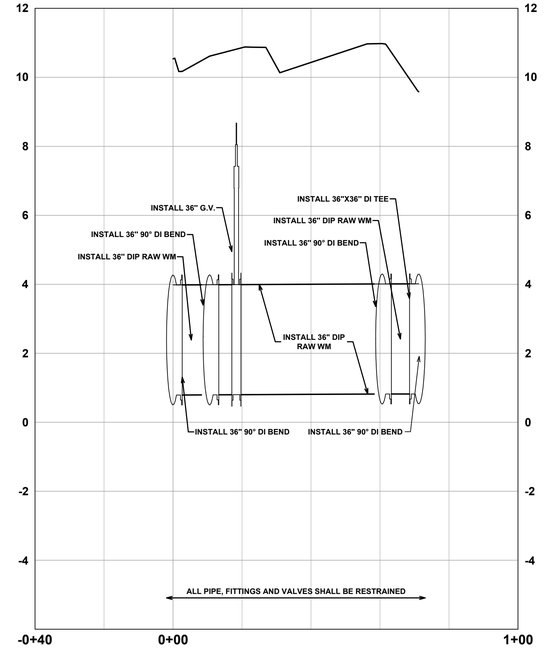
Pipe Run for Prop Raw Water W-E

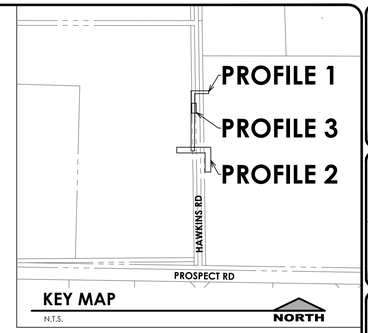
SCALE: 1"=20' HORZ | 1"=2' VERT



Pipe Run for Prop Raw Water 36in Bypass

SCALE: 1"=20' HORZ | 1"=2' VERT





DRAWN BY: JLS | DESIGNED BY: DB | CHECKED BY: DB | DATE: 02/16/2024 | SCALE: # | FIELD BOOK: #

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

WATER MAIN PROFILES

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DRAWING #	SHT #
WS-2	008
TOTAL:	12
CAD FILE: 12765-MULTI-PLAN	
DRAWING FILE NO. 4-141-91	

Plot Date: 3/29/2024 5:06:57 PM Username: jspicer Layout Name: WS-2
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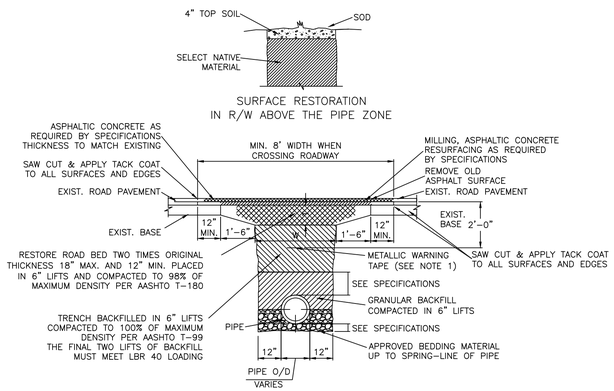


NOTES:

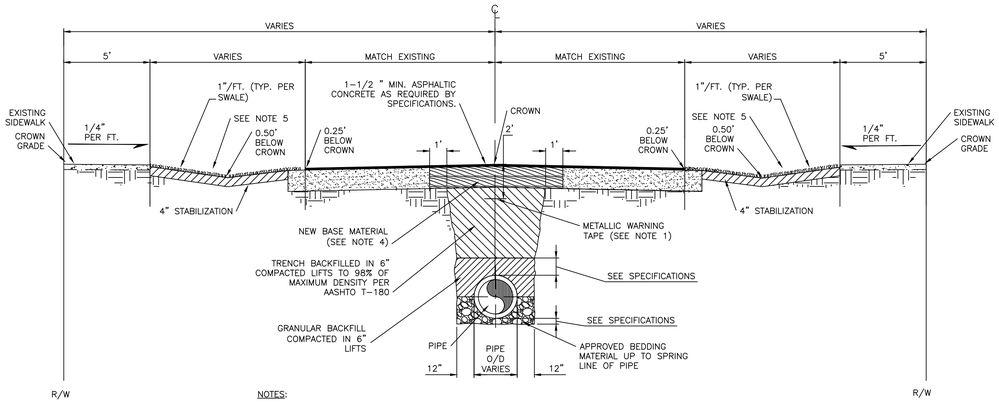
1. METALLIC WARNING TAPES SHALL BE INSTALLED 24" BELOW FINISH GRADE ABOVE MAIN. (SEE SPECIFICATION 2320 SECTION 3.6 FOR MARKING TYPE)
2. UNLESS OTHERWISE SPECIFIED SELECTED MATERIAL SHALL BE FREE OF STONES LARGER THAN 3/8" DIA. REPLACE ALL LANE MARKINGS AND REFLECTIVE MARKERS.

T=6" PARKING
T=8" RESIDENTIAL STREETS
T=10" MAJOR STREETS (4 LANE)
T=12" MAJOR STREETS (6 LANE)

2T=18" MAX. 12" MIN.

100 TYPICAL TRENCH AND PAVEMENT RESTORATION FOR TRANSVERSE CROSSING

Scale: 1" = 3'

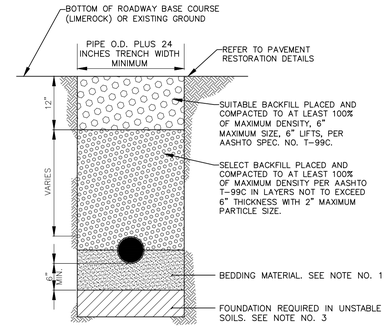


NOTES:

1. 2" WIDE METALLIC WARNING TAPES SHALL BE INSTALLED 24" BELOW FINISH GRADE. DOES NOT APPLY TO STORM DRAINAGE PIPE INSTALLATION.
2. UNLESS OTHERWISE SPECIFIED SELECTED MATERIAL SHALL BE FREE OF STONES LARGER THAN 3/8" DIA.
3. REPLACE ALL LANE MARKINGS AND REFLECTIVE MARKERS.
4. 12" MIN. LIMEROCK BASE PLACED IN 6" LAYERS AND COMPACTED TO 98% OF MAXIMUM DENSITY PER AASHTO T-180
5. BAHIA SOD -OR- ST. AUGUSTINE "FLORITAM" SOD IN PREVIOUSLY SODDED AREAS -OR- REPLACE EXISTING IMPROVED SURFACE (e.g., ROCK OR ASPHALT PAVING TO MATCH EXISTING -IF ASPHALT, MINIMUM 1" ASPHALT OVER MINIMUM 6" COMPACTED LIMEROCK)

100B TYPICAL ROAD SECTION, TYPICAL TRENCH, PAVEMENT AND SWALE RESTORATION FOR PARALLEL PIPE TRENCH

Scale: 1' = 4'

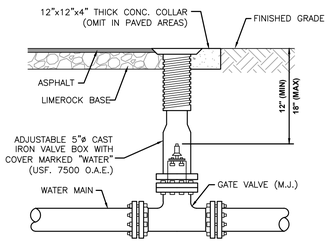


TYPICAL TRENCH BACKFILL

N.T.S.

NOTES:

1. UNLESS OTHERWISE SPECIFIED, BEDDING MATERIAL SHALL CONSIST OF SELECT BACKFILL MATERIAL 2" MAXIMUM PARTICLE SIZE, COMPACTED TO AT LEAST 100% OF MAX. DENSITY, 6" LIFTS, PER AASHTO SPEC. NO. T-99C.
2. WHERE REQUIRED, SHEETING AND SHORING SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.
3. WHERE UNSTABLE SOILS ARE ENCOUNTERED, INCLUDING PEAT, MUCK OR OTHER ORGANIC SOILS, ELASTIC SILT AND CLAYS, A FOUNDATION IS REQUIRED AS DETERMINED BY THE ENGINEER OF RECORD.



WATER VALVE BOX

N.T.S.

POTABLE WATER AND SANITARY OR REUSE WATER SEPARATION NOTES

N.T.S.

