David Mancini & Sons, Inc.

Bid Contact **Christopher Lazzari**
amejia@dmsi.co
Ph 954-895-0741

Address **2601 Wiles Road**
Pompano Beach, FL 33073

Bid Bond **Bid Bond icon** (Status: Authorized on Feb 1, 2021)

Item #	Line Item	Notes	Unit Price	Qty/Unit		Attch.	Docs
12470-416--01-01	RE-BID Design Build Pump Station B-4 Redundant Force Main	**Supplier Product Code:**	**First Offer - $2,628,197.00**	1 / lot	**$2,628,197.00**	**Y**	**Y**

Supplier Total **$2,628,197.00**

Bid Bond from

Surety
Bid Bond Number
Bond Type
Bond Form
Bid Date
Bid ID
Security Percent %
Job Description

Agency ID
Name
Address , , ,
Phone
Contact Name
Bond Status
Execution Date

Contractor ID
Name
Contractor Tax ID
Assigned Contractor ID
Address , , ,
Phone

Name
Address , , ,

Surety ID
Name
NAIC Number
State of Incorporation
Contact

Address , , ,

Phone

Terror Rider

David Mancini & Sons, Inc.

Item: **RE-BID Design Build Pump Station B-4 Redundant Force Main**

Attachments

DMSI Proposal 12470-416 Re-Bid DB PS B-4.pdf

Proposal for:

CITY OF FORT LAUDERDALE

RFP No. 12470-416

RE-BID Design Build Pump Station B-4 Redundant Force Main P12567

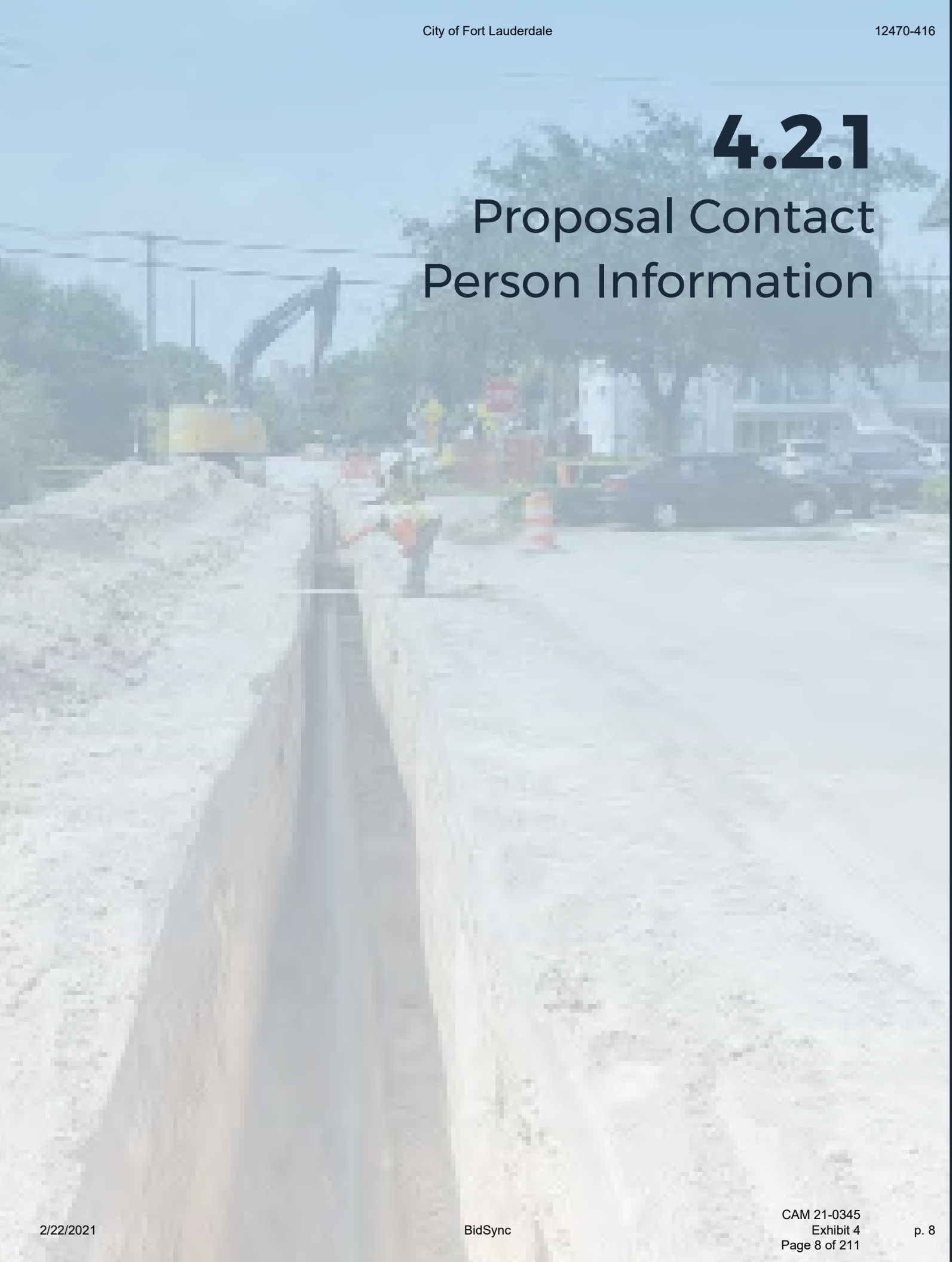
February 17, 2020

Submitted by:

DAVID MANCINI & SONS, INC.

wsp

TABLE OF CONTENTS



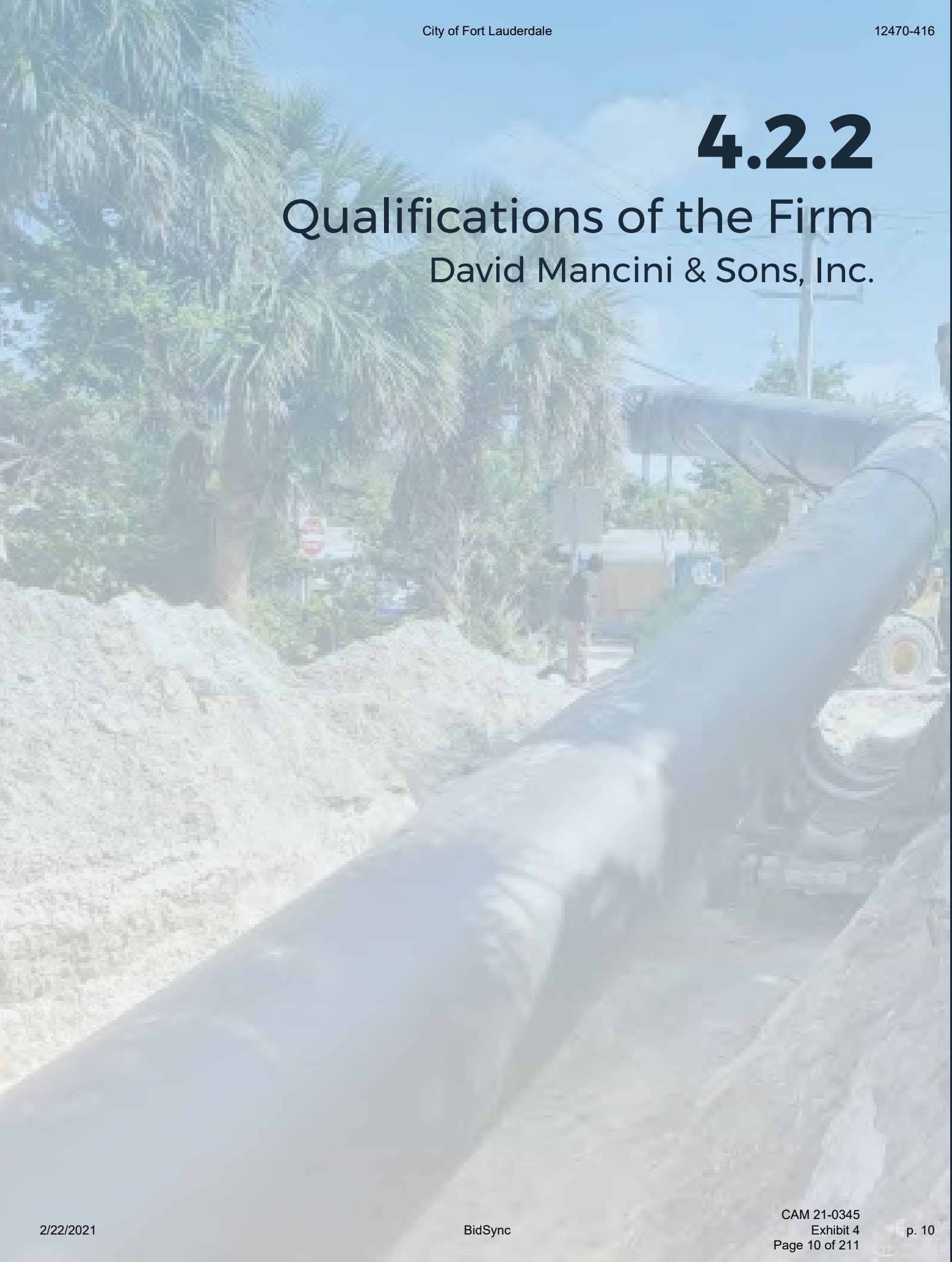
4.2.1
Proposal Contact Person Information

4.2.1 PROPOSAL CONTACT PERSON INFORMATION

Indicate which firm/company is the Lead Design-Builder whose signature grants authority to bind submitter to the provisions of this RFP.

Lead Design Builder

Lead Design-Builder: David Mancini & Sons, Inc. (DMSI)
Federal Employee Identification (FEIN) Number: 27-3716806
Mailing Address: 2601 Wiles Road, Pompano Beach, Florida 33073
Contact Person's Name/Title: David Mancini Jr., Vice President
Email Address: Bids@dmsi.co
Phone Number: (954) 977-3556
Fax Number: (954) 944 - 2040



4.2.2

Qualifications of the Firm

David Mancini & Sons, Inc.

4.2.2 QUALIFICATIONS OF THE FIRM

The Design Build Firm shall have previous design and construction experience in underground water and wastewater piping installation in the State of Florida within the last ten (10) years. Proposers shall submit proof of design and construction experience for a minimum of three (3) projects of similar scope and scale (or larger) and shall, for each project listed, identify location; dates of construction; project name and overall scope; scope of work that was self-performed by DBF and client's name, address, telephone number and email address.

A. MINIMUM QUALIFICATIONS

DAVID MANCINI & SONS, INC.
2601 Wiles Road
Pompano Beach, Florida 33073
(954) 977-3556

February 17, 2021

Penelope Burger, Procurement Administrator
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, Florida 33301

Re: RFP No. 12470-416 – RE-BID Design Build Pump Station B-4 Redundant Force Main P12567

Dear Ms. Burger and Evaluation Committee Members,

The City of Fort Lauderdale (the City) Pump Station B-4 Redundant Force Main Project, part of the Florida Department of Environmental Protection (FDEP) Consent Order's Phase II Projects, will provide a connection from Pump Station B-4 at the George English Park to the new 48-inches redundant force main on Coral Ridge. This important interconnection will allow the City to keep the existing Pump Station in operation when the existing 42-inches force main is rehabilitated in the future. **Furthermore, we understand the importance of not only being able to rehabilitate, but kill the existing transmission force main which has plauged the City with sewage spills the past year. The installation of this 24-Inch Force main needs to be installed and in service to be able to kill the old force main. Therefore, this is AN EMERGENCY PROJECT, and DMSI will govern ourselves accordingly if selected.** This infrastructure investment to install a mile of a new force main will improve the quality of life for the local community, but the improvements must be made quickly, with minimal disruptions. Success on this project requires a team that has completed similar underground projects in a highly urbanized area dealing with the heavy vehicle and pedestrian traffic of a central business district and numerous utilities. The team must also have an in-depth understanding of coordinating with the City, the FDEP, and various other stakeholders.

David Mancini & Sons, Inc. (DMSI), in cooperation with **WSP USA Inc.** (WSP), brings the City a design-build team with extensive experience in trenchless design and construction, including complex and urban underground utility projects with similar geotechnical conditions as this project. **Our firm has more than 18 years of experience in underground water and wastewater piping installation in the State of Florida, working for municipalities throughout Broward and Miami-Dade Counties. The Specific Project's Experiences showed in this proposal were led and delivered by the Key Staff identified in Section 4.2.2. We offer the City:**

- **Years of experience with local municipal and utility company work on water and sewer trenchless infrastructure projects.** Our team's proven experience in South Florida, especially with the City, gives us first-hand knowledge of the local conditions, permitting requirements, stakeholders, public outreach concerns, and different construction methodologies specific for pipe installation projects. Our team's tenure on these projects has yielded an invaluable working relationship with their clients and other local regulatory agencies – one based on trust, quality, and responsiveness, while delivering cost-effective solutions. DMSI and WSP have been working together for the past five years on projects including the City's Central New River Water Main Crossing along SE 1st Avenue Project, currently on the Permitting Phase. We bring extensive institutional knowledge on how the City operates, which will maintain schedule and reduce the impact of the project on the community.

- **A team with years of prior experience working on similar projects.** We bring state-of-the-art approaches and technologies to deliver a resilient and sustainable infrastructure project that is implementable and cost-effective. DMSI has successfully completed several design-build projects with a total value of more than $180 million, all of which are infrastructure based in complex urban environments, utility driven, neighborhood improvements and requiring expertise in dealing with populated urban environments, multiple commercial properties, and Owner requirements. Some of these projects are the following. A detailed description and client contact information are included on this Section of the Proposal:

  - 42-inch HDPE Water Main Horizontal Directional Drill under Biscayne Bay - $22.0M
  - 54-inch HDPE Redundant Force Main (City of Miami Beach) -$10.4M – *Previous World Record Holding HDD*
  - 20-inch HDPE HDD Force Main at Miami International Airport - $1.20M
  - East Las Olas Intracoastal WM & FM HDD Crossings - $3.08M
  - Nautilus Neighborhood D/B Project street scape and watermain improvements- $38.0M
  - Biscayne Point D/B Project street scape and watermain improvements - $21.0M
  - Little Flamingo D/B Project street scape and watermain improvements - $4.5M
  - Fort Lauderdale Redundant 54" FM - $3.5M – *Current World Record Holding HDD*

- **An understanding of the importance of design and construction dynamics.** We work hand in hand with our design partner, WSP, to ensure technical elements are developed as a team. Our project managers attend all meetings during the design process with the City, homeowners, businesses and regulatory agencies to explain and confirm our field approaches to the work. We'll bring the same teamwork we provided on previous South Florida projects such as **the Miami Dade Water & Sewer Department/Miami Dade County Port Miami Capital Development, the 42-inch HDPE water main to Port of Miami via HDD and the 12-inch HDPE dual force main via HDD under Biscayne Bay.**

- **Significant upfront work to understand the best installation method to expedite the project construction, reduce impacts to traffic, and most importantly reduce impact on residents.** In preparation for this project we have reviewed the as-builts of the existing Pump Station B-4 and other information provided by the City. Based on these and surface elevation obtained from LiDAR, our team has prepared preliminary profiles of the proposed alignment taking into consideration the existing utilities within the Project area. By doing this, it helps us in determine possible pipe conflicts, hence reducing change orders during construction. These Plans & Profiles are shown in our conceptual plans attached with this proposal.

- **Emphasis on the importance of maintainability of the end user.** Our conceptual design considered many project aspects, the most important being maintainability of the new asset by the end user, Fort Lauderdale Utility Operations staff. Our conceptual plans in our proposal slightly shift a few feet the location and dimension of the pits for maintainability and accommodate the vertical and horizontal curves but honors the original intent of your scope of work. To maintain uninterrupted traffic flow at the location of the HDD, pulls will stay on grassed area to reduce the potential impact to neighbors.

As the president and authorized representative of David Mancini & Sons, Inc., I affirm and commit to the City that if selected for this project, we will undertake the work in accordance with your terms and conditions while providing you the level of service you expect. The City can have confidence the new water mains installed by our team will remain in service for years to come. Thank you for your consideration and we are look forward to working with the City once again.

Sincerely,

David Mancini & Sons, Inc.

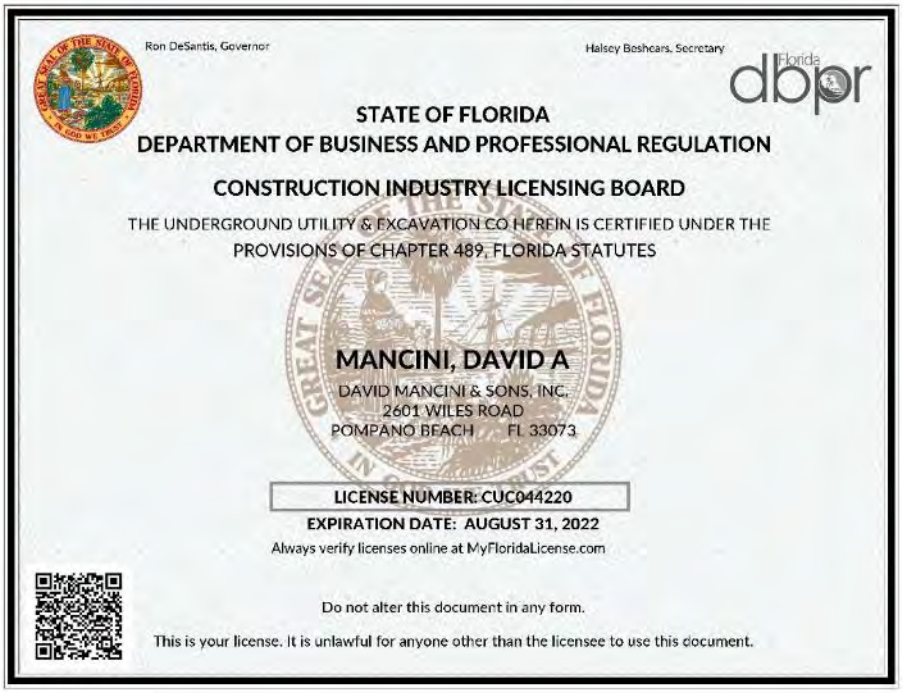
David Mancini
President

- *The Proposer shall be either a State of Florida certified General Contractor, or a State of Florida certified Underground Utility Contractor, at the time of submittal of its RFP response, and shall maintain licensure for the duration of the Design-Build Contract.*
- *The Proposer's Engineer shall be a State of Florida certified Professional Engineer and shall maintain licensure for the duration of the Design-Build Contract.*

B. LICENSURE

DMSI Professional Licenses

Copies of all active State of Florida professional licenses for DMSI are provided below.



Ron DeSantis, Governor

Halsey Beshears, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

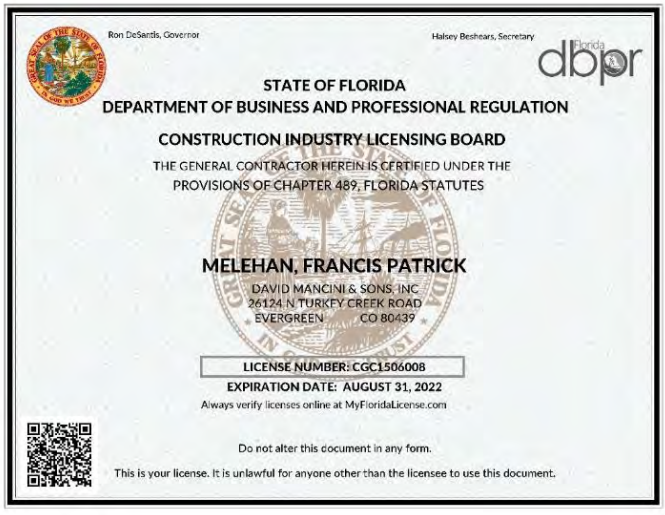
THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

MANCINI, DAVID A
DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH FL 33073

LICENSE NUMBER: CUC044220
EXPIRATION DATE: AUGUST 31, 2022
Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.



Ron DeSantis, Governor

Halsey Beshears, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

MELEHAN, FRANCIS PATRICK
DAVID MANCINI & SONS, INC
26124 N TURKEY CREEK ROAD
EVERGREEN CO 80439

LICENSE NUMBER: CGC1506008
EXPIRATION DATE: AUGUST 31, 2022
Always verify licenses online at MyFloridaLicense.com

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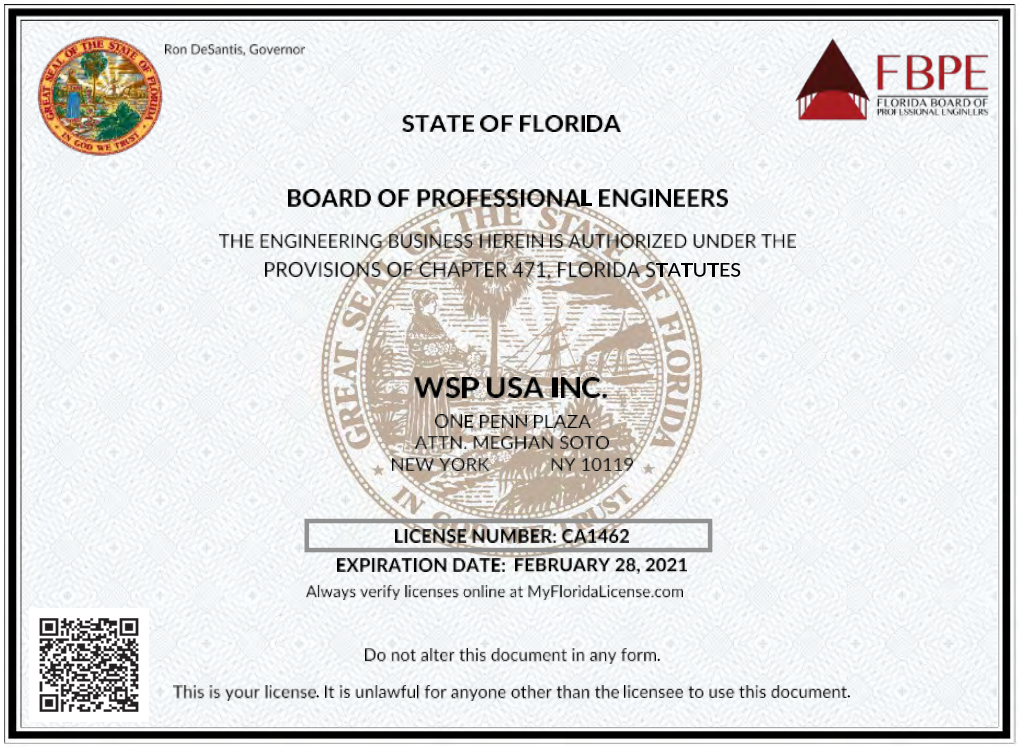
Proposer's Engineer Licenses

WSP USA, Inc. is a State of Florida certified Professional Engineer. Their licenses are provided below.



Ron DeSantis, Governor

FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE ENGINEERING BUSINESS HEREIN IS AUTHORIZED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

WSP USA INC.
ONE PENN PLAZA
ATTN. MEGHAN SOTO
NEW YORK NY 10119

LICENSE NUMBER: CA1462
EXPIRATION DATE: FEBRUARY 28, 2021
Always verify licenses online at MyFloridaLicense.com

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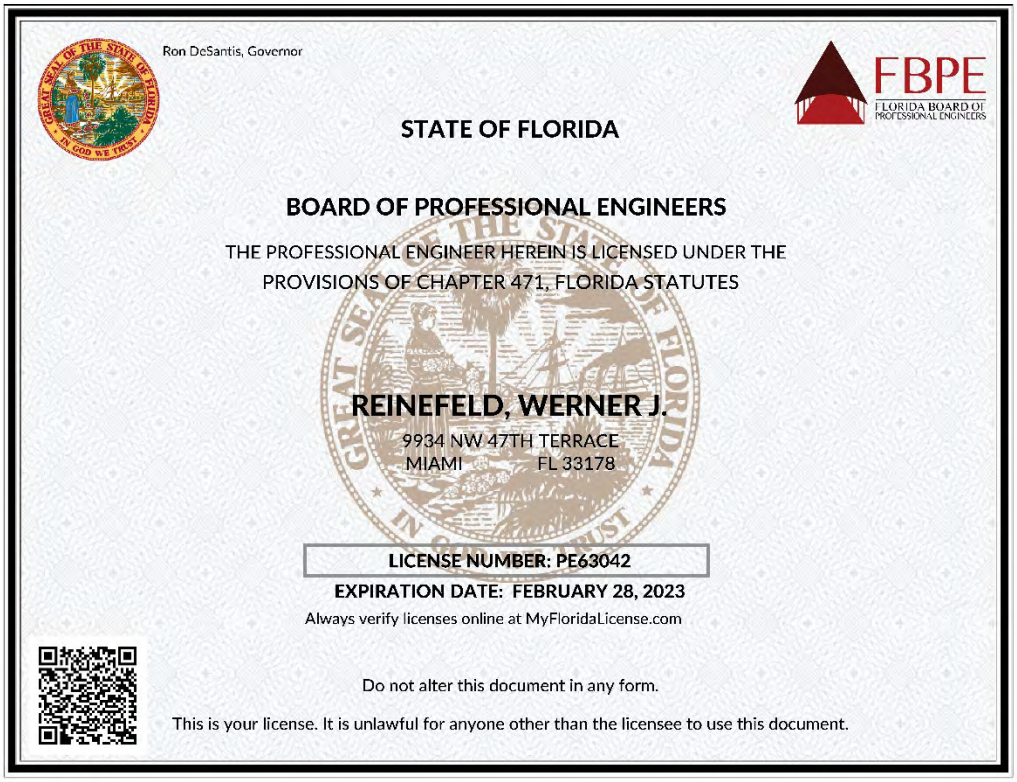

Ron DeSantis, Governor

FBPE FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

REINEFELD, WERNER J.
9934 NW 47TH TERRACE
MIAMI FL 33178

LICENSE NUMBER: PE63042
EXPIRATION DATE: FEBRUARY 28, 2023
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C. BUSINESS STRUCTURE

Provide a brief introduction narrative letter highlighting the qualifications of the firm in providing the professional services as it relates specifically to the project

i. Introduction Narrative

David Mancini & Sons, Inc. – Lead Design-Builder

Since Incorporate in 2010, following the Mancini Family Estate Succession Planning, DMSI's construction experience history now spans four generations and six decades of underground utility excellence. DMSI is a heavy civil general contractor and construction management firm headquartered in Deerfield, Florida since its inception. DMSI is defined by its employees – honest, experienced, forward-thinking, professional and hard-working. DMSI's team members form collaborative relationships with owners, developers, design teams, subcontractors and others to assist in delivering the most desirable and economical solution to the construction goal, reinforcing the company's reputation for superior workmanship and performance. DMSI's business philosophy is dedicated to trusting relationships, excellent service and workmanship that has enduring character and meeting or exceeding customer expectations every time. **For this project, DMSI is proposing the same Contractor, Engineer of Record, Superintendent, and Key Personnel that supported the Port of Miami Project.**

DMSI has designed and constructed more pipeline projects of similar or greater size and complexity than any other team. With an aggregate bonding capacity in excess of $100 million, DMSI is recognized as one of the most technically advanced underground utility, road, building and earth moving contractors in South Florida. Over the past 30 years, David Mancini, President and Qualifier of DMSI, has successfully delivered multiple design-build projects which accounted for more than $200M worth of their contracts. DMSI is highly recognized in the construction industry for completing the projects within time and budget.

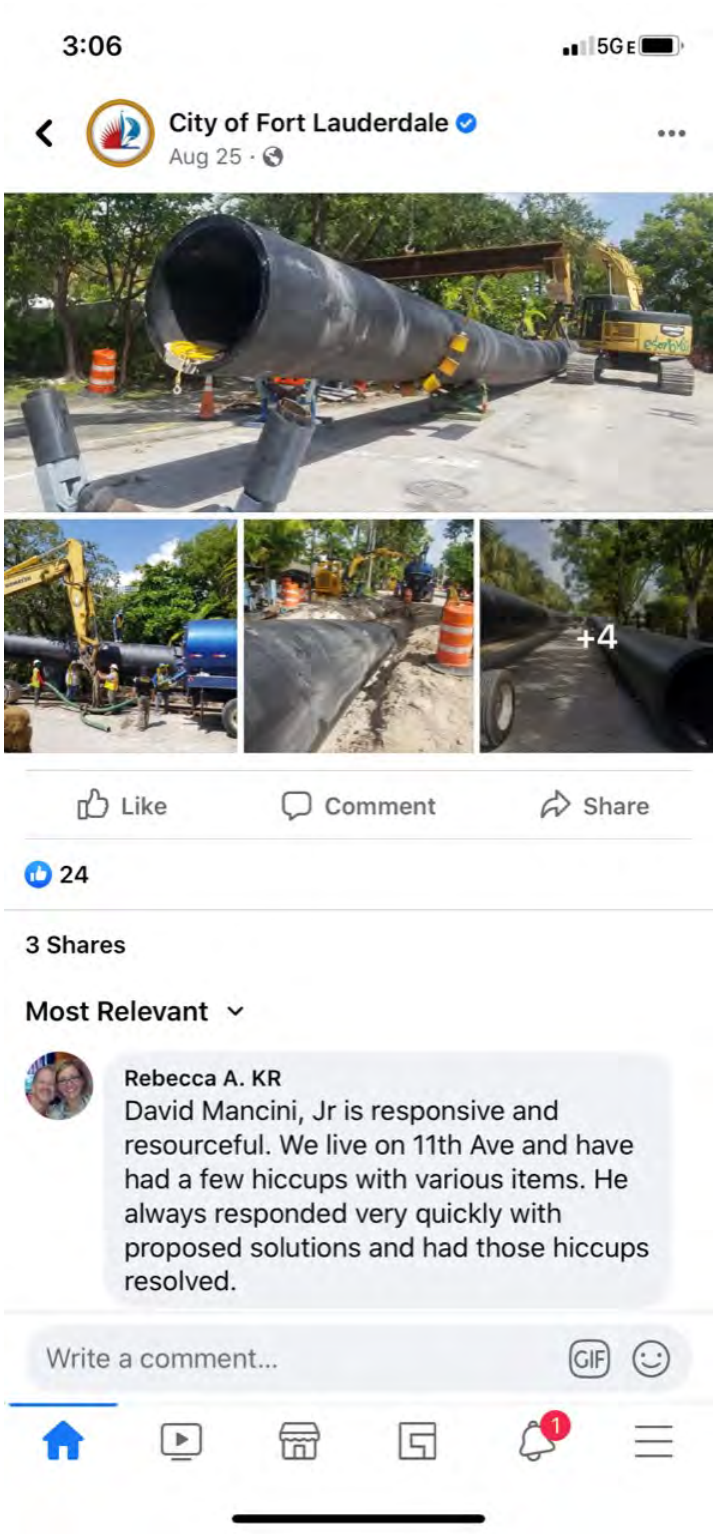
The company specializes in delivering large-scale projects which entail difficult tasks, conditions and schedules. DMSI executes projects through a variety of delivery systems, ranging from traditional contracting arrangements to turnkey design-build projects. Typical projects include, large diameter pipelines, underground utilities, commercial and industrial site developments and trenchless utility installations. As an example of DMSI's capabilities, DMSI as Design-Builder for the City of Miami Beach completed the installation of a redundant 54-inch force main. **This Project established a World's Record when it successfully completed the horizontal directional drill (HDD) installation of approximately 3,300 linear feet of a 54-inch HDPE force main** along Euclid Avenue from 11th Street to just north of 5th Street.

YouTube Link: https://www.youtube.com/watch?v=_6N_217qq9I&feature=youtu.be

The DMSI team understands Fort Lauderdale

On December 2019, DMSI's Team responded to the City's force main break emergency in the Rio Vista neighborhood. Since then, DMSI has installed via HDD more than a mile and a half of a new 54-inch HDPE force main segment in the Rio Vista Neighborhood by HDD and Open Cut with two connections to the active Foremain system. This segment (Rio Vista Emergency) is now fully operational and allowed the removal of the 36-inch aboveground bypass line that was installed during the City's emergency. More importantly, it allowed the abandonment and isolation of the existing force main through this corridor. Similar to what this project will do for the force main system north of Sunrise. This new force main is part of the new redundant wastewater transmission line extending from the Coral Ridge Country Club Wastewater Lift Station to the GTL Wastewater Treatment Plant.

This project required extensive coordination with the public and City neighbors to answer their concerns and more important to resolve possible issues related to the project, specially in the Rio Vista neighborhood. David Jr. "always responded very quickly with proposed solutions and had those hiccups resolved."



Corporations, Joint Ventures, LLC or Partnerships – submit a copy indicating when the corporation was organized as a legal entity in the State of Florida, corporation number. Shall be a minimum of ten (10) years to do business in the State of Florida.

ii. Copy of Incorporation

DMSI State of Florida Legal Entity

State of Florida
Department of State

I certify from the records of this office that DAVID MANCINI & SONS, INC. is a corporation organized under the laws of the State of Florida, filed on October 20, 2010, effective October 20, 2010.

The document number of this corporation is P10000086044.

I further certify that said corporation has paid all fees due this office through December 31, 2021, that its most recent annual report/uniform business report was filed on January 29, 2021, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-ninth day of January, 2021

Secretary of State

Tracking Number: 3342167917CC

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-831-4000
VALID OCTOBER 1, 2020 THROUGH SEPTEMBER 30, 2021

DBA:
Business Name: DAVID MANCINI & SONS INC

Receipt #: 189-238757
Business Type: ALL OTHER TYPES CONTRACTOR (UNDERGROUND UTILITY & EXCAVATION)

Owner Name: DAVID MANCINI
Business Location: 2601 WILES ROAD
POMPANO BEACH
Business Phone: 954-977-3556

Business Opened: 01/27/2011
State/County/Cert/Reg: CUC044220
Exemption Code:

Rooms	Seats	Employees	Machines	Professionals
		10		

	For Vending Business Only					
	Number of Machines:			Vending Type:		
Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
27.00	0.00	0.00	0.00	0.00	0.00	27.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

THIS BECOMES A TAX RECEIPT

WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

DAVID MANCINI & SONS INC
2601 WILES ROAD
POMPANO BEACH, FL 33073

Receipt #WWW-19-00207306
Paid 09/01/2020 27.00

2020 - 2021

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		10		

Signature	For Vending Business Only					
	Number of Machines:			Vending Type:		
Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
27.00	0.00	0.00	0.00	0.00	0.00	27.00

Receipt #WWW-19-00207306
Paid 09/01/2020 27.00

Include copies of all active State of Florida professional licenses, including professional engineers, State of Florida certifications; State of Florida certified general contractors license with unlimited building classification, held by the Firm under Florida Law to provide the required services.

iii. Licenses

Copies of all active State of Florida professional licenses for DMSI are provided below.

Ron DeSantis, Governor

Halsey Beshears, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

MANCINI, DAVID A

DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH FL 33073

LICENSE NUMBER: CUC044220
EXPIRATION DATE: AUGUST 31, 2022
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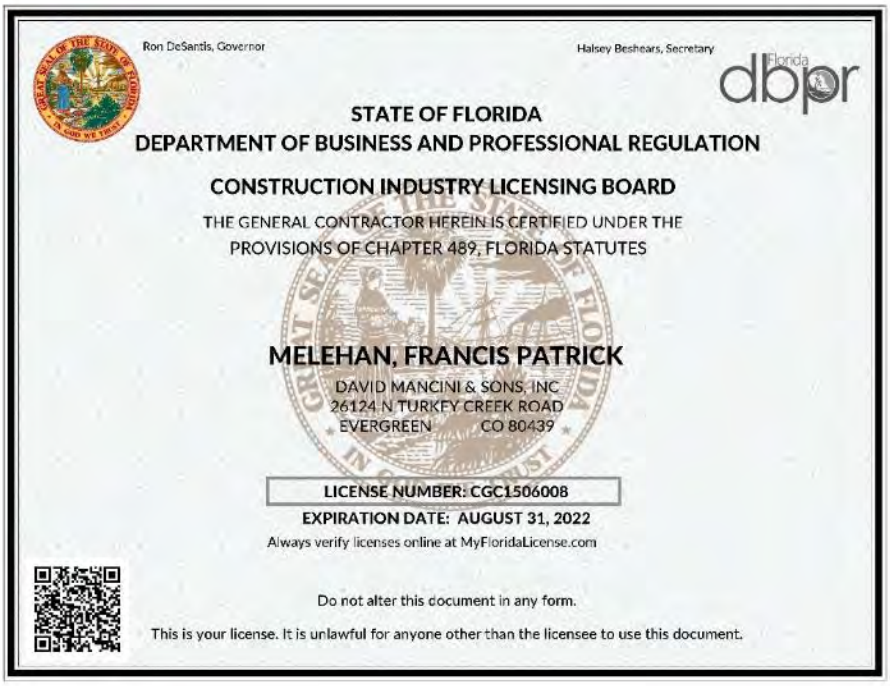

Ron DeSantis, Governor

Halsey Beshears, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

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MELEHAN, FRANCIS PATRICK

DAVID MANCINI & SONS, INC
26124 N TURKEY CREEK ROAD
EVERGREEN CO 80439

LICENSE NUMBER: CGC1506008
EXPIRATION DATE: AUGUST 31, 2022
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3A MAJOR ROADS (ASPHALT AND CONCRETE PAVING FOR INTERSTATE, PRIMARY, SECONDARY, AND ARTERIAL ROADWAYS ANI AIRPORTS AND WORK INCIDENTAL THERETO)

00-1650-W
MANCINI, DAVID A. - QUALIFYING
DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH FL 33073
EXPIRES 08/31/2021

BROWARD COUNTY FLORIDA

CERTIFICATE OF COMPETENCY

Detach and **SIGN** the reverse side of this card **IMMEDIATELY** upon receipt! **You should carry this card with you at all times.**

Contractor must obtain a photo I.D. Certificate of Competency Card every two years.

MANCINI, DAVID A.
8835 NW 58 CT
PARKLAND FL 330670000

503-207 (Rev. 1/12) PC201247908

BROWARD COUNTY, FLORIDA
CERTIFICATE OF COMPETENCY

CC# 3A MAJOR ROADS (ASPHALT AND CONCRETE PAVING FOR INTERSTATE, PRIMARY, SECONDARY, AND ARTERIAL ROADWAYS AND AIRPORTS AND WORK INCIDENTAL THERETO)
00-1650-W
MANCINI, DAVID A. - QUALIFYING
DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH FL 33073
EXPIRES 08/31/2021

Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAULT, P.E.
SECRETARY

June 1, 2020

DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH, FLORIDA 33073

RE: CERTIFICATE OF QUALIFICATION

Dear Sir/Madam:

The Department of Transportation has qualified your company for the type of work indicated below. Unless your company is notified otherwise, this Certificate of Qualification will expire 6/30/2021. However, the new application is due **4/30/2021**.

In accordance with S.337.14 (1) F.S. your next application must be filed within (4) months of the ending date of the applicant's audited annual financial statements.

If your company's maximum capacity has been revised, you can access it by logging into the Contractor Prequalification Application System via the following link: HTTPS://fdotwp1.dot.state.fl.us/ContractorPreQualification/

Once logged in, select "View" for the most recently approved application, and then click the "Manage" and "Application Summary" tabs.

FDOT APPROVED WORK CLASSES:
DRAINAGE, FLEXIBLE PAVING, GRADING, GRASSING, SEEDING AND SODDING, MINOR BRIDGES, ASPHALT RESTORATION, DIRECTIONAL DRILLING, PUMPS STATIONS, UNDERGROUND UTILITY (WATER & SEWER).

You may apply for a Revised Certificate of Qualification at any time prior to the expiration date of this certificate according to Section 14-22.0041(3), Florida Administrative Code (F.A.C.), by accessing your most recently approved application as shown above and choosing "Update" instead of "View." If certification in additional classes of work is desired, documentation is needed to show that your company has done such work with your own forces and equipment or that experience was gained with another contractor and that you have the necessary equipment for each additional class of work requested.

All prequalified contractors are required by Section 14-22.006(3), F.A.C., to certify their work underway monthly in order to adjust maximum bidding capacity to available bidding capacity. You can find the link to this report at the website shown above.

Sincerely,

Alan D. Autry

Alan Autry, Manager
Contracts Administration Office

AA:cg

www.fdot.gov

Names of Key Personnel and Role in this project
Name, title, name of firm, phone number, fax number, and email

iv. Key Personnel and Role

For this project, DMSI is proposing the same Contractor, Engineer of Record, Superintendent, and Key Personnel that supported the Port of Miami Project. Please refer to Section 4.2.3, page 40 for Design and Construction Team Key Personnel.

Name	Role	Phone	Fax	Email
David Mancini & Sons, Inc. – Lead Design-Builder				
David Mancini Sr.	Project Manager	(954) 977-3556	(954) 944-2040	Bids@dmsi.co
David Mancini, Jr.	Design Manager	(754) 264-9594	(954) 944-2040	dmancinijr@dmsi.co
Richard Mancini	General Superintendent	(954) 242-8763	(954) 944-2040	richiemancini@dmsi.co
Fabio Angarita	Project Quality Control Manager	(954) 551-2324	(954) 944-2040	fangarita@dmsi.co
Evelio Gibert	Scheduler / Project Controls Specialist	(786) 693-3445	(954) 944-2040	egilbert@dmsi.co
Alejandro Mejia	Project Health and Safety Manager	(786) 774-2477	(954) 944-2040	amejia@dmsi.co
Alejandra Suarez	Public Information Officer	(954) 977-3556	(954) 944-2040	ASuarez@dmsi.co

Demonstrate your firm's ability to comply with insurance requirements. Provide a previous certificate or other evidence listing the Insurance Companies names for both Professional Liability, General Liability, Automobile Liability, Worker's Compensation, and Professional Liability and/or Errors and Omissions, evidencing the dollar amounts of the coverage.

v. Insurance Requirements

Certificate of Insurance

DAVIMAN-01 HARRISM

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 5/27/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Insurance Office of America, Inc.
1855 West State Road 434
Longwood, FL 32750

CONTACT NAME: Brenda Laflamme
PHONE (A/C, No, Ext): (407) 998-5421 15421 FAX (A/C, No): (407) 788-7933
E-MAIL ADDRESS: Brenda.Laflamme@ioausa.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A: Evanston Insurance Company	35378
INSURER B: Liberty Insurance Corporation	42404
INSURER C: Liberty Mutual Fire Insurance Company	23035
INSURER D:	
INSURER E:	
INSURER F:	

INSURED
David Mancini & Sons, Inc.
2601 Wiles Rd
Pompano Beach, FL 33073

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY							
	CLAIMS-MADE X OCCUR							
	X General Liability			MKLV1ENV102342	4/1/2020	4/1/2021	EACH OCCURRENCE $	1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence) $	50,000
							MED EXP (Any one person) $	5,000
							PERSONAL & ADV INJURY $	1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE $	5,000,000
	POLICY PRO-JECT X LOC						PRODUCTS - COMP/OP AGG $	2,000,000
	OTHER						$	
B	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) $	1,000,000
	X ANY AUTO						BODILY INJURY (Per person) $	
	OWNED AUTOS ONLY / SCHEDULED AUTOS			AS7-Z61-292589-020	4/1/2020	4/1/2021	BODILY INJURY (Per accident) $	
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident) $	
							$	
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE $	
	EXCESS LIAB CLAIMS-MADE						AGGREGATE $	
	DED RETENTION $						$	
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Y/N					X PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	N/A		WC2-Z61-292589-010	4/1/2020	4/1/2021	E.L. EACH ACCIDENT $	500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE $	500,000
							E.L. DISEASE - POLICY LIMIT $	500,000
A	Pollution Legal Liab			MKLV1ENV102342	4/1/2020	4/1/2021	Aggregate Limit	2,000,000
A	Ltd Prof Liab			MKLV1ENV102342	4/1/2020	4/1/2021	Ded: $1,000	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Insurer	Type of Insurance	Policy Number	Effective	Aggregate Limit
Zurich American Ins. Co.	Installation Floater	CPP0507826	04/01/2020-04/01/2021	$500,000

CERTIFICATE HOLDER

David Mancini & Sons, Inc. - FOR INFORMATIONAL PURPOSES ONLY
2601 Wiles Rd
Pompano Beach, FL 33073

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE - A034287

ACORD 25 (2016/03)

Previous Performance and Payment Bond

TRAVELERS

Christopher J. Ashley
Senior Account Underwriter
Bond & Specialty Insurance
1441 W. Long Lake Road, Suite 300
Troy, MI 48098
248.312.7953
866.216.5992 (fax)
cashley@travelers.com

February 1, 2021

City of Fort Lauderdale
100 N. Andrews Ave., #619
Fort Lauderdale, FL 33301

Re: Re-Bid Design-Build Pump Station B-4 Redundant Force Main
RFP: 12470-416

To Whom It May Concern:

We are pleased to share with you our experience as surety for David Mancini & Sons, Inc. We consider David Mancini & Sons, Inc. one of our outstanding and most valued clients in whom we have the highest confidence. Through the years this company has, in our opinion, remained properly financed, well equipped and capably managed.

Travelers Casualty and Surety Company of America ("Travelers")[1] is prepared to give favorable consideration to the execution of contract performance and payment bonds running to the Owner, in association with the above captioned project. David Mancini & Sons, Inc. currently has a $35,000,000 single / $75,000,000 aggregate work program.

Please note that the decision to issue performance and payment bonds is a matter between David Mancini & Sons, Inc. and Travelers, and will be subject to our standard underwriting at the time of the final bond request, which will include but not be limited to the acceptability of the contract documents, bond forms and financing. We assume no liability to third parties or to you if for any reason we do not execute said bonds.

If you have any questions or need any additional information, please do not hesitate to contact me.

Sincerely,

TRAVELERS CASUALTY AND SURETY
COMPANY OF AMERICA

Christopher J. Ashley

[1] Travelers is an A++ (Superior) A.M. Best rated insurance company (Financial Size Category XV ($2 billion or more)).

DMS DAVID MANCINI & SONS, INC.

February 17, 2021

RE: **"RE-BID Design Build Pump Station B-4 Redundant Force Main P12567 RFP 12470-416"**

Subject: Financial Statements

To Whom It May Concern:

We at David Mancini & Sons, Inc. would like to thank you for the opportunity to serve the City of Fort Lauderdale; however, our financial statement is proprietary and confidential and therefore, we do not wish it be made public.

Our financial records are available for your appropriate staff to review at our accounting office in Pompano Beach, FL. Please advise us 48 hours in advance.

If you should have any questions regarding our financial information, please feel free to contact David Mancini at (954) 605-3982.

Sincerely,

David Mancini
President

For the prime DBF, or in the case of a Joint Venture (JV), list all completed and active projects that DBF or JV has managed within the past five years. In addition, list all projected projects and dollar value that DBF or JV will be working on in the near future.

D. WORKLOAD OF THE FIRM

Our team will use the time and budget management philosophy described in our project understanding to manage overall workload. We will work together to ensure all technical elements are met on this project. The table below lists our current workload and we do not feel that any of our major on-going projects will conflict with the team's performance of services under this important City/Consent Order Project.

DMSI Current Workload

PROJECT ID	PROJECT NAME	CONTRACT AMOUNT	REMAINING WORK	% REMAINING	NOTES
19-LW.LOWM	Lake Osborne Water Main Improvements Project	$2,618,649.00	$830,264.28	32%	SUB WORK ONLY REMAINING.
19-MD.TERM	Cruise Terminal B & C Conversion to C Waterside Improvements	$4,277,050.00	$426,971.71	10%	SUB WORK ONLY REMAINING.
20-BR.CCWM	Country Club Village infrastructure Upgrades	$5,636,847.00	$3,985,214.10	71%	1 of DMSI's 5 Mainline Crews required until 7/1/21
20-CG.COPS	Cocoplum 1 Sanitary Pump Station & Force Main Upgrades	$2,240,459.00	$507,832.26	23%	SUB WORK ONLY REMAINING.
20-FL.DB48	Design Build Installation of new redundant bypass Force Main	$29,908,007.66	$3,700,000.00	12%	2 of DMSI's 5 Mainline Crews come available 3/15/2021. 1 of DMSI's 2 Restoration Crew Available 4/1/21
20-FL.WM16	Central New River 16" Water Main River Crossing	$804,202.34	$722,524.94	90%	1 of DMSI's 2 Support Crews Required.
20-LW.PACO	Park of Commerce Phase 1B Infrastructure Improvements	$1,695,685.50	$649,515.69	38%	SUB WORK ONLY REMAINING.
20-MI.AWSW	Alice Wainwright Park Shoreline Improvements	$4,633,117.27	$3,272,790.15	71%	67.% Sub-Contractors Work and 4% DMSI work
		$51,814,017.77	**$14,095,113.13**	**27%**	

DMSI Projected Projects

PROJECT ID	PROJECT NAME	CONTRACT AMOUNT	Notes
21-FL.SCWM	Coral Shores Water Main Improvements Project	$1,280,000.00	1 of DMSI's 2 Support Crews Required.
19-MI.AAP3	AAA Eastside - Maurice Ferre Park Walkway	$751,197.96	SUB WORK ONLY
20.FL.DB.B4	B-4 Forcemain Project	TBD	2 Mainline Crews, 1 Restoration Crew, 1 MOT Crew, Sr, Jr, RjM, Ready to Mobilize 3/15/21
		$2,031,197.96	

DMSI Completed Projects within the Past Five Years		
PROJECT ID	PROJECT NAME	CONTRACT AMOUNT
16-FL.LASO	DESIGN BUILD SERVICES FOR (2) DIRECTIONAL DRILLS	$3,096,859.00
16-MB.IN72	INDIAN CREEK STORM WATER IMPROVEMENTSD FROM 25th STREET TO 41st STREET / COLLINS	$2,999,885.53
16-MB.SPPS	SOUTH POINT STORM WATER IMPROVEMENTS	$248,549.38
16-MB.SWPS	CONVETION CENTER PUMP STATION DESIGN-BUILD	$5,398,019.00
16-MD.MA48	MIAMI DADE 48-INCH FORCE MAIN DESIGN BUILD	$22,012,999.04
16-NM.HDD2	DESIGN-BUILD SERVICES FOR A WATER MAIN AND FORCE MAIN REPLACEMENT	$515,825.00
17-MB.11ST	11TH STREET IMPROVEMENTS FLAMINGO PARK NEIGHBORHOOD PHASE II	$6,303,313.01
17-MB.SSEM	SUNSET ISLAND 1 BRIDGE EMERGENCY WATER MAIN AND FORCE MAIN REPLACEMENT	$417,832.00
17-MD.AN48	DESIGN-BUILD SERVICES TO INSTALL A 48-INCH WATER MAIN FOR AREA N	$9,866,866.00
17-MD.EMG1	INSTALLATION OF 54-INCH AND 72-INCH KNIFE GATE VALVES NEAR GRIT CHAMBER BUILDING OF PLANT #2	$1,293,052.20
18-DM.MISC	EXTRA: WYNWOOD WATER & SEWER CONNECTION	$58,559.00
18-DM.MISC	EXTRA: MUSS PARK INSTALL 36-INCH TIDEFLEX VALVE	$35,000.00
18-MD.PORT	INSTALLATION OF 42-INCH DUCTILE IRON WATER MAIN AND 10-INCH FORCE MAIN TO PUMP STATION 9141 REPLACEMENT	$20,884,160.89
18-MI.MUPA	MUSEUM PARK PROMENADE PHASE IV	$1,378,079.54
18-MI.SOLA	SOLAR LIGHTING MUSEUM PARK WALKWAYS PROJECT	$189,989.11
19-BC.METR	REGIONAL MASTER METER IMPROVEMENTS	$926,939.00
19-FL.42BV	42" BUTTERFLY VALVE REPLACEMENT	$155,865.34
19-FL.42EM	EMERGENCY REPAIRS 42" WATER MAIN	$155,859.25
19-FL.EM54	54-INCH BREAK REPAIR (RIO VISTA)	$8,300,000.00
19-MD.42BS	EMERGENCY REPLACEMENT OF THE 48-INCH FORCE MAIN CROSSING THE OLETA RIVER AT NE 163 ST	$3,650,000.00
19-MD.EM48	EMERGENCY LINESTOPS & BYPASS REPAIR ON THE 48" PCCP FORCE MAIN AT OLETA RIVER AT NE 163 STREET	$1,365,573.30
19-MD.EM54	EMERGENCY REPAIRS TO 72" AND 54" PCCP FORCE MAIN	$4,424,443.44
19-MI.BAYW	AAA EMERGENCY REPAIR BAYWALK PROJECT	$190,111.51
19-MI.SEAF	BAYFRONT PARK MARINA SHORE POWER CONNECTION FOR EXPO SHIP "SEAFAIR"	$211,234.81
19-MI.SGSW	SPRING GARDEN POINT PARK SEAWALL	$1,389,114.89
19-MI.TDE2	BISCAYNE BAY TIDAL VALVES AND STORMWATER IMPROVEMENTS	$1,465,236.47
19-MI.TIDE	CITYWIDE TIDAL VALVE INSTALLATIONS 40-B193800	$1,277,723.31
19-RE.SAFM	RAIDER ENVIRONMENTAL SANITARY FORCE MAIN	$69,433.00
20-MD.DTPW	EMERGENCY REPLACEMENT OF 120-INCH CULVERT	$830,000.00
20-MI.WALL	MUSEUM PARK RETAINING WALL	$213,665.21
		$99,324,188.23

Firms should submit any information they deem appropriate for evaluation of past performance with projects similar in nature to the one under consideration by the City.

E. FIRM'S PAST EXPERIENCE

63rd Street Water Main Replacement

Miami Beach, Florida

This design-build project consisted of the installation of 1,000 linear feet of HDPE water main for the City of Miami Beach. This section of 1,000 linear feet was installed via horizontal directional drilling (HDD). In addition, project included 250 linear feet of an aerial crossing mounted to the existing bridge, and 1,000 linear feet of 20-inch ductile iron pipe via open cut. Tie-ins to the existing mains were performed, while keeping the system in operation. This Project was performed within FDOT right-of-way and involved extensive coordination for vehicular traffic since it is a main thru way for beach access. The HDD installation was performed in the Intracoastal Waterway between Collins Avenue to Allison Drive. All water main improvements were fully complete prior to decommissioning of the existing system. Extensive public outreach and coordination was performed to maintain all operations.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 1,000 linear feet of HDPE HDD 20-inch, 1,00 linear feet of 20-inch DIP open-cut, 250 linear feet of 20-inch HDPE aerial crossing mounted to FDOT bridge)
- Trenchless installation
- HDD along a busy corridor in a politically connected neighborhood
- Project required constant communication with the City and residents
- HDPE and DIP installation

YouTube Link:
https://www.youtube.com/watch?v=9hjWufTbBPU&feature=youtu.be

Team Member
DAVID MANCINI & SONS, INC.
Dates of Service
12/2015 – 08/2016
Project Status
This project is complete
Project Budget
Original Budget: $1,600,000 Final Cost: $1,661,179.52
Client / Point of Contact Familiar with Project
City of Miami Beach Otniel Rodriguez 1700 Convention Center Dr. Miami Beach, FL 33139 (P) (786) 831-0483 (E) otnielRodrigues@miamibeachfl.gov
Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC David Mancini, Jr. Fabio Angarita Richard Mancini

54-inch HDPE Force Main Along Euclid Avenue

Miami Beach, Florida

This design-build project consisted of the installation of a 54-inch PCCP Force Main for the City of Miami Beach. It serves as one of the marquee projects in DMSI's roster exhibiting DMSI's commitment to ensure that all our clients concerns are met. A 54-inch redundant force main was installed along Euclid Avenue in the City of Miami Beach. This force main segment was a crucial component of the City of Miami beach to improve the quality of service in this touristic area. Phase I installed a 54-inch HDPE force main along Euclid Avenue from 11th Street to Washington Avenue and along Washington Avenue from Euclid Avenue to Commerce Court. The scope of services for this section of the project included the design and construction around 4,450 linear feet of 54-inch HDPE force main installed by Horizontal Directional Drilling (HDD). A connection to Pump Station #31 was included in this phase. The project required constant communication with the City, the residents, and robust tourism of world-renowned Miami Beach thoroughfare. The team worked around the clock to deliver the project within the tight schedule. The project's expedited schedule was delivered, exceeding all expectations.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- Value engineering of switching microtunel to HDD saves the project $5 million to meet the project budget
- HDD along a busy corridor
- Large Diameter Force main project in a sensitive and politically connected neighborhood along an arterial roadway.
- Largest Diameter HDD project in the world
- Project required constant communication with the City and residents
- Expedited scheduled was met
- Open-Cut connections to existing force mains under-water

YouTube Link:
https://www.youtube.com/watch?v=_6N_217qq9I&feature=youtu.be

Team Member

DAVID MANCINI & SONS, INC.

Dates of Service
08/2015 – 08/2016

Project Status
This project is complete

Project Budget
Original Budget: $10,482,000
Final Cost: $18,253,488 (final cost due to additional scope, no claims)

Client / Point of Contact Familiar with Project
City of Miami Beach
Otniel Rodriguez
1700 Convention Center Dr.
Miami Beach, FL 33139
(P) (786) 831-0483
(E) otnielRodrigues@miamibeachfl.gov

Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita
Richard Mancini

63rd Street Water Main Replacement

Miami Beach, Florida

This design-build project consisted of the installation of 1,000 linear feet of HDPE water main for the City of Miami Beach. This section of 1,000 linear feet was installed via horizontal directional drilling (HDD). In addition, project included 250 linear feet of an aerial crossing mounted to the existing bridge, and 1,000 linear feet of 20-inch ductile iron pipe via open cut. Tie-ins to the existing mains were performed, while keeping the system in operation. This Project was performed within FDOT right-of-way and involved extensive coordination for vehicular traffic since it is a main thru way for beach access. The HDD installation was performed in the Intracoastal Waterway between Collins Avenue to Allison Drive. All water main improvements were fully complete prior to decommissioning of the existing system. Extensive public outreach and coordination was performed to maintain all operations.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 1,000 linear feet of HDPE HDD 20-inch, 1,00 linear feet of 20-inch DIP open-cut, 250 linear feet of 20-inch HDPE aerial crossing mounted to FDOT bridge)
- Trenchless installation
- HDD along a busy corridor in a politically connected neighborhood
- Project required constant communication with the City and residents
- HDPE and DIP installation

YouTube Link:
https://www.youtube.com/watch?v=9hjWufTbBPU&feature=youtu.be

Team Member
DAVID MANCINI & SONS, INC.
Dates of Service
12/2015 – 08/2016
Project Status
This project is complete
Project Budget
Original Budget: $1,600,000 Final Cost: $1,661,179.52
Client / Point of Contact Familiar with Project
City of Miami Beach Otniel Rodriguez 1700 Convention Center Dr. Miami Beach, FL 33139 (P) (786) 831-0483 (E) otnielRodrigues@miamibeachfl.gov
Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC David Mancini, Jr. Fabio Angarita Richard Mancini

Emergency Replacement of 48-inch Force Main Crossing the Oleta River at NE 163rd Street

Miami Beach, Florida

This project consisted of construction of a 48-inch force main by directional drill, open cut, and slip-lining methods. Existing linestop and 24-inch bypass was installed as part of the scope of work of RPQ PO231 by DMSI. The work zone was restored by completing pavement resurfacing and bringing pavement marketing and signalization up to specifications.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 48" HDPE force main via HDD and open cut installation
- Extensive Public Outreach
- Large Diameter Pipe in arterial roadway
- Existing force main was leaking in the ICW and all over the news. DMSI mobilized on an emergency basis and designed and built a "Pollution Dome" to catch the leaking sewage and pump it back into the force main during long-lead material procurement. Able to isolate a very political problem and "get the helicopters on to something more exciting."

Team Member

DAVID MANCINI & SONS, INC.

Dates of Service

09/2019 – 02/2020

Project Status

This project is complete

Project Budget

Original Budget: $3,650,000

Final Cost: $5,000,000

Owner extended limits of construction to avoid risky relocation of existing 30-inch transmission Watermain.

Client / Point of Contact Familiar with Project

Miami-Dade Water and Sewer Department
Alexis Valdes, Project Manager
3575 LeJeune Road
Miami, FL 33139
(P) (786) 299-9008
(E) Alexis.Valdes@miamidade.gov

Key Personnel on this Similar Project & B-4

David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita

Design-Build Installation of New Redundant 54-Inch Bypass Sewer Force Main Line

Fort Lauderdale, Florida

The Fort Lauderdale Emergency Design-Build consisted of 15,000 LF of 54" HDPE Force Main. Roughly 11,200 LF of the installation is being completed by Horizontal Directional Drill, with 3,800 LF of 54" HDPE Open Cut, along with multiple pump station connections. This Project also includes two Sub-Aqueous crossings, with one being directionally drilled and one being performed open cut. Challenges overcome include:

- Constant Coordination with Ft Lauderdale as the team worked diligently to meet project schedule which allowed the most expeditious installation.
- Existing Transmission Main has been at HIGH RISK of failure, DMSI has worked diligently to install the new main, designing "zones" where the Existing Transmission Main has been able to be taken "offline" prior to project completion. Utilizing these zones, the most critical areas have been shut off before the final zones were able to be designed.
- Management of multiple crews completing: Large Diameter Open Cut, Small Diameter Open Cut, Trenchless Operations, MOT and Restoration, working simultaneously.
- This Fast-Tracked Project was awarded in January 2020, and is on schedule to be completed April 2021. Incredibly fast paced for a project of this size.

Team Member
DAVID MANCINI & SONS, INC.
Dates of Service
12/2019 – 04/2021 (estimated)
Project Status
This project is ongoing
Project Budget
Original Budget: $31,500,000 Final Cost: $28,908,000
Client / Point of Contact Familiar with Project
City of Fort Lauderdale Krishan Kandial, Project Manager 100 N. Andrews Avenue Fort Lauderdale, FL 33301 (P) (954) 828-4019 (E) KKandial@fortlauderdale.gov
Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC David Mancini, Jr. Onique Williams Richard Mancini

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- HDD and open cut installation within neighborhood roads
- Open-Cut connections to existing force-mains under-water.
- Large Diameter Pipe installation through utility infested, high density residential, and arterial roadways in the city of Fort Lauderdale.
- B-4 is directly related to and part of the New Redundant 54-Inch Bypass Sewer Force main Line. (Will use the Emergency Project and connections made with agencies having jurisdiction to expedite permitting process)

Water Main and Force Main Intracoastal Waterway Crossings at Las Olas Blvd

Fort Lauderdale, Florida

This project consists of (1) 20 inch nominal diameter water main utilizing HDPE installation via horizontal directional drilling in the crossing of the Intracoastal Waterway. (1) 16-inch nominal diameter force main HDPE installation via horizontal directional drilling in the crossing of the ICW. Along with cut and capping of the existing 16-inch water main on the north side of Las Olas Blvd. Bridge at both sides of the ICW and connecting all proposed piping to the existing piping on-shore utilizing 16-inch PVC pressure pipe meeting AWWA C905 standard. Project was the City's first Design Build. Delivered on time and under budget. Including strict deadlines and acceleration required for City's cherished annual Boat Show and FIND deadlines.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- HDD and open cut installations
- Connection to the existing live sewage force main
- Acceleration (*at no additional cost*) to make-way for the City's Annual Boat Show.

Team Member

DAVID MANCINI & SONS, INC.

Dates of Service

09/2016 – 03/2017

Project Status

This project is complete

Project Budget

Original Budget: $ 3,096,859.00
Final Cost: $ 3,038,400.00

Client / Point of Contact Familiar with Project

City of Fort Lauderdale
Daniel Lizarazo, Project Manager
100 N. Andrews Avenue
Ft. Lauderdale, FL 33301
(P) (954) 828-6982
(E) DLizarazo@gfnet.com

Key Personnel on this Similar Project & B-4

David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita
Richard Mancini
Evelio Gibert

42-Inch Water Main to Port Miami

Miami, Florida

Team Member
DAVID MANCINI & SONS, INC. / WSP
Dates of Service
05/2018 – 08/2019
Project Status
This project is complete
Project Budget
Original Budget: $21,000,000 Final Cost: $20,884,000
Client / Point of Contact Familiar with Project
Miami-Dade Water & Sewer Department Eduardo Luis 3071 SW 38th Avenue Miami, Florida 33146 (P) (786) 552-8837 (E) Eduardo.luis@miamidade.gov
Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC David Mancini, Jr. Fabio Angarita Werner Reinefeld, PE, ENV SP (WSP) Ronald Fields, PE (WSP)

DMSI and WSP were responsible for the design, permitting and construction of a 42-inch transmission main that interconnected with a future 36-inch stub-out (Downtown Loop Project) located at the intersection between Biscayne Boulevard (SR 5/US-1) and North West 5th Street and PortMiami. The transmission main took into consideration future system expansion and improvements identified in PortMiami's Master Plan. The project consisted of furnishing and installing approximately 9,740 linear feet of 42-inch Watermain, a venturi meter, including valve and fittings quick disconnect for the cruise ships and making a connection to a 36-inch water main at Biscayne Boulevard. It entails approximately 260 linear feet of microtunneling under existing FEC railroad right-of-way with steel casing, drill shafts and proposed area of construction, and approximately 4,600 linear feet of twin 30-inch HDPE HDD subaqueous channel crossing along Biscayne Bay from Bayside to PortMiami (approximately 2,000 linear feet HDPE/each).

This project also entailed construction around a large mix of existing utilities within a small and busy corridor (Between the American Airlines Arena and Bayside Marketplace). All this work was preformed while maintaining the cruise ship traffic and seaport shipping trucks.

Principal Elements/Special Features:

- 4,600 linear feet of 30-inch HDPE HDD, 7,440 linear feet og 42-inch DIP open cut
- Microtunneling trenchless crossing for the FEC railway at PortMiami
- **Value engineering with $.5 million in savings** by eliminating microtunnel via Open-Cut. Saved more than 3 Months on critical schedule

12-inch Force Main Dual Crossing to Port of Miami

Miami, Florida

PortMiami contracted WSP to provide professional civil engineering design and construction administration services for upgrades to PortMiami's Master Sanitary Sewage Pump Station No. 9141 and replacement of the existing 8-inch cast iron pipe with 1,800 linear feet of a dual 12-inch HDPE DR-9 pipe crossing underneath the Biscayne Bay. DMSI served as the Contractor for this Project.

One of the force mains served as the future connection for the Southwest Corner Commercial Development. The dual HDPE alignment that crossed the waterway between Dodge Island and the mainland were designed to be south of the Bascule Bridge below the Biscayne Bay Bottom using Horizontal Directional Drilling (HDD) method of construction. The remaining portions of the replacement force main along Dodge Island and the mainland were designed using a combination of open-cut and trenchless methods of construction. This project also entailed construction around a large mix of existing utilities within a small and busy corridor (Between the American Airlines Arena and Bayside Marketplace).

Principal Elements/Special Features:

- Horizontal Directional Drilling (HDD)
- Dual Crossing Under Biscayne Bay Bottom
- Compound Curve Dual Force Main using dual 12-inch HDPE DR-9

Team Member

DAVID MANCINI & SONS, INC.

wsp

Dates of Service

2019

Project Status

This project is complete

Project Budget

Original Budget: $2,840,000
Final Cost: $2,900,000

Client / Point of Contact Familiar with Project

Miami-Dade County PortMiami – Capital Development
Victor Gutierrez, PE
1015 North America Way, 2nd Floor Miami, Florida 33132
(P) (305) 347-4802
(E) Victor.Guiterrez@miamidade.gov

Key Personnel on this Similar Project & B-4

David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita
Werner Reinefeld, PE, ENV SP (WSP)
Ronald Fields, PE (WSP)

The DBF shall provide a maximum of seven (7) resumes of the key staff to be assigned to perform the Work. The resumes provided shall identify the Project Manager, Design Manager, DBF or General Superintendent, Project Quality Control Manager, Scheduler/Project Controls Specialist, Project Health and Safety Manager. These Primary positions shall only serve in one (1) role.

- *Provide an organization chart for proposed Team Member key personnel staff, including subconsultants and subcontractors.*

F. KEY PERSONNEL

For this project, DMSI is proposing the same Contractor, Engineer of Record, Superintendent, and Key Personnel that supported the Port of Miami Project. Please refer to Section 4.2.3, page 40 for Design and Construction Team Key Personnel.

David Mancini, Sr., CUC

PROJECT MANAGER

David Mancini has more than 36 years of construction experience from Michigan to Florida. David Mancini has built David Mancini & Sons, Inc. (DMSI) into the premier underground civil contractor in South Florida. David served as President and Qualifier for his father, Richard Mancini, at Ric-Man International, Inc. from 1985- 2010. Since incorporating David Mancini & Sons, Inc. in 2010, his"hands-on" abilities and vast pool of knowledge have enabled DMSI to become the leader in large diameter pipeline construction. Serving as Design-Build Project Manager, David Mancini has successfully completed a long list of projects within an urban environment throughout South Florida that include the installation of transmission water mains (PCCP & DIP), transmission force mains (PCCP & DIP), sanitary sewers, storm sewers, pump stations, jack and bores, micro tunnels, directional drills, roadways, sub-aqueous crossings, and neighborhood improvement projects over the past three decades.

FIRM

David Mancini and Sons, Inc.

YEARS OF EXPERIENCE

36

PROFESSIONAL REGISTRATIONS

State of Florida
Underground Utility License
No. CUC0442220

Broward County License:
#00-1650-W

REPRESENTATIVE PROJECT EXPERIENCE

42-Inch Dip Water Main & 10-Inch Force Main Installation Between (US-1/5th St) to the Port of Miami and PS 9141 Replacement: President/Manager/Qualifier for the installation of approximately 9,740 linear feet of 42-inch ductile iron pipe and fittings, valves, 4,000 linear feet of 30-inch water main HDPE horizontal directional drilling water main and 4,000 linear feet of 12-inch force main HDPE subaqueous channel crossing along Biscayne Bay from Bayside to Port of Miami.

Design-Build 54-Inch Redundant Force Main at Miami Beach: President/Manager/Qualifier for the installation of approximately 4,000 linear feet of 54-inch HDPE pipe via horizontal directional drilling, fittings, and valves along Euclid Avenue from 11 St to Washington Avenue.

48-Inch PCCP Sewer Along North Miami Avenue: President/Manager/ This project was done via design-build method and it was to provide engineering, design, survey, technical specifications, permitting and inspection to support the construction, installation, testing and commissioning activities associated with the construction of 13,000 linear feet of 48-inch PCCP sewer, 12-inch and 16-inch water mains and 24-inch pipe for storm water drainage.

48-Inch Force Main (Broward CW&WWD) Broward County, Florida: Design-Build Manager for over 5,000 feet of 48-inch force main within the FDOT Turnpike right-of-way, completed in 8 months including

design, permits and construction. The new pipeline was constructed alongside a canal bank and residential neighborhood and included a subaqueous crossing.

DERM01-WASD-NLE-WEST 54-Inch Force Main, Miami- Dade County: Design-Build Manager for a project consisting of 9,240 linear feet of 54-inch PCCP force main complete with restoration, infrastructure and beautification improvements along 57th Avenue and the Opa-locka Airport Property. This project also included a 25-foot-deep subaqueous bypass of existing 48-inch force main and open cut of existing state road.

Design-Build Line Stops & Bypass on 48-Inch PCCP Force Main Crossing Oleta River at Biscayne Boulevard and NE 163 Street: President/Manager/Qualifier for the installation of approximately 800 linear feet of 42-inch HDPE pipe via horizontal directional drilling, and 1,000 linear feet 0f 42-inch open cut.

MDWASD Water Main and Force Main Relocation SW 8th Street and 132nd Avenue: President/Manager/Qualifier for installation of 30 inch water main and 24-inch force main.

MDWASD Ludlam Canal Water Control Structure: President/Manager/Qualifier for installation of 12 LF of galvanized steel culvert.

MDWASD Emergency Repair of Flagler Interceptor: President/Manager/Qualifier for installation of 1,400 LF of 54-inch PCCP force main.

MDWASD Hialeah West 8th Avenue Emergency Repair: President/Manager/Qualifier for installation of 48-inch pipe in West 8th Avenue.

MDWASD PS 2 and Central District WWTP Interconnection: President/Manager/Qualifier for installation of 150 LF of 120-inch PCCP force main including shutdown of existing 72-inch PCCP force main and bypass, removal of existing force main, and connection to 120-inch PCCP force main.

MDWASD NW 7th Avenue, NW 113th Street, NW 135th Street 20-Inch Water Main: President/Manager/Qualifier for installation 8,257 LF of 8- to 24-inch water main.

MDWASD Force Main Installation SL 1022-A SW 352nd Street: President/Manager/Qualifier for installation of 8-inch pipe.

MDWASD Force Main Installation CL-7A: President/Manager/Qualifier for installation of 12-inch force main.

MDWASD Sanitary Restoration Program C7-F Contract S-319F: President/Manager/Qualifier for installation of 8-inch pipe.

Resumes

FIRM

David Mancini and Sons, Inc.

YEARS OF EXPERIENCE

16

EDUCATION

MBA, Specializing in International Finance

CERTIFICATIONS

OSHA Construction Safety

OSHA Construction Health MOT Work Zone Traffic Control: Intermediate Level

David Mancini, Jr.

DESIGN MANAGER

David A. Mancini Jr. has over 10 years of construction experience in South Florida. As a field laborer, David began his career in construction at only 15 years old, working on various construction projects for several government agencies. As a Construction Manager of David Mancini and Sons, Inc., David administers all construction operations, residential public relations, and coordination in multiple construction projects. His specialization and experience is in neighborhood improvement projects, water main replacements, private property water service installations, and roadway restoration. His management practice consists of a "first person on site and last person to leave" attitude. David's main priority in administering construction operations is limiting at all cost the impact construction operations may impose on the residents.

REPRESENTATIVE PROJECT EXPERIENCE

City of Fort Lauderdale Las Olas Boulevard Water and Force Main Intracoastal Waterway Crossings: construction manager for installation of a 20-inch water main and 16-inch subaqueous force main on the south side of Las Olas Boulevard Bridge to provide redundancy. The City selected the HDD method for construction of the proposed subaqueous crossings.

MDWASD N. Miami Avenue 48-Inch Force Main Design-Build: construction manager for installation of a 48-inch sewer force main on NE 36th Street between Federal Highway and N. Miami Avenue, 12-inch and 16-inch water mains on N. Miami Avenue between NW 20th and 29th streets, and 1,000 linear feet of 24-inch storm drain.

City of Miami Replacement of Existing 54-Inch Sanitary Sewer Force Main from Central District WWTP to Fisher Island, Under Norris Cut Channel, Miami, Florida: construction manager for design-build replacement of the existing 54-inch force main from Virginia Key Central District Wastewater Treatment Plant (WWTP) under Biscayne Bay Norris Cut to Fisher Island, including planning, engineering, design, permitting, procurement, construction/installation, testing, and startup of a new 60-inch replacement force main. The scope includes approximately 5,200 linear feet of tunnel boring with precast segmental liners capable of accommodating a 60-inch internal diameter carrier pipeline, approximately 2,500 linear feet of opencut construction for 60-inch diameter pipe, and approximately 1,000 linear feet of HDD to install 8-inch pipe from Fisher Island (PS 170) to the tunnel. The existing main will be cut, flushed, plugged, and abandoned for future rehabilitation.

Design-Build Installation of New Redundant 54-Inch Bypass Sewer Force Main Line, Fort Lauderdale, Florida: construction manager forthe emergency design-build installation of a 54-inch bypass sewer force main line. The Fort Lauderdale Emergency Design-Build consisted of 15,000 LF of

54” HDPE Force Main. Roughly 11,200 LF of the installation is being completed by Horizontal Directional Drill, with 3,800 LF of 54” HDPE Open Cut, along with multiple pump station connections. This Project also includes two Sub-Aqueous crossings, with one being directionally drilled and one being performed open cut.

Emergency Replacement of 48-inch Force Main Crossing the Oleta River at NE 163rd Street, Miami Beach, Florida: construction manager for the construction of a 48-inch force main by directional drill, open cut, and slip-lining methods. Existing linestop and 24-inch bypass was installed as part of the scope of work of RPQ PO231 by DMSI. The work zone was restored by completing pavement resurfacing and bringing pavement marketing and signalization up to specifications.

63rd Street Water Main Replacement, Miami Beach, Florida: construction manager for this design-build project which consisted of the installation of 1,000 linear feet of HDPE water main for the City of Miami Beach. This section of 1,000 linear feet was installed via horizontal directional drilling (HDD). In addition, project included 250 linear feet of an aerial crossing mounted to the existing bridge, and 1,000 linear feet of 20-inch ductile iron pipe via open cut. Tie-ins to the existing mains were performed, while keeping the system in operation. This Project was performed within FDOT right-of-way and involved extensive coordination for vehicular traffic since it is a main thru way for beach access. The HDD installation was performed in the Intracoastal Waterway between Collins Avenue to Allison Drive. All water main improvements were fully complete prior to decommissioning of the existing system. Extensive public outreach and coordination was performed to maintain all operations.

Rio Vista Emergency 54-inch Force Main Replacement Design-Build, Fort Lauderdale, Florida: construction manager. The methods of installation open cut along SE 9th Ave and SE 12 ST and directional drilling for the Tarpon River crossing. The final alignments and lengths were determined by existing site conditions. The Record Drawings of a Fixed Bridge were unavailable with unknown Pile Depths. Our Design Build team was successful in delivering this emergency HDD with compound turns to circumvent the bridge piles and kept the 54-inch hdpe within the 8’ right of way, just outside the bridge piles. Such included an “Intersect HDD Technique” where two different pilots were utilized and intersected in the middle of the bore-path. Such ensured a successful installation.

Richard Mancini

GENERAL SUPERINTENDENT

Richard Mancini, Superintendent for David Mancini and Sons, Inc. has always been fascinated with the underground industry since a young age. When he was young, he would spend his days after school playing and pretend driving all the equipment in our storage yard, and starting around 10 years old, David SR, would bring him to jobsites on the weekend to learn how to run equipment. At 15 years old, he got his first summertime job cleaning the shop and doing light mechanic work. Fast forward to present day, Richie is fully immersed in the day to day business of running large diameter pipeline projects for just shy of 4 years.

FIRM

David Mancini and Sons, Inc.

YEARS OF EXPERIENCE

9

EDUCATION

Master of Business and Administration Specialization in International Finance

TRAINING

OSHA Certification - Construction Safety and Health MOT Work Zone Traffic Control: Intermediate Level

REPRESENTATIVE PROJECT EXPERIENCE

Area N, 48-Inch Transmission Water Main, Miami, Florida: 48-inch transmission water main, 15,000 feet. Oversee open cut installation, subaqueous crossing (100-foot wide canal, 25-feet underwater); crossing FDOT roadways SR-986 + SR-94, which SR-94 included a 1,200-foot run. Developed MOT Plans, Coordinated with stakeholders in the neighborhood, kept up to four crews busy daily, and designed alternate routes when conflicts emerged.

Indian Creek, 72-Inch Storm Drainage, Miami Beach, Florida: 72-inch storm drainage 1,500-feet in Miami Beach. Responsibilities included overseeing day to day operations, managing three to five in-house DMSI crews, while overseeing multiple subcontractors; delivering fast tracked completion dates, installation of 72-inch drainage, a large pump station consisting of over five 100,000 lb structures, smaller diameter drainage structures and piping, and rebuilding a new roadway at a higher elevation.

Design-Build Installation of New Redundant 54-Inch Bypass Sewer Force Main Line, Fort Lauderdale, Florida: construction superintendent forthe emergency design-build installation of a 54-inch bypass sewer force main line. The Fort Lauderdale Emergency Design-Build consisted of 15,000 LF of 54" HDPE Force Main. Roughly 11,200 LF of the installation is being completed by Horizontal Directional Drill, with 3,800 LF of 54" HDPE Open Cut, along with multiple pump station connections. This Project also includes two Sub-Aqueous crossings, with one being directionally drilled and one being performed open cut.

63rd Street Water Main Replacement, Miami Beach, Florida: design-build project which consisted of the installation of 1,000 linear feet of HDPE water main installed via HDD. In addition, project included 250 linear feet of an aerial crossing mounted to the existing bridge, and 1,000 linear feet of 20-inch ductile iron pipe via open cut. Tie-ins to the existing mains were performed, while keeping the system in operation. The HDD installation was performed in the Intracoastal Waterway between Collins Avenue to Allison Drive. All water main improvements were fully complete prior to decommissioning of the existing system.

Fabio Angarita

PROJECT QUALITY CONTROL MANAGER

FIRM

David Mancini & Sons, Inc.

YEARS OF EXPERIENCE

10

EDUCATION

Civil Engineering Coursework

Fabio Angarita has successfully completed a over $60 million of municipal projects in highly urban environments throughout Miami-Dade County, Florida including storm sewer projects, storm sewer pump stations, force mains (PCCP & DIP), sub-aqueous crossings, roadway, and neighborhood improvement projects over the past decade.