1. VERTICAL CROSSINGS
   SANITARY SEWER SYSTEMS AND/OR REUSE WATER MAINS SHALL CROSS UNDER POTABLE WATER MAINS WHENEVER PHYSICALLY POSSIBLE. SANITARY SEWERS SYSTEMS AND/OR REUSE WATER MAINS CROSSING BELOW POTABLE WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL SEPARATION DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE POTABLE WATER MAIN AND THE CROWN OF THE LOWER PIPE.
2. HORIZONTAL SEPARATIONS
   WHEREVER IT IS PHYSICALLY POSSIBLE. SANITARY SEWER SYSTEMS REQUIRE A MINIMUM OF A 10-FOOT HORIZONTAL SEPARATION DISTANCE BETWEEN ANY POTABLE WATER MAIN PARALLEL INSTALLATIONS. REUSE WATER MAINS REQUIRE A MINIMUM OF A 5 FOOT CENTER TO CENTER (ABSOLUTE MINIMUM OF 3 FOOT OUTSIDE OF PIPE) HORIZONTAL SEPARATION DISTANCE BETWEEN ANY POTABLE WATER MAIN AND/OR A SANITARY SEWER SYSTEM PARALLEL INSTALLATIONS. WHEREVER EITHER ARE NOT PHYSICALLY POSSIBLE, THEN THE POTABLE WATER MAIN SHALL BE LAID AT THE MAXIMUM PHYSICAL HORIZONTAL SEPARATION DISTANCE POSSIBLE, AND EITHER LAID:
   A) IN A SEPARATE TRENCH
   B) ON AN UNDISTURBED EARTH SHELF
   WITH A MINIMUM VERTICAL SEPARATION DISTANCE OF 18 INCHES PROVIDED BETWEEN THE INVERT OF THE POTABLE WATER MAIN AND THE CROWN OF THE LOWER PIPE, THUS CONFORMING TO THE MINIMUM VERTICAL CROSSINGS IN PARAGRAPH 1).
3. CONFLICTS
   WHEREVER IT IS NOT POSSIBLE TO MAINTAIN THE MINIMUM STANDARDS IN 1) AND 2), THEN ALL PIPING MATERIAL SHALL BE BE DUCTILE IRON PIPE (DIP). ALL DIP SHALL BE CLASS 50 OR HIGHER. ADEQUATE PROTECTIVE MEASURES AGAINST CORROSION SHALL BE USED AS DETERMINED BY THE DESIGN AND SITE CONDITIONS. ADDITIONALLY, ALL JOINTS ON THE POTABLE WATER MAIN, WITHIN 20 FEET OF THE THE CONFLICT, SHALL BE MECHANICALLY RESTRAINED. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF 6 INCHES SHALL BE PROVIDED BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE.

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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT
CIVIL DETAILS

DRAWING #	SHT #
D-1	009
TOTAL:	12
CAD FILE: 12765-MULTI-DETL	
DRAWING FILE NO.	

Plot Date: 3/29/2024 5:07:01 PM Username: jspicer Layout Name: D-1
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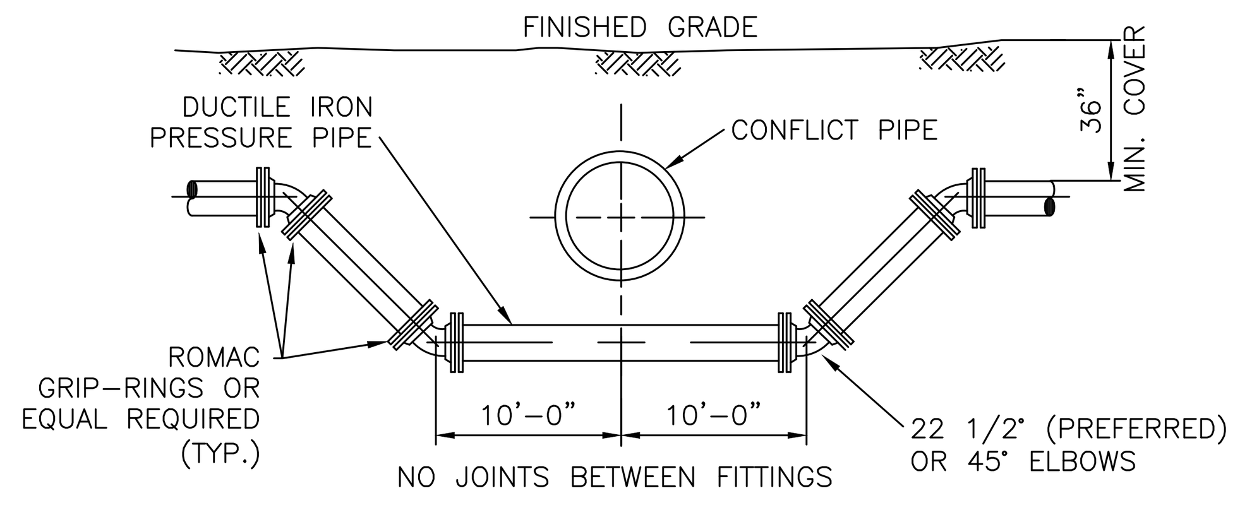
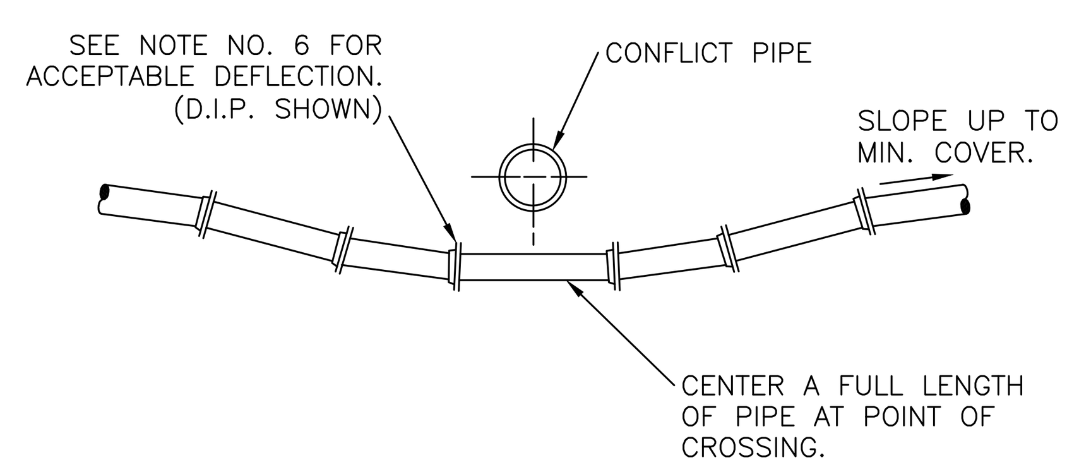


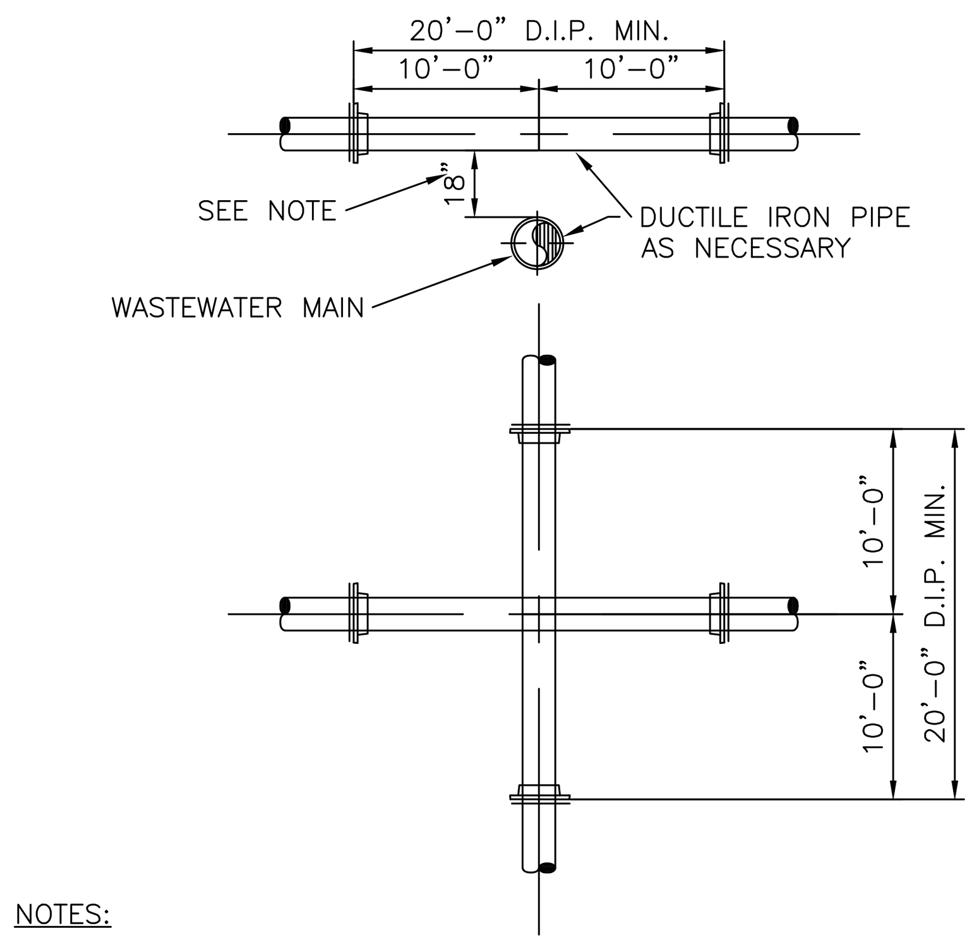
FITTING TYPE



DEFLECTION TYPE

(400) PRESSURE PIPE CONFLICT DETAIL

Scale: 1" = 10'

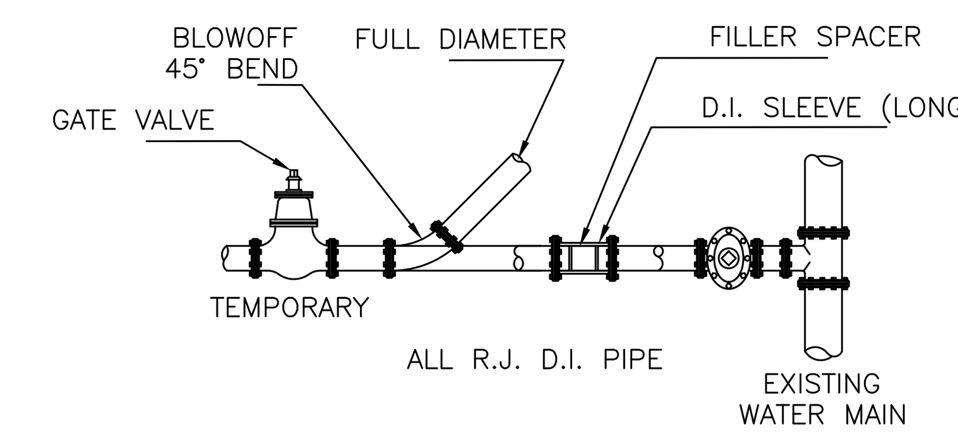


NOTES:

1. STORM SEWER, GRAVITY WASTEWATER AND RECLAIMED WATER MAIN CROSSING UNDER POTABLE WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE STORM/WASTEWATER/RECLAIMED WATER PIPE JOINTS AND POTABLE WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN TEN (10) FEET BETWEEN ANY TWO JOINTS, BOTH PIPES SHALL BE D.I.P., AND THE MINIMUM VERTICAL SEPARATION SHALL BE 6 INCHES. WHERE THERE IS NO ALTERNATIVE TO STORM/WASTEWATER/RECLAIMED WATER PIPES CROSSING OVER A POTABLE WATER MAIN, THE CRITERIA FOR MINIMUM 18" VERTICAL SEPARATION BETWEEN LINES AND JOINT ARRANGEMENT, AS STATED ABOVE, SHALL BE REQUIRED, AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
2. MAINTAIN MIN. TEN (10) FEET HORIZONTAL DISTANCE BETWEEN POTABLE WATER MAIN AND STORM SEWER, WASTEWATER MAIN, OR FORCE MAIN. MAINTAIN MIN. THREE (3) FEET HORIZONTAL DISTANCE (WALL TO WALL) BETWEEN RECLAIMED WATER MAIN AND POTABLE WATER MAIN, STORM SEWER, WASTEWATER GRAVITY MAIN OR FORCE MAIN.
3. FORCE MAIN CROSSING POTABLE WATER MAIN OR RECLAIMED WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN WITH THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN CROSSING OVER THE FORCE MAIN.

(402) STANDARD WATER AND SEWER SEPARATION DETAIL

Scale: 1" = 10'

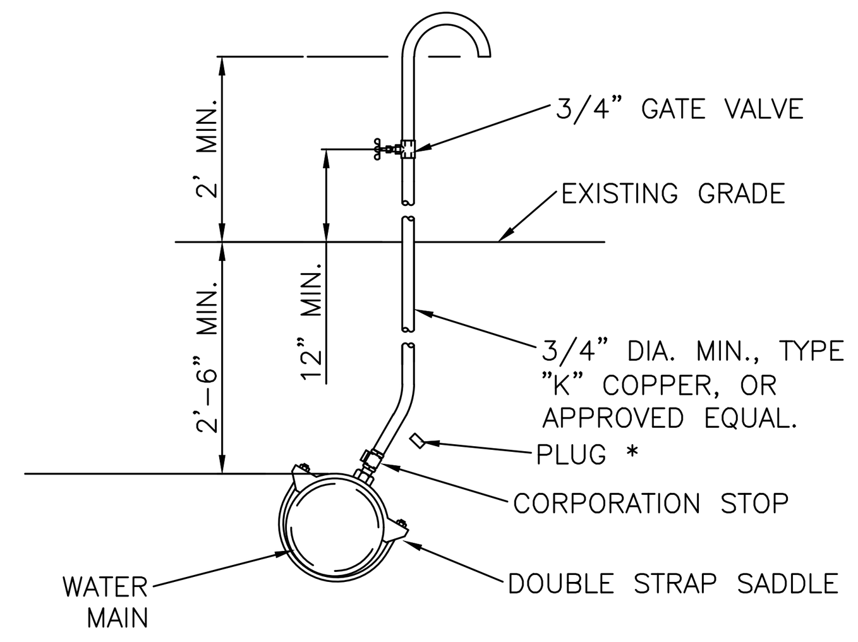


NOTES:

1. UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAINS SHALL BE SWABBED AND FLUSHED TO REMOVE DIRT AND ANY OTHER FOREIGN MATTER BY ACHIEVING A MINIMUM VELOCITY OF 2.5 FEET PER SECOND IN THE PIPE. TEMPORARY FITTINGS, PIPE, ETC. MAY BE NEEDED TO FACILITATE FLUSHING.
2. INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLICT PROPERTY DAMAGE.
3. BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE FLUSHED.
4. PRIOR TO THE ACTUAL LINE FLUSHING OPERATION, THE CONTRACTOR SHALL PROPERLY NOTIFY THE CITY INSPECTOR OF SUCH INTENDED WATER USE.
5. NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED CITY PERSONNEL.
6. FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE CITY INSPECTOR.
7. AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.
8. THERE MAY BE SPECIAL REQUIREMENTS FOR FLUSHING PIPE LARGER THAN 12" DIAMETER.

(303) FLUSHING CONNECTION AND BLOW OFF DETAIL

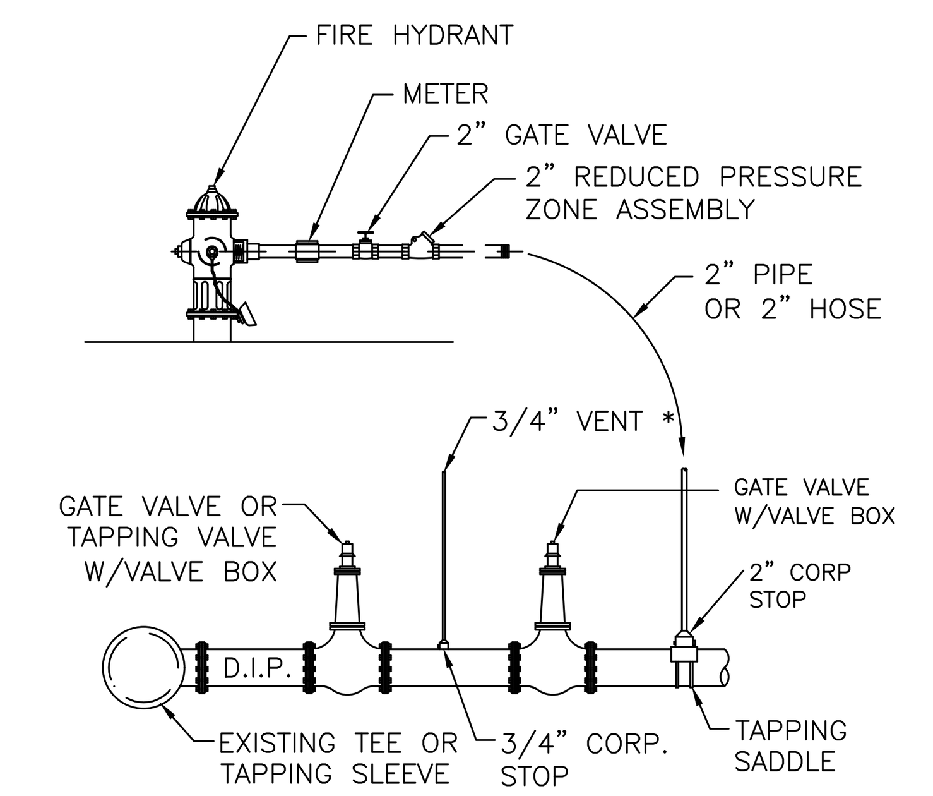
Scale: 1" = 2'



* NOTE: AFTER TESTS REMOVE 3/4" TUBING AND INSTALL PLUG ON CORPORATION STOP.

(304) TYPICAL BACTERIOLOGICAL SAMPLING POINT AT INTERMEDIATE POINTS

Scale: 1" = 2'



* NOTE: AFTER TESTS REMOVE 3/4" TUBING AND 2" GALVANIZED PIPE AND INSTALL PLUGS ON CORPORATION STOPS.

FILLING CONNECTION (305)

NOTES:

1. STORM SEWER, GRAVITY WASTEWATER AND RECLAIMED WATER MAIN CROSSING UNDER POTABLE WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE STORM/WASTEWATER/RECLAIMED WATER PIPE JOINTS AND POTABLE WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN TEN (10) FEET BETWEEN ANY TWO JOINTS, BOTH PIPES SHALL BE D.I.P., AND THE MINIMUM VERTICAL SEPARATION SHALL BE 6 INCHES. WHERE THERE IS NO ALTERNATIVE TO STORM/WASTEWATER/RECLAIMED WATER PIPES CROSSING OVER A POTABLE WATER MAIN, THE CRITERIA FOR MINIMUM 18" VERTICAL SEPARATION BETWEEN LINES AND JOINT ARRANGEMENT, AS STATED ABOVE, SHALL BE REQUIRED, AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.

2. MAINTAIN MIN. TEN (10) FEET HORIZONTAL DISTANCE BETWEEN POTABLE WATER MAIN AND STORM SEWER, WASTEWATER MAIN, OR FORCE MAIN. MAINTAIN MIN. THREE (3) FEET HORIZONTAL DISTANCE (WALL TO WALL) BETWEEN RECLAIMED WATER MAIN AND POTABLE WATER MAIN, STORM SEWER, WASTEWATER GRAVITY MAIN OR FORCE MAIN. VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN WITH THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN CROSSING OVER THE FORCE MAIN.

3. FORCE MAIN CROSSING POTABLE WATER MAIN OR RECLAIMED WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN WITH POTABLE WATER MAIN OR RECLAIMED WATER MAIN CROSSING OVER THE FORCE MAIN.