REPRESENTATIVE PROJECT EXPERIENCE

MDWASD Installation of 42-Inch DIP Water Main and 10-Inch Force Main to Port of Miami and PS 9141 Replacement: Safety Manager for the Miami-Dade Water and Sewer Department (MDWASD) installation of 9,740 linear feet of 42-inch DIP and fittings; 42-inch mechanical joint resilient seated wedge gate valve; Venturi meter (including valve and fittings, manhole frame and cover, valve box quick disconnect, and concrete support slab); 260 linear feet of microtunneling under existing FEC railroad right-of-way (including steel casing, drill shafts, and pro-posed area of construction); 4,600 linear feet of twin 30-inch HDPE HDD subaqueous channel crossing along Biscayne Bay from Bayside to Port of Miami; replacement of Pump Station (PS) 9141 (including existing 8-inch cast iron pipe (CIP) force main connecting to wastewater collection and transmission system); and installation of approximately 5,000 linear feet of 10-inch replacement force main pipeline between PS 9141 and a point of connection on the mainland (City of Miami).

Miami-Dade County Public Works Seaboard Acres Pump Station Retrofit and Replacement: manager complete demolition and reconstruction the existing Seaboard Acres Storm Water Pump Station in northeast Miami-Dade County (mostly residential with some commercial development) at the intersection of NE 131st Street and Memorial Highway. The reconstructed pump station has a pumping capacity of 40 CFS achieved using two electronic submersible pumps of 20 CFS each. Emergency diesel pumps backup gen-erator and telemetry system for remote monitoring and control of the pumps and generator.

City of Miami Beach 54-Inch Redundant Sewer Force Main: QA/QC manager for installation of approximately 5,300 linear feet of 54-inch force main (from the existing 48-inch plug valve at the intersection of Washington Avenue and Commerce Street, extending northerly in Washington Avenue right-of-way to the intersection of Euclid Avenue); approximately 4,200 linear feet of HDD along the urban corridor be-tween Euclid and Washington avenues; approximately 1,000 linear feet of open-cut pipe installation along 11th Street and in Washington Avenue; and final connections with the 30-inch discharge PS No.1 and existing 48-inch plug valve in the intersection of Commerce Street and Washington Avenue. The

54-inch pipe replaces the existing force main sanitary line, constructed in 1977, the sole means of wastewater conveyance through Miami Beach.

City of Miami Beach Crespi Boulevard Water Main, Storm Sewer Collection System, and Storm Sewer Pump Station: QA/QC manager for installation of water main and storm sewer along Crespi Boulevard between 85 and 79th streets. The scope includes more than 2,500 linear feet of water main, 2,800 linear feet of storm sewer collection system, installation of pollution control structure and storm sewer pump station, and construction of seawall and landscaping adjacent to a residential neighborhood.

City of Sweetwater Storm Sewer Improvements Phase IIB: QA/QC Manager for installation of approximately 6,000 linear feet of storm sewer collection system and two storm sewer pump stations with capacity of 5,500 GPM adjacent to a residential neighborhood.

MDWASD NW 57th Avenue 54-Inch Water Main (FDOT T6278): QA/QC manager for installation of a 54-inch water main subaqueous crossing along NW 57th Avenue between W46th and W 53rd streets.

FDOT Push-Button Projects: QA/QC manager for several drainage and roadway projects in FDOT District 6, including an emergency drainage project in downtown Miami and US 1, drainage improvements in Bakers Haulover Inlet Bridge, and drainage improvements on 163rd Street.

MDWASD Opa Locka Boulevard Plug Valves: QA/QC manager for installation of 48-inch plug valves throughout the existing PCCP force main along Opa Locka Boulevard. The project included six plug valves, 12 line stops, and extensive MOT, shoring, and dewatering.

City of Miami San Marco Island Drainage Improvements: QA/QC manager for preinstallation of storm sewer collection system and a pump station in San Marco Island, including approximately 2,000 linear feet of storm sewer collection system, four deep wells, emergency bypass, and a storm sewer pump station.

City of Sweetwater Storm Sewer Improvements Phase IV: QA/QC manager for installation of about 8,000 linear feet of storm sewer collection system and two storm sewer pump stations with capacity of 5,500 GPM adjacent to a residential neighborhood.

City of Miami Fairlawn Storm Sewer Phase III: QA/QC manager for installation of 10,000 linear feet of exfiltration storm sewer system adjacent to a residential neighborhood.

City of Hialeah/FDOT E 4th Avenue Improvements: QA/QC Manager for installation of torm sewer exfiltration system and full roadway reconstruction along E 4th Avenue between 25th and 32nd streets.

Town of Golden Beach Capital Improvements Project: QA/QC manager for installation of new water main along Golden Beach Drive and North, Center, and South Island drives; installation of water-tight storm sewer collection system and two storm sewer pump stations; utility conversions for ATT, Atlantic Broadband, and FPL; and full roadway reconstruction, landscaping, and beautification.

City of Sunny Isles Central Island Drainage Improvements: QA/QC manager for installation of water-tight storm sewer collection system discharging to storm drainage wells and improvements to Senator Gwen Margolis Park. The project included the installation or construction of more than 10,000 linear feet of storm sewer collection system, 22 deep wells, a football field, landscaping, and beautification.

Evelio Gibert

SCHEDULER / PROJECT CONTROLS SPECIALIST

Evelio Gibert has over 8 years of construction experience in South Florida. As a field laborer, Evelio began his career in construction 2 years after graduating from High School and joining Miami Dade College for his business administration career. Evelio has been working on various construction projects for several government agencies including City of Hollywood, City of Fort Lauderdale, City of Miami, City of Coral Gables and Miami Dade Water & Sewer & Miami Dade Department of Public Works. As a Project Manager of David Mancini and Sons, Inc., Evelio administers all construction operations as a project manager, residential public relations, and coordination in multiple construction projects. His specialization and experience is in neighborhood improvement projects, water main replacements, private property water service installations, roadway restoration, parks construction and seawalls, culvert installations, backflow tidal valves at canal and bays. Always making sure there is a safe environment during construction, a manageable MOT minimizing impacts to traffic as well as working diligently to finish any task on schedule.

FIRM

David Mancini & Sons, Inc.

YEARS OF EXPERIENCE

8

EDUCATION

Business Administration

Advanced Primavera P6 Scheduling Software

TRAINING

OSHA Construction Safety

Radiation Materials (RSO)

REPRESENTATIVE PROJECT EXPERIENCE

City of Hollywood Water Main Replacement, Hollywood, Florida: Project manager for installation of more than 5,200 linear feet of16-inch C905 PVC transmission water main; more than 60,000 linear feet of four, six- and eight-inch C900 PVC; and associated DIP distribution water mains, fittings, valves, fire hydrants, and interconnections. The project also included more than 900 water service connections at existing meters, 400 water meter relocations, and water service installations on private property. Activities included emergency response, temporary traffic control, clearing and grubbing, tree relocation, locating and protecting existing utilities, trench excavation, shoring, density and pressure testing, pipe disinfection, pavement restoration, water main abandonment, and coordination with HOA and City, County, and FDOT Utility Staff.

MDWASD N. Miami Avenue 48-Inch Force Main Design-Build: Project manager for installation of a 48-inch sewer force main on NE 36th Street between Federal Highway and N. Miami Avenue, 12-inch and 16- inch water mains on N. Miami Avenue between NW 20th and 29th streets, and 1,000 linear feet of 24-inch storm drain.

CITY OF MIAMI City Wide Tidal Valves Installation: Construction Manager for the installation of more than 100+ tidal valves to prevent flooding during King Tides all throughout the City of Miami. Valve installed ranged from 8” to 54”. The project also included assessing flooding areas and designing the location to install the tidal valve. In addition, DMSI redesigned the flows of the Brickell Pump Station system to eliminate any potential flooding at Brickell Ave during normal operations of the pump station.

City of Miami Alice Wainwright Park and Spring Garden Park: Construction Manager for more than 1500 LF of Sheet Pile Installation with concrete cap. Including bike paths, new landscaping with large trees, and lighting.

Miami Dade County Department of Transportation Installation of 120" Culvert: Construction Manager for the Emergency Repair of approximately 140FT of 120" Culvert canal continuance at one of the busiest intersections in Miami. The project also consisted of designing the MOT to facilitate the installation of the culvert including but not limited to the coordination with residents and the department of traffic signals. This project was substantially completed 2 months earlier than anticipated by DTPW resulting in the maximum rating by DTPW

FIRM

David Mancini and Sons, Inc.

YEARS OF EXPERIENCE

16

EDUCATION

AS, Business Administration

AS, Civil Engineering

CERTIFICATIONS

OSHA 30 Certification

Alejandro Mejia

PROJECT HEALTH AND SAFETY MANAGER

Alejandro Mejia has over 16 years of experience overseeing municipal projects in highly urban environments, airports throughout Dade and Broward Counties, Florida, including storm sewer projects, storm sewer pump stations, sanitary sewer, force mains, water mains, roadway, and neighborhood improvement projects over the past decade.

REPRESENTATIVE PROJECT EXPERIENCE

Terminal 4 Extension, Installation of Multiple Underground Utilities at Fort Lauderdale International Airport, Broward County, Florida: safety manager for furnishing and installing approximately 1,000 linear feet in storm sewer pipes ranging from 30-inch to 96-inch; 2,000 linear feet in water mains ranging from eight-inch to 12- inch ductile iron pipe and fittings; 1,500 linear feet in eight-inch sanitary sewer mains including laterals and new sanitary lift station. In addition to this, excavation of cast in place concrete piles and preparation of building pad for new Terminal 4.

MDWASD Installation of 42-Inch Dip Water Main and 10-Inch Force Main to Port of Miami and PS 9141 Replacement, Miami-Dade County, Florida: safety manager for the Miami-Dade Water and Sewer Department (MDWASD) installation of 9,740 linear feet of 42-inch DIP and fittings; 42-inch mechanical joint resilient seated wedge gate valve; Venturi meter (including valve and fittings, manhole frame and cover, valve box quick disconnect, and concrete support slab); 260 linear feet of micro tunneling under existing FEC railroad right-of-way (including steel casing, drill shafts, and proposed area of construction); 4,600 linear feet of twin 30-inch HDPE HDD subaqueous channel crossing along Biscayne Bay from Bayside to Port of Miami; replacement of Pump Station (PS) 9141 (including existing eight-inch cast iron pipe (CIP) force main connecting to wastewater collection and transmission system); and installation of approximately 5,000 linear feet of 10-inch replacement force main pipeline between PS 9141 and a point of connection on the mainland (City of Miami).

MDC Emergency Repairs to 72-Inch and 54-Inch PCCP Force Main at Biscayne Blvd & NW 156 Street, Miami-Dade County, Florida: safety manager for an emergency contractor for removal60 linear feet of existing PCCP and replace with 60 linear feet section of 42-inch DIP which was located in the center of SW 2nd Ave. This entailed extensive MOT, shoring and dewatering.

MDC Installation of 54-Inch DIP Force Main at Opa Locka Executive Airport, Miami-Dade County, Florida: safety manager for furnishing and installing approximately 10,900 linear feet of 54- inch ductile iron pipe and

fittings; 54-inch mechanical joint resilient seated wedge plug valves; connections to existing 48-inch force main and connection to existing 54-inch PCCP, including valves and fittings, access manholes installation.

MDC Installation of 54-Inch Bar Wrapped Concrete Cylinder Pipe Water Main at Red Road IV FDOT T-6345, Miami-Dade County, Florida: safety manager of furnishing and installing approximately 4,300 linear feet of 54-inch bar wrapped concrete pipe and fittings; 54-inch mechanical butterfly valves; connections to existing 54-inch water main and connection to existing 36-inch water main, including valves and fittings, access manholes installation.

Alejandra Suarez, CGC

PUBLIC INFORMATION OFFICER

Ms. Suarez has over 9 years of roadway, infrastructure, underground utility construction and design experience. More recently she has been responsible for the coordination of large diameter pipe in main thoroughfare roads. Her proactive and hands-on approach toward communicating with stakeholders and clients has helped DMSI improve relationships with the different municipalities she has worked with. Ms. Suarez brings knowledge, leadership and a solid understanding of costs, planning, scheduling and supervision. Offering strong efforts to ensure all projects are accomplished within time.

FIRM

David Mancini & Sons, Inc.

YEARS OF EXPERIENCE

9

EDUCATION

F.A.U. – Bachelor In Public Management (Currently)

Broward College – Architecture Major Associate Degree

Broward College – Certified Bldg. Construction Technologies

REGISTRATIONS

State of Florida – Certified General Contractor No. Cgc1528370.

FDOT - Advanced Temporary Traffic Mot Certified.

OSHA 10 Hour Safety, CPR And AED Certified

State of Florida – Public Notary

REPRESENTATIVE PROJECT EXPERIENCE

Weston Force Main and Drainage Improvements: project manager/ construction coordinator for the the installation of 8,000 feet of 16- inch DIP and 8,800 feet of up to 72-inch Pipe, including several culvert crossing main City thoroughfare roads, requiring lane shifting, road closures and many detours. Northwest 5th Street to Peters Road. This project required FDOT lane closure coordination.

Section 5 Project 48-Inch PCCP - NW 72nd Ave from NW 8th St thru NW 12 Street: Jr. Project Manager/ onstruction Coordinator for a 48-inch PCCP including restrained pipe, fittings, closures and connections to existing 48-inch PCCP. The path of the pipe was on NW 72nd Ave a 6-lane road with extreme heavy traffic. Several businesses existed along the path requiring difficult coordination and access at all times. The worked involved; critical demolition of existing PCCP, removing sewage from existing pipe, sheeting and shoring, extensive dewatering, deep excavations, installation of access manholes and air releases, dealing with heavy traffic, working on weekends, nights and multiple crews. Difficult utility support and crossings. The project had tight time restraints due to existing lines requiring minimal shut down period. We succeeded in completing the installation and connection within the scheduled time frame.

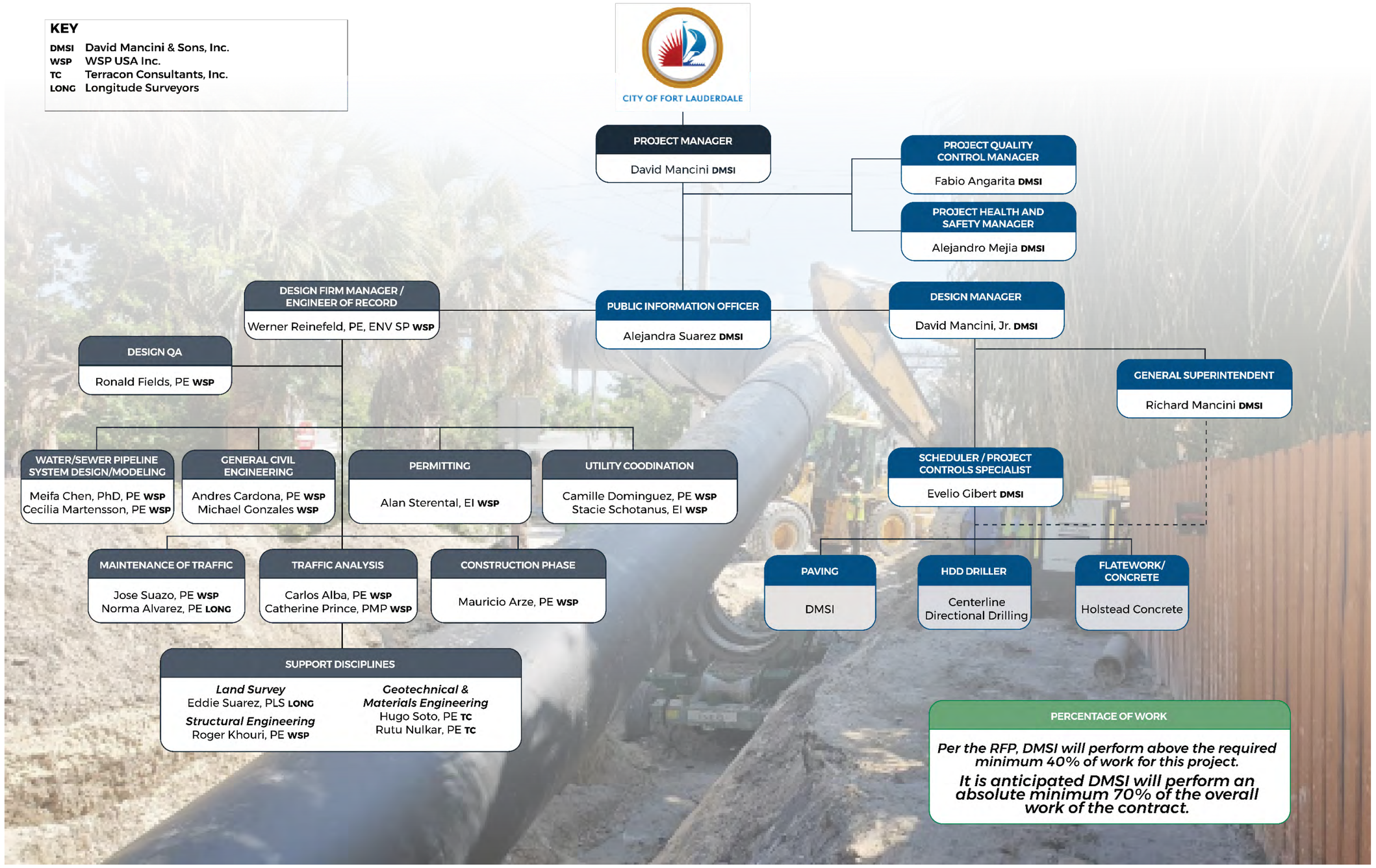
Northeast 38th Street Reconstruction, Orckland park, Florida: Jr. Project Manager/ Construction Coordinator. As part of a FDOT funded project, the Prime Contractor performed drainage, sewer, and roadway infrastructure improvements to the City of Oakland Park's Northeast 38th St. from Northeast 11th Ave. to North Andrews Ave. Drainage construction included the installation of 1,614 feet of 18 to 48-inch RCP and 60 drainage structures. Utility construction included the demolition or Abandonment of existing sanitary utilities and the installation of 450 feet of 6 to 10-inch PVC sewer main, 11 laterals, and 4 manholes; as well as 12,500 feet of telecom and electrical conduit. Roadway and landscape improvements included 17,800 S.Y. of road construction, 8,750 S.Y. of sidewalk & driveway construction, 1,300 S.Y. of decorative paver work, the planting or relocating of over 80 trees, as well as new landscape plantings and new irrigation.

1B2 Water Main Improvements, Broward County, Florida: Jr. Project Manager/ Construction Coordinator for a project that consisted of water main and roadway infrastructure improvements along Cypress Creek Road from I-95 to Dixie Highway, and on Dixie Highway to Northeast 56th Street. Water construction consisted of installing 8,500 feet of 6 to 16-inch DIP water main with 13 wet taps, 11 fire hydrants, and 18 new water services. Roadway construction included 12,000 square yards of asphalt road & concrete sidewalk work as well as 1,000 square yards of swales restoration. This project required FDOT and Broward County lane closure coordination from I-95 off-ramp to Dixie Highway.

Garden Acres Sanitary System- Design Build Owner: City of Oakland Park, Florida: Jr. Project Manager/ Construction Coordinator Provided all design, materials, equipment, and performed installation of 800 feet of 6 to 8-inch DIP water main, 2,500 feet of 2-inch HDPE sanitary force main, and a 1,700 foot 4 to 6-inch PVC gravity sewer collection system. The sewer system was equipped with 12 grinder pumps and service connections for individual properties in the project area that connects to the City's existing sewer system. As part of our scope, the prime contractor was also responsible for the development of a cost-effective method for providing power to grinder pumps, as well as a methodology for payment of electrical power costs.

Oakland Park BP3 Water Main, City of Oakland Park, Florida: Jr. Project Manager/ Construction Coordinator for a project that consisted of water, drainage, and road infrastructure improvements to 6 disconnected sites near Oakland Park Boulevard between NW 31st Ave. and NW 18th Ave. Water construction consisted of installing 8,200 feet of 6 to 8-inch ductile iron pipe with 62 services, and 1,200 feet of 6-inch PVC directional drill. Drainage construction consisted of installing 3,900 feet of 15-inch RCP and 37 drainage structures. Road construction consisted 34,000 square yards of asphalt, concrete, and sidewalk reconstruction.

i. Organization Chart



The amount of work that is sublet by the DBF, including Joint Ventures, shall be limited by the condition that the DBF, or in the case of a Joint Ventures, shall with his own organization, perform at least forty percent (40%) of the total dollar amount of the Work to be performed under the Agreement.

G. CONCERNING SUBCONSULTANTS, SUPPLIERS AND OTHERS

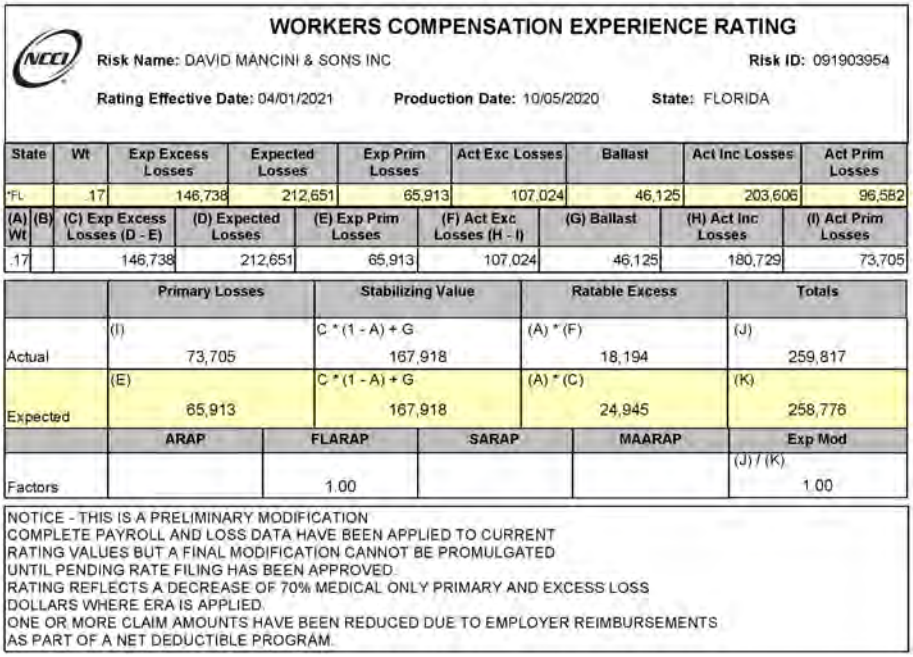
DMSI will exceed the 40% dollar amount in-house work requirement of the RFP. We take pride in performing most services in-house. These services include:

1. Public Outreach
2. Soil Borings review and identification of prime layer for HDD
3. HDD Fusing and String Out Design Layout
4. HDD Pit(s) design and construction.
5. Open-Cut excavations, Shoring, and Connections to existing System.
6. MOT design and impliment with any changes on-the-fly as needed.
7. Trench Pavement
8. Vactor Truck Services

Most recent Experience Modification Rate (EMR) (provided on letterhead from current insurance provider) not greater than 1.0; Five-year average OSHA Total Recordable Incident Rates (TRIR) of less than 3.4; Five-year average OSHA Days Away, Restricted or Transferred (DART) Rate of less than 2.1; and Five-year average OSHA Days Away from Work Case (DAWC) rate of less than 1.0.

H. SAFETY

DMSI's EMR is provided below.



WORKERS COMPENSATION EXPERIENCE RATING

Risk Name: DAVID MANCINI & SONS INC **Risk ID:** 091903954

Rating Effective Date: 04/01/2021 **Production Date:** 10/05/2020 **State:** FLORIDA

State	Wt	Exp Excess Losses	Expected Losses	Exp Prim Losses	Act Exc Losses	Ballast	Act Inc Losses	Act Prim Losses
*FL	.17	146,738	212,651	65,913	107,024	46,125	203,606	96,582

(A) Wt	(B)	(C) Exp Excess Losses (D - E)	(D) Expected Losses	(E) Exp Prim Losses	(F) Act Exc Losses (H - I)	(G) Ballast	(H) Act Inc Losses	(I) Act Prim Losses
.17		146,738	212,651	65,913	107,024	46,125	180,729	73,705

	Primary Losses	Stabilizing Value	Ratable Excess	Totals
Actual	(I) 73,705	C * (1 - A) + G 167,918	(A) * (F) 18,194	(J) 259,817
Expected	(E) 65,913	C * (1 - A) + G 167,918	(A) * (C) 24,945	(K) 258,776

	ARAP	FLARAP	SARAP	MAARAP	Exp Mod
Factors		1.00			(J) / (K) 1.00

NOTICE - THIS IS A PRELIMINARY MODIFICATION.
COMPLETE PAYROLL AND LOSS DATA HAVE BEEN APPLIED TO CURRENT RATING VALUES BUT A FINAL MODIFICATION CANNOT BE PROMULGATED UNTIL PENDING RATE FILING HAS BEEN APPROVED.
RATING REFLECTS A DECREASE OF 70% MEDICAL ONLY PRIMARY AND EXCESS LOSS DOLLARS WHERE ERA IS APPLIED.
ONE OR MORE CLAIM AMOUNTS HAVE BEEN REDUCED DUE TO EMPLOYER REIMBURSEMENTS AS PART OF A NET DEDUCTIBLE PROGRAM.

Page 1 of 3

WORKERS COMPENSATION EXPERIENCE RATING

Risk Name: DAVID MANCINI & SONS INC **Risk ID:** 091903954

Rating Effective Date: 04/01/2021 **Production Date:** 10/05/2020 **State:** FLORIDA

09-FLORIDA **Firm ID:** **Firm Name:** DAVID MANCINI & SONS INC

Carrier: 11525 **Policy No.** WC207674406 **Eff Date:** 04/01/2017 **Exp Date:** 04/01/2018

Code	ELR	D-Ratio	Payroll	Expected Losses	Exp Prim Losses	Claim Data	IJ	OF	Act Inc Losses	Act Prim Losses
5606	.53	.31	349,955	1,855	575	2103382	05	F	45,965	17,500
6306	2.65	.31	319,225	8,459	2,622	NO. 4	06	*	1,812	1,812
6319	2.02	.31	2,662,128	53,775	16,670	2111301	06	F	13,985	13,985
8227	2.26	.29	292,913	6,620	1,920	2101584	09	F	9,691	9,691
8810	.08	.42	1,138,019	910	382					
9765	WORKPLACE SAFETY (			-1,432	-443					
9807	EMPLOYERS LIABILIT			0	0					
9841	DRUG-FREE WORKPLAC			-3,509	-1,086					
Policy Total:			**4,762,240**	**Subject Premium:**	**239,436**	**Total Act Inc Losses:**			**71,453**	

09-FLORIDA **Firm ID:** **Firm Name:** DAVID MANCINI & SONS INC

Carrier: 34169 **Policy No.** 19645742 **Eff Date:** 04/01/2018 **Exp Date:** 04/01/2019

Code	ELR	D-Ratio	Payroll	Expected Losses	Exp Prim Losses	Claim Data	IJ	OF	Act Inc Losses	Act Prim Losses
0930	WAIVER OF SUBROGAT			0	0	183175	05	F	15,454	15,454
5606	.53	.31	561,500	2,976	923	155992	06	F	7,032	7,032
6306	2.65	.31	566,405	15,010	4,653	166810	09	O	96,059	17,500
6319	2.02	.31	2,971,153	60,017	18,605					
8227	2.26	.29	194,627	4,399	1,276					
8810	.08	.42	1,126,470	901	378					
9765	WORKPLACE SAFETY (			-1,666	-517					
9807	EMPLOYERS LIABILIT			0	0					
9841	DRUG-FREE WORKPLAC			-4,082	-1,266					
Policy Total:			**5,420,155**	**Subject Premium:**	**263,244**	**Total Act Inc Losses:**			**118,545**	

* Total by Policy Year of all cases $2000 or less. D Disease Loss X Ex-Medical Coverage U USL&HW

C Catastrophic Loss E Employers Liability Loss # Limited Loss

WORKERS COMPENSATION EXPERIENCE RATING

Risk Name: DAVID MANCINI & SONS INC **Risk ID:** 091903954

Rating Effective Date: 04/01/2021 **Production Date:** 10/05/2020 **State:** FLORIDA

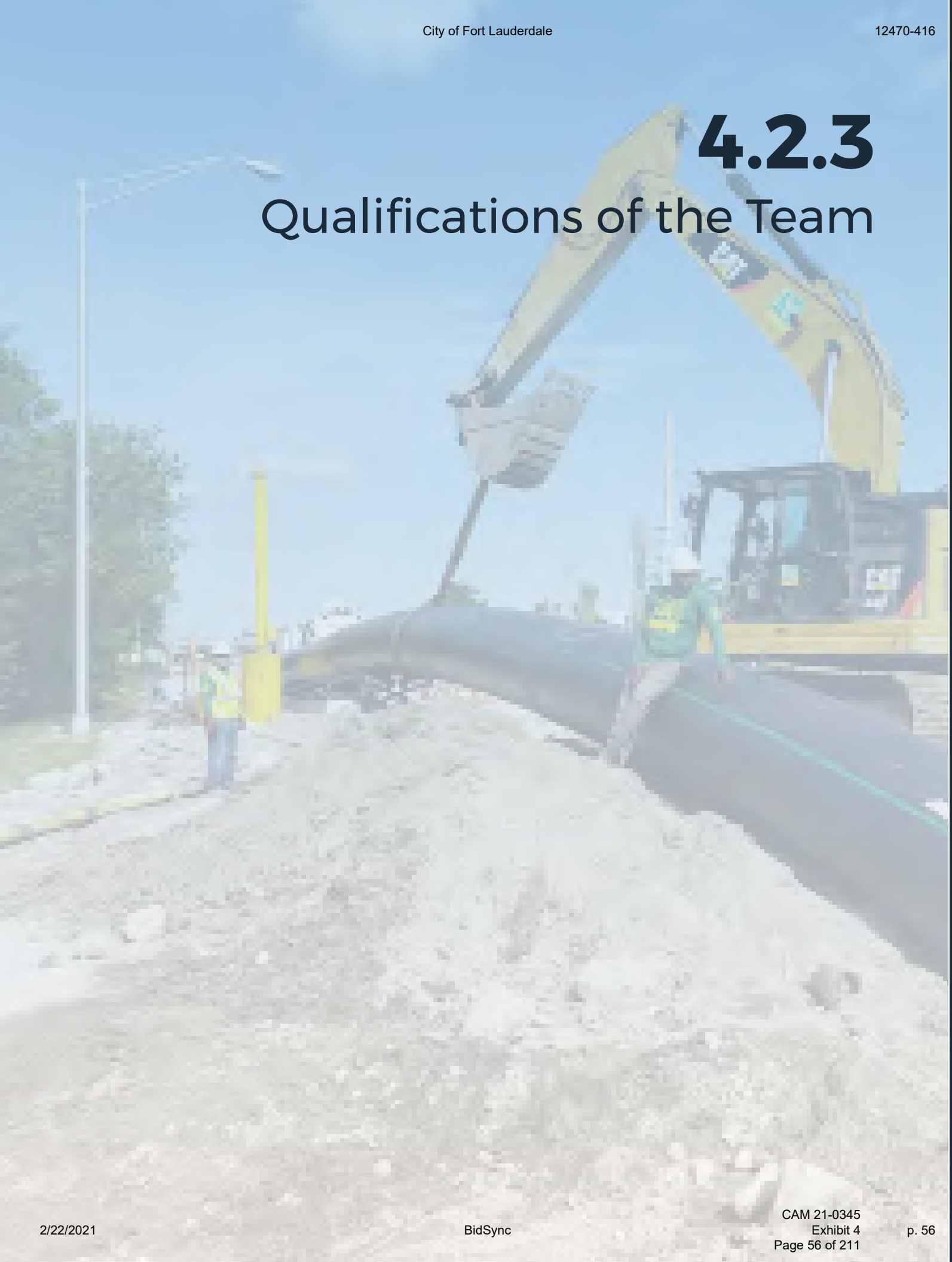
09-FLORIDA **Firm ID:** **Firm Name:** DAVID MANCINI & SONS INC

Carrier: 34169 **Policy No.** 19645742 **Eff Date:** 04/01/2019 **Exp Date:** 04/01/2020

Code	ELR	D-Ratio	Payroll	Expected Losses	Exp Prim Losses	Claim Data	IJ	OF	Act Inc Losses	Act Prim Losses
0930	WAIVER OF SUBROGAT			0	0	207862	06	F	9,854	9,854
5606	.53	.31	492,320	2,609	809	199551	09	F	3,754	3,754
6306	2.65	.31	621,005	16,457	5,102					
6319	2.02	.31	2,422,518	48,935	15,170					
8227	2.26	.29	201,491	4,554	1,321					
8810	.08	.42	1,166,908	934	392					
9765	WORKPLACE SAFETY (			-1,470	-456					
9807	EMPLOYERS LIABILIT			0	0					
9841	DRUG-FREE WORKPLAC			-3,601	-1,117					
Policy Total:			**4,904,242**	**Subject Premium:**	**193,988**	**Total Act Inc Losses:**			**13,608**	

* Total by Policy Year of all cases $2000 or less. D Disease Loss X Ex-Medical Coverage U USL&HW

C Catastrophic Loss E Employers Liability Loss # Limited Loss



4.2.3
Qualifications of the Team

4.2.3 QUALIFICATIONS OF THE TEAM

The DBF must identify all design and construction disciplines and specialty consultants that the DBF intends to employ in the design and construction of this Project.

A. Design and Construction Disciplines

DMSI is proposing the same Contractor, Engineer of Record, Superintendent, and Key Personnel that supported the Port of Miami Project. The Key Personnel requested in the RFP are all DMSI staff and provided in the table below with a listing of their qualifications. For our complete qualifications, please refer to our resumes in 4.2.2.

The table on the following page lists each proposed team member selected for this project and their qualifications. For complete qualifications of our team members, please refer to their resumes at the end of this section.

Key Personnel -DMSI Staff						
Name	Years Exp.	Title/Area of Responsibility	Firm/ Location	Education	Registration/ License	Other
David Mancini Sr.	32	**Project Manager**	DMSI/ Pompano Beach, Florida	Certified Underground Contractor: Florida (CUC0442220)	Competent Person Trained Trench Safety OSHA 30 Hour Construction Safety & Health	See resume in 4.2.2
David Mancini, Jr.	10	**Design Manager**	DMSI/ Pompano Beach, Florida	MBA, Specializing in International Finance	OSHA Construction Safety OSHA Construction Health MOT Work Zone Traffic Control: Intermediate Level	See resume in 4.2.2
Richard Mancini	9	**General Superintendent**	DMSI/ Pompano Beach, Florida	N/A	N/A	See resume in 4.2.2
Fabio Angarita	11	**Project Quality Control Manager**	DMSI/ Pompano Beach, Florida	Civil Engineering Coursework	N/A	See resume in 4.2.2
Evelio Gibert	8	**Scheduler / Project Controls Specialist**	DMSI/ Pompano Beach, Florida	Business Administration Advanced Primavera P6 Scheduling Software	OSHA Construction Safety Radiation Materials (RSO)	See resume in 4.2.2
Alejandro Mejia	16	**Health and Safety Manager**	DMSI/ Pompano Beach, Florida	AS, Business Administration; AS, Civil Engineering	N/A	See resume
Alejandra Suarez	9	**Public Information Officer**	DMSI/ Pompano Beach, Florida	BS, Public Management; AS, Architecture	Certified General Contractor, Florida (CGC 1528370); FDOT Advanced Temporary Traffic Control Certified; OSHA 10 Hour Certified	See Resume

Proposed Team Members						
Name	Years Exp.	Title/Area of Responsibility	Firm/ Location	Education	Registration/ License	Other
Werner Reinefeld, PE, ENV SP	34	Design Firm Manager / Engineer of Record	WSP/Miami, Florida	BS, Civil Engineering, Central University of Venezuela	Professional Engineer, FL (63042) Envision Sustainable Professional, ISI Certified Pipe Assessment User, National Association of Sewer Service Companies (NASSCO)	See resume
Ronald Fields, PE	39	Design QA	WSP/Miami, Florida	MS, Civil Engineering, University of Florida	Professional Engineer: Florida (32259); North Carolina (010445); Georgia (18652)	See resume
Catherine Prince, PMP	12	Traffic Analysis	WSP/Miami, Florida	Master of Architecture, University of Miami; Bachelor of Architecture, Center for Environmental Planning and Technology University	Project Management Professional (PMP), 2019; Greenroads Sustainable Transportation Professional (STP), 2019; Leadership in Energy and Environmental Design Accredited Professional (LEED AP), 2008	See resume
Alan Sterental, EI, ENV SP	15	Permitting	WSP/Miami, Florida	BS, Environmental Engineering, University of Miami	Engineering Intern: FL (1100023437) Environmental Sustainability Professional (ENV SP)	See resume
Eddie Suarez	32	Survey & SUE	Longitude/ Doral Florida	N/A	Professional Surveyor and Mapper: Florida	See resume
Rutu Nulkar, PE	14	Geotechnical Engineer	Terracon/Ft. Lauderdale, Florida	MS, Geotechnical Engineering, University of Florida BS, Civil Engineering, V.J.T.I. Matunga, Mumbai, India	Professional Engineer: Florida (70625)	See resume

Werner Reinefeld, PE, ENV SP

DESIGN MANAGER/ENGINEER OF RECORD

Werner Reinefeld has 34 years of experience in the fields of civil and infrastructure engineering, project management, design construction and land development. His experience includes work in the areas of water and wastewater facilities, sewer systems, stormwater and drainage infrastructure, hydrological and hydraulic systems and modeling, utility coordination, permitting, feasibility studies, oil-contaminated water, energy efficiency audits, earthworks, road systems and land development projects.

FIRM

WSP

YEARS OF EXPERIENCE

34

EDUCATION

B.S., Civil Engineering, Central University of Venezuela

PROFESSIONAL REGISTRATIONS

Professional Engineer: Florida (63042)

Envision Sustainable Professional, 2016

Certified Pipe Assessment User, National Association of Sewer Service Companies (NASSCO)

REPRESENTATIVE PROJECT EXPERIENCE

54-inch Prestressed Cylinder Concerete Pipe (PCCP) Force Main Rehabilitation Design-Build on W. Flagler Street, Miami, Florida: project manager for the Miami-Dade Water and Sewer Department (MDWASD) force main rehabilitation project. The project included the rehabilitation of an existing 54-inch PCCP along W. Flagler Street. The project encompasses approximately 3,5000' of pipe from SW 78 Place to a meter station east of SW 72 Avenue using Compressed Fit (Swagelinning) technology. The design approach was focusesd on providing the required facilities in the most cost-effective means possible, while safely minimizing the impacts to the area and its stakeholders along this very congested traffi corridor.

48-Inch Water Main at Downtown Miami "The Loop" Design-Build, Miami, Florida: engineer of record for the installation of a two-phased, 48-inch water main loop project for the Miami-Dade Water and Sewer Department (MDWASD). The project's primary purpose is to provide interconnection of the Hialeah/Preston (North Service Area) and Alexander Orr (South Service Area) water transmission systems to form a "loop" closure. WSP is responsible for the planning, design, permitting and construction services associated with the construction of a new 30-inch, 36-inch and 48-inch water main. The design included a micro-tunnel of approximately 180 feet under the Florida East Coast Railway at NW 1st Avenue and NW 12th Street. A critical challenges the team addressed was working in a highly-urbanized area and public right-of-way. Construction in downtown Miami is affected by vehicular and pedestrian traffic and numerous congested utilities occupying the streets and rights-of-way.

19th Street Stormwater Pump Station Design-Build , Miami Beach Florida: lead design engineer for the construction of the 19th Street pump station between Convention Center Drive and Meridian Avenue. The project is part of the overall plan for a citywide stormwater improvement system to reduce flooding for residents of Miami Beach, more specifically, for the neighborhoods near the Convention Center. The work comprises the design, permitting and construction of a new 80 mgd stormwater

pump station, ancillary site infrastructure and discharge facilities. In addition to the pump station components and electrical infrastructure to power the pump station, construction-related services also include site preparation, earthwork, dewatering, storm drainage infrastructure installation, parking reconstruction, utility adjustments, landscaping, and seawall modifications on the south side of the Collins Canal between Convention Center Drive and Meridian Avenue.

60-inch Force Main E15-WASD-01, Dade County, Florida: engineer of record responsible for designing 30%, 60%, 90%, Permit Plan and Profile drawings for approximately 3 miles of 60-inch PCCP for this project. THe scope of work included preparation of the alternative routes available for the new 60-inch fore main, construction materials and methods, and construction cost. Also included coordination with Ferderal, State, and County regulatory agencies, local governments, property owners and stakeholders having interest or potential interest in this project.

Central River New Water Main Crossing, Fort Lauderdale, Florida: engineer of record responsible for the design of 800 LF of subaqueous water main crossing under the New River Canal. The existing 16-inch cast iron water main is aging and undersized for the existing and future potable water demands. It will be replaced with a 20-inch HDPE DR-13.5 pipe to be installed via horizontal directional drilling in the middle of Fort Lauderdale Downtown Area. Project includes extensive coordination with the residents of the high-rise buildings within the area, downtown development authority and Broward County Jail facility.

North Miami Beach Water Main Replacement and Meter Conversions Design-Build Criteria Package, North Miami Beach, Florida: senior project engineer responsible for services including utility coordination support, as-built review, cadastral support, quantities take-off, opinion of probable cost (OPC), field observation support, and various permitting and scheduling services for the Miami-Dade Water and Sewer Department (MDWASD). Werner provided cadastral support services for Task 2 of the pipeline improvement project and prepared the design-build criteria package for replacement of outdated and deteriorated water mains in the North Miami Beach area. The overall project included 30,657 liner feet of water main replacement. A total of 501 water meters were installed within the overall project and 498 of these meters were relocated from the rear to the front of the property.

Wastewater System Priority Projects Program and Construction Management Services (PMCM), Miami, Florida: water collection and transmission system design manager on the PMCM team selected by the Miami-Dade Water and Sewer Department's (MDWASD) to provide program and construction management services. Werner worked as a deputy task leader for the wastewater collection and transmission system (WCTS) task. The WCTS task assisted MDWASD with coordination and management of 93 force main and pump station projects, from conception to closure, and included engineering design, permitting, procurement, construction and certification. PMCM services included program management, construction management, development coordination, public outreach, engineering analysis, hydraulic modeling, scheduling, cost estimates, inspections and document control.

60-inch Force Main Installation Basis of Design Report (BODR), Miami, Florida: project manager for the Basis of Design Report (BODR) for installation of a 60-inch force main from pump station 0536 to SW 88th Street. Per the U.S. Environmental Protection Agency Consent Decree, MDWASD was required to install the force main to increase hydraulic flow in the system and reduce pressure differential between PS 0536 and PS 0559. The BODR analyzed three alternatives by comparing construction cost, public impact, schedule, pipe material, constructability, hydraulic impact, traffic impact, maintenance and accessibility, permitting and easement acquisition. Hydraulic modeling was prepared to confirm BODR results. Recommendation were provided and approved by MDWASD.

Ronald Fields, PE

DESIGN QA/QC

Ron Fields is a senior supervising construction engineer and project manager for WSP with extensive experience in program and construction management for a variety of public works projects. Ron has been involved with numerous facets of program management including cost control, schedule management, community involvement and partnered program approach, document management and accountability, and management plans consisting of a system of checks and balances. He has a solid background in utilities, structural and civil engineering.

FIRM

WSP

YEARS OF EXPERIENCE

39

EDUCATION

M.S., Civil Engineering, University of Florida, Gainesville, Florida

B.S., Civil Engineering, University of Florida, Gainesville, Florida

PROFESSIONAL REGISTRATIONS

Professional Engineer: Florida, 1982 (32259); Georgia, 1990 (18652); North Carolina, 1982 (10445)

Construction Training/ Qualification Program (CTQP): Quality Control Manager

REPRESENTATIVE PROJECT EXPERIENCE

MDWASD, Ocean Outfall Program, Miami, Florida: construction project manager that monitors and provides documentation of construction activities. His current assignment is design-build delivery of 13,200 feet of 48-inch force main and 5,200 feet of 12-inch water main. WSP, in a subconsultant role, is assisting Miami-Dade County enhance and upgrade its water and wastewater infrastructure in this 10-year program that encompasses the design, procurement, construction, and commissioning of an estimated 35 capital projects with a total value of $5.5 billion.

MDWASD, Norris Cut Utility Relocation, Miami, Florida: project manager for the relocation of an existing 54-inch sanitary sewer force main under Norris Cut Channel between Fisher Island and the Central District Wastewater Treatment Plant (WWTP) on Virginia Key. Trenchless technology of segmental tunnel bore machine was used to install a 10.25-inch diameter precast concrete segmental tunnel for the new sewer force main. The design-builder also installed a new connecting eight-inch diameter force main from Fisher Island PS 170 to the new 60-inch force main using horizontal directional drilling. Ron was responsible for the overall quality assurance program, design-build contract administration, management and supervision providing design phase review and support, constructability review, scheduling and cost estimating, project permitting review support, pre-construction coordination, contract administration, construction monitoring and inspection, coordination of project start-ups and closeout.

MDWASD Government Cut/Fisherman's Channel Utility Relocation Projects, Miami, Florida: project manager for the relocation of an existing 54-inch sanitary sewer force main under Government Cut Channel between Fisher Island and South of Miami Beach Marina and the relocation of an existing 20-inch water main under Fisherman's Channel between Port of Miami (Dodge Island) and Fisher Island. Trenchless technology of micro-tunneling was used to install a 72-inch casing for the new sewer force main and a 60-inch casing for the new water main and dry line. The design-builder also evaluated the trenchless technology of horizontal directional

drilling for the relocation of the existing 20-inch water main. Ron was responsible for the overall quality assurance program, D-B contract administration, management and supervision providing design phase review and support, constructability review, scheduling and cost estimating, project permitting review support, pre-construction coordination, contract administration, construction monitoring and inspection, coordination of project start-ups, and closeout.

New Castle County, Governor Printz Boulevard Sewer Project, Claymont, Delaware: project manager overseeing the construction of 2.5 miles of a new twin 36- and 78-inch fiberglass reinforced pipe. Project challenges included a river crossing, tunneling under Interstate 495 (I-495), and excavation through hard bedrock material. Work also included three phases of bypass pumping, three phases of maintenance of traffic with associated lane shifts, rock blasting excavation and the total reconstruction of Governor Printz Boulevard to Delaware DOT specifications. This was safely constructed in urbanized area. The new interceptor sewers alleviate overflows of untreated sewage to the Delaware River during heavy rainfall and basement flooding.

South Florida Water Management District (SFWMD), Everglades Agricultural Area (EAA) Reservoir A-1, Palm Beach County, Florida: project manager for this reservoir providing capacity for 190,000-acre-feet (65 billion gallons) of water storage. Other main project components include a pumping station that pumps from the North New River Canal designed to handle 3,500 cubic feet per second and four-lane bridge on U.S. Hwy 27. His work assignments included approximately 12 miles of seepage canal construction and the installation and startup of the 5.4 million tons aggregate processing plant. Ron was responsible for the overall quality assurance program, construction contract amendment and guaranteed maximum price negotiating support, management and supervision providing design phase review and support, constructability review, scheduling and cost estimating, project permitting support, pre-construction coordination, contract administration, construction monitoring and inspection, coordination of project start-ups, and closeout.

City of Atlanta, Sewer Separation Program, Atlanta, Georgia: project manager for the Stockade Basin sewer separation project which consists of separating 14.1 miles of 8-inch to 42-inch sanitary and storm sewer pipelines. The project included procurement of 130 easement parcels, two miles of tunneling, and 1.1 miles of water main rehabilitation. Responsibilities included supervision of project field staff of assistant basin managers, field engineers and field inspectors; coordination of contract administration, cost and schedule review, document control; disputes review board reporting, client liaison and public information coordination.

Tampa Bay Water, Master Water Plan - South Program, Hillsborough County, Florida: project manager for the construction of approximately 21 miles of 72-inch and 84-inch diameter water transmission mains, a 52 million-gallon per day (mgd) high service pumping station, a 15 billion-gallon capacity reservoir, and 350 acres of wetlands mitigation. Ron was responsible for the overall management and supervision of the south construction management program providing design phase review and support, constructability review, scheduling and cost estimating, public information coordination and contact, project permitting support, land acquisition support, bidding of projects, pre-construction coordination, contract administration, construction monitoring and inspection, coordination of project start-ups and closeout.

Catherine Prince, PMP

TRAFFIC ANALYSIS

Catherine Prince is an urbanist with over 13 years of experience in transportation planning, Vision Zero implementation, Complete Streets engineering design and construction, and project management. She is an innovator with a reputation for challenging status-quo to achieve elevated standards of equity, safety, sustainability, and mobility. She brings a unique and multifaceted perspective in creating desirable and active urban spaces, thanks to her background in architecture, town-planning, and urban design.

In her previous role at the City of Fort Lauderdale, Catherine executed numerous pilot projects, including an electric bicycle cargo delivery program in collaboration with UPS. During that time, she also led a number roadway design and construction projects, giving her a strong combination of the planning as well as the execution challenges, along with the importance of working with the community to make innovative ideas successful. Catherine has also worked on multiple local and international Transit-Oriented-Development (TOD) area plans to create walkable, bikeable communities anchored around transit. She was part of the 'Built Environment and Transportation' workgroup, South Florida Climate Change Compact, a regional working group that recommends policy changes and provides guidelines for a resilient South Florida.

FIRM

WSP

YEARS OF EXPERIENCE

15

EDUCATION

M.Arch Suburb and Town Design, University of Miami

B. Arch Center for Environmental Planning and Technology University

PROFESSIONAL REGISTRATIONS

Project Management Professional (PMP), 2019

Greenroads Sustainable Transportation Professional (STP), 2019

Leadership in Energy and Environmental Design Accredited Professional (LEED AP), 2008

REPRESENTATIVE PROJECT EXPERIENCE

2020 Vision Zero Implementation Plan, Miami-Dade County, Florida: project manager leading the effort to develop a Vision Zero program for Miami-Dade County through an implementation plan. The plan identifies of high-injury corridors, prioritized projects for implementation per commission using a region specific- prioritization methodology. Ms. Prince is responsible for developing engineering countermeasures, developing supporting educational materials, coordinating education workshops for policy makers and professionals to achieve the County's goal of Zero deaths and incapacitating injuries.

Virgin/ Brightline Station Mobility and Access Implementation Plan. City of Aventura and Ojus neighborhood, Florida: project manager. leading the effort to identify safe mobility infrastructure options that are immediately implementable, to connect to the new high-speed train station in Aventura/Ojus. The study focuses on safe last/first-mile safe connections for people using transit, walking, biking, scooter, rideshare, commuter shuttles to the proposed station. Also, Ms. Prince is leading the development of project before-after renderings, engagement consensus of multi-agency stakeholders and neighborhood residents.

Okeechobee Corridor Transit Alternatives Analysis, Palm Beach County, Florida: Project Manager. Ms. Prince is leading the effort to identify the most appropriate and feasible transit along the Okeechobee Corridor alternatives analysis. She is responsible for overseeing the transit plan, travel demand and ridership projection, and developing a cost estimate. Ms. Prince is also leading the development of phasing and alignment recommendations.

Before joining WSP, Catherine was the Mobility Project Manager, City of Fort Lauderdale: led using the five E's of Vision Zero, from planning through implementation of transportation Capital Improvement Projects (CIP). She successfully led the implementation of multiple capital projects, and two program portfolio of capital projects with recurring annual funding. Also, she led the implementation of policies and strategies supporting a project's long-term success including, policies encouraging active transportation, curb demand management, right sizing the roadway and parking. In project management, she assisted with the procurement process, negotiated contracts, controlled budget, and any changes. Key projects included:

Las Olas Boulevard Safety and Mobility Improvements, Fort Lauderdale, Florida. Completed 2018: project manager that designed and implemented innovative engineering design like South Florida's first parking-protected bike lane, bike box, truck apron, and urban raised intersections Catherine spearheaded innovative private-public initiatives like a pilot with Uber and Lyft for rideshare zones among the first in the US, a partnership with UPS for the first e-bike delivery in the SE US as part of this street redesign project. She developed and launched a creative educational campaign with a catchy video and print materials, combined with Police Department enforcement to facilitate user familiarity of the innovative initiatives and new street design. The post-project evaluation showed a 50% increase in safety, a 27% decrease in vehicular speeding, a 91% increase in bicycle ridership, among other positive outcomes. Exceeded overall expectations with a multi-fold increase in overall safety, ensuring the project was successful, and the project, as well as, its initiatives were retained well beyond its 6-month demonstration.

Downtown Walkability Program, Fort Lauderdale, Florida. Completed 2019: project manager that led the consensus building on multiple high-visibility urban intersections through design and increased safety, accessibility for people walking within downtown, and traffic calming improvements within the neighborhoods. She collaborated with the County staff to innovate with better design, including County's first mid-block crossing on an urban arterial roadway featuring sustainable elements like native landscape, water-efficient irrigation. Catherine led the engagement with owners, residents, and business associations to reduce the impact on adjacent properties during project construction.

Neighborhood Traffic Calming Program, Fort Lauderdale, Florida: project manager that led the in-house engineering design and construction of neighborhood traffic calming and mobility projects.

Breakers Avenue Streetscape and Climate-Resilient Infrastructure, Concept Design. Fort Lauderdale, Florida: project manager that led the six City-block streetscape improvements in a tourist-intense district to foster economic development through better infrastructure both for the visitors and adjacent business owners. The project envisioned a flexible shared streetscape with resilient infrastructure.

Alan Sterental, EI, ENV SP

PERMITTING

Alan Sterental is a land development professional with 15 years of project management experience in the civil and environmental engineering fields, specializing in water resources, land development, and urban and master planning. He is experienced in municipal, commercial, industrial and residential projects and is familiar with local, state and federal regulatory agencies, their policies and procedures.

FIRM

WSP

YEARS OF EXPERIENCE

15

EDUCATION

B.S., Environmental Engineering, University of Miami

PROFESSIONAL REGISTRATION

Engineering Intern: FL (1100023437)

Environmental Sustainability Professional (ENV SP)

REPRESENTATIVE PROJECT EXPERIENCE

MDWASD, Construction Engineering Inspection Services for the construction of a 42-inch Water Main/10-Inch Force Main and PS9141 Replacement at Port of Miami, Florida: senior civil inspector responsible for overseeing inspections for the construction of the proposed 42-inch water main and 10-inch force main from Downtown Miami to Port of Miami and Pump Station 9141. Coordinated with contractor to prepare weekly inspection schedules, field design changes and approvals. Prepared daily inspection reports, monthly progress reports, coordinated construction progress meetings and addressed design modifications requests from Port of Miami. Reviewed contractor payment requests and change orders.

MDWASD, 42-Inch Water Main Extension at Port of Miami, Florida: deputy project manager responsible for design of a proposed 42-inch water main from Downtown Miami to Port of Miami. Prepared water main plan and profile drawings, including various pipe construction techniques, coordinated with client, Port of Miami and regulatory agencies to obtain required permits and prepared a technical specifications package. Coordinated with client to prepare bid set procurement documents, and assisted client during bidding process.

MDWASD Design-Build 48-Inch Water Main at Downtown Miami "the Loop", Miami, Florida: deputy project manager who prepared plan and profile design plans for the proposed 48-, 36- and 30-inch water main extensions in downtown Miami to close a transmission main loop in the County's water system. Coordinated with the client, owner and regulatory agencies to obtain the required permits. With Ric-Man Construction.

MDWASD, 10-Inch Force Main and Pump Station 9141 Rehabilitation, Port of Miami, Florida: deputy project manager in charge of design for a proposed ten-inch force main from Downtown Miami to Port of Miami. Prepared force main plan and profile drawings, including various pipe construction techniques, coordinated with sub-consultants to prepare Pump Station 9141 plans. Assisted the client and Port of Miami to obtain required permits from

regulatory agencies, prepared a technical specifications package. Coordinated with client to prepare bid set procurement documents, and assisted client during bidding process.

Ric-Man Construction of Florida, West Avenue Phase II Improvements, Miami Beach, Florida: project engineer responsible for completing a temporary dewatering system for the construction of roadway, water, sewer and drainage improvements along the West Avenue basin in Miami Beach. Completed an environmental site assessment for contaminated sites in the project area, performed full dewatering calculations for the various construction activities, and prepared a complete Dewatering Permit Package to be submitted to Miami-Dade County RER-DERM for review and approval. With Ric-Man Construction of Florida.

Miami-Dade Transit and Public Works Department, Flagler Street Project Development and Environment (PD&E) Study, Miami, Florida: project engineer in charge of preparing various site plans for proposed park-and-ride facilities at multiple sites selected throughout the corridor. Site plans were prepared to maximize parking spaces while meeting all local regulatory requirements for parking standards, and were situated to accommodate pedestrian access to existing and proposed bus stops.

MDWASD, Miami-Dade County Water Facilities Master Plan Update, Miami, Florida: senior project engineer that assisted in preparing and updating the Water Facilities Master Plan (WFMP) to serve MDWASD water service area through 2030, including preparing a detailed description of the existing conditions, reviewing the alternative water supply sources, preparing and implementing water demand projections, evaluating the water transmission and distribution systems, preparing and reviewing a hydraulic-hydrologic model to identify system deficiencies and future system improvements. A financing plan was included to be incorporated into the Department's Capital Improvements Office Budget.

MDWASD, Alexander Orr, Jr. WTP Lime Sludge Residuals Analysis, Miami, Florida: senior project engineer who prepared a Water Treatment Lime Sludge Residuals Management Plan (LSRMP) for the Alexander Orr, Jr. Water Treatment Plant (AOWTP), owned and operated by MDWASD. Provided a complete analysis and evaluation of the current sludge management practices and the current and projected sludge production rates. Prepared an estimated cost of improvements to increase efficiency of the system, and an alternatives analysis for sludge disposal methods for the projected 5-, 10- and 20-year sludge production rates.

MDWASD, GWUDI Northwest Wellfield Water Treatment Plant, Miami, Florida: senior project engineer who prepared a site plan and access road layout, designed a stormwater management system, and coordinated permitting for the NWWF Water Treatment Facility in Miami-Dade County. The project encompassed approximately 82 acres within the Wellfield Protection Area established by DERM. Inter-disciplinary coordination to identify a site with the most efficient layout. Coordinated with regulatory agencies to comply with over twenty federal, state and local permits. The use of chemicals within the facility was of special concern due to the site's location within the wellfield protection area. Finally, given the remoteness of the site, additional infrastructure for this project involved coordination with Florida Power and Light Co. (FPL) to address the power supply to the proposed facility, as well as design of a 100-foot wide, 1-mile-long access corridor to provide access to the facility.

Eddie Suarez, PE

SURVEY & SUE

Eduardo (Eddie) Suarez, PSM, has been in the Land Surveying profession in South Florida for the past 31 years. Eddie oversees the daily operation of Longitude Surveyors, LLC. He has extensive experience in the project management of a wide variety of projects and Surveys for both the public and private sectors. Mr. Suarez spent his formative years working as a Sub-Consultant to FDOT both in the field and office. As President of his firm, he has been the Principal–In-Charge over the past 14 years for all FDOT projects his firm has been associated with. He knows the District well, its procedures and expectations. His role in this project would be to direct the Team to come up with a strategic plan to prepare a schedule, perform the work, and provide the necessary resources to be successful.

FIRM

Longitude

YEARS OF EXPERIENCE

31

EDUCATION

Associates of Science, Engineering Studies
Miami Dade College

PROFESSIONAL REGISTRATIONS

Professional Surveyor and Mapper Florida (LS6313)

REPRESENTATIVE PROJECT EXPERIENCE

48-Inch Water Main Project along South West 117th Avenue, Miami, Florida: principal-in-charge, Longitud prepared a Topographic Survey; Utility Routing Analysis (6.7 miles) to establish Horizontal and Vertical Control and Benchmarks for future construction; 3-D Topographic Survey from Civil 3-D digital file; identified elevations at three water crossings and throughout Survey corridor right-of-way to right-of-way; located all fixed surface features, traffic stripping along route, overhead utilities, signs, manholes, catch basins, valves/valve boxes and other fixed improvements, collected rim elevations, inverts, and pipe information for utility structures.

Five Intersections along SR-802/Lake Worth from Sherwood Forest Boulevard to SR 809/ Military Trail, Florida: principal-in-charge, Longitude Surveyors prepared a Topographic Survey including Right-of-Way mapping, Digital Terrain Model, (SUE) Underground Utilities, provided Surface Utility Designation, Sub-Surface Utility Location (VVH – verified vertical and horizontal), and Survey surfaces; designated and marked the horizontal location of found underground utilities at proposed mast arm signal and lighting pole locations.

Storm water-Outfalls Key Biscayne, Florida: principal-in-charge that prepared a Topographic Survey; Right-of-way and property lines for the project area and adjacent properties; a graphical baseline; located all overhead utilities, sidewalks, curb and gutters, paved roads, fences, signs, manholes, catch basins, valves/valve boxes, all above-ground improvements within the Survey limits; collected invert and grate elevations for all project area storm manholes and catch basins; elevations at edge of pavement, center of pavement, right-of-way limits and approximately 5-feet beyond.

Flagler Street between South West 72 Avenue and Soth West 27 Avenue Pedestrian Safety & Access Management Evaluation - SR/968 Miami, Florida: principal-in-charge, Longitude Surveyors performed and prepared a Topographic Survey including horizontal and vertical Control Survey, showed

all improvements from Right-of-Way to Right-of-Way, establishing horizontal and vertical control for future construction, cross-sections (spot elevations) and established Right-of-Way lines.

SR 710/ Passing Lanes, Martin County, Florida: principal-in-charge that verified both vertical and horizontal control and topographic verification to the FDOT survey files, staked baseline, and provided re-certified surveys for construction.

SR 826/ (Palmetto), I-75 to C-8 Canal, N.W. 154th & North West 77th Court, Miami, Florida: principal-in-charge, Longitude Surveyors performed and prepared Aerial targeting for LAMP, topographic and hydrographic survey for design purposes.

Traffic Calming, Along South West 21st Street from S.W. 25th Avenue to South West 23rd Avenue, Miami, Florida: principal-in-charge, Longitude prepared a Topographic Survey; Right-of-way and property lines for the project area and adjacent properties; created a graphical baseline, located all overhead utilities, sidewalks, curb and gutters, paved roads, fences, signs, manholes, catch basins, valves/valve boxes and all above-ground improvements within Survey limits; collected invert and grate elevations for all project area storm manholes and catch basins; elevations at edge and center of pavement, right-of-way limits and approximately 5-feet beyond; cross-section elevations at 50-foot intervals, set control points.

US-27/SR 25/ Okeechobee Roadfrom East of North West 107th Avenue to East of North West 116th Way Miami, Florida: principal-in-charge, prepared Horizontal and vertical control, topographic, and right-of-way Surveys for the design of new intersection alignments and Frontage road improvements. Additionally, responsible for Right-of-Way mapping of the corridor which will include the north frontage road and NW South River Drive.

Rutu Nulkar, PE

GEOTECHNICAL ENGINEER

Rutu has been practicing geotechnical engineering in South Florida for more than 14 years. She has managed several continuing services contracts during her career. Her geotechnical consulting capabilities include providing services for buildings, roadways, bridges, and drilled shaft inspections. Rutu has performed geotechnical analysis for design of shallow and deep foundation systems, slope stability. Additionally, Rutu has over 14 years of construction materials testing and verification experience working on numerous Florida Department of Transportation (FDOT) projects and districtwide (D/W) materials contracts in the past. She has also worked as an in-house geotechnical consultant with the District Materials Research Office (DMRO).

FIRM

Terracon Consultants

YEARS OF EXPERIENCE

14

EDUCATION

M.S., Geotechnical Engineering, University of Florida

B.S., Civil Engineering, V.J.T.I. Matunga, Mumbai, India

PROFESSIONAL REGISTRATIONS

Professional Engineer: Florida, 2010 (36440)

REPRESENTATIVE PROJECT EXPERIENCE

48-Inch Diameter Water Main Downtown Loop Closure, Miami, Florida: the 48-inch diameter water main will be constructed under railroad tracks and roadway at the Miami Loop, along NW 12th Street between NW 1st Avenue West and NW 1st Avenue East. Terracon provided geotechnical exploration services including drilling borings. The purpose of these services was to provide subsurface field exploration, laboratory testing information, and geotechnical engineering recommendations to assist in the design and construction of the water main.

Re-use Pipelines and Watermain Extensions, Davie, Florida: project manager/engineer for the upgrade of its utility systems to allow for anticipated growth from two major redevelopment initiatives. Terracon performed subsurface exploration and engineering services during construction for the project including: laboratory moisture-density relationship tests for materials used for the utility trench backfill; Limerock Bearing Ratio (LBR) and carbonate tests on the base course materials; in-place density testing on the utility trench backfill and base course materials; and corrosivity testing on in-situ soils disclosed during trenching on utility lines along Broward County roads.

Nova Southeastern University (NSU) Master Drainage Plan Project Phase II, Davie, Florida: project manager/engineer. Three conceptual master stormwater management systems were developed for three portions of NSU's main campus which is spread over 314 acres. Terracon provided construction materials testing services during Phases IIA and IIB. The scope of work included soil density testing and concrete compressive strength testing along with associated laboratory and field testing services.

NSU Re-use Pipelines and Watermain Extensions, Davie, Florida: project engineer responsible for the completion of subsurface exploration

services in connection with the re-use pipelines and watermain extensions project. She also provided engineering testing services during construction for the project.

City Water Treatment Plant (WTP), West Palm Beach, Florida: engineer that provided geotechnical engineering services to determine the soil conditions for various components (i.e. the electrical generator building, fuel storage facility, proposed pipelines, and the lime sludge area) at the WTP. Subsurface exploration was conducted for the proposed 36/48-inch and 60-inch diameter pipelines. The purpose of this study was to determine the existing soil conditions and provide geotechnical recommendations to assist in the installation of the pipelines connecting the high service pump station no. 1 to the 3 MG ground storage tank and the proposed pipeline around the meter building.

Seawall Evaluation at Pump Station 1 Facility, Miami, Florida: project engineer. WASD planned to renovate the seawall that existed due to signs of deterioration along the southeast edge and pavement areas showing signs of heavy deterioration with holes found in the asphalt. Subsurface exploration, laboratory testing, and geotechnical engineering recommendations related to the design and construction of the seawall modifications were provided. The recommendations were relative to subsurface and groundwater conditions, geotechnical engineering parameters for the design of the new seawall, construction considerations, and hydraulic conductivity of the existing soils.

Lake Region Water Treatment Plant (WTP) Pipeline, Palm Beach County, Florida: project manager for the WTP and transmission system would reduce the public water supply withdrawals from Lake Okeechobee and provide an alternative water supply solution for lakeside communities (Pahokee, Belle Glade and South Bay) by shifting the area's water source to the Upper Floridian Aquifer. Installation of approximately 80,000 linear feet of various sized water mains (30-inch, 24-inch and 16-inch), and approximately 10,000 linear feet of 30-inch and 24-inch raw water main, and a 24-inch water main area crossing over Hillsborough Canal were constructed. Geotechnical exploration and geotechnical recommendations were provided for laying the pipeline and settlement analysis.

i. Design Firm

WSP USA Inc.

WSP USA Inc. (WSP) is the US operating company of WSP, one of the world's leading engineering and professional services firms. Dedicated to serving local communities, we are engineers, planners, technical experts, strategic advisors and construction management professionals.

WSP designs lasting solutions in the water and environment, transportation, buildings and energy markets. With more than 9,500 employees in 150 offices across the US, we are technical experts who design and provide strategic advice on sustainable solutions, engineering projects that will help societies grow for lifetime to come. In Florida, we have provided solutions to design, design evaluations, project management and construction of infrastructure systems for Florida cities, counties and utilities for more than 50 years. We offer planning, engineering design and construction management and inspection services to Florida municipalities, utilities, public agencies and private clients, as well as state-specific water policy and technical issues.

Our long and varied experience across the state and especially in South Florida where 229 of our staff live and work, gives us in-depth knowledge of the region. WSP consistently delivers the planning, design and construction management of water resources projects on time, within budget and to the highest quality standards. Our infrastructure portfolio ranges from the mega projects that define an entire region to smaller, more local projects that keep a community humming. WSP has maintained a presence in Florida that spans more than three decades with South Florida offices in Miami, Fort Lauderdale and a project office in the Keys. A few of our key local clients include:

- Broward MPO
- Port Miami
- Miami-Dade County
- Florida Department of Transportation
- City of Miami
- City of Miami Beach
- City of Coral Gables
- Town of Medley
- S. FL Regional Transportation Authority
- SFWMD

Trenchless Technologies

WSP has a long track record of working with trenchless technologies, including the recent microtunneling trenchless crossing for the FEC railway at PortMiami, the Horizontal Direction Drilling subaqueous crossing under the Biscayne Bay, among others. Using these techniques, we can assess, rehabilitate, or install underground infrastructure with minimum excavation, thereby minimizing the impact on the environment, and reducing the disruption on adjoining buildings, structures, utilities, and the public. WSP's linear infrastructure expertise ranges from the replacement of small diameter water mains in congested urban streets to large diameter transmission mains. WSP engineers are specialized in design of a variety of construction methods and lead the industry in trenchless solutions, including CIPP rehabilitation, sliplining, tunneling, microtunneling, and directional drilling techniques.

WSP State of Florida Legal Entity

State of Florida
Department of State

I certify from the records of this office that WSP USA INC. is a New York corporation authorized to transact business in the State of Florida, qualified on March 5, 1973.

The document number of this corporation is 829626.

I further certify that said corporation has paid all fees due this office through December 31, 2020, that its most recent annual report/uniform business report was filed on February 24, 2020, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-fifth day of February, 2020

Secretary of State

Tracking Number: 2276783112CU

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DIVISION OF CORPORATIONS

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Foreign Profit Corporation
WSP USA INC.

Filing Information

Document Number	829626
FEI/EIN Number	11-1531569
Date Filed	03/05/1973
State	NY
Status	ACTIVE
Last Event	NAME CHANGE AMENDMENT
Event Date Filed	05/02/2017
Event Effective Date	NONE

Principal Address

One Penn Plaza
New York, NY 10119

Changed: 02/24/2020

Mailing Address

4139 Oregon Pike
Ephrata, PA 17522

Changed: 02/24/2020

Registered Agent Name & Address

CT CORPORATION SYSTEM
1200 S. PINE ISLAND ROAD
PLANTATION, FL 33324

Name Changed: 07/02/1992

Address Changed: 07/02/1992

Officer/Director Detail

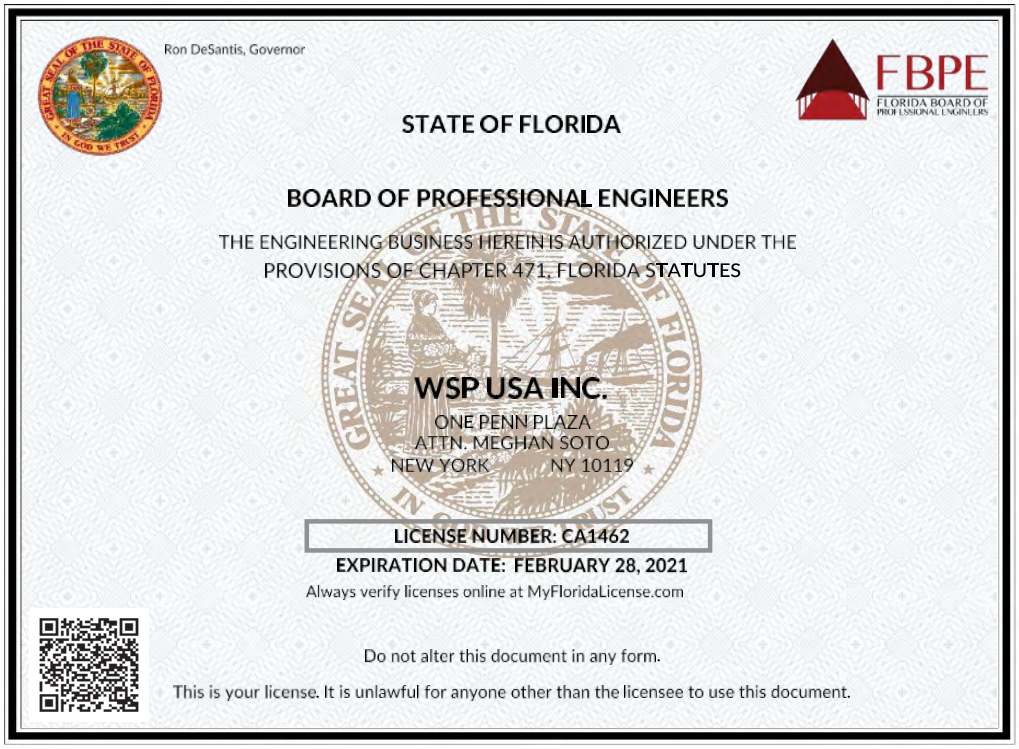
Name & Address

Title President

McNeilly, Bernard P
One Penn Plaza
New York, NY 10119

WSP Professional Licenses

This page include copies of all active State of Florida professional licenses, including professional engineers, State of Florida certifications for our proposed team members.


Ron DeSantis, Governor

FBPE
FLORIDA BOARD OF PROFESSIONAL ENGINEERS

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE ENGINEERING BUSINESS HEREIN IS AUTHORIZED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

WSP USA INC.
ONE PENN PLAZA
ATTN. MEGHAN SOTO
NEW YORK NY 10119

LICENSE NUMBER: CA1462
EXPIRATION DATE: FEBRUARY 28, 2021
Always verify licenses online at MyFloridaLicense.com

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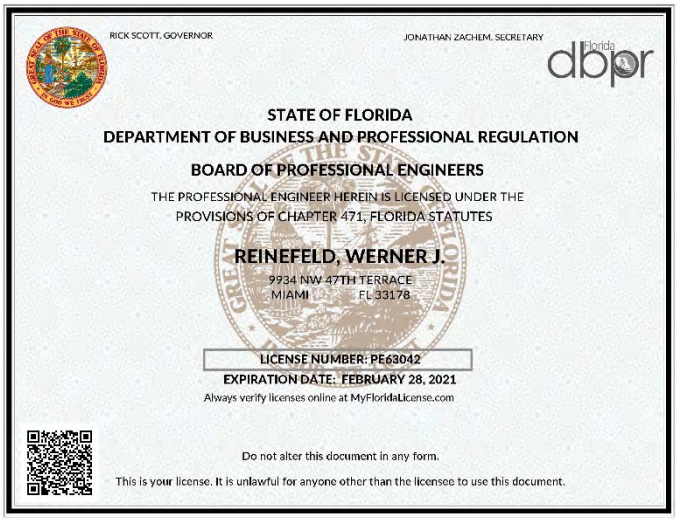
RICK SCOTT, GOVERNOR JONATHAN ZACHEM, SECRETARY

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

REINEFELD, WERNER J.
9934 NW 47TH TERRACE
MIAMI FL 33178

LICENSE NUMBER: PE63042
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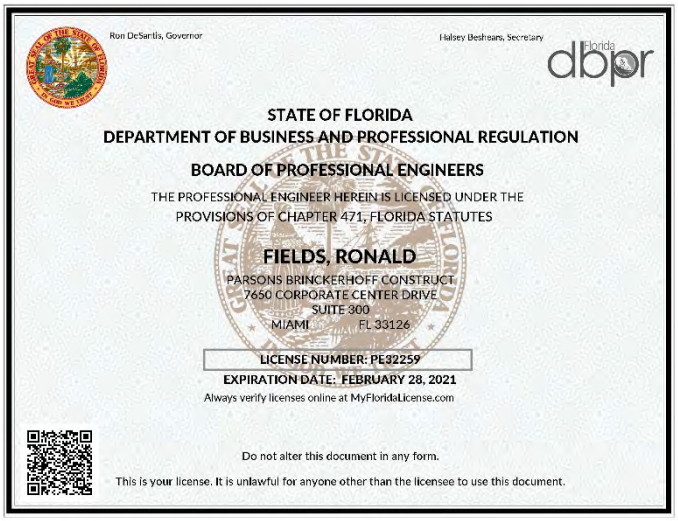
Ron DeSantis, Governor Halsey Beshears, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

FIELDS, RONALD
PARSONS BRINCKERHOFF CONSTRUCT
7650 CORPORATE CENTER DRIVE
SUITE 300
MIAMI FL 33126

LICENSE NUMBER: PE32259
EXPIRATION DATE: FEBRUARY 28, 2021
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DBF must clearly reflect in its Proposal any Sub-consultant including but not limited to the Project Manager, Design Manager, DBF or General Superintendent, Project Quality Control Manager, Scheduler/Project Controls Specialists, Project Health and Safety Manager (collectively, the "Team Members"), proposed to be utilized along with a summary of their background and qualifications, including but not limited to name of the sub-consultant, location of place of business, service(s) the sub-consultant will provide, license (if applicable), two (2) sub-consultant references, ownership, education, and experience. These Primary positions shall only serve in one (1) role. The City retains the right to accept or reject any Sub-consultant proposed.

B. SUBCONSULTANTS

None of the 7 primary roles on the project will be subconsultants as all primary roles are in-house employees of the DBF, David Mancini & Sons Inc.

Legal Business Name: Terracon Consultants, Inc.
Location of Business: 5371 NW 33rd Avenue, Suite 201, Fort Lauderdale, Florida 33309
Services on Contract: Geotechnical Services
Company Ownership: Corporation
Company Contact: Rutu Nulkar, PE
Address: 5371 NW 33rd Avenue, Suite 201, Fort Lauderdale, Florida 33309
Phone: (954) 741-8282 Fax: (954) 741-8240
Email: Rutu.Nulkar@terracon.com

Company Overview

Terracon is a 100 percent employee-owned consulting engineering firm providing quality services to clients. Since 1965, Terracon has evolved into a successful multi-discipline firm specializing in environmental, facilities, geotechnical, and materials services. Through Terracon's nationwide network of geotechnical professionals, access to historical subsurface exploration data from thousands of locations across the country, and GIS-enabled geology mapping, they can accurately anticipate ground conditions and develop the right work plan to explore a site.

Terracon's geotechnical services include: stage1 predictive analysis delivered via Georeport ®, subsurface exploration (soil borings, in-situ testing, geophysical), laboratory testing, geotechnical design, collaborative reporting/decision making, geotechnical instrumentation construction monitoring and support.

Relevant Project Experience

Terracon's experience is extensive, varied, and includes several projects in South Florida. Projects include the following:

- Miami-Dade Water & Sewer Department, 42-inch Watermain and a 10-inch Force Main, and Pump Station 9141 Replacement/PortMiami, Miami, Florida: Terracon is currently providing construction materials engineering and testing services.

- Miami-Dade Water & Sewer Department, 10-inch Diameter Force Main, Miami-Dade County, Florida: Terracon performed geotechnical exploration for the proposed project. Six Standard Penetration Test (SPT) borings were drilled to depths of 15 feet below the existing ground surface.
- Miami-Dade Water & Sewer Department, Seawall at Pump Station 1, Miami, Florida: Terracon conducted subsurface exploration, laboratory testing, and provided geotechnical engineering recommendations related to the design and construction of the seawall modifications.
- 10-inch D.I. Pipeline & PS 9141 Upgrade/PortMiami, Miami-Dade County, Florida: Terracon performed a subsurface study for WSP for the proposed new 10-inch diameter force main pipeline to be installed between Pump Station 9141 on the Port side (Dodge Island) to a point of connection on the mainland (City of Miami). A total of 22 borings were performed including: 15 borings to a depth of 35 feet along the force main alignment, 2 borings to a depth of 40 feet at pump station 9141, 2 borings to a depth of 100 feet at the horizontal directional drilling (HDD) launching and receiving pits at Biscayne Bay, 2 borings to a depth of 40 feet, and 1 boring to a depth of 25 feet below the existing grade for the HDD under Biscayne Boulevard.

References

Client Reference #1: Hazen and Sawyer, PC, Beth Waters, PE
Address: 999 Ponce De Leon Boulevard, PH 1150, Coral Gables, Florida 33134
Phone: (305) 443-4001
Email: bwaters@hazensawyer.com
Project Name: Terminal Island Force Main, MacArthur Causeway
Project Start/End Dates: July 2018 – December 2018
Brief Project Description: Terracon provided geotechnical exploration for a 10-inch force main that was planned to be installed using jack and bore crossing across the MacArthur Causeway project on Terminal Island, near the Florida Power & Light (FPL) Miami Beach Plant, in Miami Beach, Florida. Borings were performed to a depth of 25 feet at each end of the proposed project. Terracon provided subsurface field exploration, laboratory testing information, and geotechnical engineering parameters to assist in the design and construction of any repairs.