4. FITTINGS SHALL BE RESTRAINED.
5. THE DEFLECTION TYPE CROSSING IS PREFERRED.
6. DO NOT EXCEED 75% OF MANUFACTURER'S RECOMMENDED MAXIMUM JOINT DEFLECTION FOR DUCTILE IRON PIPE. NO DEFLECTION AT THE JOINT IS ALLOWED FOR P.V.C. PIPE. BENDING OF P.V.C. PIPE SHALL NOT EXCEED THE FOLLOWING PARAMETERS:

PVC PIPE SIZE (INCH)	MIN. ALLOWED RADIUS (FT.)	MAX. DEFLECTION (INCH) PER 20' LENGTH
6"	300	8"
8"	400	6"
10"	600	4"
12"	600	4"

(401) PRESSURE PIPE CONFLICT NOTES

Scale: N/A

I. FORCE MAIN AND WATER MAIN OUTSIDE OF WELLFIELD PROTECTION ZONE

MAXIMUM QUANTITY OF WATER (GALLONS PER HOUR) THAT MAY BE SUPPLIED TO MAINTAIN PRESSURE WITHIN 5 P.S.I. OF THE SPECIFIED TEST PRESSURE.

(MECHANICAL OR PUSH-ON JOINT, 18 FT. NOMINAL LENGTHS, PER 1000 FT. OF PIPE)

AVG. TEST PRESSURE	PIPE DIAMETER (INCHES)											
PSI	2	3	4	6	8	10	12	14	16	18	20	24	30
150	0.10	0.14	0.18	0.27	0.37	0.46	0.55	0.64	0.73	0.83	0.92	1.10	1.38

NOTES:

1. TO OBTAIN THE MAXIMUM QUANTITY OF WATER FOR PIPE WITH 20 FT. NOMINAL LENGTHS, MULTIPLY THE QUANTITY CALCULATED FROM THE TABLE BY 0.9.<<
2. THE MAXIMUM QUANTITY OF ADDED WATER FOR A PIPELINE IS CALCULATED BY MULTIPLYING THE QUANTITY PER HOUR AS OBTAINED FROM THE ABOVE TABLE, BY THE DURATION OF THE TEST IN HOURS, AND BY THE TOTAL LENGTH OF THE LINE BEING TESTED DIVIDED BY 1,000. IF THE LINE UNDER TEST CONTAINS SECTIONS OF VARIOUS DIAMETERS, THE MAXIMUM QUANTITY ADDED WILL BE THE SUM OF THE COMPUTED QUANTITIES FOR EACH SIZE.<<
3. MAXIMUM TEST LENGTH = 2,500 FEET PER SECTION.<<
4. THIS STANDARD SHALL REFLECT ANY REVISION OF A.W.W.A. C-600-05. HOWEVER, THE MAXIMUM QUANTITY OF WATER ADDED SHALL NOT EXCEED 50% OF RECOMMENDED LIMIT PER APPLICABLE AWWA C-600-05 STANDARD.<<
5. STANDARD TEST PRESSURE = 150 P.S.I.
6. FORMULA BASIS: $L = \frac{(S)\times(D)\times(P)^{\frac{1}{2}}}{148,000}$ (revision 1)

   L = MAXIMUM QUANTITY OF WATER TO BE ADDED (GALLONS PER HOUR)
   S = LENGTH OF PIPE TESTED (FEET)
   D = DIAMETER OF PIPE (INCHES)
   P = TEST PRESSURE (P.S.I.)
7. PRESSURE TEST DURATION TO BE MIN. 2 HOURS.
8. DISINFECTION OF MAINS SHALL COMPLY WITH A.N.S.I./A.W.W.A. C-651-05 STANDARD.
9. DUCTILE IRON WATER MAIN PIPE SHALL CONFORM TO THE REQUIREMENTS OF A.N.S.I./A.W.W.A. C-151-'02.

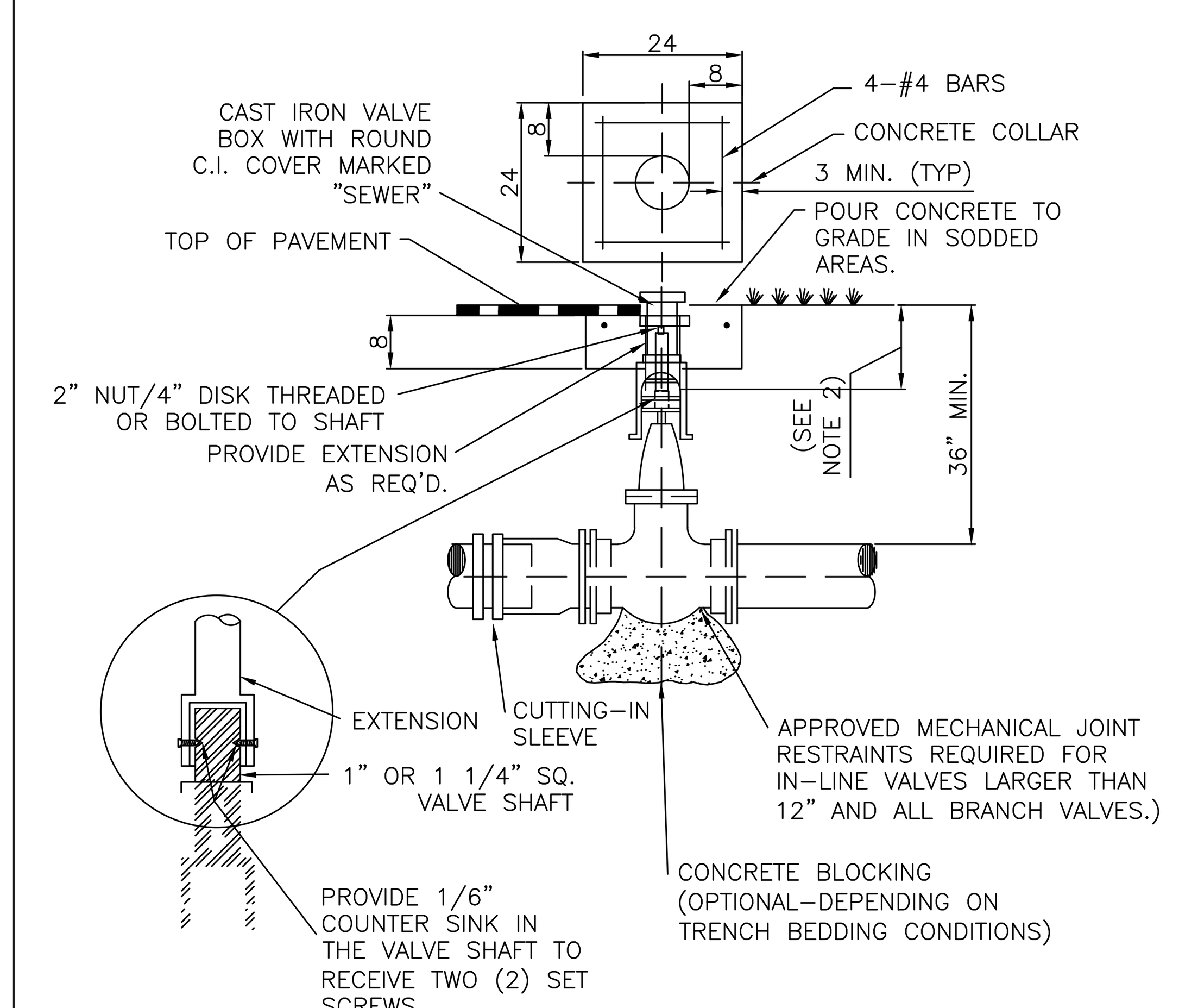
II. FORCE MAIN AND WATER MAIN WITHIN WELLFIELD PROTECTION ZONE.

NOTES:

1. PRESSURE TEST PROCEDURE TO FOLLOW THE CURRENT AWWA C-600-05 STANDARD (150psi, (2) HOUR DURATION). THERE SHALL BE NO PRESSURE DROP IN THE PIPE DURING THE TEST ("ZERO" FILL-UP TOLERANCE).

(403) PRESSURE TEST CRITERIA

Scale: N/A

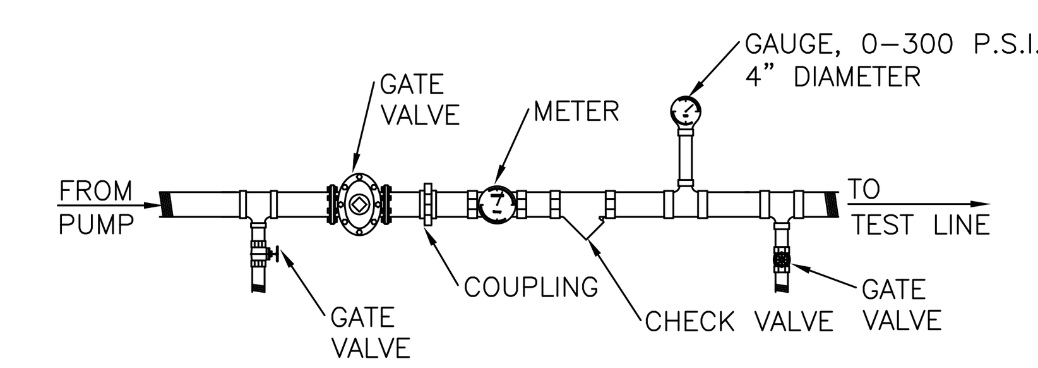


NOTES:

1. CONCRETE COLLAR IS NOT REQUIRED IN PAVED AREAS IF PAVEMENT SURFACE IS FINISHED PRIOR TO CONDITIONAL FINAL INSPECTION.
2. WHEN VALVE NUT IS DEEPER THAN 36" AN EXTENSION WITH UNIVERSAL JOINT SHALL BE REQUIRED TO BRING OPERATING NUT 24"-30" BELOW FINISHED GRADE. EXTENSION BOLTS & NUTS SHALL BE 316 STAINLESS STEEL. A 316 STAINLESS STEEL CENTERING PLATE SHALL ALSO BE REQUIRED.
   VALVE BOXES SHALL HAVE LOCKING COVERS MARKED "SEWER" OR "WATER".
3. EXTENSION RISER TO BE D.I.P.
4. AT DEAD END OR WHERE MAIN LINES CHANGE DIRECTION, VALVES SHALL BE RESTRAINED USING MECHANICAL JOINT RESTRAINT.