Client Reference #2: CAP Government, Inc., David J. Mendez, PE
Address: 343 Almeria Avenue, Coral Gables, Florida 33134
Phone: (305) 448-1711
Email: dmendez@capfla.com
Project Name: 12-Inch Water Main, Martin Luther King Blvd, South Bay, Florida
Project Start/End Dates: October 2015 – December 2015
Brief Project Description: Terracon completed geotechnical engineering services for the referenced 12-inch water main project, which is located at Martin Luther King Boulevard from west of U.S. Route 7 to terminus of road. Terracon provided subsurface exploration, laboratory testing, and geotechnical engineering recommendations for the proposed roadway improvements. The project included placement of a 12-inch water main in organic PEAT material that extended to a depth of approximately 6 feet below existing grade. Terracon provided information and geotechnical recommendations concerning the proposed milling, resurfacing, widening of the median, and replacement of sidewalks and curb and gutter for Martin Luther King Boulevard.

Licenses

Ron DeSantis, Governor

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

NULKAR, RUTUGANDHA H.
5371 NW 33RD AVENUE
SUITE 201
FORT LAUDERDALE FL 33309

LICENSE NUMBER: PE70625
EXPIRATION DATE: FEBRUARY 28, 2021
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State of Florida
Department of State

I certify from the records of this office that TERRACON CONSULTANTS, INC. is a Delaware corporation authorized to transact business in the State of Florida, qualified on December 31, 2003.

The document number of this corporation is F04000000114.

I further certify that said corporation has paid all fees due this office through December 31, 2021, that its most recent annual report/uniform business report was filed on January 14, 2021, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fourteenth day of January, 2021

Secretary of State

Tracking Number: 026381942OCC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

Legal Business Name: Longitude Surveyors LLC
Location of Business: 7769 NW 48 Street, Suite 375, Doral, Florida 33166
Services on Contract: Surveying and Mapping Services
Company Ownership: Limited Liability Corporation
Company Contact: Eduardo M. Suarez, President, PSM Longitude Surveyors LLC
Address: 7769 NW 48 Street, Suite 375, Doral, Florida 33166
Phone: (305) 463-0912 Fax: (305) 513-5680
Email: esuarez@longitudefl.com

Company Overview

Longitude Surveyors specializes in land surveying and underground utility location. Longitude Surveyors, LLC was established in Miami-Dade County in 2004. Since that time the firm has diligently worked to meet the needs of the private and public sector clients in South Florida. Longitude Surveyors offers a broad range of services to Residential, Commercial and Municipal Land Surveying Services which include:

- ALTA/ACSM Land Title Survey
- Boundary Survey
- Topographic Survey
- Lot Survey
- Architectural Survey
- Construction Layout
- Forensic Survey
- Expert Witness
- Fence Construction Survey
- Soldier Pile Monitoring
- Easement Surveys
- Lot Line Adjustment

Relevant Project Experience

Longitude's experience includes the following:

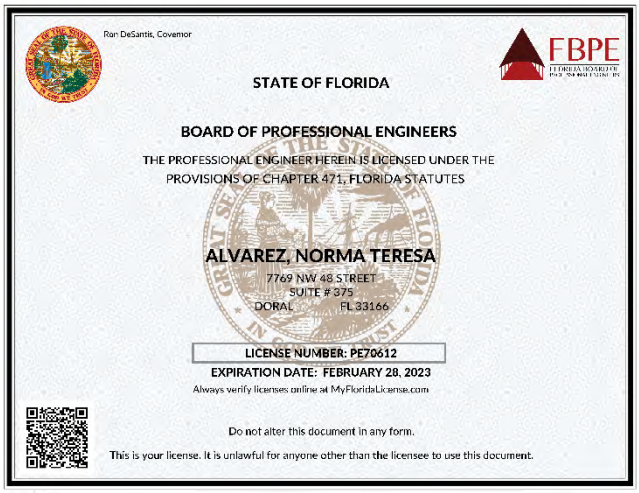
- CAMCON Group, 8-Inch Water Main Expansion, Miami, Florida: Design of 800 linear foot 8-inch D.I.P. water main extension according to MDWASD requirements. The design includes plan preparation, utilities evaluation, pollution prevention, MOT and permitting.
- Resivest Realty, Inc., 8-inch Water Main Extension, Miami, Florida: Design of 160 linear foot 8-inch D.I.P. water main extension according to MDWASD requirements. The design includes plan preparation, utilities evaluation, pollution prevention, MOT and permitting.
- City of Miami Beach San Marino, Miami Beach, Florida: Paving, drainage, grading, water and sewer connection, pollution prevention, utilities coordination, permitting and plan preparation. The design includes drainage calculations according with a new City of Miami Beach regulations.

References

Client Reference #1: Duran Consulting Engineering, Leonardo Duran / President
Address: 8390 W Flagler Street, Suite 208, Miami, Florida 33144
Phone: (305) 992-2193
Email: leonardo@DuranConsultEng.com, lduranp321@gmail.com
Project Name: Venezia Apartment
Project Start/End Dates: September 2019 - November 2019
Brief Project Description: Four-story commercial and residential building, located at 11995 SW 216 Street, Miami, Florida 33170; Responsible for paving, grading , drainage, water and sewer, sewer pump station, pollution prevention, and utilities coordination.

Client Reference#2: Resivest Realty, Leo Delgado
Address: 1331 SW 8 Street, Miami, Florida 33135
Phone: (305) 901-5880
Email: leo@resivestrealty.com
Project Name: Palmetto Bay Water Main Extension
Project Start/End Dates: November 2019 - Currently in permit process
Brief Project Description: Design of 8-inch D.I.P. Water Main extension along S.W. 89 avenue btw. S.W. 159 Street and SW 158 Street, Palmetto Bay, Florida 33157 Licenses.

Licenses



Ron DeSantis, Governor

FBPE

STATE OF FLORIDA

BOARD OF PROFESSIONAL ENGINEERS

THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

ALVAREZ, NORMA TERESA
7769 NW 48 STREET
SUITE # 375
DORAL FL 33166

LICENSE NUMBER: PE70612
EXPIRATION DATE: FEBRUARY 28, 2023
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RICK SCOTT, GOVERNOR JONATHAN ZACHEM, SECRETARY

dbpr

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DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

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ALVAREZ, NORMA TERESA
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State of Florida
Department of State

I certify from the records of this office that LONGITUDE SURVEYORS, LLC is a limited liability company organized under the laws of the State of Florida, filed on March 12, 2004.

The document number of this limited liability company is L04000019574.

I further certify that said limited liability company has paid all fees due this office through December 31, 2020, that its most recent annual report was filed on April 21, 2020, and that its status is active.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capitol, this the Twenty-first day of April, 2020

Secretary of State

Tracking Number: 7610155285CC

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

Sunbiz.org

Department of State / Division of Corporations / Search Records / Search by Entity Name /

Detail by Entity Name

Florida Limited Liability Company
LONGITUDE SURVEYORS, LLC

Filing Information

Document Number	L04000019574
FEI/EIN Number	36-4551726
Date Filed	03/12/2004
State	FL
Status	ACTIVE
Last Event	LC AMENDMENT AND NAME CHANGE
Event Date Filed	11/19/2012
Event Effective Date	NONE

Principal Address
7769 NW 48 STREET
SUITE 375
Doral, FL 33166

Changed: 03/09/2019

Mailing Address
7769 NW 48 STREET
SUITE 375
Doral, FL 33166

Changed: 03/09/2019

Registered Agent Name & Address
Suarez, Eduardo M.
7769 N.W. 48th Street
Suite 375
Doral, FL 33166

Name Changed: 05/01/2014

Address Changed: 03/09/2019

Authorized Person(s) Detail
Name & Address

Title Manager

i. Subcontractor

The only Major Subcontractor will be the HDD Subcontractor. The following subcontractors have been identified as a potential vendor for this emergency project. DMSI will coordinate with all to select the best-fit subcontractor for this project based on mobilization and equipment availability lead times. We will play the vendors against each-other to get the best result in the City's best interest. None will be selected without the City's prior written approval.

Identified Subcontractors		
Hardrock Directional Drilling	HDD	World Record HDD Team
Spartan Directional Drilling	HDD	World Record HDD Team
Centerline Directional Drilling	HDD	Local experience
DBE Utility Services	HDD	Local experience

4.2.4
Project Manager's Experience

4.2.4 PROJECT MANAGER'S EXPERIENCE

Provide a comprehensive summary of the experience and qualifications of the individual(s) who will be selected to serve as the project managers overseeing the design and construction for the City. Individual(s) must have a minimum of five (5) years' experience in required discipline and have served as project manager on a minimum of three (3) previous occasions. Include their related work experience and qualification and copies of active licenses and certifications. Include the length of tenure with Firm.

A. COMPREHENSIVE SUMMARY OF EXPERIENCE AND QUALIFICATIONS

David Mancini | Project Manager

David Mancini has more than 36 years of construction experience from Michigan to Florida. David Mancini has built David Mancini & Sons, Inc. (DMSI) into the premier underground civil contractor in South Florida. David served as President and Qualifier for his father, Richard Mancini, at Ric-Man International, Inc. from 1985- 2010. Since incorporating David Mancini & Sons, Inc. in 2010, his "hands-on" abilities and vast pool of knowledge have enabled DMSI to become the leader in large diameter pipeline construction. Serving as Design-Build Project Manager for special projects, David Mancini has successfully completed a long list of projects within an urban environment throughout South Florida that include the installation of transmission water mains (PCCP & DIP), transmission force mains (PCCP & DIP), sanitary sewers, storm sewers, pump stations, jack and bores, micro tunnels, directional drills, roadways, sub-aqueous crossings, and neighborhood improvement projects over the past 30 years. **David Mancini is the owner of DMSI and will be committed with staff 100 percent of the duration of this project.**

Experience on Similar Projects


STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD
THE UNDERGROUND UTILITY & EXCAVATION CO HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 489, FLORIDA STATUTES
MANCINI, DAVID A
DAVID MANCINI & SONS, INC.
2601 WILES ROAD
POMPANO BEACH FL 33073
LICENSE NUMBER: CUC044220
EXPIRATION DATE: AUGUST 31, 2022
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- **President, Manager, Qualifier**, 42-Inch Dip Water Main & 10-Inch Force Main Installation Between (US-1/5th St) to the Port of Miami and PS 9141 Replacement
- **President, Manager, Qualifier**, 54-Inch Redundant Force Main at Miami Beach
- **President, Manager, Qualifier**, 54-Inch Redundant Force Main at Miami Beach 48-Inch PCCP Sewer Along North Miami Avenue
- **President, Manager, Qualifier**, Design Build – Line Stops & Bypass on 48-Inch PCCP Force Main Crossing Oleta River at Biscayne Boulevard and NE 163 Street
- **Design-Build Manager**, 48-Inch Force Main (Broward CW&WWD) Broward County, Florida
- **Design-Build Manager**, DERM01-WASD-NLE-WEST 54-Inch Force Main, Miami- Dade County, Florida

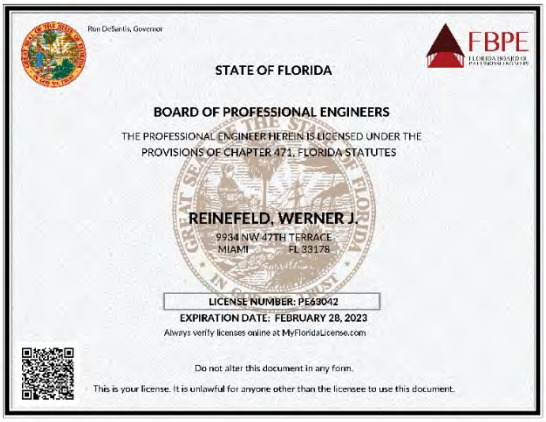
Werner, Reinefeld PE, ENV SP | Design Firm Project Manager / Engineer of Record

Werner Reinefeld is the proposed Design Manager for this project. He will be 100% committed for the duration of the Project. Werner brings 34 years of experience in the fields of civil and infrastructure engineering, project management, design construction and land development. His experience includes work in the areas of water and wastewater facilities, sewer systems, stormwater and drainage infrastructure, hydrological and hydraulic systems and modeling, utility coordination, permitting, feasibility studies, oil-contaminated water, energy efficiency audits, earthworks, road systems and land development projects. He is a licensed professional engineer registered in Florida, Envision Sustainable Professional, and Certified Pipe Assessment User.

Werner has overseen the design and construction of the following projects:

- 54-inch Prestressed Cylinder Concerete Pipe (PCCP) Force Main Rehabilitation Design-Build on W. Flagler Street – rehabilitation of an existing 54" PCCP. The project encompasses approximately 3,500' of pipe using Compressed Fit (Swagelinning) technology – Construction Cost of $4,000,00048-Inch Water Main Downtown Loop Design-Build – installation of a two-phased
- 48-Inch Water Main at Downtown Miami "The Loop" Design-Build - installation of a two-phased, 48-inch water main loop project for the Miami-Dade Water and Sewer Department – Construction Cost of $9,031,199
- 19th Street Stormwater Pump Station Design-Build - construction of the 19th Street pump station between Convention Center Drive and Meridian Avenue. The project is part of the overall plan for a citywide stormwater improvement system to reduce flooding for residents of Miami Beach, more specifically, for the neighborhoods near the Convention Center. The work comprises the design, permitting and construction of a new 80 mgd stormwater pump station, ancillary site infrastructure and discharge facilities – Construction Cost of $7,000,000
- 60-inch Force Main E15-WASD-01 – preparation of the alternative routes available for the new 60-inch force main, construction materials and methods, and construction cost. Coordination with Federal, State, and County regulatory agencies, local governments, property owners and stakeholders having interest or potential interest in the project – Construction Cost of $28,000,000
- Central River New Water Main Crossing – design of 800 LF of a subaqueous water main corssing under the New River Canal. The existing 16-inch cast iron water main is aging and undersized for the existing and future potable water demands - Construction Cost of $800,000

All of these projects were completed within schedule and within budget.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REINEFELD, WERNER J.

9934 NW 47TH TERRACE
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LICENSE NUMBER: PE63042

EXPIRATION DATE: FEBRUARY 28, 2023

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Illustrate proposed team member's qualifications preferably where multiple team members worked together in the past five (5) years on similar projects, including projects that involve design, permitting, and construction.

B. Example Projects

i. Project Manager's Example Projects

63rd Street Water Main Replacement

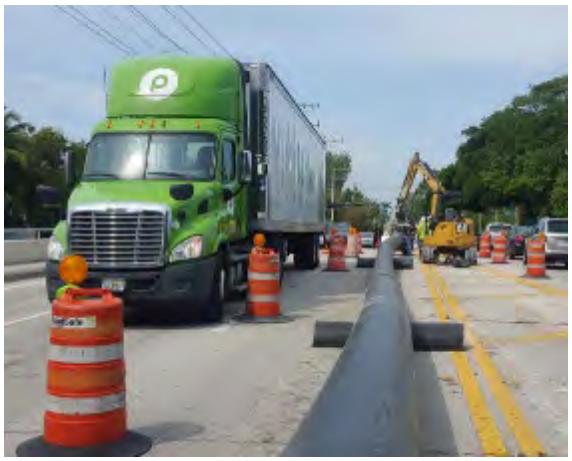
Miami Beach, Florida

This design-build project consisted of the installation of 1,000 linear feet of HDPE water main for the City of Miami Beach. This section of 1,000 linear feet was installed via horizontal directional drilling (HDD). In addition, project included 250 linear feet of an aerial crossing mounted to the existing bridge, and 1,000 linear feet of 20-inch ductile iron pipe via open cut. Tie-ins to the existing mains were performed, while keeping the system in operation. This Project was performed within FDOT right-of-way and involved extensive coordination for vehicular traffic since it is a main thru way for beach access. The HDD installation was performed in the Intracoastal Waterway between Collins Avenue to Allison Drive. All water main improvements were fully complete prior to decommissioning of the existing system. Extensive public outreach and coordination was performed to maintain all operations.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 1,000 linear feet of HDPE HDD 20-inch, 1,00 linear feet of 20-inch DIP open-cut, 250 linear feet of 20-inch HDPE aerial crossing mounted to FDOT bridge)
- Trenchless installation
- HDD along a busy corridor in a politically connected neighborhood
- Project required constant communication with the City and residents
- HDPE and DIP installation

YouTube Link:
https://www.youtube.com/watch?v=9hjWufTbBPU&feature=youtu.be



Team Member
DAVID MANCINI & SONS, INC.
Dates of Service
12/2015 – 08/2016
Project Status
This project is complete
Project Budget
Original Budget: $1,600,000 Final Cost: $1,661,179.52
Client / Point of Contact Familiar with Project
City of Miami Beach Otniel Rodriguez 1700 Convention Center Dr. Miami Beach, FL 33139 (P) (786) 831-0483 (E) otnielRodrigues@miamibeachfl.gov
Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC David Mancini, Jr. Fabio Angarita Richard Mancini

42-Inch Water Main to Port Miami

Miami, Florida

Team Member

Dates of Service
05/2018 – 08/2019

Project Status
This project is complete

Project Budget
Original Budget: $21,000,000
Final Cost: $20,884,000

Client / Point of Contact Familiar with Project
Miami-Dade Water & Sewer Department
Eduardo Luis
3071 SW 38th Avenue
Miami, Florida 33146
(P) (786) 552-8837
(E) Eduardo.luis@miamidade.gov

Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita
Werner Reinefeld, PE, ENV SP (WSP)
Ronald Fields, PE (WSP)

DMSI and WSP were responsible for the design, permitting and construction of a 42-inch transmission main that interconnected with a future 36-inch stub-out (Downtown Loop Project) located at the intersection between Biscayne Boulevard (SR 5/US-1) and North West 5th Street and PortMiami. The transmission main took into consideration future system expansion and improvements identified in PortMiami's Master Plan. The project consisted of furnishing and installing approximately 9,740 linear feet of 42-inch Watermain, a venturi meter, including valve and fittings quick disconnect for the cruise ships and making a connection to a 36-inch water main at Biscayne Boulevard. It entails approximately 260 linear feet of microtunneling under existing FEC railroad right-of-way with steel casing, drill shafts and proposed area of construction, and approximately 4,600 linear feet of twin 30-inch HDPE HDD subaqueous channel crossing along Biscayne Bay from Bayside to PortMiami (approximately 2,000 linear feet HDPE/each). This project also entailed construction around a large mix of existing utilities within a small and busy corridor (Between the American Airlines Arena and Bayside Marketplace). All this work was preformed while maintaining the cruise ship traffic and seaport shipping trucks.

Principal Elements/Special Features:

- 4,600 linear feet of 30-inch HDPE HDD, 7,440 linear feet og 42-inch DIP open cut
- Microtunneling trenchless crossing for the FEC railway at PortMiami
- **Value engineering with $.5 million in savings** by eliminating microtunnel via Open-Cut. Saved more than 3 Months on critical schedule

12-inch Force Main Dual Crossing to Port of Miami

Miami, Florida

PortMiami contracted WSP to provide professional civil engineering design and construction administration services for upgrades to PortMiami's Master Sanitary Sewage Pump Station No. 9141 and replacement of the existing 8-inch cast iron pipe with 1,800 linear feet of a dual 12-inch HDPE DR-9 pipe crossing underneath the Biscayne Bay. DMSI served as the Contractor for this Project.

One of the force mains served as the future connection for the Southwest Corner Commercial Development. The dual HDPE alignment that crossed the waterway between Dodge Island and the mainland were designed to be south of the Bascule Bridge below the Biscayne Bay Bottom using Horizontal Directional Drilling (HDD) method of construction. The remaining portions of the replacement force main along Dodge Island and the mainland were designed using a combination of open-cut and trenchless methods of construction. This project also entailed construction around a large mix of existing utilities within a small and busy corridor (Between the American Airlines Arena and Bayside Marketplace).

Principal Elements/Special Features:

- Horizontal Directional Drilling (HDD)
- Dual Crossing Under Biscayne Bay Bottom
- Compound Curve Dual Force Main using dual 12-inch HDPE DR-9

Team Member

DAVID MANCINI & SONS, INC.

wsp

Dates of Service

2019

Project Status

This project is complete

Project Budget

Original Budget: $2,840,000
Final Cost: $2,900,000

Client / Point of Contact Familiar with Project

Miami-Dade County PortMiami – Capital Development
Victor Gutierrez, PE
1015 North America Way, 2nd Floor Miami, Florida 33132
(P) (305) 347-4802
(E) Victor.Guiterrez@miamidade.gov

Key Personnel on this Similar Project & B-4

David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita
Werner Reinefeld, PE, ENV SP (WSP)
Ronald Fields, PE (WSP)

63rd Street Water Main Replacement

Miami Beach, Florida

This design-build project consisted of the installation of 1,000 linear feet of HDPE water main for the City of Miami Beach. This section of 1,000 linear feet was installed via horizontal directional drilling (HDD). In addition, project included 250 linear feet of an aerial crossing mounted to the existing bridge, and 1,000 linear feet of 20-inch ductile iron pipe via open cut. Tie-ins to the existing mains were performed, while keeping the system in operation. This Project was performed within FDOT right-of-way and involved extensive coordination for vehicular traffic since it is a main thru way for beach access. The HDD installation was performed in the Intracoastal Waterway between Collins Avenue to Allison Drive. All water main improvements were fully complete prior to decommissioning of the existing system. Extensive public outreach and coordination was performed to maintain all operations.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 1,000 linear feet of HDPE HDD 20-inch, 1,00 linear feet of 20-inch DIP open-cut, 250 linear feet of 20-inch HDPE aerial crossing mounted to FDOT bridge)
- Trenchless installation
- HDD along a busy corridor in a politically connected neighborhood
- Project required constant communication with the City and residents
- HDPE and DIP installation

YouTube Link:
https://www.youtube.com/watch?v=9hjWufTbBPU&feature=youtu.be

Team Member
DAVID MANCINI & SONS, INC.
Dates of Service
12/2015 – 08/2016
Project Status
This project is complete
Project Budget
Original Budget: $1,600,000 Final Cost: $1,661,179.52
Client / Point of Contact Familiar with Project
City of Miami Beach Otniel Rodriguez 1700 Convention Center Dr. Miami Beach, FL 33139 (P) (786) 831-0483 (E) otnielRodrigues@miamibeachfl.gov
Key Personnel on this Similar Project & B-4
David Mancini, Sr., CUC David Mancini, Jr. Fabio Angarita Richard Mancini

Emergency Replacement of 48-inch Force Main Crossing the Oleta River at NE 163rd Street

Miami Beach, Florida

This project consisted of construction of a 48-inch force main by directional drill, open cut, and slip-lining methods. Existing linestop and 24-inch bypass was installed as part of the scope of work of RPQ PO231 by DMSI. The work zone was restored by completing pavement resurfacing and bringing pavement marketing and signalization up to specifications.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 48" HDPE force main via HDD and open cut installation
- Extensive Public Outreach
- Large Diameter Pipe in arterial roadway
- Existing force main was leaking in the ICW and all over the news. DMSI mobilized on an emergency basis and designed and built a "Pollution Dome" to catch the leaking sewage and pump it back into the force main during long-lead material procurement. Able to isolate a very political problem and "get the helicopters on to something more exciting."

Team Member

DAVID MANCINI & SONS, INC.

Dates of Service

09/2019 – 02/2020

Project Status

This project is complete

Project Budget

Original Budget: $3,650,000

Final Cost: $5,000,000

Owner extended limits of construction to avoid risky relocation of existing 30-inch transmission Watermain.

Client / Point of Contact Familiar with Project

Miami-Dade Water and Sewer Department
Alexis Valdes, Project Manager
3575 LeJeune Road
Miami, FL 33139
(P) (786) 299-9008
(E) Alexis.Valdes@miamidade.gov

Key Personnel on this Similar Project & B-4

David Mancini, Sr., CUC
David Mancini, Jr.
Fabio Angarita

ii. Design Firm's Project Manager Example Projects

RTQ – 54-inch Swagelining PCCP Force Main Rehabilitation at Flagler Street between 79th Avenue and 82nd Avenue

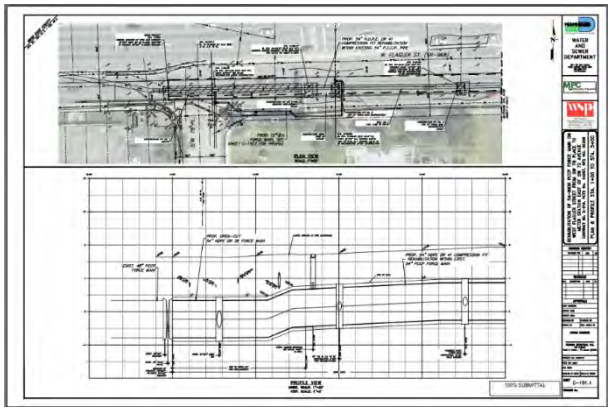
Miami, Florida

The Miami-Dade Sewer Collection System includes a number of large diameter PCCP force main pipes that were constructed in the late 1960s and early 1970s. These PCCP pipes have reached their end of life and are in dire need for replacement. This specific 54-inch force main is located along West Flagler Street, a main thoroughfare in the County that connects the Downtown Core of Miami with the residential areas to the west and is therefore a very congested corridor. Instead of replacing this large pipe via standard open cut methods, which would significantly affect traffic circulation in the area, the Miami-Dade Water and Sewer Department (MDWASD) has opted to rehabilitate this pipe with the use of less invasive trenchless technologies, which reduce construction times and limit roadway disturbance, thereby minimizing impacts to the local traffic.

This design-build project consists of the rehabilitation of the existing 54-inch force main via trenchless compression-fit swagelining, where a new 54-inch HDPE pipe is pulled through the existing pipe, resulting in a tight fit between the two pipes that maintains flow capacity while providing additional strength.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- Rehabilitation of approximately 3,400 feet of existing 54-inch PCCP force main via trenchless compression-fit swagelining using DR-41 HDPE pipe. A total of 4 pulls will be accomplished during construction. Construction is expected to take 3 months.



Team Member
WSP
Dates of Service
May 2019 - Present
Project Status
This project is ongoing
Project Budget
Original Budget: $342,000 Final Cost: TBD (in progress)
Client / Point of Contact Familiar with Project
Miami-Dade Water & Sewer Department Alexis Valdes 3575 S. LeJeune Road Miami, FL 33146 (P) (786) 552-4364 (E) Alexis.valdes@miamidade.gov
Key Personnel on this Similar Project & B-4
Werner Reinefeld, PE, ENV SP Alan Sterental, EI, ENV SP

48-Inch Water Main at Downtown Miami "The Loop" Design-Build

Miami, Florida

The City of Miami's Downtown Loop Central Business Area is predominantly serviced by undersized water mains. These pipes have long exceeded their design life. For this two-phase, 48-inch water main project, WSP provided design-build services for the interconnection of the Hialeah/Preston (North service area) and Alexander Orr (South service area) water systems. Phase One consisted of a proposed 4,000-linear-foot, 48-inch water transmission main located along North West 1st Place from North West 17th Street to North West 12th Street and a 30-inch water transmission main located west of All Aboard Florida passenger station to North West 1st Court. Phase Two consists of a proposed 1,200 linear feet, 36-inch water transmission main along 5th Street from approximately North West 1st Avenue to the east side of Biscayne Boulevard. The design included a microtunnel approximately 180 feet under the FEC railroad at North West and 12th Street.

Team Member

WSP

Dates of Service

July 2018 - July 2019

Project Status

This project is complete

Project Budget

Original Budget: $9,309,864
Design Fees: $672,197
Final Cost: $9,031,199

Client / Point of Contact Familiar with Project

Miami-Dade Water & Sewer Department
Carlos Benavides
3071 SW 38th Avenue Miami, Florida 33146
(P) (786) 552-4366
(E) Carlos.Benavides@miamidade.gov

Key Personnel on this Similar Project & B-4

Werner Reinefeld, PE, ENV SP

Launch and retrieval shafts have been positioned so that each is accessible for ease of operation and safety of the workers, motorists and pedestrians and to route traffic safely around the work area. The locations of the shafts were defined to allow hauling operations to be conducted with minimum impact. This project also entailed designing around a large mix of existing utilities within a small corridor.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

- 4,120 feet of 48-inch water main
- 2,250 feet of 36-inch water main
- 210 feet of 30-inch water main
- The design approach focused on providing the required facilities in the most cost effective means possible, while safely minimizing the impacts to the area and its stakeholders.

60-inch Force Main E15-WASD-01

North Miami Beach, Florida

The Miami Dade Water & Sewer Department (MDWASD) is currently replacing approximately 13,500 linear feet of 60-inch force main Prestressed Concrete Cylinder Pipe (PCCP) located in the City of North Miami Beach, Florida. The Project begins at NE 151 Street and Biscayne Blvd. and ends at NE 163 Street and NE 8th Avenue. The project also includes the installation of nineteen (19) automatic air release valves, six (6) 60-inch plug valves, relocation of approximately 1,400 linear feet of a 12-inch water main and one (1) tapping connection to an existing 72-inch force main.

This Project includes a crossing under the F.E.C. railroad. WSP also provided the design of approximately 600 linear feet of micro tunneling under NE 151 Street.

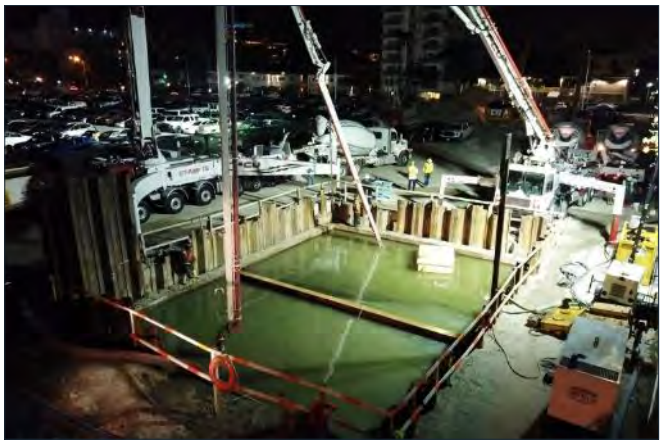
Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

Installation of approximately 600 linear feet of tunneling under the F.E.C. railroad (Trenchless Installation, Extensive coordination with the City of North Miami Beach and other stakeholders.

Team Member
WSP
Dates of Service
January 2018 - Present
Project Status
This project is in the bidding phase
Project Budget
Original Budget: $9,309,864 Design Fees: $672,197 Final Cost: $9,031,199
Client / Point of Contact Familiar with Project
Miami-Dade Water & Sewer Department Eduardo Luis 3071 SW 38th Avenue Miami, Florida 33146 (P) (786) 552-8837 (E) Eduardo.luis@miamidade.gov
Key Personnel on this Similar Project & B-4
Werner Reinefeld, PE, ENV SP

City of Miami Beach, KB-52 Stormwater Pump Station at 19th Street Design-Build

Miami Beach, Florida



WSP performed the design and permitting of a new 80 million gallon per day (MGD) stormwater pump station and ancillary site infrastructure and discharge facilities. In addition to the pump station components and electrical infrastructure to power the station, construction- related services also include site preparation, earthwork, dewatering, storm drainage infrastructure installation, parking reconstruction, utility adjustments, landscaping and seawall modifications on the south side of the Collins Canal between Convention Center Drive and Meridian Avenue.

The scope of work included cofferdams design and implementation for 30-foot-deep shafts for the pump station and treatment units. These shafts are similar in footprint and depth to the microtunneling shafts required in the solicitation.

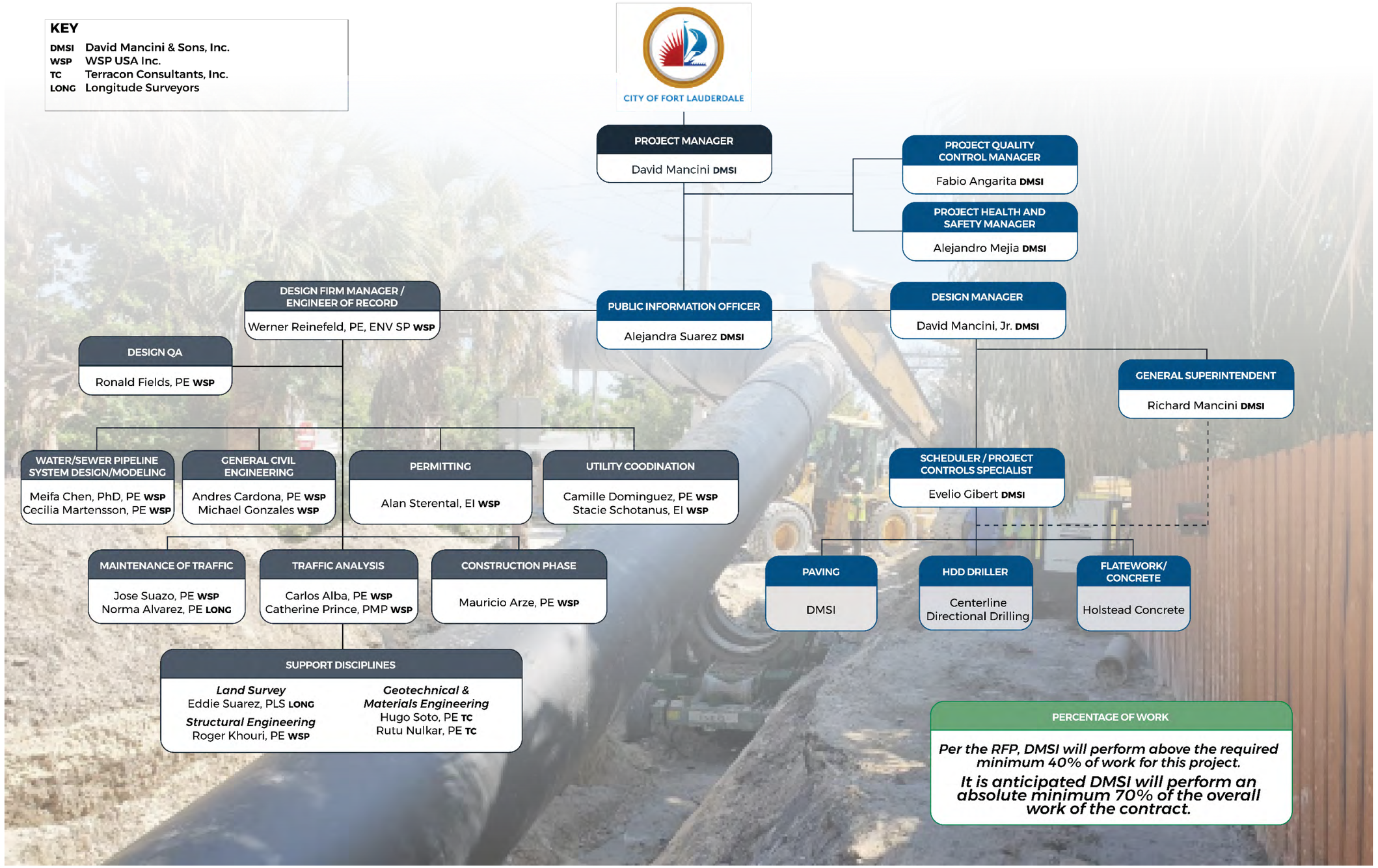
Team Member
WSP
Dates of Service
January 2018 - November 2018
Project Status
This project is complete.
Project Budget
Original Budget: $6,332,390 Final Cost: $7,516,549
Client / Point of Contact Familiar with Project
City of Miami Beach Sabrina Baglieri 1700 Convention Center Drive Miami Beach, Florida 33139 (P) (786) 383-9319 (E) SabrinaBaglieri@miamibeachfl.gov
Key Personnel on this Similar Project & B-4
Werner Reinefeld, PE, ENV SP

The project included design and construction of a deep (30-foot) stormwater pump station, including a 45- by 50- by 30-foot-deep watertight cofferdam to accommodate the pump station trash rack, treatment units, four 20,000 Gpm submersible variable speed flygt pumps contained within precast structures to combat flooding events at the new convention center and surrounding areas.

Principal Elements/Special Features of the Project and how it relates to the B-4 Force Main Solicitation:

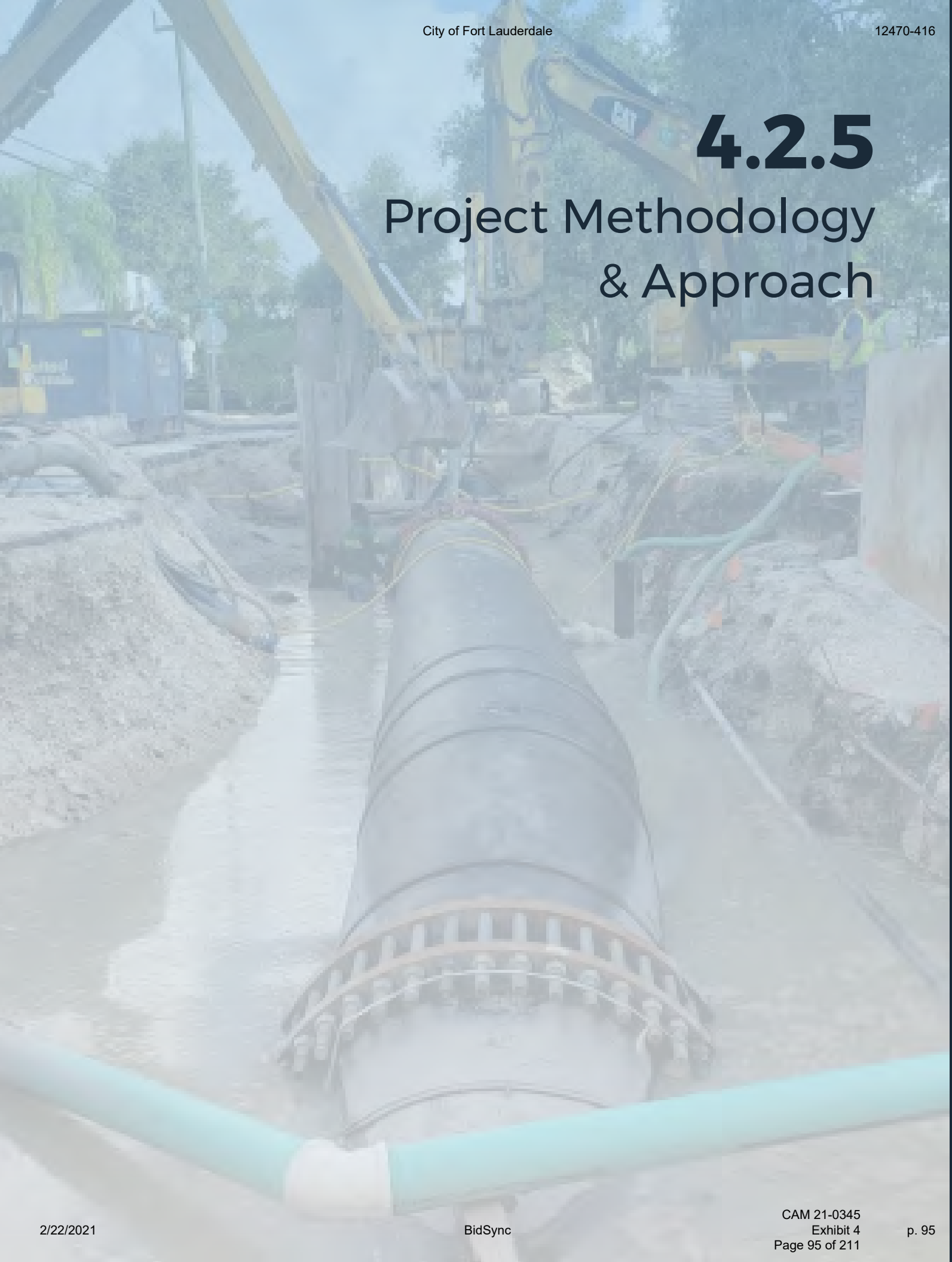
- Project included four 32-inch pumps discharge pressurized pipes
- Project included deep cofferdam, 40 feet by 50 feet at 30 feet deep, similar in size to large microtunnel shafts
- Dewatering permits for excavation of the shafts
- Work performed in a crowded urban environment

iii. Organization Chart



ii. Resumes

Resumes for the Firm's Key Personnel are provided on page 29 in 4.2.2 Qualifications of the Firm. The Team Key Personnel resumes are included on page 49 of 4.2.3 Qualifications of the Team.



4.2.5
Project Methodology & Approach

4.2.5 PROJECT METHODOLOGY AND APPROACH

Provide a statement of the firms understanding of the project and methodology and approach to managing the project. Include a plan for completing the specified work including ability to meet time and budget requirements.

A. UNDERSTANDING THE PROJECT

In September of 2017, the City of Fort Lauderdale (The City) entered into a Consent Order with the Florida Department of Environmental Protection (FDEP). A force main condition assessment was included as a Consent Order task, with additional projects to be added as result of this assessment. One of these projects is a redundant force main to the existing 42-inch force main from Repump Station B to the George T. Lohmeyer (GTL) Wastewater Treatment Plant.

We understand that the City's plans to rehabilitate the existing 42-inch force main once the new force main has been installed and placed into operation. **In order to place out of service the existing 42-inch force main and be able to start the rehabilitation work, this B-4 force main shall be connected to the new redundant force main that we are very familiar with, having installed approximately 15000' (3 miles) of it.** In other words, we do understand that for the City to have a fully redundant force main system, this project should be completed as soon as possible.

Based on the above-mentioned information, the City is soliciting proposals for the design, permitting, construction, construction management, inspection, testing, certification for a new 24-inch (internal diameter) force main from Pump Station B-4 to a 24-inch stub out just south of NE 21st Street along Bayview Drive. Our team agrees with the City's preference of horizontal directional drilling (HDD) installation due to its advantages like reducing traffic impacts, reducing excavations and expediting the construction time. The scope of work is as follows:

- Installation of a new 24-inch (internal diameter) force main along Bayview Drive using HDPE PE4710 DR-11 via HDD and ductile iron pipe Class 350 for the open cut segments (tie-ins)
- Tie-ins to the existing Pump Station B-4 at the George English Park on the south side and on the north side to a 24-inch stub out just south of NE 21st Street
- Relocation of existing water main (when in conflict with the new force main)
- Restoration works
- Future sea level rise included in the design

The south side of the project near Sunrise Boulevard and George English Park is a very busy area with commercial and residential properties. The north side of the project along Bayview Drive is exclusively residential. Construction along the project area would be affected by vehicular and pedestrian traffic, especially for open cut areas (HDD pits and tie-ins). **DMSI has extensive successful experience working with these conditions in Fort Lauderdale, including the completed Rio Vista Emergency Force Main, and the ongoing Redundant Force Main to GTL Projects.**

Together with our team of engineers from **WSP**, the challenges of minimizing impacts to the community, coordinating with the regulatory agencies like FDEP and stakeholders within the project area, and dealing with public safety concerns and access, will be addressed with professionalism and speed without sacrificing the quality of the project.

It is important to note that this is not a typical HDD project, which consists of only vertical curves. In order to install the force main along this corridor via HDD, a combination of both vertical and horizontal curves will need to be designed and installed. These type of combination (vertical, horizontal and possible compound curves) should be carefully evaluated early during the design stage since this will result in a significant increase in pulling forces needed during construction and could damage the HDPE pipe if the pulling forces used are higher than the pipe capacity.

The good news is that the DMSI-WSP team has successfully worked on this type of compound curves HDD projects in the past. For example, the Port Miami HDD project (see project description in previous sections) consisted of a 42-inch water main and a 12-inch dual force main under the Biscayne Bay in Miami. This project was designed by WSP and installed by DMSI without issue because these compound curves were identified during the beginning of the design process.

As shown in our **conceptual plans in Appendix A**, our team prepared Plans & Profiles for the HDD sections where the vertical and horizontal curves are shown. The table below summarizes these curves and shows that we have taken these into consideration for the preparation of this Proposal.

Table 1: Curve Summary

HDD Segment	Stationing		Vertical Curve	Horizontal Curve	Compound Curve	Comment
	From	To				
1	0+20.00	10+25.00	x	x		Horizontal curve at the bottom tangent (to avoid a compound curve)
2	10+25.00	30+10.00	x	x	x	Includes one compound curve near the end of the segment
3	30+10.00	52+18.00	x			Typical HDD (no horizontal curve)

i. Approach to Managing the Project

Our project management systems and controls are rigorous enough to exceed the requirements of the City for this important consent Order Project, yet flexible enough to adapt to other requirements from the City that may arise quickly.

Upon receiving Notice-to-Proceed (NTP) for the Project, we will coordinate a kickoff meeting with the City's Project Manager, City's Engineering and Operations staff to discuss the Project goals, deliverables and schedule. To this meeting, David Mancini Sr. and David Mancini Jr. (DMSI), will be attending with Werner Reinefeld (WSP). When project delivery activities kick off, the schedule is tracked, updated, and presented in monthly progress reports, which will include the status of each design deliverables, permits status and important milestones during construction. The main purposes of the meetings are to keep you informed of progress and for coordination. Following each meeting, minutes will be prepared with specific action items.

During the Construction Phase, our Deputy Project Manager, David Mancini Jr. will keep constant communication with the City through the City's Project Manager. The first day of the week, we will discuss with

the Project Manager the work to be performed during that week and what we expect to be doing the week after. This approach will help to keep City's upper management informed on the status of the Project.

We understand that given the situation that this Project is part of the Consent Order with FDEP, the City needs to constantly provide Reports to the FDEP on the status of the Projects. Our team is aware of this specific condition and will be providing all the information needed to the Consent Order Program Manager to facilitate the preparation of these reports. We are aligned with the City on how important is to keep FDEP informed on the status of the Projects. Once we understand that substantial completion has been achieved, we will notify the City's Project Manager and we will coordinate the substantial completion walkthrough, and our design consultant will prepare a punch list of the items that need to be corrected. After all items are corrected, we will coordinate a Final Walkthrough with the City and Operation Staff.

At the end of the Project, all documents including but not limited to As-Builts, CAD files, pressure tests will be delivered to the City. Our team knows the importance of the CAD files and As-Builts since of the Tasks of the Consent Order is the Asset Management and it needs to be kept updated. We will work with you, to have this incorporated into the City's database, so it can be used by future generations.

ii. Quality Assurance / Quality Control

Both DMSI and WSP have internal quality assurance (QA) and quality control (QC) plans, which are directed to provide a high level of service standard to our clients, in this case to the City of Fort Lauderdale. As shown in the organizational chart provided for this specific design-build project, Ron Fields, PE will be providing QA/QC for the project design and deliverables. QA will involve verification that the project-specific Quality Control Plan is being implemented and that the services being provided are meeting the requirements from the City of Fort Lauderdale. QC will determine that established procedures are followed and the requirements of the scope of services are met in accordance to the standards.

The review process will be performed as indicated below:

1. The project manager and designer indicate that deliverable is complete and is ready for review.
2. Our QA/QC manager will perform a thorough review of the deliverable and inform the project manager and designer of any comments.
3. The project manager and designer will indicate concurrence with the corrections and revise the deliverable as needed.
4. The QA/QC manager will perform a final review and verify the incorporation of all agreed changes.
5. As part of the deliverables to the City, red lines comments of the QA/QC will be provided to the City as needed.

iii. Ability to Meet Time and Budget Requirements

We firmly believe that with our design and construction approach described in the following conceptual design section, the project completion is executable within the dates required by the City (180 days after notice to proceed for Substantial Completion and 210 days for final completion). A preliminary CPM schedule is provided at the end of this section, which confirms DMSI's intention on meeting the schedule outlined in the RFP.

Figure 1 – DMSI currently maintains a staging area in Fort Lauderdale

Provide a conceptual design for the proposed Project. Include design, construction, planning, coordination, scheduling, maintainability and any other areas that utilize new or time saving techniques to accomplish the work in a timely manner without sacrificing quality. Include the maintainability of the water main and force main.

B. CONCEPTUAL DESIGN

The conceptual plans at the end of this section were prepared based on the scope of work, City standard details and existing utility infrastructure provided as part of the design criteria package. For the preparation of the preliminary plans & profiles, our design team used public LiDAR data from the USGS to create a profile of the existing ground elevation. LiDAR is an optical remote-sensing technique that uses laser light to densely sample the surface of the earth, producing highly accurate measurements. LiDAR is typically used for the preparation of conceptual plans due to its accuracy. For the preparation of the detailed design, our team will be using updated field land survey data and geotechnical investigation to be provided by our sub consultants **Longitude Surveyors, LLC and Terracon Consultants, Inc.** This conceptual design has been prepared taking into consideration different aspects, but the most important, **maintainability of the new asset by the end user, Fort Lauderdale Utility operations staff**.

i. Selection of the Pipe Material

It is specified on the Design Criteria Package that the inside diameter of the proposed force main shall be 24 inches. It was also indicted that the pipe material for the HDD sections shall be HDPE DR-11 and for the open cut sections Ductile Iron Pipe (DIP) Class 350.

- **HDPE Pipe:** The internal diameter of a 24-inch HDPE IPS pipe is 19.37 inches, much smaller than the requirement of this project. In order to have an internal diameter of 24-inches as required by the Design Criteria Package, the selected HDPE IPS pipe shall be at least 30 inches, which has an internal diameter of 24.22 inches and in compliance with the requirements of the Design Criteria Package. ***Our team is proposing to use a 30-inch in diameter HDPE DR-11 IPS for the HDD sections.***

- **Ductile Iron Pipe:** For the open cut sections, as required by the Design Criteria Package and shown in our conceptual plans, we have done our design with 24-inch DIP Class 350 pipe. Since the location of the open cut sections are mostly on grass outside of traffic areas, a lower-class pipe will be sufficient. For the City's consideration, we are including preliminary thickness calculations based on the Ductile Iron Pipe Research Association (DIPRA). All DIP pipe will be encased in polyethylene per AWWA C-105 as required by the City. These calculations can be found in **Appendix B** at the end of this section.

ii. Construction Methodology Along Bayview Drive

Segment #1 – From Sta 0+00 to Sta 10+25

As shown in our conceptual plans, the length of this segment is 1,025 linear feet of pipe. At this segment **the open cut is limited to only 12% of the total length** which results in less traffic and restoration impacts. The location of the entry and exit pits are on the grass outside of pavement areas. The location of the pipe exit pit is next to the lift station B-4 at the George English Park. This park is highly used by boat owners since there is a boat ramp at this park. The pipe entry pit will be located next to the Jack and Harriet Kaye Park. Both are City parks owned by the City and maintained by the Parks & Recreation Department. Our work will be coordinated

with the City's project manager and parks and recreation staff, but we do not expect impacts to the park parking area.

As previously noted, the alignment layout has both vertical and horizontal curves. Our previous experience with this type of layout is to avoid having both curves occurring at the same time, since this would increase significantly the pulling forces during installation. For this case, the horizontal curve (R=600 feet) is designed to fall within the bottom tangent as recommended by the industry. The radii used here are acceptable and more than the minimum for this pipe. The entry and exit angles are 10 degrees. These low angles allow a smoother transition and reducing the pulling forces exerted on the pipe during installation. Also, we will be using pipe rollers and water ballast to reduce the friction during installation.

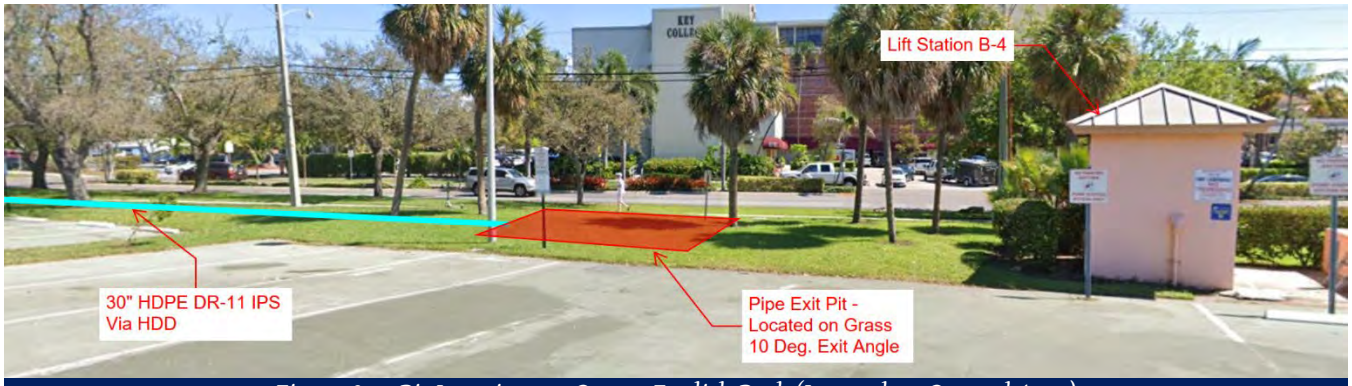


Figure 2a – Pit Locations at George English Park (Located on Grassed Area)

Figure 2b – Pit Locations at Jack & Harriet Kaye Park (Located on Grassed Area)

Segment #2 – From Sta 10+25 to Sta 29+90

This segment consists of approximately 1,965 linear feet of pipe. In order to complete this segment in one single pull to avoid impacting the road, it is necessary to provide three horizontal curves (R=1,100 feet, R=1,100 feet R=1,000 feet). This segment is the only one with a compound curve (vertical and horizontal curve happening at the same time). To achieve this, we propose the use of 10-degree angles for a smoother transition, and also the use of pipe rollers and water ballast to reduce friction, hence reducing the pulling forces needed for the installation of this segment.

Similar to Segment #1, the location of the entry and exit pits are on the grass outside of pavement areas. The pipe entry pit will be located next to the Jack and Harriet Kaye Park where Segment #1 ends. The location of the exit pit is on the grassed area just south of NE 15th Street. Our team will closely coordinate with the neighbors who live close to this area to learn their concerns and reduce complaints.

This segment is a highly technical segment that shall be designed and installed by a team that has the experience working on this type of compound curves installation. We are that team!

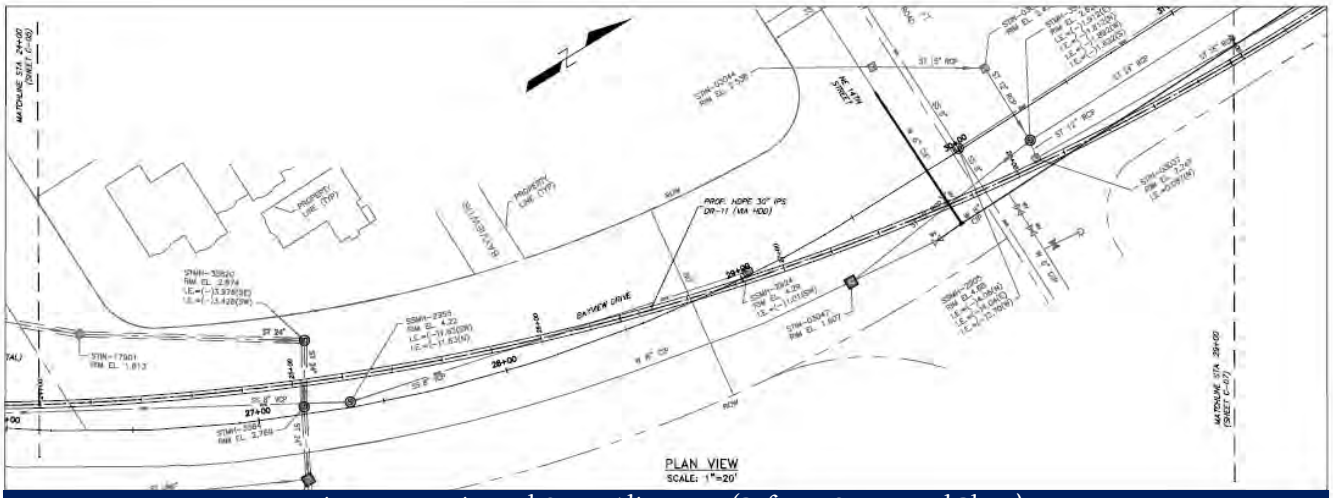


Figure 3 – Horizontal Curve Alignment (Refer to Conceptual Plans)

Segment #3 – From Sta 29+90 to Sta 53+70

This is the largest segment with a total of 2,380 linear feet of pipe (including a 2,200-linear-foot HDD Pull). Although this is the largest HDD Pull, it is a straight segment without horizontal curves. The entry and exit angles are 10 degrees and as shown in our **preliminary calculations in Appendix B**. The pulling force during installation are within the acceptable range, however, pipe rollers and water ballast will be used to ensure the successful installation of this segment.

The southern HDD pit is on the grassed area just south of NE 15th Street (as HDD segment #2) and the northern pit will be located close to the intersection with NE 20th Court. Although we prefer the exit pit to be just north of the intersection to avoid blocking of the road, this will be determined once all the utilities in this section have been identified. We will avoid having a pit too close to a property's driveway and at the same time keeping the horizontal clearance from the existing water main at this location.

For the open cut segment to perform the tie-in, our plans are being performed with DIP Class 350 as required by the Design Criteria Package. One thing to note here is the two 6-inches water main crossing the over the force main. For these crossings we are using the City's standard details and deflecting the pipe joints (3 degrees) to avoid the installation of additional fittings. This deflection is within the acceptable ranges of the manufacturer. The tie-in to the new redundant force main will be performed at the stub-out installed by others.

Figure 4 – HDD Pull #3 (Located on Grassed Area)

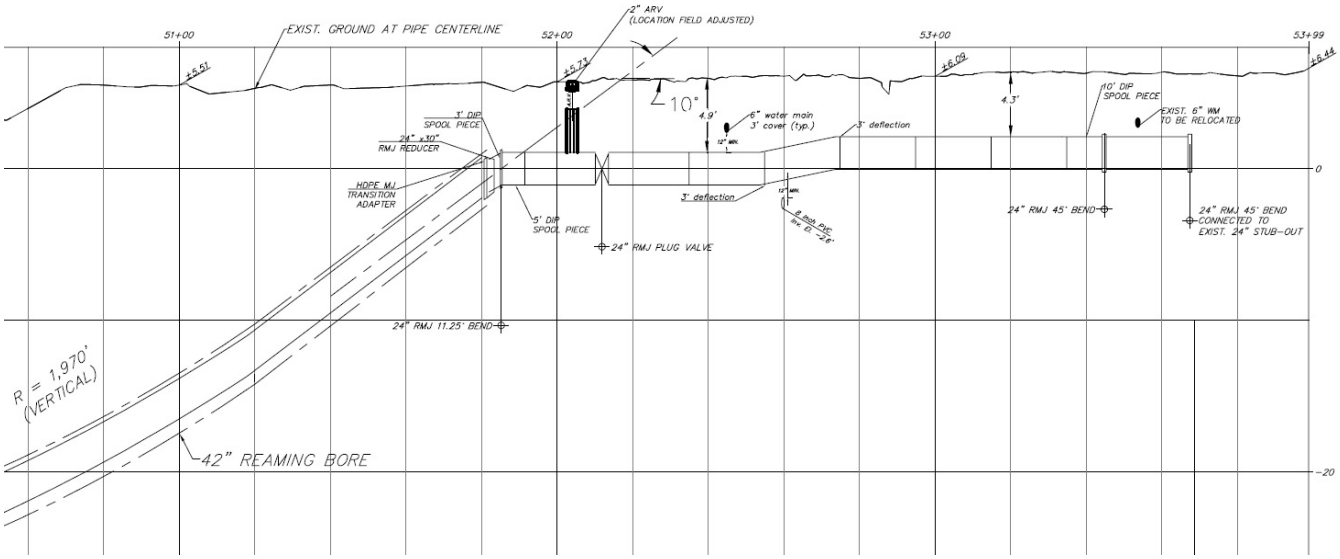


Figure 5 – Open Cut Tie-In Profile (Refer to Conceptual Plans)

Tracer Wire for HDPE Water Main and Service Connections

One of the most common mistakes in HDPE installation projects is the wrong installation of the Tracer Wire, also called locating wire. This is used to assist utility operations staff in locating pipes and other lines after they have been buried in the ground. Once the pipe is laid down, tracer wire is placed along the length of the plastic material pipe. The issue of this is that the tracer wire must be properly grounded at all dead ends. The best way to ground a tracer wire is to install a drive-in magnesium ground rod and an access point at each dead end of the wire. Also, an access point will protect the wire and provide a direct connection point for the City's utility staff to locate the transmitter to connect to the tracer wire. **DMSI understands this important detail and how concerned the City is with this and we will make sure that this is installed in satisfactory way**. **Figure 6** shows typical details of the wire connection also included as part of our conceptual plans at the end of this section.

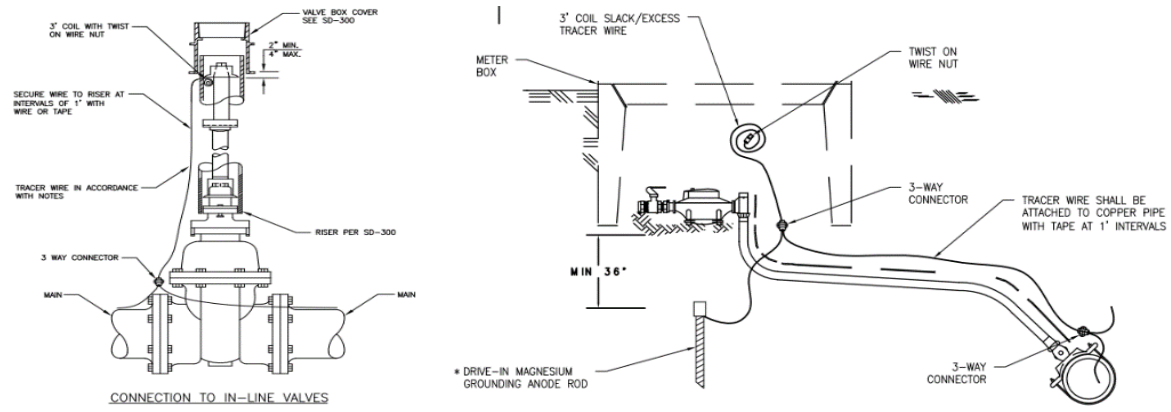


Figure 6 – Tracer Wire Installation Examples

iii. Maintainability of the New Asset

Due to the natural composition of the wastewater inside the force main, due to pressure fluctuations in the system, or simply because of a corrosive environment, all pipes degrade over time and eventually will need repair or rehabilitation. Maintainability of the system is a high priority issue for the City's utilities operations staff, and we are providing a force main that will satisfy this critical corrosion issue. At the end of the day, the utilities operations staff is the end-user and should be provided with a system and materials that they are very familiar working with to help them to respond quickly in case of an emergency. The use of HDPE provides a more homogeneous system with less mechanical joints, hence reducing the sources of possible leaks. HDPE PE4710 has excellent corrosion resistance and is an inert material, virtually perfect for this type of project. HDPE will offer better resistance to corrosive acids, bases and salts than most piping materials. **We understand that one of most important items for the Utilities Operations division is to field locate the existing assets in the future. Since HDPE is a plastic material, we will be providing a continuous copper tracer wire to facilitate the field locate of the water mains. The detail of the tracer wire is included as part of the conceptual plans.**

For the ductile iron pipe used in open cut sections, to extend its life and reduce maintainability issues/concerns the pipe used is internally lined with a ceramic epoxy lining (Protecto 401) and to protect the exterior a shop-applied exterior asphaltic coating is provided.

iv. Geotechnical Considerations

Due to the nature and priority of this project the City did not have a chance to perform a geotechnical evaluation. However, based on previous experiences of our team in the Fort Lauderdale area, the type of soil that we expect to encounter is Fine Sand with Limestone fragments. Although groundwater elevation varies depending on the season of the year, we expect to encounter groundwater to a depth of 4 to 5 feet below existing ground. For conceptual design purposes, we have designed the open cut segments of the new force main to be installed at a depth of 3.5 to 4 feet below ground.

1. **Expected Soil Material:** The expected soil material is sand and limestone and, like open cut, it is the easiest ground to excavate and easiest material to bore via HDD. Care shall be taken to prevent collapse of the ground/hole due to inadequate support. Special attention should be given to the mixture of the drilling fluid in order to provide a better sealed bore and complete a successful project. In addition, although limestone is a type of rock, it is classified as a soft rock which will present lesser challenges than other denser rock formations. As shown on the previous Section 4.2.3 Qualifications of the Team, we have extensive experience working with these types of soils throughout South Florida.

2. **Pipe Material:** The material of the new water main is HDPE with butt fusion joints, which creates a monolithic pipe structure. The fittings and appurtenances will be connected to the HDPE pipe through adapters and mechanical joints connections. In other words, the pipe is designed to withstand substantial soil settlement.

3. **Open Cut Excavations (tie-ins):** Based on the expected soil conditions and anticipated depth of the proposed and existing water mains, excavations will be done by cut slopes in some locations. For crossings under existing utilities, the excavation would be cased or shored following the Occupational Safety and Health Administration (OSHA) standards.

4. **Fill Material:** Fill material will be placed in lifts not exceeding twelve inches in loose thickness. Fill material placed above groundwater level will be compacted to at least 95 percent of the Modified Proctor Maximum Dry Density (ASTM D-1557).
5. **Trench Restoration:** Trench restoration will be performed following City Standard details, as shown in our conceptual plans provided with this proposal.

v. Permitting Process

To expedite the permitting process and be breaking ground as soon as possible, our first approach with the permitting agencies will be to link this project to the Redundant Force Main Emergency Project Permits, given that every day that this force main remains connected to the old 42-inch force main is a risk for sewage reaching the water ways. With the set of plans that we have already prepared (plans and profiles), we can make this request to the permitting agencies sooner than the other firms.

Although we believe this Project can be linked to the existing Emergency Permits and be in construction as soon as possible, we do have a Plan B. Our team has prepared the Applications to Construct a Wastewater Collection/Transmission System for Broward County and for the FDEP, as shown in the Appendix C. Our design consultant is ready to submit the Permit Applications along with the already prepared Plans and Profiles as soon as the City issues the Notice to Proceed.

We understand that with this Permitting approach, we can be in construction sooner than every other firm.

Table 2: Permit Matrix

Permit	Agency	Submitted	Time for Review
Application to Construct a Wastewater Collection/Transmission System (BCEPD Form 212-0004)	Broward County Environmental Protection and Growth Management Department	Already prepared and ready for submission.	Typically, 4 weeks
Application to Construct a Wastewater Collection/Transmission System (FDEP Form #62-604.300 (8)(a)	Florida Department of Environmental Protection (FDEP)		
Dewatering Permit	Broward County Environmental Protection and Growth Management Department (BCEPGMD)	**5 Working Days after Notice to Proceed**	Typically, 3 weeks
Traffic Permit	Broward County (Signs and Striping)	**5 Working Days after Notice to Proceed**	Typically, 3 weeks
MOT (City Roads)	CFL TAM Department	**5 Working Days after Notice to Proceed**	Typically, 2 weeks

vi. Contaminated Site Dewatering

A dewatering permit from the Broward County Environmental Protection and Growth Management Department is required if dewatering operations are conducted within 0.25 miles of a contaminated site. After review of the Broward County Inventory Report of Contaminated Locations, our team found one contaminated sites within a 0.25-mile radius from our project area. As shown in Figure7 below, the pollutant/contaminant at this location is Petroleum. This type of pollutant falls within a Federal Cleaning Program. The dewatering approach to be used is standard dewatering method. After conversations with the Broward County Specialist Norman Arazola, PE, there is a high probability that groundwater data is not available for these sites, and the County would require additional information, laboratory sampling, or three-dimensional computer model to confirm the radius of influence of the dewatering activities. This permit will be submitted after the 100% design is completed, once the excavation limits and depths are completely determined.

Figure 7: Contaminated Site No. 1277A (Phillips 66 Muffler Land)

vii. Environmental Management

The City is known as "The Venice of America," given that it contains more than 165 miles of rivers and canals. These rivers and canals are greatly used by the neighbors and tourists, based on this, dewatering activities from a construction project should be planned well ahead of construction to avoid groundwater discharges to these waterways. These types of discharges affect adversely the City's waterways and can result in complaints from neighbors and also can make it to the headline of the primetime news shows. Our team understands these concerns from the City and will apply available methods and technologies to remove sediment and reduce associated turbidity before groundwater is discharged. A dewatering plan will be provided. This plan will be developed using the findings and recommendations in the geotechnical report to be

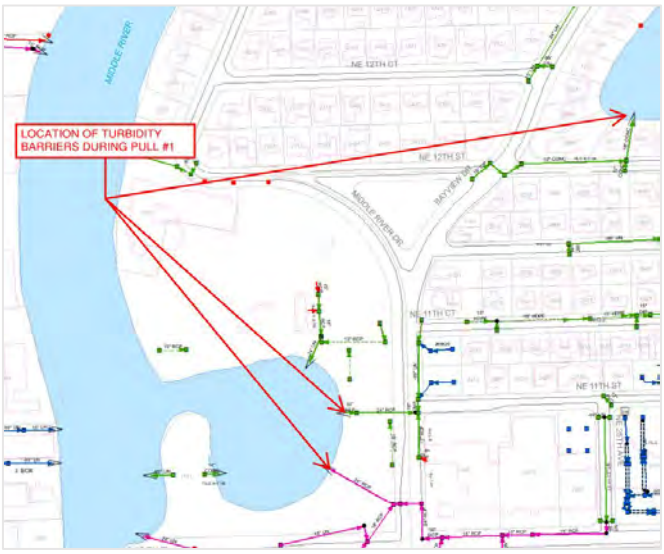


Figure 8a: Location of Turbidity Barriers

prepared by Terracon Consultants and using FDEP's Best Management Practices (BMPs). Based on preliminary review of the City's Atlases, we have identified that the storm water system located along Bayview Drive, discharging to the Middle River and Intracoastal Water Way. For the first HDD Pull (Pull #1) we have identified two 24-inch outfalls at the George English Park discharging to the Middle River and an 18-inch outfall discharging to a canal just north of NE 12th Street.

For the second HDD Pull (Pull #2), turbidity barriers will be installed on the outfall discharging to a canal just south of NE 15th Street (24-inch and 15" in diameter) and the 18-inch outfall of Pull #1 will remain protected.

For the third HDD Pull (Pull #3), three (3) outfalls will be protected. The two outfalls located south of NE 15th Street and a 24-inch outfall located north of NE 17th Street.

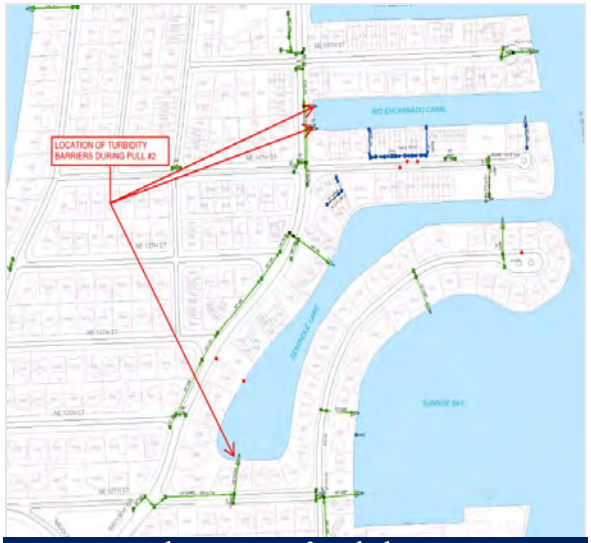


Figure 8b: Location of Turbidity Barriers

Figure 8c: Location of Turbidity Barriers

Turbidity barriers as shown in Figure 8 will be installed at these locations as the last line of defense to prevent any groundwater from reaching the water bodies.

All catch basins within the project limits will have a filter fabric installed prior start of construction activities, and these will be monitored every week, after major rain event and while dewatering activities are being performed. A variety of methods or a combination of these could be used to treat water during the dewatering operations depending on the level of turbidity. Among these methods are dewatering tanks, filter bags, sand media filters or chemical treatment (Polymers). Polymers are well used through North and Central Florida to reduce the turbidity of the discharge water when the receiving waterway is a sensitive one.

viii. Hurricane Protection Plan

There is always the possibility of the project being under construction phase during the hurricane season (June- November). **Our team understands the importance of this and will have a Hurricane Preparedness Plan ready before construction starts.** This plan will include our team's procedures and City requirements in case of hurricane, securing of the equipment and areas and contact information of key personnel among other important items.

ix. King Tides

Due to the geographical location of the City of Fort Lauderdale, and its flat topography, the City is vulnerable to the sea level rise, especially with the King Tides from September to December. For this project and **based on preliminary LiDAR elevations included in our conceptual plans (as low as 1.06' NAVD) and location of area between South Middle River and Intracoastal Waterway, we have determined that the area of Coral Ridge, could have or have experienced flooding problems in the past.** We understand this common situation and will be monitoring closely the National Oceanographic and Atmospheric Administration (NOAA)'s South Port Everglades Station, to determine ahead of time when King Tides will be occurring, since these could affect the construction phase during certain hours of the day.

x. Maintainability of the Existing Water Main and sanitary sewer system

As part of the DCP, information of existing utilities owned by the City was provided. We have incorporated these existing utilities, included water main and force main to our plan and profile views in Civil 3D. Before start of construction, all utilities will be field located. Our plan is to protect and maintain the existing water mains and sanitary sewer system, providing adequate separation from the proposed water main avoiding relocation. Regarding the tie-ins to the existing system, on the north side there is a stub-out and a closed valve that will allow the installation of this tie-in without placing the system out of service. On the south side, the tie-in to the existing pump station B-4 a cut-in tee is called out in the DCP documents we understand the system can be isolated for the installation of the cut-in tee without the need of a tapping connection.

Describe approach to minimizing impact to surrounding neighbors, businesses, and travelling public.

C. APPROACH TO MINIMIZE PROJECT IMPACTS

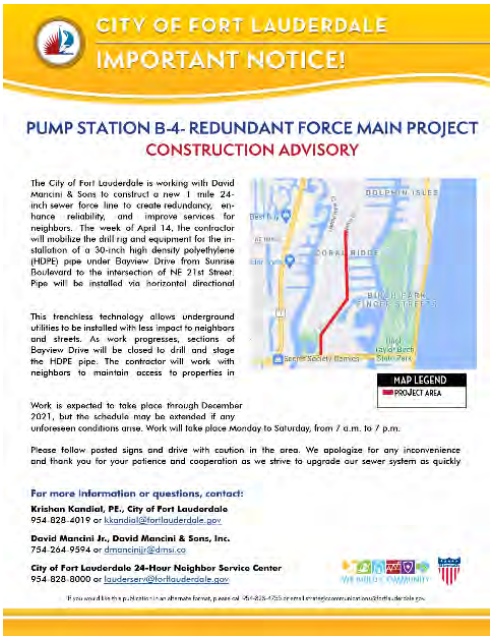
Our team fully understands that one of the most important components of a successful construction project is communication, not only with the staff from Public Works or City officials, but also with the City's neighbors and businesses. Our Team knows from firsthand how engaged the neighbors are with the infrastructure projects currently happening in Fort Lauderdale. DMSI Design Manager David Mancini Jr. has developed strong communications with neighbors from the Rio Vista Civic Association, where DMSI responded to the City's emergency repairs for a force main break. Currently, DMSI and WSP are involved in communications with the Downtown Development Authority, and the residents of 100 E. Las Olas Boulevard and Las Olas River House as part of the coordination for the Central New River 20-inch water main project. ***Our team understands the importance of communication to the City, neighbors, and businesses and will use our experience and relationships to significantly reduce any complaints to the City during this project.***

Upon Notice to Proceed (NTP), we will develop a Community Outreach Plan (COP) that will serve as a "blueprint" outlining the communication tools, techniques and methods to be used throughout the duration of the project. This blueprint will be developed with an understanding of the current City of Fort Lauderdale infrastructure challenges and priorities, surrounding urban environment, community dynamics and unique stakeholders in the area. Upon completion, the COP will be submitted to the City's project manager for review and approval. The COP is a living document and will be updated periodically throughout the duration of the project. The COP will outline the following plan elements:

- Stakeholder management
- Public meetings and open houses
- Grassroots interactions
- Special event planning
- Local agency, condo association special interest and business group meeting
- Media relations
  Website updates
  Social media (City's Facebook, Twitter, Instagram, YouTube and Nextdoor
- Anticipated stakeholder concerns (e.g. safety, noise, construction schedule, traffic, and access
- City's General Communications Platforms (City Newsletter, City
- E-News, Government Access TV and Code Red Emergency Notifications, if needed
- 24/7 project hotline

i. Stakeholder Database Management

Specific to this project, **we will develop a stakeholder database comprised of key stakeholders including the Coral Ridge Association, Inc. (Mary Peloquin – President and Al Massey – Vice President), property owners, local businesses and elected officials including Commissioner Heather Moraitis (District 1) as well as City department leaders as well as other interested parties.** This stakeholder database will capture contact information as well as track correspondence with dates, stakeholder type, form of communication, area(s) of concern, inquiries, responses and resolutions.


CITY OF FORT LAUDERDALE
IMPORTANT NOTICE!

PUMP STATION B-4- REDUNDANT FORCE MAIN PROJECT
CONSTRUCTION ADVISORY

The City of Fort Lauderdale is working with David Mancini & Sons to construct a new 1 mile 24-inch sewer force line to create redundancy, enhance reliability, and improve services for neighbors. The week of April 14, the contractor will mobilize the drill rig and equipment for the installation of a 30-inch high density polyethylene (HDPE) pipe under Bayview Drive from Sunrise Boulevard to the intersection of NE 21st Street. Pipe will be installed via horizontal directional

This trenchless technology allows underground utilities to be installed with less impact to neighbors and streets. As work progresses, sections of Bayview Drive will be closed to drill and stage the HDPE pipe. The contractor will work with neighbors to maintain access to properties in

MAP LEGEND
PROJECT AREA

Work is expected to take place through December 2021, but the schedule may be extended if any unforeseen conditions arise. Work will take place Monday to Saturday, from 7 a.m. to 7 p.m.

Please follow posted signs and drive with caution in the area. We apologize for any inconvenience and thank you for your patience and cooperation as we strive to upgrade our sewer system as quickly

For more information or questions, contact:
Krishan Kandial, PE., City of Fort Lauderdale
954.828.4019 or kkandial@fortlauderdale.gov
David Mancini Jr., David Mancini & Sons, Inc.
754.264.9594 or dmancinijr@dmsi.co
City of Fort Lauderdale 24-Hour Neighbor Service Center
954.828.8000 or lauderserv@fortlauderdale.gov

ii. Pre-Construction Activities

Several weeks prior to the start of construction, we will develop and distribute door hangers or flyers providing notice of the start of construction, what to expect during construction, and contact information. This information will also be provided to the City's Strategic Communications staff for posting to the City's website and social media platforms.

iii. Construction Phase (Outreach Tools, Techniques, Activities)

During construction, we will perform public information and outreach activities to include the following:

1. Meeting/interacting one-on-one with property and business owners, tenants, local organizations and other interested parties as required/needed. We suggest sharing project updates to the HOA and impacted neighbors to keep these key stakeholders engaged and informed.
2. Maintaining a project specific 24/7 Hotline and respond to inquiries in a timely manner (if requested).
3. Developing/creating project collateral such as a project fact sheet, notifications, door hangers, flyers, Frequently Asked Questions (FAQs), and other relevant information.
4. Distribute project collateral via door-to-door, email and/or first-class mail to property owners, businesses and tenants located near the project site, and to other interested parties.
5. Maintain stakeholder database (using a Stakeholder Management Database System).
6. Correspond regularly with the City regarding relevant project updates/information to post to social media platforms and website.

Project Communications

Based on our team's prior experience, and project knowledge, we can anticipate many of the questions and concerns that may arise and address them through pre-approved communications materials such as a project fact sheets and FAQs. All written responses will be presented to the City's Project Manager and Public Information Officer for review and approval prior to being released to the public. We will typically respond to routine public inquiries either within two hours of receiving a call and/or message or the morning of the next business day if received after hours or on the weekend. We understand that even when there is no immediate answer to the inquiry, it is important to be responsive and to reassure the caller their concern has been heard

and will be addressed. This can often be the difference between a minor problem being resolved or escalating into a crisis.

Broward County Bus Routes

To reduce impacts to Broward County Bus users, our team completed a preliminary evaluation into Broward County website for the Bus routes that might be affected by the construction. As shown in the Figure below there is no Bus Stop/Route along the Bayview Drive. However, Bus #36 and Bus #72 have a route along Sunrise Blvd. and Oakland Park Boulevard, respectively. We do not expect these routes to be impacted by our Project, but we will closely coordinate with Broward County ahead of time to confirm and reduce impacts. We will collaborate and fully comply with their requirements.

Figure 9: Broward County Bus Stops

Describe approach for minimizing lane closures, lanes reductions, maintenance of traffic (MOT) plan, and reducing traffic impacts.