(406) TYPICAL VALVE DETAIL

Scale: 1" = 2'



NOTE:
PRESSURE TEST TO INCLUDE SERVICES TO ANGLE STOP.

PRESSURE TEST DETAIL (306)

cma
chen moore and associates
500 West Cypress Creek Road, Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

100% SUBMITTAL

DRAWN BY:	DATE:	
JLS	02/16/2024	
DESIGNED BY:	SCALE:	
DB	#	
CHECKED BY:	FIELD BOOK:	
DB	#	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

PRESSURE PIPE DETAILS

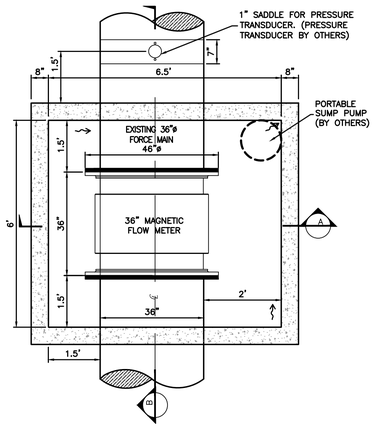
DRAWING #	SHT #
D-2	010
TOTAL:	12

CAD FILE: 12765-MULTI-DETL

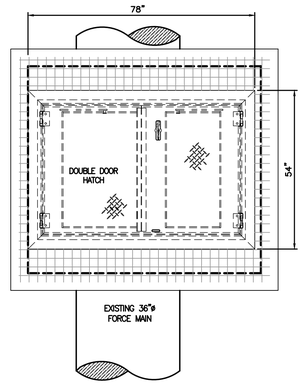
DRAWING FILE NO. 4-141-91

Layout Name: D-2 Filename: 12765-MULTI-DETL.dwg

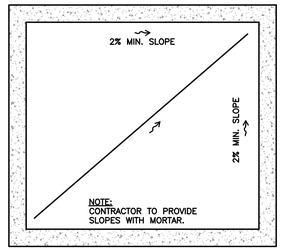
WATER2



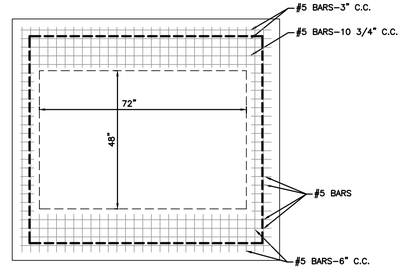
METER VAULT



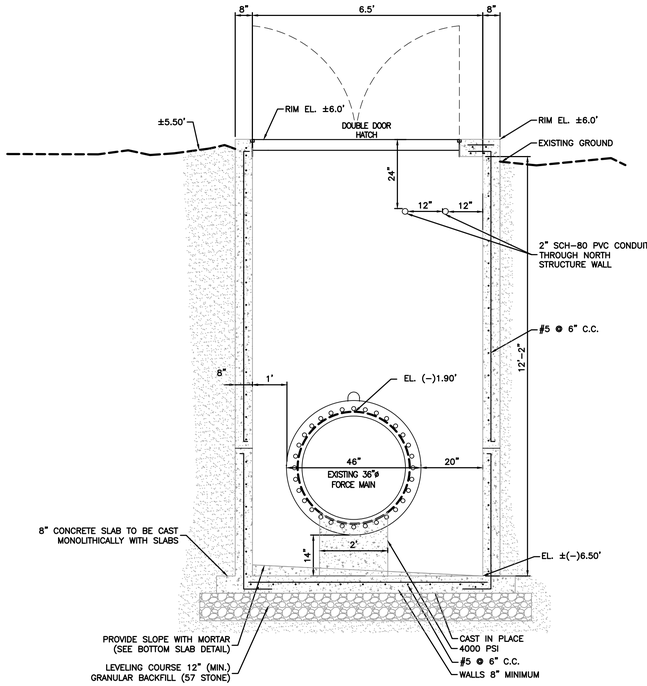
TOP SLAB DETAIL



BOTTOM SLAB DETAIL

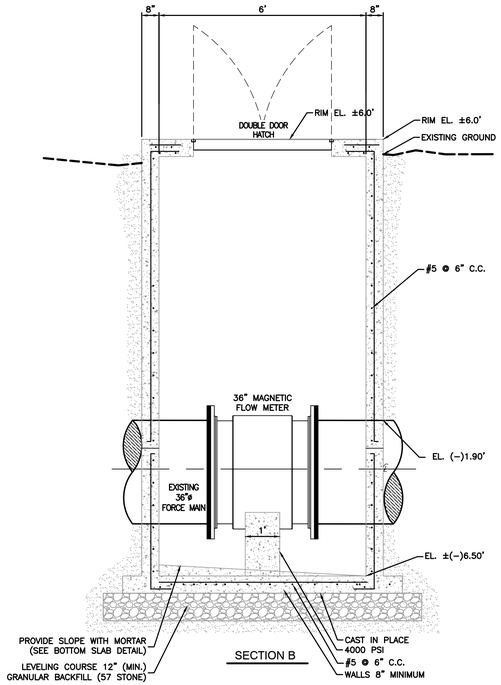


DETAIL OF PRECAST TOP

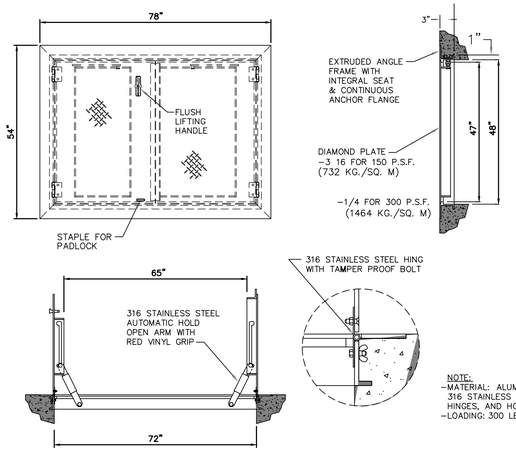


SECTION A

NOTE:
STRUCTURE WALLS TO BE SEAL COATED INSIDE AND OUTSIDE WITH 16 MIL. THICKNESS OF COAL TAR EPOXY.



SECTION B



NOTE:
-MATERIAL: ALUMINUM WITH 316 STAINLESS STEEL NUTS & BOLTS, HINGES, AND HOLD OPEN ARM.
-LOADING: 300 LBS. PER SQ. FOOT.

48"x54" DOUBLE DOOR ALUMINUM HATCH
MODEL APD300
N.T.S. (REFER TO U.S.F. FABRICATION, INC.)

Sunshine811
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

cma chen moore and associates
500 West Cypress Creek Road,
Suite 600
Ft. Lauderdale, FL 33309
954.730.0707
www.chenmoore.com

100% SUBMITTAL

DRAWN BY: JLS | DATE: 02/16/2024
DESIGNED BY: DB | SCALE: #
CHECKED BY: DB | FIELD BOOK: #

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY PROJECT # 12765
FEEDSTOCK WATER MAIN TO PROSPECT WATER TREATMENT PLANT

METER VAULT DETAILS

DRAWING #	SHT #
D-3	011
TOTAL:	12
CAD FILE: 12765-MULTI-DETL	
DRAWING FILE NO.	

Plot Date: 3/29/2024 5:07:03 PM Username: jspicer Layout Name: D-3
Folder Path: V:\Projects\2023\23-0047.00068 - Prospect Lake WTP Enabling Proj\Design\CAD\Sheets Filename: 12765-MULTI-DETL.dwg

Attachment 1C

Metallic Warning Tape Specification

[*Attached*]

3M EMS Path Marking Warning Tape – Water, Wastewater, Reclaim

1. Specifications

a. All underground pressure pipe shall have electronically detectable Path Marking Warning Tape installed above it.
b. The Path Marking Warning Tape shall be made of polyethylene (or approved equivalent) material, 6-inches wide and a minimum of 11 millimetres thick.
c. The Path Marking Warning Tape shall have detectable RFID Markers embedded in the tape every eight feet to provide a continuous path to allow for easy detection at any point along the pipe. The signal should be such that it will provide guidance on the direction of the tape.