D. TRAFFIC MANAGEMENT (MOT APPROACH)

With our approach of HDD for the new force main installation and open cut for the tie-ins to the existing B-4 Pump Station and Stub-out near NE 21st Street, **the excavations within the Bayview Drive corridor will be reduced approximately 93 percent— a significant reduction on traffic impact and lane closures within the project area.** Entry and Exit Pits are located outside of the roadway (in the Right-of-Way) which allow the work to be performed without impacting significantly the traffic flow within the area. All the work will be performed within the Bayview Drive which falls under City's jurisdiction as a "Minor Collector Road" with a width of 80-feet from Right-of-Way to Right-of-Way. The roadway consists of one lane on each direction and two bicycle outside lanes. Maintenance of Traffic (MOT) plans will be prepared by Longitude's staff who carry all certifications to prepare and maintain the MOTs. The MOT will be prepared taking into consideration traffic and pedestrian flow and putting attention to the traffic coming from and going to Sunrise Blvd. and the local dead-end streets located to the east side of the alignment. Access to private properties will always be provided during construction. For all lanes and pedestrian closures (if any), our team will coordinate with the City's Strategic Communication Staff and will provide notification ahead of time.

A MOT permit from the City Transportation and Mobility Department (TAM) will be obtained prior to start of construction. This permit will have certain conditions like construction times, lane closures, among others. **Our team will comply with all the requirements from the City's TAM Department. This information will be provided as well to the City of Fort Lauderdale, so lane closures (if any) can be published on the City's "LauderStreet" System.**

Describe means and methods for expediting project schedule.

E. MEANS AND METHODS TO EXPEDITE PROJECT'S SCHEDULE

As discussed in the Permitting Process Section, our team has put a lot of upfront work in order to expedite the Project Schedule. We have prepare Plans & Profiles already that will facilitate the Permitting Process hence expediting the design schedule and bringing the project to construction earlier and finish construction ahead of time.

To expedite the project's schedule, our plan with the permitting agencies will be to link this project to the Redundant Force Main **Emergency Project Permits**, given that every day that this force main remains connected to the old 42-inch force main is a risk for sewage reaching the water ways. With the set of plans that we have already prepared, we can make this request to the permitting agencies sooner than the other firms.

Although we believe this Project can be linked to the existing Emergency Permits and be in construction as soon as possible, we do have a Plan B. Our team has prepared the Applications to Construct a Wastewater Collection/Transmission System for Broward County and for the FDEP, as shown in the Appendix D. Our design consultant is ready to submit the Permit Applications along with the already prepared Plans and Profiles as soon as the City issues the Notice to Proceed. Also, we plan to submit dewatering plan, and MOT within 5 working days after NTP.

Provide information on your firm's current workload and how this project will fit into your workload.

F. WORKLOAD

Our team will use the time and budget management philosophy described in our project understanding to manage overall workload. We will work together to ensure all technical elements are met on this project. The table below lists our current workload and we do not feel that any of our major on-going projects will conflict with the team's performance of services under this important City/Consent Order Project.

DMSI Current Workload					
PROJECT ID	PROJECT NAME	CONTRACT AMOUNT	REMAINING WORK	% REMAINING	NOTES
19-LW.LOWM	Lake Osborne Water Main Improvements Project	$2,618,649.00	$830,264.28	32%	SUB WORK ONLY REMAINING.
19-MD.TERM	Cruise Terminal B & C Conversion to C Waterside Improvements	$4,277,050.00	$426,971.71	10%	SUB WORK ONLY REMAINING.
20-BR.CCWM	Country Club Village infrastructure Upgrades	$5,636,847.00	$3,985,214.10	71%	1 of DMSI's 5 Mainline Crews required until 7/1/21
20-CG.COPS	Cocoplum 1 Sanitary Pump Station & Force Main Upgrades	$2,240,459.00	$507,832.26	23%	SUB WORK ONLY REMAINING.
20-FL.DB48	Design Build Installation of new redundant bypass Force Main	$29,908,007.66	$3,700,000.00	12%	2 of DMSI's 5 Mainline Crews come available 3/15/2021. 1 of DMSI's 2 Restoration Crew Available 4/1/21
20-FL.WM16	Central New River 16" Water Main River Crossing	$804,202.34	$722,524.94	90%	1 of DMSI's 2 Support Crews Required.
20-LW.PACO	Park of Commerce Phase 1B Infrastructure Improvements	$1,695,685.50	$649,515.69	38%	SUB WORK ONLY REMAINING.
20-MI.AWSW	Alice Wainwright Park Shoreline Improvements	$4,633,117.27	$3,272,790.15	71%	67.% Sub-Contractors Work and 4% DMSI work
		$51,814,017.77	**$14,095,113.13**	**27%**	

WSP Current Workload			
Project	**Phase of Project**	**Estimated Completion**	**Firm's Role**
Central New River 20-inch WM Crossing – Fort Lauderdale	Permitting	Feb. 2021	Lead Designer
60-inch Force Main E15-WASD-01 Project NL-1A	Construction	Mar. 2022	CEI
54-inch Force Main Rehabilitation RTQ - WASD	Permitting	Nov. 2020 (Design)	Lead Designer
WASD's Large Diameter (OOL Outfall Repairs) E15-WASD-01	Design	May 2021	Lead Designer
C-44 SFWMD RestorationProject	Construction	Mar. 2021	CEI
Dania Beach Drainage Improvements	Design	Sept. 2022	Lead Designer

Describe available facilities, technological capabilities and other available resources you offer for the project.

G. AVAILABLE FACILITIES AND TECHNOLOGIES

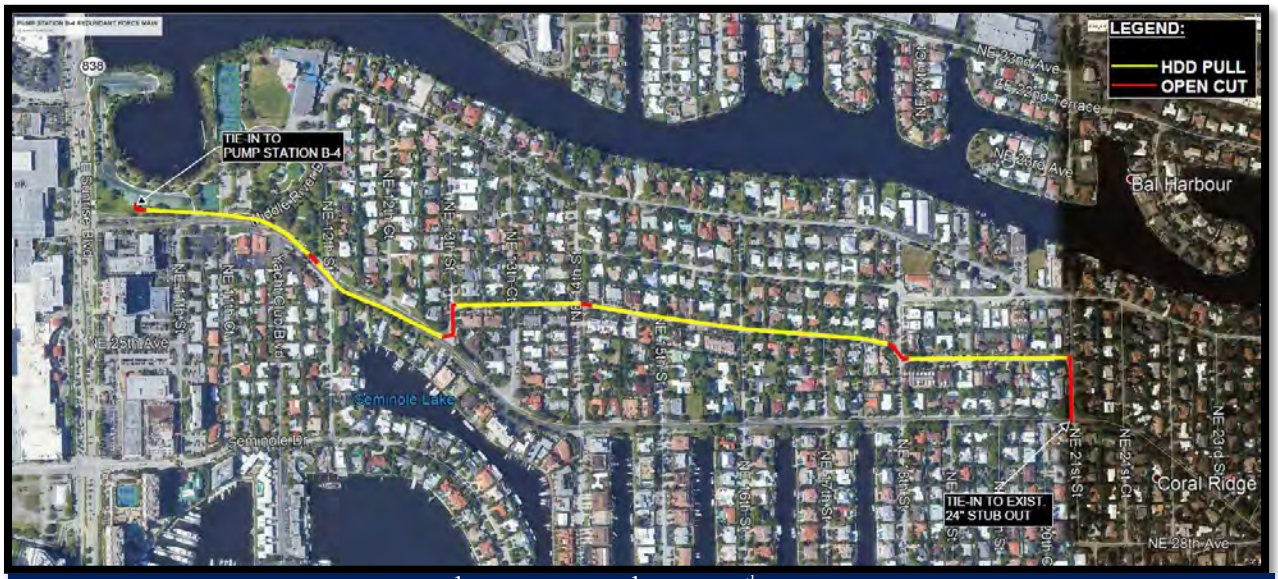
DMSI currently has a storage yard in Victoria Park in Fort Lauderdale, just south of Sunrise Boulevard. DMSI has all the necessary construction equipment like pavers in-house, MOT truck, boom tractor excavators, loaders, dozers, and other hauling capabilities. Our team is highly trained in infrastructure projects involving trenchless techniques like HDD, slip lining as well as deep open cut approaches. Quality of the work is maintained by the performing of regular inspections of the work by the foreman and superintendents with support from project manager and executive staff lead by David Mancini Sr.

i. Alternate Alignment – NE 26th Avenue

In addition to the components of the DCP, our team evaluated other engineering, environmental and construction aspects related to the alignment along Bayview Drive and based on the findings we would like to present the City an Alternate Route along NE 26th Avenue for the installation of the new force main, that takes into consideration sea level rise, and reduce construction impacts along the Bayview Drive corridor which is highly used by traffic and pedestrians.

ii. Proposed Alignment

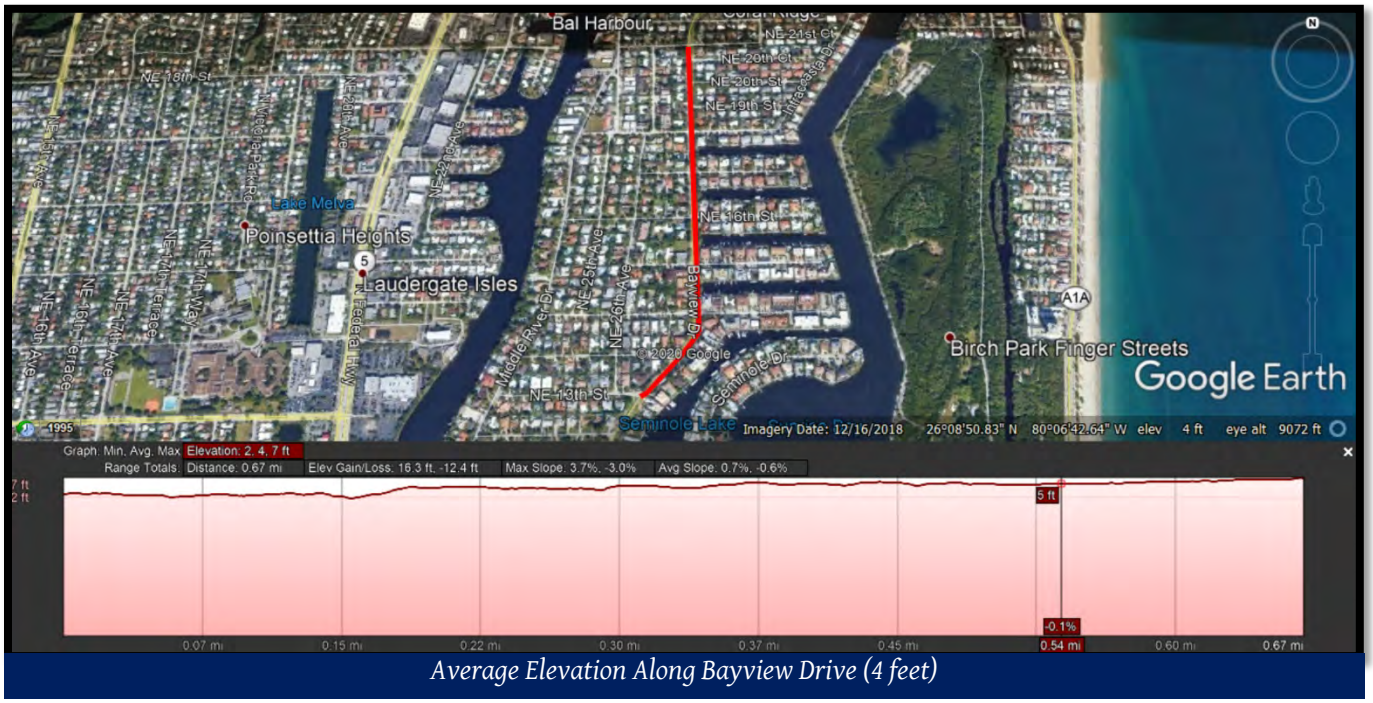
As shown in **Appendix B and sketch below**, the alternate alignment starts at the same point near Pump Station B-4 at the George English Park and continues the same route as the Design Criteria Package, along Bayview Drive until the intersection of NE 13th Street, where an HDD exit pit is located. Then we propose going west on NE 13th Street via open cut (**approximately 220 linear feet**) until the intersection with NE 26th Avenue, where another HDD pit will be located to install the new force main via 2 HDD pulls along NE 26th Avenue from NE 13th Street to NE 21st Street. On 21st Street, the force main will turn west on the south side of the road, keeping the clearances from the existing water main and the recently installed force main by others. This segment will be installed via open cut (**approximately 350 linear feet**) due to its short distance. The connection point will be on the 24-inch stub out provided by others.



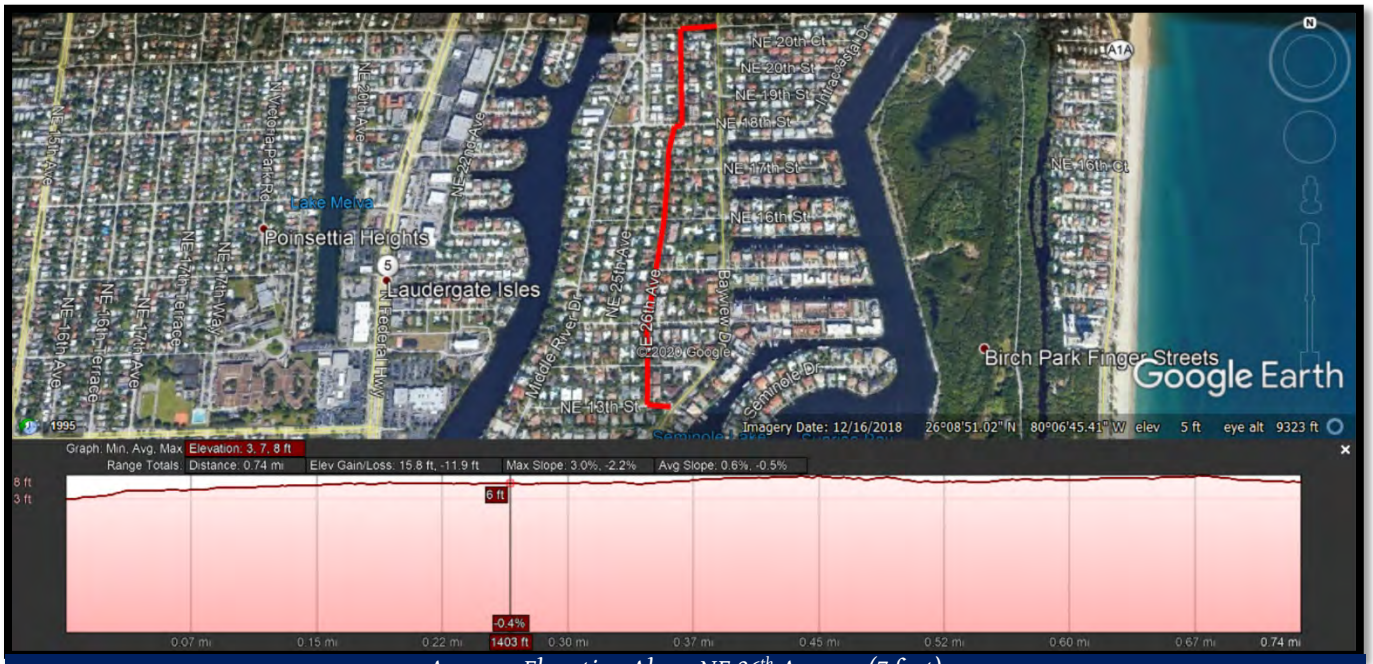
Alternate Route Along NE 26th Avenue

iii. Why This Route?

Difference in Elevation: Based in our preliminary analysis from available data, there is a significant difference in elevations between Bayview Drive and NE 26th Avenue. Along Bayview Drive, the existing ground elevation is on average 3 feet to 4 feet, when compared to 7 feet along NE 26th Avenue. In terms of construction installation, the operation will be performed faster since there is a high probability that the pipe will be installed in a dry excavation, reducing and may be eliminating the need for dewatering near the Intracoastal Waterway.



Average Elevation Along Bayview Drive (4 feet)



Average Elevation Along NE 26th Avenue (7 feet)

With sea level rise, the groundwater level will keep increasing through the years, making dewatering activities more complicated and expensive. This approach will be a benefit for the City's operation team if valve or pipe repairs are needed to be performed by City crews in the future. Since no dewatering will be needed, this results in an easier replacement activity than one in Bayview Drive.

Pedestrian and Vehicle Traffic: Bayview Drive is a minor corridor used regularly by City neighbors to go from Oakland Park Blvd. to Sunrise Blvd. and vice versa. However, NE 26th Avenue is a local road with less traffic, hence less traffic disruption and less complaints during construction.

We also understand that asphalt pavement along Bayview Drive from Sunrise Blvd. to Oakland Park Blvd. was installed around 2018, including the new pavement markings. Although the HDD on the base proposal are in grassed area, the paved road near these areas would be affected by the construction equipment. With this alternate alignment, we are reducing the impacts to this important City's asset.

Existing Utilities Along the Corridor: After review of the City's Utility Atlas, and information provided on the Design Criteria Package, we have noticed a series of large diameter storm water pipes crossing east to west on Bayview Drive and discharging into the Intracoastal. Also, the current alignment might need to relocate the existing water main on the north side of Bayview Drive to comply with the minimum clearance of 6 feet required by the State. There are other utilities also on this corridor. However, along NE 26th Avenue although there is a 24-inch water main on the east side of the road, our alternate alignment proposed to install the new force main on the left western lane (southbound) and keeping at least 6-feet of clearance with the existing 6-inch water main, as shown in our conceptual plans. Also, there is only one stormwater pipe crossing west-east on this corridor, hence reducing the chances of runoff discharges from the Project to the Intracoastal Waterway or the Middle River.

4.2.6
References

RFP NO. 12470-416 / PROJECT NO. 12567 SPECIFIC REFERENCES FORM

The DBF shall have previous experience in the design, permitting, construction aspects of Pump Station Redundant Force Main work and shall have previous construction experience in underground water and wastewater piping installation as described in this RFP, in the State of Florida within the last ten (10) years. DBF shall submit project experience for a minimum of three (3) projects of similar scope and scale (or larger) and shall, for each project listed, identify location; dates of construction; project name and overall scope; scope of work that was self-performed by Contractor; and client's name, address, telephone number and e-mail address. **DBF's are expected to provide information on each project by including these forms in their bid submittals**. If these forms are not utilized, the DBF's must provide identical information to the City for evaluation purposes.
Note: Do not include proposed team members or parent/subsidiary companies as references in your submittals.

A. PRIME BIDDER'S NAME: David Mancini & Sons, Inc.

CLIENT NO.1 - Name of firm to be contacted: Miami Dade Water and Sewer Department

Address: 3575 LeJeune Road, Miami, FL 33146

Contact Person: Gary Clarke

Phone No: (305) 205-6980

Contact E-Mail Address: Gary.Clarke@miamidade.gov

Project Performance Period: 05/18 to 08/19 (Dates should be in mm/yy format)

Project Name : Installation of 42" DIP Water Main and 10" Force Main to P.S. 9141 Replacement

Location of Project: Biscayne Blvd and NW 5th Street to Port of Miami, Miami, FL.

Overall Construction Cost: $18,056,779.55

Description of the overall scope: Project consist of furnish and install 9,740 LF of 42-Inch DIP and fittings; Installation of 4,000 LF of twin 30" HDPE Water Main and 4,000 LF of twin 12" HDPE Force main via Horizontal Directional Drill Sub-aqueous channel crossing along Biscayne bay from Bayside to Port of Miami.

Description of work that was self-performed by Bidder:
David Mancini & Sons furnished and installed all the pipe, including gate valves, meters, fittings manhole frame and covers, valve boxes and concrete support slab. Additionally, made inline connections to a proposed 36-Inch water main. Replace a pump station No. 9141. Performed Jack and Bore under Florida East Coast Railway crossing.

BID NO. 12470-416 / PROJECT NO. 12567 SPECIFIC REFERENCES FORM

CLIENT NO.2 - Name of firm to be contacted: City of Miami Beach

Address: 1700 Convention Center Drive, Miami Beach, FL 33139

Contact Person: Otniel Rodriguez

Phone No: (786) 831-0483 or (305) 673-7080

Contact E-Mail Address: OtnielRodriguez@miamibeachfl.gov

Project Performance Period: 08/15 to 08/16
Dates should be in mm/yy format

Project Name : Design-Build 54-Inch Redundant Sewer Force Main

Location of Project: Along Washington Avenue from Euclid to Commerce Street

Overall Construction Cost: $18,253,488.00

Description of the overall scope: Provide engineering, design, permitting, testing and commissioning services for the construction of approximately 5,300 linear feet of 54-Inch Sewer Force Main pipe line.

Description of work that was self-performed by Bidder:
DMSI was responsible for the construction of 4,450 linear feet of 54-inch HDPE Force Main pipe via Horizontal Directional Drilling. A connection to Pump Station # 31. Approximately 600 Linear feet of 54-Inch Open Cut pipe installation at the terminal location of the project. The connection to the 30-inch discharge main fronting Pump Station # 1. Decommisioning and purge the damaged sewage system to prepare it for rehabilitation work. In Addition, DMSI had to provide around the clock manned operation to meet a tight schedule, which DMSI delivered with no major setback.

CLIENT NO.3 - Name of firm to be contacted: Miami Dade Water and Sewer

Address: 3575 LeJeune Road,Miami, FL 33146

Contact Person: Alexis Valdes

Phone No: (786) 299-9008

Contact E-Mail Address: Alexis.Valdes@miamidade.gov

Project Performance Period: 10/19 to 07/20
Dates should be in mm/yy format

Project Name : Emergency Replacement of 48-Inch Force Main at NW 163 St Crossing Oleta River

Location of Project: NE 163rd Street bridge crossing Oleta River, Miami-Dade County

Overall Construction Cost: $5,000,000.00

Description of the overall scope: Project consists of performing emergency repairs and pipe installation due to a break in the 48-inch subaqueous force main crossing the Oleta River canal under the NE 163 Street bridge. The 48-inch force main has no redundancy and needs to be repaired in conjunction with a linestop and bypass operation.

Description of work that was self-performed by Bidder:
DMSI mobilized on an emegency basis, design and built a "pollution dome" to catch the leaking sewage and pump it back into the force main. Then repair and constructed a 48-inch force main by directional drill, open cut and slip-lining methods. The work zone was restores by our own forces, including pavement resurfacing, pavement marking and signalizations.

BID NO. 12470-416 / PROJECT NO. 12567 SPECIFIC REFERENCES FORM

CLIENT NO.4 - Name of firm to be contacted: City of Fort Lauderdale

Address: 100 N. Andrews Avenue, Fort Lauderdale, FL 33301

Contact Person: Krishan Kandial, Project Manager

Phone No: (954) 828-4019

Contact E-Mail Address: KKandial@fortlauderdale.gov

Project Performance Period: 12/19 to 04/21
Dates should be in mm/yy format

Project Name : Design-Build Installation of New Redundant 54-Inch Bypass Sewer Force Main Line

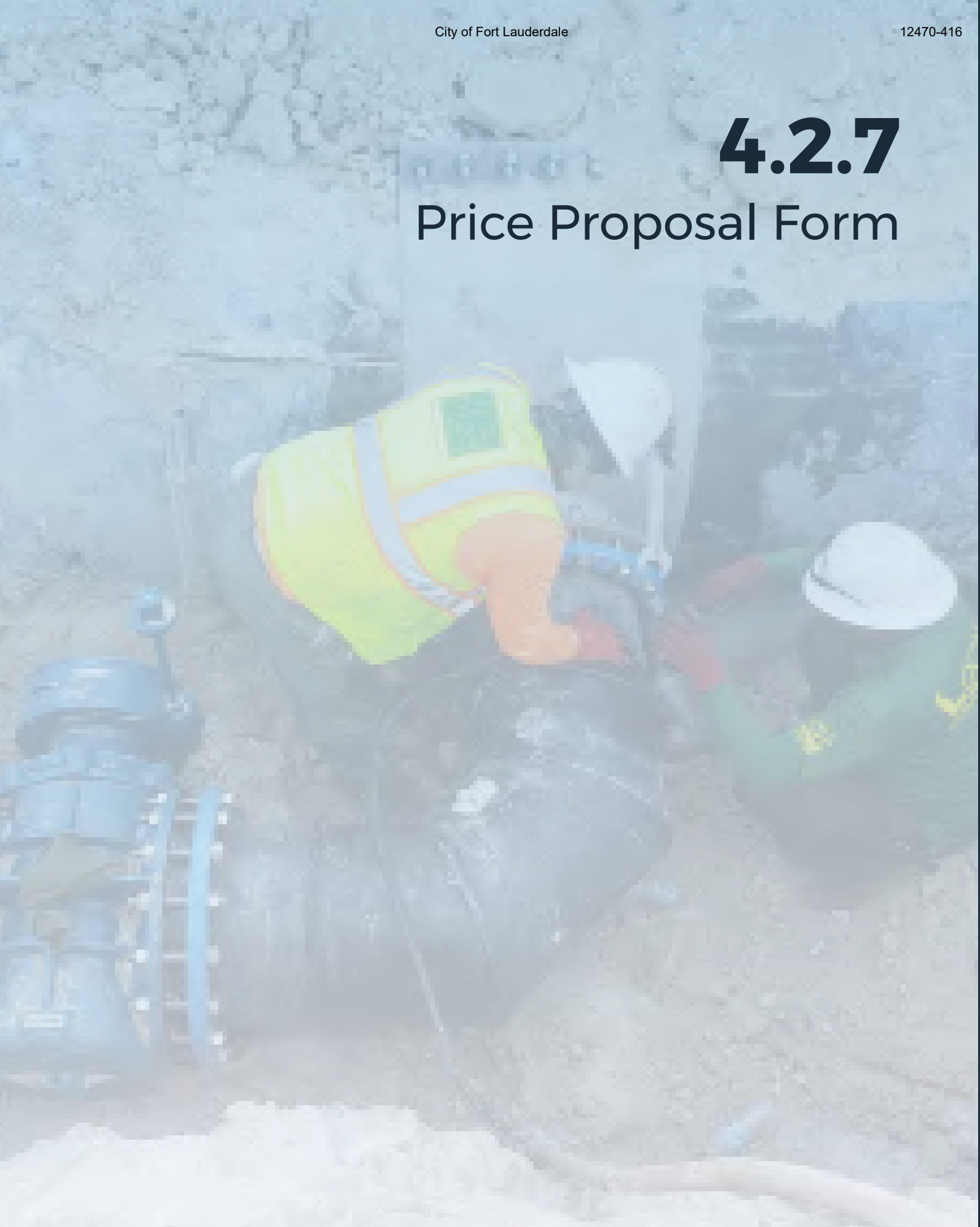
Location of Project: Along SE 10th Avenue, SE 9th Avenue, NE 11th Ave and NE 15th Avenue, from SE 18th Street going north to NE 9th Street, Fort Lauderdale, Florida

Overall Construction Cost: $28,908,007.66

Description of the overall scope: The Fort Lauderdale Emergency Design Build consisted of 15,000 LF of 54” HDPE Force Main. This Project also includes two Sub-Aqueous crossings, with one being directionally drilled and one being performed open cut.

Description of work that was self-performed by Bidder:
DMSI is performing the roughly 11,200 LF of the installation by Horizontal Directional Drill, with 3,800 LF of 54” HDPE Open Cut, along with multiple pump station connections.

4.2.7
Price Proposal Form



CITY OF FORT LAUDERDALE

PRICE PROPOSAL FORM

RFP #12470-416 RE-BID DESIGN-BUILD SERVICES FOR PUMP STATION B-4 REDUNDANT FORCE MAIN P12567

DESIGN

1. **Design Development**	$200,000.00
2. **Construction Administration**	$67,000.00
SUB-TOTAL DESIGN COSTS	$267,000.00

CONSTRUCTION

GENERAL

3. **Mobilization/Demobilization**	$95,197.00
4. **Maintenance of Traffic**	$40,000.00
5. **Restoration**	$120,000.00

FORCEMAIN

6. **24-Inch Opencut Piping** *(Includes labor, material, fittings, valves, ARV's, manholes, testing, connection to existing force mains, connections to existing pump stations, reducers, etc.)*	$360,000.00
7. **24-Inch HDPE Pipeline – Directional Drill**	$1,736,000.00
SUBTOTAL CONSTRUCTION COSTS	$2,351,197.00

PERMIT ALLOWANCE

8. **Permitting** *(For both Design and Construction)*	**$ 10,000.00**

TOTAL PROPOSAL – Design, Construction, and Permit Allowance Costs (proposed "Contract Price"). Enter this figure in Bidsync, Item Response Form, to indicate your total price. TWO MILLION SIX HUNDRED TWENTY EIGHT THOUSAND ONE HUNDRED NINETY SEVEN DOLLARS ZERO CENTS

(IN WORDS)

$ 2,628,197.00

(FIGURES)

1. The prices listed in the Price Proposal Form shall include the total cost to complete the Work including but not limited to materials, labor, equipment, profit, bonds, insurances, etc., as necessary to ensure proper execution of the design-build services and product requested by the City of Fort Lauderdale. Any pricing, quantities, costs or services that are not listed above, and are known to be required, must be added by the Proposer and listed on a separate sheet and included in the total.

2. I hereby certify that I am authorized to act on behalf of the firm, individual, partnership, corporation or association making this proposal and that all statements made in this document are true and correct to the best of my knowledge. I agree to hold this proposal open for a period of one hundred and eighty (120) days from the deadline for receipt of proposals.

3. I understand and agree to be bound by the conditions contained in the Request for Proposal and shall conform with all requirements of the Request for Proposal.

David Mancini & Sons, Inc	David Mancini	
Name:	(Please Print)	
	President	02/17/2021
Proposer Signature	Title:	Date:

4.2.8
Contract Forms

STATEMENT OF QUALIFICATION CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the Department of State, in accordance with Florida Statute §607.1501 (visit http://www.dos.state.fl.us/).

Company: (Legal Registration) David Mancini & Sons, Inc

Address: 2601 Wiles Road

City: Pompano Beach State: Florida Zip: 33073

Telephone No. 954-977-3556 FAX No. 954-944-2040 Email: Bids@dmsi.co

Check box if your firm qualifies for MBE / SBE / WBE: ☐

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No.	Date Issued	Addendum No.	Date Issued	Addendum No.	Date Issued
01	02/09/2021				

VARIANCES: **TIME IS OF THE ESSENCE, NO EXCEPTIONS TO ANY ELEMENT OF THE SOLICITATION DOCUMENTS INCLUDING BUT NOT LIMITED TO THE RFP, DCP, DRAWINGS, CONSTRUCTION TIME FRAME, SAMPLE AGREEMENT, GENERAL TERMS AND CONDITIONS, ETC. SHALL BE CONSIDERED.**

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars ($500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by: David Mancini & Sons, Inc

David Mancini
Name (printed)

Signature

02/17/2021
Date:

President
Title:

05/2020

Revised

Supplier Response Form

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME	RELATIONSHIPS

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

David Mancini — President
Authorized Signature — Title

David Mancini — 02/17/2021
Name (Printed) — Date

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Username **amejla@dmsi.co**

Password ••••••••• *

Save | Take Exception | Close

* Required fields

Supplier Response Form

CONTRACT PAYMENT METHOD

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept these credit cards or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below you agree with these terms.

Please indicate which credit card payment you prefer:

- [ ] MasterCard
- [x] Visa

David Mancini & Sons Inc *
Company Name

David Mancini
*
Name (Printed)

David Mancini
*
Signature

02/17/2021 *
Date

President
*
Title

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Username **amejia@dmsi.co**

Password ••••••••• *

Save | Take Exception | Close

* Required fields

[redacted]

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 5/27/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Brenda Laflamme
Insurance Office of America, Inc. 1855 West State Road 434 Longwood, FL 32750	PHONE (A/C, No, Ext): (407) 998-5421 15421 FAX (A/C, No): (407) 788-7933 E-MAIL ADDRESS: Brenda.Laflamme@ioausa.com

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
David Mancini & Sons, Inc. 2601 Wiles Rd Pompano Beach, FL 33073	INSURER A : Evanston Insurance Company	35378
	INSURER B : Liberty Insurance Corporation	42404
	INSURER C : Liberty Mutual Fire Insurance Company	23035
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			MKLV1ENV102342	4/1/2020	4/1/2021	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	X General Liability						MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 5,000,000
	POLICY PRO-JECT X LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY			AS7-Z51-292589-020	4/1/2020	4/1/2021	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N			WC2-Z51-292589-010	4/1/2020	4/1/2021	X PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	N / A					E.L. EACH ACCIDENT	$ 500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
A	Pollution Legal Liab			MKLV1ENV102342	4/1/2020	4/1/2021	Aggregate Limit	2,000,000
A	Ltd Prof Liab			MKLV1ENV102342	4/1/2020	4/1/2021	Ded: $1,000	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Insurer	Type of Insurance	Policy Number	Effective	Aggregate Limit
Zurich American Ins. Co.	Installation Floater	CPP0507826	04/01/2020-04/01/2021	$500,000

CERTIFICATE HOLDER

David Mancini & Sons, Inc. - FOR INFORMATIONAL PURPOSES ONLY
2601 Wiles Rd
Pompano Beach, FL 33073

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE [redacted]

Supplier Response Form

CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH NON-DISCRIMINATION PROVISIONS OF THE CONTRACT

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").
2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

David Mancini *
Authorized Signature

David Mancini, President *
Print Name and Title

02/17/2021 *
Date

Please enter your password below and click Save to update your response.
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Username **amejia@dmsi.co**

Password ••••••••• *

Save | Take Exception | Close

* Required fields

Supplier Response Form

TRENCH SAFETY

Bidder acknowledges that included in the appropriate bid items of his bid and in the Total Bid Price are costs for complying with the Florida Trench Safety Act, Florida Statutes 553.60 – 553.64. The bidder further identifies the costs of such compliance to be summarized below:

Trench Safety Measure (Description)	Units of Measure (LF/SF)	Unit (Quantity)	Unit Cost	Extended Cost
A. Trench Box *	LS *	1 *	$ 10,000 *	$ 10,000 *
B.			$	$
C.			$	$
D.			$	$

Total: $ 10,000 *

The bidder certifies that all trench excavation done within his control in excess of five feet (5') in depth shall be in accordance with the Occupational Safety and Health Administration's excavation safety standards, C.F.R. s. 1926.650 Subpart P., and the Florida Trench Safety Act, Florida Statutes 553.60-553.64.

Failure to complete the above may result in the bid being declared non-responsive.

DATE: 02/17/2021

David Mancini
(SIGNATURE)

STATE OF: Florida COUNTY OF: Broward

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

David Mancini
(Name of Individual Signing)

David Mancini who, after first being duly sworn by me,
David Mancini affixed his/her signature in the space provided above on this 17 day of
February , 20 21 .

Notary Public State of Florida
Alejandra Suarez
My Commission GG 298110
Expires 05/24/2023

Alejandra Suarez
NOTARY PUBLIC

My Commission Expires: 05/24/2023

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Password ••••••••• *

Save | Take Exception | Close

* Required fields

Supplier Response Form

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT

MINORITY BUSINESS ENTERPRISE (MBE) - WOMEN BUSINESS ENTERPRISE (WBE)

PRIME CONTRACTOR IDENTIFICATION FORM

In order to assist us in identifying the status of those companies doing business with the City of Fort Lauderdale, this form must be completed and returned with your bid package.

Name of Firm:	David Mancini & Sons Inc	*
Address of Firm:	2601 Wiles Rd Pompano Beach FL 33073	*
Telephone Number:	954-977-3556	*
Name of Person Completing Form:	David Mancini	*
Title:	President	*
Signature:	David Mancini	*
Date:	02/17/2021	*
City Project Number:	Bid No. 12470-416	*
City Project Description:	Re-bid Design-Build Services for Pump Station B-4 Redundant Force Main P12567	*

Please check the item(s) which properly identify the status of your firm:

- [x] Our firm is not a MBE or WBE.
- [ ] Our firm is a MBE, as at least 51 percent is owned and operated by one or more socially and economically disadvantaged individuals.
  - [ ] American Indian [ ] Asian [ ] Black [ ] Hispanic
- [ ] Our firm is a WBE, as at least 51 percent is owned and operated by one or more women.
  - [ ] American Indian [ ] Asian [ ] Black [ ] Hispanic

MBE/WBE CONTRACTOR INFORMATION

The City, in a continuing effort, is encouraging the increased participation of minority and women-owned businesses in Public Works Department related contracts. Along those lines, we are requiring that each firm provide documentation detailing their own programs for utilizing minority and women-owned businesses.

Submit this information as a part of this bid package and refer to the checklist, to ensure that all areas of concern are covered. The low responsive bidder may be contacted to schedule a meeting to discuss these objectives. It is our intention to proceed as quickly as possible with this project, so your cooperation in this matter is appreciated.

CONTRACTOR CHECKLIST

☑ List Previous City of Fort Lauderdale Contracts

- Water Main and Force Main Intracoastal waterway crossings via HDD at Las Olas Blvd
-Grit Chamber Rehabilitation
-Prospect Rd Butterfly Valves *

☑ Number of Employees in your firm 86 *

--Percent (8 * %) Women

--Percent (87 * %) Minorities

–Job Classifications of Women and Minorities

Project Managers, administrative office personnel, Field Supervisors, Foremen, Equipment Operators, drivers, and labors.

*

☑ Use of minority and/or women subcontractors on past projects.

- E&N Construction.
- Bird's Eye View.
- Champion Control, Inc.
- Corcel Corp.
- South Florida Electrical *

☑ Nature of the work subcontracted to minority and/or women-owned firms.

- Asphalt Milling & Resurfacing.
- Pre-construction Video
- Instrumentation.
- Material Supplier.
- Electrician *

☑ How are subcontractors notified of available opportunities with your firm?

Bids plan-holder lists and direct quote request.

*

☑ Anticipated amount to be subcontracted on this project.

20% - 25%

*

☑ Anticipated amount to be subcontracted to minority and/or women-owned businesses on this project.
2%

*

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Username **amejia@dmsi.co**

Password ••••••••• *

Save | Take Exception | Close

* Required fields

RFP NO. 12470-416 / PROJECT NO. 12567 SPECIFIC REFERENCES FORM

The DBF shall have previous experience in the design, permitting, construction aspects of Pump Station Redundant Force Main work and shall have previous construction experience in underground water and wastewater piping installation as described in this RFP, in the State of Florida within the last ten (10) years. DBF shall submit project experience for a minimum of three (3) projects of similar scope and scale (or larger) and shall, for each project listed, identify location; dates of construction; project name and overall scope; scope of work that was self-performed by Contractor; and client's name, address, telephone number and e-mail address. **DBF's are expected to provide information on each project by including these forms in their bid submittals**. If these forms are not utilized, the DBF's must provide identical information to the City for evaluation purposes.
Note: Do not include proposed team members or parent/subsidiary companies as references in your submittals.

A. PRIME BIDDER'S NAME: David Mancini & Sons, Inc.

CLIENT NO.1 - Name of firm to be contacted: Miami Dade Water and Sewer Department

Address: 3575 LeJeune Road, Miami, FL 33146

Contact Person: Gary Clarke

Phone No: (305) 205-6980

Contact E-Mail Address: Gary.Clarke@miamidade.gov

Project Performance Period: 05/18 to 08/19 (Dates should be in mm/yy format)

Project Name : Installation of 42" DIP Water Main and 10" Force Main to P.S. 9141 Replacement

Location of Project: Biscayne Blvd and NW 5th Street to Port of Miami, Miami, FL.

Overall Construction Cost: $18,056,779.55

Description of the overall scope: Project consist of furnish and install 9,740 LF of 42-Inch DIP and fittings; Installation of 4,000 LF of twin 30" HDPE Water Main and 4,000 LF of twin 12" HDPE Force main via Horizontal Directional Drill Sub-aqueous channel crossing along Biscayne bay from Bayside to Port of Miami.

Description of work that was self-performed by Bidder:
David Mancini & Sons furnished and installed all the pipe, including gate valves, meters, fittings manhole frame and covers, valve boxes and concrete support slab. Additionally, made inline connections to a proposed 36-Inch water main. Replace a pump station No. 9141. Performed Jack and Bore under Florida East Coast Railway crossing.

BID NO. 12470-416 / PROJECT NO. 12567 SPECIFIC REFERENCES FORM

CLIENT NO.2 - Name of firm to be contacted: City of Miami Beach

Address: 1700 Convention Center Drive, Miami Beach, FL 33139

Contact Person: Otniel Rodriguez

Phone No: (786) 831-0483 or (305) 673-7080

Contact E-Mail Address: OtnielRodriguez@miamibeachfl.gov

Project Performance Period: 08/15 to 08/16
Dates should be in mm/yy format

Project Name : Design-Build 54-Inch Redundant Sewer Force Main

Location of Project: Along Washington Avenue from Euclid to Commerce Street

Overall Construction Cost: $18,253,488.00

Description of the overall scope: Provide engineering, design, permitting, testing and commissioning services for the construction of approximately 5,300 linear feet of 54-Inch Sewer Force Main pipe line.