    1. RFID Frequencies shall be as follows:
        1. Water: 73.5 kHZ
        2. Wastewater: 41.4 kHz
        3. Reclaim Water: 44.9 kHz

d. The Path Marking Warning Tape shall be able to function and be detected without the need for a direct connection to an external power source (e.g. no access points needed), which will allow for a quicker detection at any point along the path.
e. Each detectable RFID marker embedded in the Path Marking Warning Tape functions independently so that even if a section of tape is removed, the remaining marked sections will continue to function.
f. Path Marking Warning Tape must be able to provide a depth measurement using an underground cable/pipe locator.
g. The Path Marking Warning Tape will not require grounding.
h. Path Marking Warning Tape shall be Blue, Green or Purple in color and shall be printed on one side in black letters (Typical for all lettering) and shall be as follows: “CAUTION WATER (or Sewer or Reclaim) LINE BURIED BELOW” (or an approved equivalent wording). The wording shall be repetitive along the full length of the tape.
i. Path Marking Tape shall be detectable at a maximum of 48” below grade regardless of soil composition.
j. Approved Manufacture: 3M Electronic Marking System (EMS) Path Marking Warning Tape.

2. Installation

a. Path Marking Warning Tape shall be installed continuously and longitudinally above and along all water, wastewater and reclaim pressure mains and services for new construction and for any repair or retrofit construction using open trench methods, for identification and detection purposes.

b. For service connections, the Path Marking Warning Tape shall extend from the main line to the meter.

c. The Path Marking Warning Tape shall be installed directly above the center of the pipe and at least 16-inches deep from final grade to a maximum depth of 48-inches below final grade.

d. The contractor shall exercise care to prevent damage to the Path Marking Warning Tape when placing the remaining backfill.

3M™ EMS Warning Tape 7900 Series

Data Sheet

The 7900 Series EMS Warning Tape is engineered to provide visual verification of underground utilities and can include the following additional features:

7900 EMS Warning Tape – Includes an EMS marker laminated between two pieces of film.

The RF technology does not require an electrically continuous path to provide detection in places where the tape has been damaged or detection where it is prohibitive to have an electrical path.

Agency Approvals & Self Certifications	For RoHS information, please visit www.3M.com/ROHS RoHS Compliant
Physical Specifications	
Models	**7900 EMS Warning Tape** 
Length	500ft (152m)
Tensile Strength	6"/360lb (15cm/1.6kN)
Elongation	20% at failure
Weight Mfg. Tested	6" (15cm) width - 18 LBS/500 ft (8.1 kg/150m)
Thickness (ASTM D2103)	11 MIL (.28mm) +Add 2 cm at RF marker
Printability PE Film (ASTM D2578)	34 dynes

Environmental Specifications	
Operating temperature	**-4° F to 122° F (-20° C to 50° C)**

Storage temperature		-4° F to 140° F (-20° C to 60° C)	
Environmental Standard		IP68	
Impact Rating of Marker		IK-9 (Tag)	
Chemical Resistance		Excellent resistance to acids. Good resistance to alkalis.	
Electrical Specifications			
Marker Detection Depth		4' (1.2 m) for 3M Dynatel™ Locators 7420, 7550 and 7573. 3' (.9 m) for 3M Dynatel Locator 1420-iD, 2250MiD,2273M-iD, 2550-iD and 2573-iD (for units with compatible hardware)	
Nominal Distance Between Markers		8ft. (2.4m)	
Minimum Separation from Metallic Facilities		4 in (10 cm)	
Utility		Color	Frequency
Gas		Yellow	53.9 kHz
Telecom		Orange	48.8 kHz
Power		Red	34.9 kHz
Water	Part Number 7903	Blue	73.5 kHz
Wastewater	Part Number 7904	Green	41.4 kHz
Reclaimed Water	Part Number 7908	Purple	44.9 kHz

*APWA Guidelines. Check local reference as some exceptions may apply.

Attachment 1D

Geotechnical Investigation Report

[*Attached*]

PANGEO
CONSULTANTS

REPORT OF
GEOTECHNICAL EXPLORATION

EVENT 50
12765 PROSPECT LAKE WTP ENABLING WORKS
NEW RAW WATER MAIN TO WTP
FORT LAUDERDALE, FL

CHEN MOORE AND ASSOCIATES
500 WEST CYPRESS CREEK ROAD, SUITE 600
FORT LAUDERDALE, FL 33309

PREPARED BY

PAN GEO CONSULTANTS, LLC.
8258 WEST SR 84
DAVIE, FL 33324

FEBRUARY 2024

SOLUTIONS AND SERVICE
Info@PanGeoConsult.com
Phone: (954) 200-4019

PANGEO
CONSULTANTS

February 13, 2024 (revised February 18, 2024)

Mr. Daniel Davila, P.E., Director – Water and Sewer
CHEN MOORE AND ASSOCIATES
500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309
O: +1 (954) 730-0707
C: +1 (772) 361-9759
Email: ddavila@chenmoore.com

Re: Report of Geotechnical Exploration
Event 50
12765 Prospect Lake WTP Enabling Works
New Raw Water Main to WTP
Fort Lauderdale, FL

Dear Mr. Davila:

Pan Geo Consultants, LLC (PGC) has performed a limited geotechnical exploration for the above proposed construction. The purpose of this exploration was to obtain information concerning the site and subsurface conditions at specific locations in order to provide site preparation and recommendations for support of the proposed construction. This report presents our findings and recommendations.

PROJECT INFORMATION

Based on our conversations with you and review of materials provided, we understand that plans for this project call for the design of a new 54-inch raw water supply line from the existing Prospect Wellfield to the connection point to the new Prospect Lake Clean Water Center (official name of the WTP).

PGC should be notified in writing by the client of any changes in the proposed replacement along with a request to amend our foundation analysis and/or recommendations within this report as appropriate.

GENERAL SUBSURFACE CONDITIONS

Subsurface Soil Exploration

The exploration of subsurface conditions included site observation and three (3) standard penetration test borings (SPT) in general accordance with ASTM D-1586 specifications to depths of fifteen feet. The approximate locations of the soil borings are shown on the attached Test Location plan, presented in the Appendix. The engineer may have adjusted the locations in the field due to site restrictions and/or utilities. As such, locations should be considered approximate.

Test Boring Results

The test borings performed for this project generally revealed a surficial layer of topsoil to a depth of approximately one foot, underlain by loose to medium dense sand and trace limestone fragments to depths of approximately eight to eleven feet. Below this layer, medium hard to very hard limestone was noted to approximately fifteen feet, the maximum depth explored. Additional information is shown on the boring logs, presented in the Appendix of this report.

Special Note: During excavation, zones of hard to very hard limestone may be encountered which may not have been shown in the test borings. If these zones are encountered, we should be notified in order to further evaluate subsurface conditions. Shoring procedures should conform to those presented in the Occupational Safety and Health Administration (OSHA) standards.

Representative samples collected from the SPT borings were visually reviewed in the laboratory by a geotechnical engineer to confirm the field classifications. A detailed description of the soil/rock profile is presented in the test boring records provided in the Appendix. The Standard Penetration Test N-values are used to evaluate the relative density of granular soils.

Groundwater Information

During the performance of the soil borings, the groundwater level was not encountered within the sampling depth.

The immediate depth to groundwater measurements presented in this report may not provide a reliable indication of stabilized or long-term depth to groundwater at this site. Water table elevations can vary dramatically with time through rainfall, droughts, storm events, flood control activities, nearby surface water bodies, tidal activity, pumping and many other factors. For these reasons, this immediate depth to water data **should not** be relied upon alone for project design considerations.

Further information regarding stabilized groundwater elevations at the site could be developed upon specific request. Additional evaluation might include monitoring of piezometers, survey of the project area for evidence of current groundwater elevation influences such as well fields, obvious construction dewatering, tidal activity, flood control canals and other surface water bodies.

ANALYSIS AND RECOMENDATIONS

The test borings performed for this project revealed a soil profile consisting principally of sand and limestone formation. The proposed pipe may be supported on the existing soils utilizing typical construction methods.

In the case peat or silt materials are encountered within the pipe bedding area, the bedding should be over-excavated to at least 6 inches or two pipe diameters below the proposed pipe, whichever is greater. Backfill should be performed in accordance with the recommendations presented herein or as specified by the civil engineer. Sand and/or limestone fragments encountered above the unsuitable material layer may be stockpiled for later use.

The following table may be used for design. We note that the values in the table are based on visual classification and if more exact values are needed, specific laboratory testing should be performed. We note that the sand, limestone fragments, and sand/limestone mixtures should be considered to be cohesionless. Appropriate factors of safety should be applied by the design engineer depending on the application. We are available to assist in the design process if needed.

TABLE OF SOIL PARAMETERS

SOIL DESCRIPTION	SOIL UNIT WEIGHT (PCF)		ANGLE OF INTERNAL FRICTION (DEGREES)	SHEAR MODULUS (KSI)	EARTH PRESSURE COEFFICIENT		
	SATURATED	SUB-MERGED			AT REST (Ko)	ACTIVE (Ka)	PASSIVE (Kp)
SAND	105-110	43-48	28-33	0.25-0.30	0.5	0.33	3.0
LIMESTONE	120-125	58-63	40-45	0.3-1.0	0.36	0.22	4.6

Backfill Recommendations

Fill needed to bring the site back to grade may be placed in lifts not exceeding twelve inches in loose thickness. Each lift should be thoroughly compacted until densities equivalent to at least 98 percent of the modified Proctor maximum dry density (ASTM D-1557/AASHTO T-180) are uniformly obtained. Fill should consist of granular soil, with less than ten percent passing the No. 200 sieve, free of rubble, organics (five percent or less) clay, debris and other unsuitable material. Backfill above the pipe invert elevation should be performed as per the civil engineer.

The fill should have ASTM designation (D-2487) of GP, GW, SP, or SW, with a maximum particle size of no more than three inches or as otherwise approved by the geotechnical engineer.

Pavements

The following would apply within pavement areas which require repair. A stabilized subgrade having a minimum LBR of 40 shall be placed to a depth of at least twelve inches below the base course. The stabilized subgrade should be compacted to an equivalent density of 98 percent of the modified Proctor maximum dry density. The base course should be placed to at least twelve inches below the asphalt and should have a minimum LBR of 100. The base material should be compacted to 98 percent of

the modified Proctor maximum dry density. The pavement material and thickness should be based on design requirements.

GENERAL INFORMATION

Our client for this geotechnical evaluation was:

CHEN MOORE AND ASSOCIATES
500 West Cypress Creek Road, Suite 600
Fort Lauderdale, FL 33309

The contents of this report are for the exclusive use of the client, the client's design & construction team and governmental authorities for this specific project exclusively. Information conveyed in this report shall not be used or relied upon by other parties or for other projects without the expressed written consent of PGC.

This report discusses geotechnical considerations for this site based upon observed conditions and our understanding of proposed construction for foundation support. Environmental issues including (but not limited to), soil and/or groundwater contamination are beyond our scope of service for this project. As such, this report shall not be used or relied upon for evaluation of environmental issues.

Prior to initiating compaction operations, we recommend that representative samples of the structural fill material to be used and acceptable in-place soils be collected and tested to determine their compaction and classification characteristics. The maximum dry density, optimum moisture content, gradation and plasticity characteristics should be determined. These tests are needed for compaction quality control of the structural fill and existing soils, and to determine if the fill material is acceptable.

If conditions are encountered which are not consistent with the findings presented in this report, or if proposed construction is moved from the location investigated, this office shall be notified in writing immediately so that the condition or change can be evaluated and appropriate action taken.

PGC shall bear no liability for the implementation of recommended inspection and testing services as described in this report if implemented by others. PGC has no ability to verify the completeness, accuracy or proper technique of such procedures if performed by others.

Excavations of five feet or more in depth should be sloped or shored in accordance with OSHA and State of Florida requirements.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with general accepted professional practice in the field of foundation engineering, soil mechanics and engineering geology. No other warranties are implied or expressed.

We appreciate the opportunity to provide these services for you and look forward to completing this and other projects with you. If we can be of any further assistance with the design or construction services, or if you need additional information, please feel free to contact us at your convenience.

Sincerely,
PAN GEO CONSULTANTS, LLC

Paul C Catledge

Digitally signed by Paul C Catledge
Date: 2024.02.18 20:41:21 -05'00'

Paul C. Catledge, P.E. #68448
Principal

Attachments: Test Location Plan
Test Boring Logs (B-1 to B-3)

This item has been digitally signed and sealed by Paul C. Catledge, P.E. on the date adjacent to the seal using a digital signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

PANGEO CONSULTANTS

EVENT 50 NEW RAW WATER MAIN TO WTP
3501 W PROSPECT RD
FORT LAUDERDALE, FL 33309

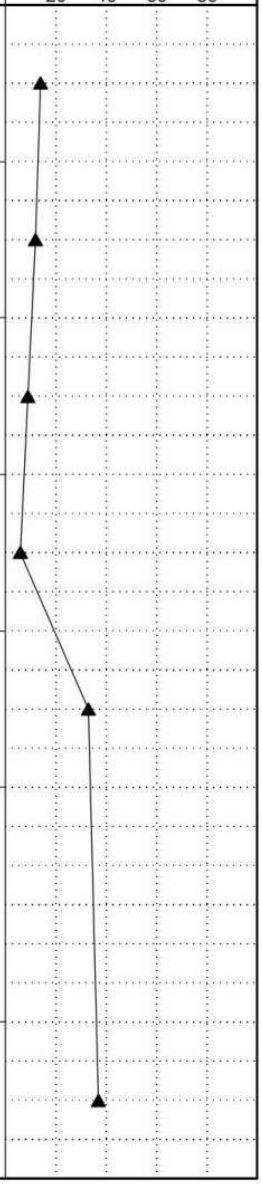
APPROXIMATE LOCATIONS
NOT TO SCALE

PANGEO CONSULTANTS
Pan Geo Consultants
8258 W SR 84
Davie, FL 33324
Telephone: +1(954) 200-4019

BORING NUMBER B-1

CLIENT CHEN MOORE
PROJECT NAME EVENT 50 - PROSPECT LAKE WTP NEW RAW WATER MAIN
PROJECT NUMBER CMA122
PROJECT LOCATION FT. LAUDERDALE, FL
DATE STARTED 1/30/24 **COMPLETED** 1/30/24
GROUND ELEVATION _____ **HOLE SIZE** 3 inches
DRILLING CONTRACTOR DANCOR
GROUND WATER LEVELS:
DRILLING METHOD MUD ROTARY DRILLING
AT TIME OF DRILLING ---
LOGGED BY JC **CHECKED BY** PCC
AT END OF DRILLING ---
NOTES AS LOCATED ON SITE PLAN
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)
0.0		Dk. Brown SAND, Tr. Limestone Fragments and Roots		
		Lt. Brown to Dk. Brown SAND, Tr. Limestone Fragments	SS S-1	4-6-8-10 (14)
2.5			SS S-2	8-7-5-3 (12)
		Dk. Brown to Lt. Brown SAND	SS S-3	6-5-4-2 (9)
5.0				
		Lt. Brown SAND, Tr. Limestone Fragments	SS S-4	2-3-3-10 (6)
7.5				
		Lt. Brown LIMESTONE, with some Sand	SS S-5	8-13-20-20 (33)
10.0				
12.5			SS S-6	31-33-4-37 (37)
15.0		Bottom of borehole at 15.0 feet.		



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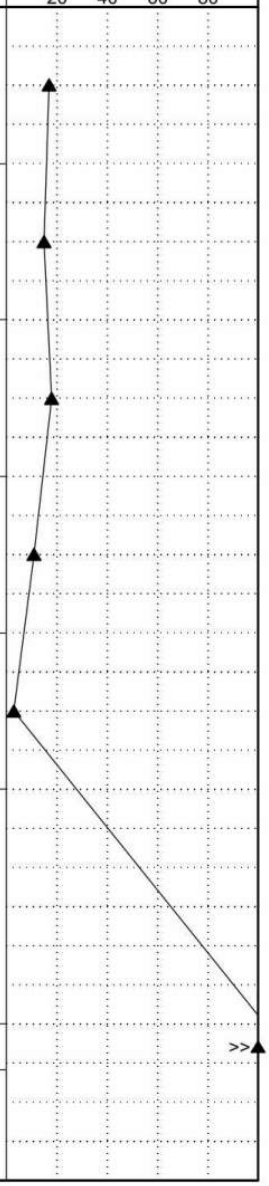
BORING NUMBER B-2

CLIENT CHEN MOORE
PROJECT NAME EVENT 50 - PROSPECT LAKE WTP NEW RAW WATER MAIN
PROJECT NUMBER CMA122
PROJECT LOCATION FT. LAUDERDALE, FL
DATE STARTED 1/30/24 **COMPLETED** 1/30/24
GROUND ELEVATION _____ **HOLE SIZE** 3 inches
DRILLING CONTRACTOR DANCOR
GROUND WATER LEVELS:
DRILLING METHOD MUD ROTARY DRILLING
AT TIME OF DRILLING ---
LOGGED BY JC **CHECKED BY** PCC
AT END OF DRILLING ---
NOTES AS LOCATED ON SITE PLAN
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)
0.0		Dk. Brown SAND, Tr. Roots		
		Lt. Brown SAND, Tr. Limestone Fragments	SS S-1	7-7-10-16 (17)
		Lt. Brown LIMESTONE FRAGMENTS		
2.5			SS S-2	9-7-8-7 (15)
		Lt. Brown to Dk. Brown SAND, Tr. Limestone Fragments	SS S-3	7-8-10-12 (18)
5.0				
			SS S-4	9-5-6-3 (11)
7.5				
		Lt. Brown SAND		
		Brown SAND, Tr. Silt	SS S-5	3-2-1-1 (3)
10.0				
		Lt. Brown LIMESTONE with Some Sand		
12.5				
			SS S-6	22-50/1"
15.0				

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80



Bottom of borehole at 15.0 feet.

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BORING NUMBER B-3

CLIENT CHEN MOORE
PROJECT NAME EVENT 50 - PROSPECT LAKE WTP NEW RAW WATER MAIN
PROJECT NUMBER CMA122
PROJECT LOCATION FT. LAUDERDALE, FL
DATE STARTED 1/30/24 **COMPLETED** 1/30/24
GROUND ELEVATION _____ **HOLE SIZE** 3 inches
DRILLING CONTRACTOR DANCOR
GROUND WATER LEVELS:
DRILLING METHOD MUD ROTARY DRILLING
AT TIME OF DRILLING ---
LOGGED BY JC **CHECKED BY** PCC
AT END OF DRILLING ---
NOTES AS LOCATED ON SITE PLAN
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)
0.0		Dk. Brown SAND, Tr. Roots		
		Lt. Brown to Tan SAND	SS S-1	3-3-5-7 (8)
2.5			SS S-2	5-6-4-4 (10)
		Lt. Brown to Brown SAND, Tr. Limestone Fragments	SS S-3	4-4-4-5 (8)
5.0			SS S-4	5-3-2-3 (5)
7.5			SS S-5	2-2-3-4 (5)
10.0				
12.5		Lt. Brown LIMESTONE with Some Sand	SS S-6	17-50/5"
15.0				

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80

>>▲

Bottom of borehole at 15.0 feet.

Attachment 2 – Updated Project Progress Milestone Dates

[*Not Used*]

Attachment 3 – Updated Payment Schedule

[Not Used]

Attachment 4 – Updated Project Schedule

[*Not Used*]

Attachment 5 – Updated Performance Criteria

[*Not Used*]

Annex II
New Form of Annex B-1 (*City Infrastructure Obligations*) to the Comprehensive Agreement

[*Attached*.]

Annex B-1 to Comprehensive Agreement

City Infrastructure Obligations

[*Attached*]

Item	Location of Tie-In Point	City's Completion Deadline	Size / Quantity	Capacity	Type/Details
Product Water Transmission to Fiveash Water Treatment Plant	East Site boundary as indicated by TP-05 in Annex E-1 (*Site Description*).	400 days from the Effective Date for the City to furnish 60% design information 912 days from Effective Date for completion of installation	City shall furnish 48 inch connection to the City Feedstock Water pipeline to Fiveash Water Treatment Plant	50 MGD	The City shall complete a 48-inch Product Water transmission main (pipe) from the Tie-In Point provided by the Project Company at the City Wellfield to Fiveash and be available to begin to receive Product Water from the Project in accordance with this Agreement. City is responsible for permitting, pressure testing, disinfection and clearance of its pipeline prior to connection at the Tie-In Point. The City shall make the final connection to the Project Company's pipe. The City shall provide a copy of its design documents to the Project Company so that the Project Company may design and construct a surge protection system if necessary.
Fiveash Improvements	Fiveash Water Treatment Plant	912 days from Effective Date	N/A	50 MGD	The City shall complete any necessary improvements to the infrastructure at the existing Fiveash Water Treatment Plant and communications with other City control centers or with Project controls as necessary to enable the City to take Product Water delivered by the Project Company in accordance with this Agreement, and the City shall be available to begin to receive Product Water from the Project in accordance with this Agreement.
Florida Power & Light Power Feeds	Northwest corner of the Site boundary as indicated by TP-07 in Annex E-1 (*Site Description*).	600 days from Effective Date	13.2 kV	12.5 MVA (mega volt amperes)	The City shall supply electricity to the Project. The City shall cause Florida Power & Light to furnish and install the Florida Power & Light main service entrance equipment (according to Florida Power & Light's standards and requirements) for two power feed connections to the Project. The City shall complete all designing, permitting, bidding and construction of any necessary structures for housing the Florida Power & Light main service entrance equipment. The City shall

Item	Location of Tie-In Point	City's Completion Deadline	Size / Quantity	Capacity	Type/Details
					cause Florida Power & Light to install the main service entrance equipment at the locations identified by the Project Company. The Project Company shall pull the cable from the Project's switchgear to the Florida Power & Light main service entrance equipment. Florida Power & Light shall terminate the Project Company's cables at the Florida Power & Light main service entrance equipment.
Wastewater/ Sewer connection	Northwest corner of the Site boundary as indicated by TP-02 in Annex E-1 (*Site Description*).	912 days from Effective Date	4 inch	50 GPM (gallons per minute)	The City shall supply wastewater and sewage services to the Project Company. The City shall complete a 4-inch sanitary sewer force main with the capacity to receive 50 GPM. The City's sewer force main shall start at TP-02 (as indicated on Annex E-1 (*Site Description*) to this Agreement) and convey the sanitary waste to a discharge connection with Broward County's existing wastewater collection system.
Temporary Potable Water Connection During Construction	Existing City fire hydrant located approximately at: Latitude: 26.199790°N Longitude: 80.196151°W	60 days from Effective Date	6 inch	1,000 GPM at 20 psig (pounds per square inch gauge)	The City shall supply potable water to the Project Company. The City shall make available for use by Project Company an existing fire hydrant within approximately 400 feet of the Site and at the latitude and longitude specified in the column to the left hereof. The City shall provide a temporary water meter to record water usage by the Project Company-Related Entities. The City shall supply potable water at no cost to the Project Company.
Permanent Potable Water Connection	Northwest corner of the Site boundary as indicated	912 days from Effective Date	12 inch	3500 GPM	The City shall complete a 12-inch potable water main connecting to the Project Company's Tie-In Point, and the City shall supply potable water to the Project Company on a permanent basis at such Tie-In Point.

Item	Location of Tie-In Point	City's Completion Deadline	Size / Quantity	Capacity	Type/Details
	by TP-04 in Annex E-1 (*Site Description*).				The City is permitted to provide a potable water main with a smaller size and/or capacity to the extent such smaller values are approved by the Project Company and the City's Fire Prevention Bureau / Fire Marshal in accordance with Article 18.4.3.1 of the Florida Fire Prevention Code based on the needed fire flow (NFF) capacity for the Project.
Communications Connections to Existing City Systems	TP-08 as indicated in Annex E-1 (*Site Description*)	912 days from Effective Date	N/A	N/A	The City shall ensure an adequate supervisory control and data acquisition (SCADA) system is available for the Project Company to draw Feedstock Water from the City Wellfield in accordance with Section 6.03(g) (*Controls and Communications with the City Wellfield*) of this Agreement. The City shall complete the work to connect the City's East Well Field Generator Building to the control equipment in the control room at the Project. City shall run conduit to a pull box at the Project boundary (located at TP-08 as indicated on Annex E-1 (*Site Description*) to this Agreement) and shall pull the fiber optic cable to the pull box leaving the excess cable that the Project Company will need to connect to the Project controls in the control room coiled at the pull box. Project Company shall install raceway to connect to the pull box and pull the City-provided cable to the Project controls in the control room. City shall complete the cable terminations at the City control panel in the East Well Field Generator Building. Project Company shall complete the cable terminations at the Project Company's control equipment.
Laboratory Services	N/A	912 days from Effective Date	N/A	N/A	The City shall make available to the Project Company (at no cost to the Project Company) one or more State-

Item	Location of Tie-In Point	City's Completion Deadline	Size / Quantity	Capacity	Type/Details
					and NELAP-certified laboratories capable of performing all Feedstock Water and Product Water testing required to support the Wet Commissioning (as defined in Annex C-1 (*Commissioning Obligations*) to this Agreement) and Performance Testing of the Project based on the testing parameters set out in Annex F (*O&M Standards*) to this Agreement.

Annex III
New Form of Annex B-2 (*City Enabling Work*) to the Comprehensive Agreement

[*Attached*.]

Annex B-2 to Comprehensive Agreement

City Enabling Work

[*Attached*]

Item	Location of Tie-In Point	Size / Quantity	Capacity	Type/Details
Feedstock Water Main and Feedstock Water Connection at Project boundary	SW Corner of the Site boundary as indicated by TP-01 in Annex E-1 (*Site Description*).	54 inch	Designed for 59MGD (Maximum Load = 65 MGD *plus* requests from Fiveash Water Treatment Plant)	Construction of the Feedstock Water main to enable the City to deliver to the Project Company at least 59 MGD (in the ordinary course) but not more than 65 MGD (in the event replenishment of the City Storage Tanks is required under this Agreement) of Feedstock Water in compliance with the requirements of Annex G (*Feedstock Water Specifications*) to this Agreement and in accordance with the terms of this Agreement.
Pre-Treatment and Booster Pumps Work	Incorporated into the Prospect Lake Clean Water Center	TBD	As required to provide the design capacity of 59 MGD up to a maximum of 65 MGD in accordance with Annex B-1 (*City Infrastructure Obligations*)	Extra Work necessary to design and construct (1) pre-treatment processes to treat the Feedstock Water from the City Wellfield to address the Revised Feedstock Water Specifications and (2) booster pumps within the Site to increase the pressure of the Feedstock Water to the levels specified in Annex G (*Feedstock Water Specifications*) to this Agreement for the Pre-Treatment and Booster Pumps Work Funding Amount (consistent with the Pre-Treatment and Booster Pumps Work Funding Amount Cap), as described in Section 8.01(a) (*Pre-Treatment and Booster Pumps Work*) of this Agreement.
Second Disposal Well	NW Corner of the Site as indicated by the SW TP-06 in Annex E-1 (*Site Description*).	20”	Design Basis of 11.39 MGD	DB Work necessary to design and construct a second Disposal Well as described in Annex M (*Design Requirements and Construction Standards*) to this Agreement, for the Second Disposal Well Funding Amount.
Modified Water Standards Work	Incorporated into the Prospect Lake Clean Water Center	N/A	Designed for 50 MGD Product Water	Work necessary to design and construct the Project in conformity with the values set forth in Annexes G (*Feedstock Water Specifications*) and H-2 (*Product Water Contract Standards*) to this Agreement as compared to the values initially

Item	Location of Tie-In Point	Size / Quantity	Capacity	Type/Details
				agreed between the Parties as set forth on Annex J (*Baseline Water Specifications*) to this Agreement for the Modified Water Standards Funding Amount (consistent with the Modified Water Standards Funding Amount Cap).
OCCT Work	Incorporated into the Prospect Lake Clean Water Center	TBD	Designed for 50 MGD Product Water	Extra Work necessary to design and construct treatment processes to treat the Feedstock Water from the City Wellfield to the optimal specifications recommended by the Project Company OCCT Study as required to obtain the FDEP Construction Permit for the OCCT Work Funding Amount, as described in Section 8.01(b) (*OCCT Work*) of this Agreement.