Description of work that was self-performed by Bidder:
DMSI was responsible for the construction of 4,450 linear feet of 54-inch HDPE Force Main pipe via Horizontal Directional Drilling. A connection to Pump Station # 31. Approximately 600 Linear feet of 54-Inch Open Cut pipe installation at the terminal location of the project. The connection to the 30-inch discharge main fronting Pump Station # 1. Decommisioning and purge the damaged sewage system to prepare it for rehabilitation work. In Addition, DMSI had to provide around the clock manned operation to meet a tight schedule, which DMSI delivered with no major setback.

CLIENT NO.3 - Name of firm to be contacted: Miami Dade Water and Sewer

Address: 3575 LeJeune Road,Miami, FL 33146

Contact Person: Alexis Valdes

Phone No: (786) 299-9008

Contact E-Mail Address: Alexis.Valdes@miamidade.gov

Project Performance Period: 10/19 to 07/20
Dates should be in mm/yy format

Project Name : Emergency Replacement of 48-Inch Force Main at NW 163 St Crossing Oleta River

Location of Project: NE 163rd Street bridge crossing Oleta River, Miami-Dade County

Overall Construction Cost: $5,000,000.00

Description of the overall scope: Project consists of performing emergency repairs and pipe installation due to a break in the 48-inch subaqueous force main crossing the Oleta River canal under the NE 163 Street bridge. The 48-inch force main has no redundancy and needs to be repaired in conjunction with a linestop and bypass operation.

Description of work that was self-performed by Bidder:
DMSI mobilized on an emegency basis, design and built a "pollution dome" to catch the leaking sewage and pump it back into the force main. Then repair and constructed a 48-inch force main by directional drill, open cut and slip-lining methods. The work zone was restores by our own forces, including pavement resurfacing, pavement marking and signalizations.

BID NO. 12470-416 / PROJECT NO. 12567 SPECIFIC REFERENCES FORM

CLIENT NO.4 - Name of firm to be contacted: City of Fort Lauderdale

Address: 100 N. Andrews Avenue, Fort Lauderdale, FL 33301

Contact Person: Krishan Kandial, Project Manager

Phone No: (954) 828-4019

Contact E-Mail Address: KKandial@fortlauderdale.gov

Project Performance Period: 12/19 to 04/21
Dates should be in mm/yy format

Project Name : Design-Build Installation of New Redundant 54-Inch Bypass Sewer Force Main Line

Location of Project: Along SE 10th Avenue, SE 9th Avenue, NE 11th Ave and NE 15th Avenue, from SE 18th Street going north to NE 9th Street, Fort Lauderdale, Florida

Overall Construction Cost: $28,908,007.66

Description of the overall scope: The Fort Lauderdale Emergency Design Build consisted of 15,000 LF of 54” HDPE Force Main. This Project also includes two Sub-Aqueous crossings, with one being directionally drilled and one being performed open cut.

Description of work that was self-performed by Bidder:
DMSI is performing the roughly 11,200 LF of the installation by Horizontal Directional Drill, with 3,800 LF of 54” HDPE Open Cut, along with multiple pump station connections.

Supplier Response Form

E-VERIFY AFFIRMATION STATEMENT

RFP/Bid /Contract No: Bid No. 12470-416

Project Description: Re-Bid Design Build Services for Pump Station B-4 Redundant Force Main P12567

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

(a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,

(b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: David Mancini & Sons, Inc.

Authorized Company Person's Signature: David Mancini 

Authorized Company Person's Title: President

Date: 02/17/2021

9/15/2020

Please enter your password below and click Save to update your response.
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Username **amejia@dmsi.co**

Password ••••••••• *

Save | Take Exception | Close

* Required fields

City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

ADDENDUM NO. 1

RFP No. 12470-416

TITLE: RE-BID Design Build pump Station B-4 Redundant Force Main

ISSUED: February 9, 2021

This addendum is being issued to make the following change(s):

1. Section 4, Submittal Requirements, 4.2.2 *Qualifications of the Firm*,

Business Structure

CHANGE FROM:

Corporations, Joint Ventures, LLC or Partnerships – submit a copy indicating when the corporation was organized as a legal entity in the State of Florida, corporation number. ~~Shall be a minimum of ten (10) years to do business in the State of Florida.~~

CHANGE TO:

Corporations, Joint Ventures, LLC or Partnerships – submit a copy indicating when the corporation was organized as a legal entity in the State of Florida, corporation number.

All other terms, conditions, and specifications remain unchanged.

Penelope Burger,
Procurement Administrator

Company Name: David Mancini & Sons, Inc.
(please print)

Bidder's Signature: David Mancini, President.

Date: 02/09/2021

SURETY 2000 INSURANCE DOCUMENT MANAGER
Insurance Document Management System 3.0

Zervos Group, Inc. - Gus E. Zervos

Bond Number: SFL21957576

Contractor Information

Principal: David Mancini & Sons, Inc. 954-977-3556
Address: 2601 Wiles Road Pompano Beach Florida 33073 United States

Owner/Obligee Information

Bond Form: Bid Bond in accordance with Contract Specifications
Owner/Obligee: City of Fort Lauderdale
Address: 100 North Andrews Ave Fort Lauderdale Florida 33301 United States

Bond Information

Bid Date: 2/17/2021
Surety: Travelers Casualty and Surety Company of America
Rider Present: Click here to view
Estimated Contract Price:
Time For Completion:
Liquidated Damages:
Estimated Work On Hand:
Amount of Bid Security: 5%
Contract ID Number: 12470-416
Description of Job: Design-Build Pump Station B-4 Redundant Force Main
Job Breakdown:

Electronic Bidding Information

Bid Security Percentage: 5
Bid Security Maximum:
Contractor's State Vendor ID Number: 1265908485

Primary Agency:
Zervos Group, Inc.
Agency Power of Attorney Limited to: Unlimited
Executed
Bond Entered By: Gus E. Zervos - 2/1/2021 1:39:37 PM ET
Bond Approved & Executed By: Gus E. Zervos - 2/1/2021 1:39:47 PM ET

Know all men by these presents that Travelers Casualty and Surety Company of America, a Corporation duly organized under the laws of the State of Connecticut, are held and firmly bound unto the above owner/obligee by this transmission. The surety agrees to waive the Statute of Fraud defense and further agrees that the owner/obligee is a third party beneficiary of the waiver for the purposes of enforcing this bid bond.

BidSync POWERED BY Periscope

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Time Left: 16 days, 0 hrs **Bid Ends:** Feb 17, 2021 2:00:00 PM EST

Offer

12470-416--01-01 **Default Lot: RE-BID Design Build Pump Station B-4 Redundant Force Main**

Product Code (optional)

Unit Price $

Qty/Unit 1 / lot

Total Price $ Save

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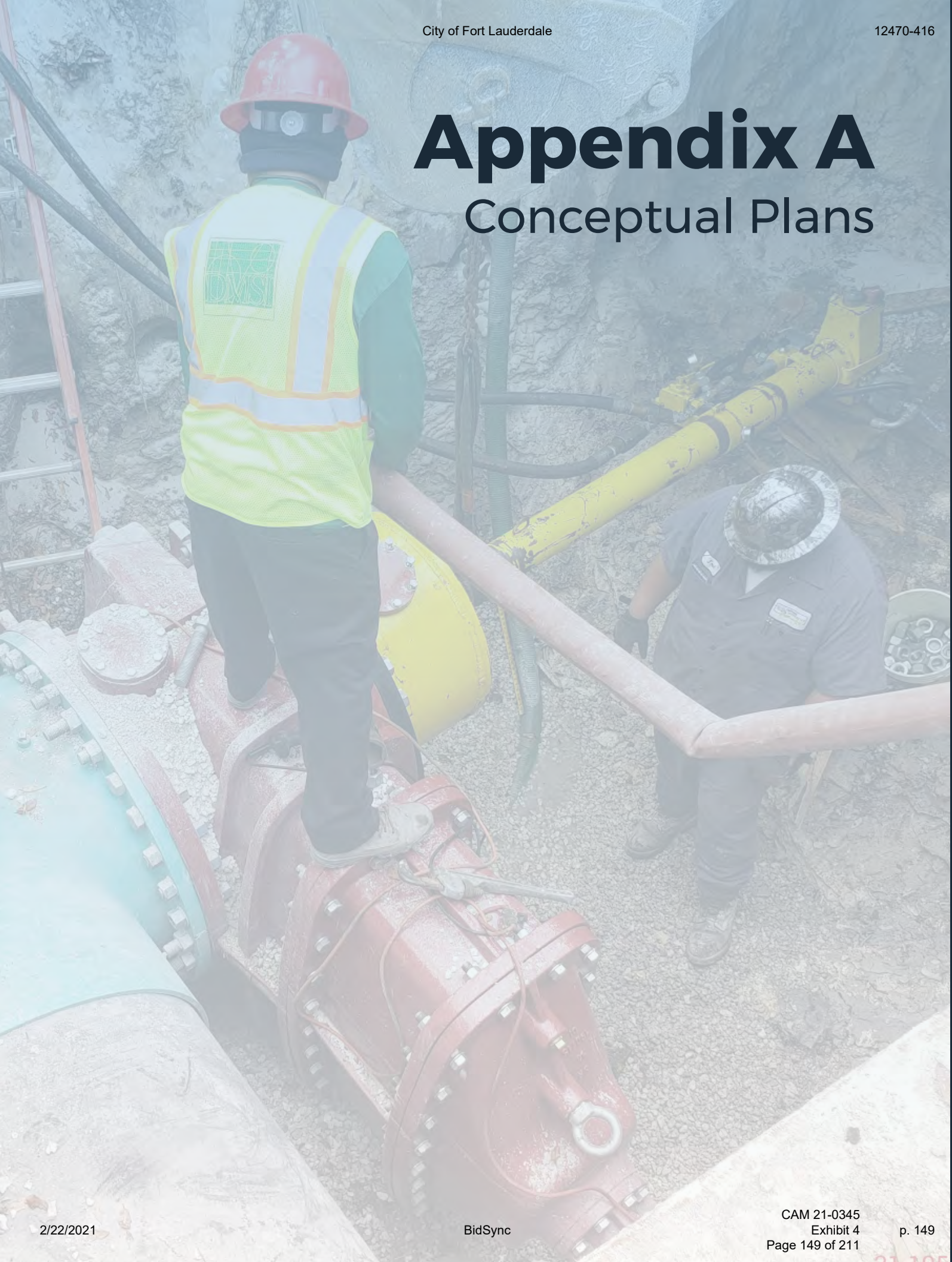

Appendix A
Conceptual Plans

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CITY OF FORT LAUDERDALE

PROJECT #12567
PUMP STATION B-4
REDUNDANT FORCE MAIN

BAYVIEW DR. (FROM GEORGE ENGLISH PARK TO NE 21ST ST.)

FORT LAUDERDALE, FLORIDA

DAVID MANCINI & SONS, INC.

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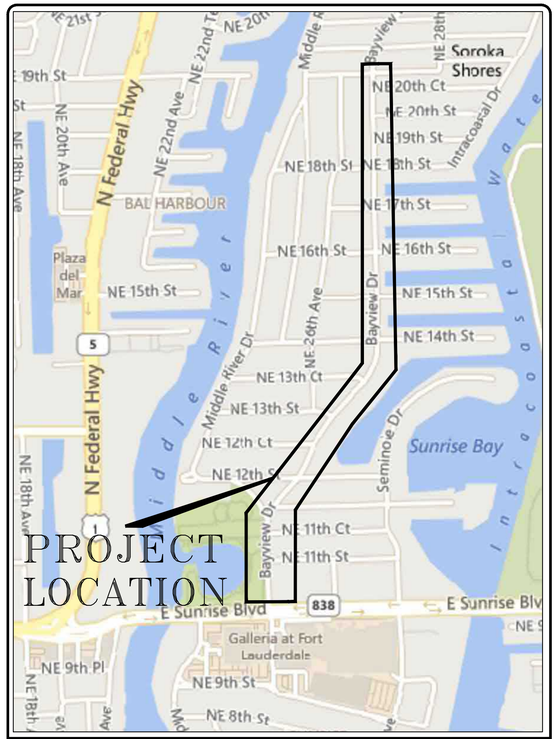

NORTH

LOCATION SKETCH

PROJECT #12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
BAYVIEW DRIVE (FROM GEORGE ENGLISH PARK TO NE 21ST STREET)

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
HEATHER MORAITIS	COMMISSIONER - DISTRICT I
STEVEN GLASSMAN	COMMISSIONER - DISTRICT II
ROBERT McKINZIE	COMMISSIONER - DISTRICT III
BEN SORENSEN	COMMISSIONER - DISTRICT IV

CITY PROJECT MANAGER	JOB TITLE	PHONE NO.
KRISHAN KANDIAL, PE	PROJECT MANAGER II	954-828-4019

DATE: 02/17/2021

CAD FILE: 12567-000-COVR

DRAWING FILE No.: 4-___-__

PROPOSAL SUBMITTAL

GENERAL NOTES:

1. CONTRACTOR SHALL MAINTAIN RESIDENT ACCESS TO PRIVATE PROPERTIES AT ALL TIMES.
2. SITE INFORMATION HAS BEEN PROVIDED BY THE OWNER.
3. HORIZONTAL CONTROL IS REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83). VERTICAL CONTROL IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
4. RECORD DRAWINGS USED FOR EXISTING WATER, SEWER AND STORM WATER INFRASTRUCTURE WERE PROVIDED BY THE OWNER.
5. CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND DIMENSIONS WHERE NEW WORK WILL MATCH EXISTING. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO THE COMMENCEMENT OF WORK.
6. ALL PRACTICAL AND NECESSARY EFFORTS SHALL BE TAKEN DURING CONSTRUCTION TO PREVENT UNNECESSARY TREE REMOVAL AND/OR DAMAGE.
7. THE LOCATION OF EXISTING UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER. THE INFORMATION IS NOT GUARANTEED. THEREFORE THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES IN THE FIELD PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
8. UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEY INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE TO THEM. THE CONTRACTOR SHALL CONTACT SUNSHINE 811 AT PHONE NUMBER 811 OR 1-800-432-4770 TO REQUEST UNDERGROUND UTILITY LOCATION MARK-OUT AT LEAST TWO (2) WORKING DAYS BUT NO MORE THAN TEN (10) WORKING DAYS PRIOR TO BEGINNING EXCAVATION, INCLUDING SOIL DRILLING. THE CONTRACTOR SHALL ALSO CONTACT AND REQUEST UTILITY LOCATION MARK-OUT FROM BURIED UTILITY OWNERS WITH UTILITIES ON THE PROJECT SITE THAT ARE NOT PARTICIPANTS OF SUNSHINE 811.
9. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN OR AROUND EXISTING CITY-OWNED UTILITIES. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWO BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION WITHIN TEN FEET OF A CITY-OWNED UTILITY SO THAT A CITY REPRESENTATIVE MAY BE PRESENT.
10. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE TO EXISTING PAVEMENT, STRUCTURES, AND UTILITIES THAT ARE NOT INDICATED TO BE DEMOLISHED OR REMOVED. ANY DAMAGE TO EXISTING PAVEMENT, STRUCTURES, AND UTILITIES NOT INDICATED TO BE DEMOLISHED OR REMOVED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. WHERE PROPOSED WORK IS IN THE VICINITY OF UTILITY POLES, SUCH THAT SUPPORT OF THE POLE(S) WILL BE REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY OF THE WORK. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE UTILITY FOR SUPPORT OF THE POLE.
12. DURING EXCAVATION AND PLACEMENT OF UTILITIES THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS AND SHALL SUBMIT TO THE ENGINEER FOR APPROVAL SHEET PILING, SHORING AND/OR BRACING DESIGNS AS MAY BE NECESSARY TO COMPLY WITH THESE REGULATIONS.
13. GROUNDWATER FROM ALL DEWATERING OPERATIONS SHALL BE DISCHARGED TO AN ENVIRONMENTALLY ACCEPTABLE LOCATION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, OR AS DIRECTED BY THE ENGINEER.
14. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS GENERATED DURING THE PROJECT OFF SITE AT A PROPERLY PERMITTED DISPOSAL FACILITY.
15. THE CONTRACTOR IS REQUIRED TO OBTAIN WRITTEN APPROVAL FROM THE ENGINEER FOR ANY DEVIATIONS FROM THE PLANS AND/OR SPECIFICATIONS.
16. THE UNDERGROUND CONTRACTOR SHALL MINIMIZE THE WORK AREA AND WIDTH OF TRENCHES TO AVOID DISTURBANCES OF NATURAL VEGETATION. SPOIL FROM TRENCHES SHALL BE PLACED ONLY ON PREVIOUSLY CLEARED AREAS, EXISTING RIGHT-OF-WAY OR APPROVED EASEMENT. THE CONTRACTOR SHALL NOT REMOVE OR DISTURB ANY TREES OR SHRUBS WITHOUT PRIOR APPROVAL FROM THE CITY.
17. ALL RESTORATION SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE RIGHT-OF-WAY WHERE THE PROJECT IS CONSTRUCTED.
18. ALL LOOP DETECTORS, COMMUNICATION CABLES AND CONDUITS, IF DAMAGED BY THE CONTRACTOR'S ACTIVITIES, SHALL BE REPAIRED AND/OR REPLACED IN ACCORDANCE WITH BCTED AND FDOT REQUIREMENTS.
19. PIPING, FITTINGS, AND APPURTENANCES FOR DUCTILE IRON PIPE SHALL BE RESTRAINED JOINT WHERE SHOWN ON THE PLANS.
20. NO CONNECTIONS FOR THE PURPOSE OF OBTAINING WATER SUPPLY DURING CONSTRUCTION SHALL BE MADE TO ANY FIRE HYDRANT OR BLOW-OFF STRUCTURE WITHOUT FIRST OBTAINING PERMISSION AND A CONSTRUCTION METER FROM THE CITY OF FORT LAUDERDALE.
21. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING, MOVING AND RELOCATING OR REPLACING ALL WATER SERVICES OR SEWER LATERALS WHICH ARE ENCOUNTERED DURING EXCAVATION. THE CONTRACTOR SHALL SUBMIT A WRITTEN PLAN FOR WATER SERVICE AND WASTEWATER SERVICE DISRUPTION FOR APPROVAL 7 (SEVEN) CALENDAR DAYS PRIOR TO THE ANTICIPATED DISRUPTION. THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS 48 HOURS IN ADVANCE OF ANY WORK ON THEIR SERVICES. THIS WORK SHALL BE CONSIDERED INCIDENTAL.
22. PIPING, FITTINGS AND APPURTENANCES SHALL BE RESTRAINED JOINTS.
23. THE CONTRACTOR MUST INFORM THE CITY AT LEAST 48-HOURS IN ADVANCE OF CONSTRUCTION, IN WRITING IF ANY CONFLICT IS DISCOVERED DURING POT HOLE OPERATIONS FOR CLARIFICATION BY THE CITY.
24. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE UTILITIES DEPARTMENT OF THE CITY OF FORT LAUDERDALE AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO COORDINATE ANY ACTIVITY TO BE PERFORMED BY THE CITY'S UTILITIES DEPARTMENT.
25. CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE EXISTING RIGHTS-OF-WAY.
26. CONTRACTOR SHALL COMPLY WITH ALL LOCAL CITY, COUNTY AND STATE REGULATIONS PERTAINING TO THE CLOSING OF PUBLIC STREETS FOR USE OF TRAFFIC DURING CONSTRUCTION.
27. STATIONS SHOWN ON THE DRAWINGS ARE BASED ON THE ESTABLISHED BASELINE AND SHALL NOT BE CONSIDERED AS DISTANCES OR AS A MEASURE OF THE LINEAR FOOTAGE OF PIPE TO BE INSTALLED.
28. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAY SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
29. TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS SHALL NOT BE LEFT OPEN DURING NIGHT TIME HOURS WITHOUT ADEQUATE PROTECTION.
30. LOCATION OF AIR RELEASE VALVES MAY BE FIELD ADJUSTED BY THE ENGINEER OR CITY OF FORT LAUDERDALE AS NECESSARY.
31. CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND HOLES, PULL BOXES, INLETS AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAYED WITH ASPHALT.
32. THE CONTRACTOR SHALL SUBMIT ALL REQUIRED SHOP DRAWINGS FOR CITY APPROVAL PRIOR TO ORDERING MATERIALS AND INSTALLATION.
33. EXISTING GAS MAINS SHALL BE IDENTIFIED BY THE APPROPRIATE UTILITY, PRIOR TO START OF CONSTRUCTION.
34. TWO LANE RESTORATION IS REQUIRED FOR ALL WORK WITHIN THE RIGHT OF WAY.

TRAFFIC CONTROL PLAN NOTES:

1. THE TRAFFIC CONTROL PLANS FOR THE PROJECT SHALL COMPLY WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 600-660. MUTCD AND THE STANDARD SPECIFICATIONS. THE CONTRACTOR'S RESPONSE TIME TO ALL REPORTED MALFUNCTIONS OF TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS SHALL BE NO MORE THAN TWO (2) HOURS AND SHALL RESTORE ALL MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT TO ITS LEVEL OF OPERATION PRIOR TO THE MALFUNCTIONING WITHIN TWENTY-FOUR (24) HOURS. DURING THIS TIME THE CONTRACTOR SHALL PROVIDE AT HIS EXPENSE TEMPORARY TRAFFIC CONTROL DEVICES, FLAGGLER PERSONNEL AND LAW ENFORCEMENT PERSONNEL AS NECESSARY TO MAINTAIN A SAFE AND EFFICIENT FLOW OF TRAFFIC AT THE AFFECTED WORK ZONE. THE ENGINEER OR THE CITY OF FORT LAUDERDALE SHALL APPROVE ALL MODIFICATIONS PRIOR TO THEIR IMPLEMENTATION.
2. THE CONTRACTOR SHALL MAINTAIN PROPER OPERATION OF ALL TRAFFIC SIGNAL LOOP ASSEMBLIES AND LOOP DETECTORS WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL CORRECT ALL LOOP ASSEMBLY/DETECTOR MALFUNCTIONS WITHIN 24 HOURS OF NOTIFICATION OF SUCH MALFUNCTIONS BY THE ENGINEER.
3. THE AGENCY RESPONSIBLE FOR MAINTENANCE OF THE TRAFFIC SIGNALS AND RELATED EQUIPMENT IS BROWARD COUNTY TRAFFIC ENGINEERING.
4. A REGULATORY SPEED OF 25 MPH SHALL BE POSTED WITHIN THE LIMITS OF THE WORK ZONE.
5. EXISTING SIGNS AND PAVEMENT MARKINGS THAT CONFLICT WITH CONSTRUCTION SIGNS AND MARKINGS SHALL BE REMOVED DURING CONSTRUCTION. ALL EXISTING SIGNS THAT ARE REMOVED SHALL BE STOCKPILED IN A SECURE PLACE AND REINSTALLED AFTER CONSTRUCTION.
6. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS AND PREVENT ADVERSE FLOODING OF THE TRAVEL LANES DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY TWO (2) BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. SEE SPECS FOR LIST OF UTILITY COMPANIES.
8. TRAFFIC CONTROL ON ALL COUNTY RIGHTS-OF-WAY SHALL MEET THE ADDITIONAL REQUIREMENTS OF THE BROWARD COUNTY ENGINEERING DEPARTMENT.
9. THE CONTRACTOR SHALL ALSO COORDINATE THE CONSTRUCTION SCHEDULE WITH THE CITY OF FORT LAUDERDALE AND OWNER OF THE ROAD TO AVOID LANE CLOSURES WHICH WOULD ADVERSELY AFFECT TRAFFIC DURING RUSH HOUR.

MINIMUM DENSITY REQUIREMENTS

LOCATION	MATERIAL	MINIMUM DENSITY (% OF MAX)	TESTING FREQUENCY
ROADS (INCLUDES SIDEWALKS, ASPHALT PATHS)	BACKFILL	98%	VERTICAL DISTRIBUTION: ONE TEST AT EVERY LIFT STARTING AT TOP OF FIRST LIFT AND PROCEEDING UPWARD TO GRADE. HORIZONTAL DISTRIBUTION: TESTS SHALL BE PERFORMED AT RANDOMLY SELECTED LOCATIONS WITHIN EACH 300 FOOT INTERVAL (MAXIMUM) ALONG THE LENGTH OF ROADWAY, SIDEWALK OR PATHWAY.
	SUBGRADE	98%	
	BASE	98%	
MANHOLES AND VAULTS (IN ROADS AND PARKING AREAS)	IN-PLACE SUBGRADE BENEATH STRUCTURES	95%	VERTICAL DISTRIBUTION: ONE TEST AT EVERY LIFT STARTING AT THE BOTTOM OF THE STRUCTURE AND PROCEEDING UPWARD TO GRADE. HORIZONTAL DISTRIBUTION: PERFORM TESTING AT EACH STRUCTURE.
	BACKFILL BENEATH STRUCTURES	98%	
	BACKFILL AROUND STRUCTURES	98%	
	CRUSHED STONE BENEATH STRUCTURES	NOTE 6	
PARKING AREAS	BACKFILL	98%	VERTICAL DISTRIBUTION: ONE TEST AT EVERY LIFT STARTING AT TOP OF FIRST LIFT AND PROCEEDING UPWARD TO GRADE. HORIZONTAL DISTRIBUTION: TESTS SHALL BE PERFORMED EVERY 6,000 SQUARE FEET OF PARKING AREA.
	SUBGRADE	98%	
	BASE	98%	
UTILITY TRENCH BACKFILL	BEDDING AND BACKFILL	98%	VERTICAL DISTRIBUTION: ONE TEST AT EVERY LIFT STARTING AT THE SPRING LINE AND PROCEEDING UPWARD TO GRADE. HORIZONTAL DISTRIBUTION: TESTS SHALL BE PERFORMED AT RANDOMLY SELECTED LOCATIONS WITHIN EACH 300 FOOT INTERVAL (MAXIMUM) ALONG THE LENGTH OF A PIPE INSTALLATION, AND BETWEEN EACH SET OF STRUCTURES SEPARATED BY LESS THAN 300 FEET.
ROADS AND PARKING	ASPHALT	94%	ASPHALT TESTING MAY BE DONE BY CORE SAMPLING OR NUCLEAR GAUGE DENSITY TESTING. ASPHALT TESTING SHALL BE AT MAXIMUM 300 LINEAR FOOT ALONG ROADWAYS AND 6,000 SQUARE FOOT INTERVALS FOR PARKING AREAS.

NOTES:

1. THE DENSITY REQUIREMENTS PRESENTED ASSUME DRY TRENCH CONDITIONS.
2. UNLESS INDICATED OTHERWISE IN THE SPECIFICATIONS, TESTING SHALL COMPLY WITH THE REQUIREMENTS PRESENTED IN THIS TABLE.
3. LIFT THICKNESSES FOR BASE, SUBGRADE AND BACKFILL SHALL BE AS INDICATED ON THE DETAILS OR DESCRIBED IN THE SPECIFICATIONS.
4. MAXIMUM DENSITY SHALL BE DETERMINED BY ASTM D 1557 OR AASHTO T180 (MODIFIED PROCTOR).
5. FIELD DENSITY TESTS SHALL BE PERFORMED IN ACCORDANCE WITH ASTM D 1556 OR D 2922.
6. THE AGGREGATE SHALL BE COMPACTED TO A DEGREE ACCEPTABLE TO THE ENGINEER BY USE OF A VIBRATORY COMPACTOR AND/OR CRAWLER TRACTOR.

ENGINEER: Werner J. Reinefeld
REG. No: 63042
DATE: 6/17/2020
TEL: 305-514-3106
FAX: N/A

DRAWN BY: JC | DESIGNED BY: JC | CHECKED BY: WR | DATE: 02/17/2021 | SCALE: N/A | 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

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
GENERAL NOTES
BAYVIEW DRIVE

PROPOSAL SUBMITTAL

DAVID MANCINI & SONS, INC.

wsp

SHEET NO. G-2 OF
TOTAL:
CAD FILE: 12567-002-NOTES
DRAWING FILE NO. 4-XXX-XX

M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\SHEET FILES (NOTES & DETAILS)\12567-002-NOTES.DWG

GENERAL DEMOLITION SPECIFICATIONS:

1. THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY.

2. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES AND OTHER FEATURES AFFECTING THE WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT MIGHT IMPACT THE WORK.

3. CHAPTER 553.851 OF THE FLORIDA STATUTES REQUIRES THAT AN EXCAVATOR NOTIFY ALL UTILITIES A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATING.

4. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE EXCAVATION.

5. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, SUPERVISION, AND EQUIPMENT REQUIRED FOR THE ORDERLY DEMOLITION AND REMOVAL OF EXISTING STRUCTURES, PAVEMENT AND UTILITIES AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.

6. PROTECT ALL UTILITIES, UNLESS OTHERWISE NOTED.

7. ALL THE CONCRETE AND PAVEMENT TO BE REMOVED MUST BE SAW CUT CLEAN PRIOR TO REMOVAL.

8. WET DOWN MASONRY WALLS AND DEBRIS DURING DEMOLITION AND LOADING OPERATIONS TO PREVENT THE SPREAD OF DUST (AS APPLICABLE TO PROJECT).

9. ALL EXISTING STRUCTURES, PAVEMENTS, SLABS, FOUNDATIONS, STEPS AND OTHER ON-SITE EXISTING FEATURES INDICATED ON THE DRAWINGS TO BE REMOVED SHALL BE DEMOLISHED AND REMOVED BY THE CONTRACTOR (AS APPLICABLE TO PROJECT).

10. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ON THE DRAWINGS ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.

11. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO REMOVAL OR RELOCATION OF ANY ELECTRICAL, TELEPHONE, CABLE AND/OR GAS LINES. SUFFICIENT TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.

12. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER/ENGINEER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINANT IS ENCOUNTERED DURING THE DEMOLITION/EXCAVATION PROCESS.

13. MAINTAIN ACCESS TO SURROUNDING PROPERTIES AND BUILDINGS.

14. PRIOR TO DEMOLITION OCCURRING ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

15. ALL TRAFFIC SIGNS OUTSIDE THE DEMOLITION AREA ARE TO REMAIN UNLESS OTHERWISE SPECIFIED.

16. ALL TRASH, DEBRIS AND OTHER MATERIAL REMOVED FROM THE SITE SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

PAVEMENT DEMOLITION:

1. WHERE EXISTING PAVEMENT IS TO BE REMOVED, SAW-CUT THE SURFACING LEAVING A UNIFORM AND STRAIGHT EDGE WITH MINIMUM DISTURBANCE TO THE REMAINING ADJACENT SURFACING. IF DEMOLITION RESULTS IN RAVELING OF SAW CUT SURFACE, RECUT BACK FROM THE RAVELED EDGE PRIOR TO RESTORATION.

2. WHERE EXISTING PAVEMENT, CURB, CURB AND GUTTER, SIDEWALK, DRIVEWAY, OR VALLEY GUTTER IS REMOVED FOR INLETS, MANHOLES, APPURTENANCES, FACILITIES OR STRUCTURES, SAID PAVEMENT, ETC., SHALL BE REPLACED WITH NEW PAVEMENT, ETC.

3. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THE DRAWINGS. HOWEVER, IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, SIDEWALK, BUILDINGS, UTILITIES, ETC., THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND REPLACEMENT. REPLACEMENT PAVEMENT, SIDEWALK, ETC., SHALL BE NEW.

PRE-DEMOLITION RESPONSIBILITIES:

1. EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE CITY AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR FOR ANY EXISTING UTILITIES NOT SHOWN.

2. THE LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY.

3. SUNSHINE STATE ONE CALL OF FLORIDA, INC. REQUIRES THE CONTRACTOR TO CALL TWO (2) FULL BUSINESS DAYS (BUT NOT MORE THAN FIVE) PRIOR TO BREAKING GROUND TO FIND OUT WHERE BURIED FACILITIES (ELECTRICAL, GAS, TELEPHONE, CABLE, WATER) ARE LOCATED.

DEMOLITION SAFETY:

1. ALL DEMOLITION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.

2. PROVIDE ADEQUATE PROTECTION FOR PERSONS AND PROPERTY AT ALL TIMES. EXECUTE THE WORK IN A MANNER TO AVOID HAZARDS TO PERSONS AND PROPERTY AND PREVENT INTERFERENCE WITH THE USE OF AND ACCESS TO ADJACENT BUILDINGS. STREETS AND SIDEWALKS SHALL NOT BE UNNECESSARILY BLOCKED BY DEBRIS AND EQUIPMENT.

DEMOLITION EROSION AND SEDIMENT CONTROL NOTES:

1. DURING DEMOLITION, THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO ENSURE AGAINST POLLUTING, SILTATION OR DISTURBANCE TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING DRAINAGE SYSTEMS AND ADJACENT WATER BODIES AND WETLANDS, IN COMPLIANCE WITH ALL PERMIT REQUIREMENTS RELATED TO SUCH MEASURES.

2. METHODS MAY INCLUDE TEMPORARY EROSION AND SEDIMENT CONTROLS SUCH AS SEDIMENT BASINS, SEDIMENT CHECKS, SILT BARRIERS, SILT SCREENS, TURBIDITY BARRIERS OR THE BEST MANAGEMENT PRACTICES AVAILABLE TO THE INDUSTRY.

3. EROSION AND SEDIMENT CONTROL INSTALLATIONS SHALL BE MAINTAINED THROUGHOUT THE DEMOLITION PERIOD AND UNTIL NEW VEGETATIVE GROWTH HAS BEEN ESTABLISHED.

4. THROUGHOUT THE DEMOLITION PERIOD, THE CONTRACTOR SHALL INSPECT DAILY THE EROSION AND SEDIMENT CONTROL INSTALLATIONS FOR FAILURE OR SIGNS OF FAILURE OR MALFUNCTION. REPAIR OR REPLACE THE EROSION AND SEDIMENT CONTROL INSTALLATIONS IMMEDIATELY UPON DISCOVERY OF FAILURE OR MALFUNCTION.

5. INLETS AND CATCH BASINS, EXISTING ON-SITE AND OFF-SITE, SHALL BE PROTECTED FROM SEDIMENT STORM RUNOFF.

6. THE CONTRACTOR SHALL PROMPTLY REMOVE ALL MUD, DIRT OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING PUBLIC ROADS AND FACILITIES DUE TO DEMOLITION.

7. DEWATERING ACTIVITIES SHALL NOT RESULT IN ANY DISCHARGE OF TURBID WATER FROM THE PROJECT SITE WITHOUT PROPER EROSION AND SEDIMENT CONTROL AND APPROVAL FROM ENGINEER.

8. PHASING OF EROSION CONTROL DEMOLITION SHALL BE RECOMMENDED AS FOLLOWS:

8.1. PLACEMENT OF PERIMETER PROTECTIVE MEASURES (SILT FENCE, HAY BALES, TURBIDITY BARRIERS, ETC.) AROUND ON-SITE FEATURES TO BE RETAINED, AT POINTS OF OFF-SITE DISCHARGE AND AROUND WORK AREAS TO BE EXCAVATED OR FILLED.

8.2. REROUTE RUNOFF FROM AREAS OUTSIDE OF THE DEMOLITION AREA TO MINIMIZE FLOW THROUGH AREAS TO BE DISTURBED BY DEMOLITION. BERMS, SWALES AND OTHER MEANS USED FOR SUCH CONVEYANCE SHALL BE VEGETATED AND MEASURES TAKEN TO PROVIDE PROTECTION UNTIL STABILIZATION OCCURS (AS APPLICABLE TO THE PROJECT).

8.3. SELECT LOCATIONS FOR PLACEMENT OF EXCAVATED MATERIAL, WHERE SUITABLE FOR FILL OR UNSUITABLE MATERIAL, AND CONSTRUCT CONTAINMENT BERMS AROUND THE AREA. THE USE OF STRIPING FOR THIS PURPOSE MAY ACCELERATE BERM REVEGETATION. CONSTRUCT TEMPORARY OUTLETS FOR CONTAINMENT AREAS WITH SCREENS, HAY BALES, SETTLING BASINS OR OTHER MEASURES TO PREVENT SILT TRANSPORT.

8.4. SELECT / DESIGNATE ACCESS ROUTING FOR DEMOLITION EQUIPMENT AND VEHICLES AND PROVIDE PERIMETER PROTECTIVE MEASURES WHERE EXISTING TERRAIN SHALL BE SUBJECT TO DISRUPTION BY SUCH TRAFFIC.

8.5. CONSTRUCT ABOVE GROUND OR OTHER CONTAINMENT AREAS FOR DEMOLITION AREA RUNOFF. PROVIDE SCREENS, HAY BALES, ETC. TO FILTER DISCHARGE FROM THOSE AREAS.

8.6. SPOIL MOUNDS SHALL NOT BE LEFT FOR MORE THAN ONE WEEK PRIOR TO REPLACEMENT UNLESS PROTECTIVE CONTAINMENT MEASURES IN THE WORK AREA ARE APPLIED.

8.7. GRASSING, SODDING, ETC. SHALL BE IN PLACE IMMEDIATELY UPON COMPLETION OF REGRADING, SWALE SLOPES AND THE CONSTRUCTED OR DISTURBED AREAS.

9. THE CONTRACTOR IS REQUIRED TO ADHERE TO THE REQUIREMENT OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). THE CONTRACTOR SHALL INSTITUTE BEST MANAGEMENT PRACTICES (BMPS) TO ENSURE COMPLIANCE WITH THE NPDES PROGRAM AND TO MINIMIZE THE IMPACT TO PUBLIC STORMWATER FACILITIES. A NOTICE OF INTENT (NOI) SHALL BE FILED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

10. THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND MAINTAIN ALL RECORDS REQUIRED BY ITS NPDES STORMWATER PERMIT FOR ITS CONSTRUCTION

11. PRIOR TO CONSTRUCTION, A SILT FENCE IN ACCORDANCE WITH CITY'S DETAIL SHALL BE ERECTED AS NOTED ON PLANS. ALL CATCH BASINS SHALL HAVE THEIR INLETS PROTECTED BY THE INSTALLATION OF FILTER INLET INSERTS INTO THE FRAME AND GRATE. SILT FENCES AND FILTER INLET INSERTS SHALL REMAIN IN PLACE DURING THE ENTIRE DURATION OF CONSTRUCTION.

12. ALL WASTE GENERATED FROM THE CONSTRUCTION SHALL BE DISCARDED IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. CONTRACTOR SHALL OBTAIN ALL APPLICABLE CODES AND BECOME FAMILIAR WITH STATE, LOCAL AND FEDERAL REGULATIONS PRIOR TO BEGINNING

13. AT ANY TIME DURING CONSTRUCTION THAT THE SILT FENCING IS DISTURBED, THE SILT FENCING SHALL BE RESTORED TO ITS ORIGINAL STATE WITHIN 24 HOURS. AT NO TIME DURING CONSTRUCTION SHALL WORK BE PERFORMED WITHOUT THE INTEGRITY OF THE SILT FENCING SECURED.

14. THE CONTRACTOR SHALL RETAIN A COPY OF THE SWPPP AND ALL REPORTS, RECORDS AND DOCUMENTATION REQUIRED BY THE PERMIT AT THE CONSTRUCTION SITE, OR AN APPROPRIATE ALTERNATIVE LOCATION AS SPECIFIED IN THE NOTICE OF INTENT, FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

15. THE CONTRACTOR SHALL RETAIN THE SWPPP, NOI AND ALL RECORDS ASSOCIATED THEREWITH FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.

ENGINEER:
Werner A. Reinefeld
REG. No. 63042
DATE: 6/18/2020

TEL: 305-514-3166
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DRAWN BY: JC | DATE: 02/17/2021
DESIGNED BY: JC | SCALE: N/A
CHECKED BY: WR | 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

PROPOSAL SUBMITTAL

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
DEMOLITION NOTES
BAYVIEW DRIVE

SHEET NO. G-3 | OF

TOTAL:

CAD FILE: 12567-003-NOTES

DRAWING FILE NO. 4-XXX-XX

M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\SHEET FILES (NOTES & DETAILS)\12567-003-NOTES.DWG

HORIZONTAL DIRECTIONAL DRILLING (HDD) WITH (HDPE) PIPE

I. WORK INCLUDED

A. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL A SEWER FORCE MAIN PIPE USING DIRECTIONAL DRILLING METHOD OF INSTALLATION, ALL IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE MATERIAL FOR THE NEW WATER MAIN SHALL BE HDPE PE4710 IPS. THE DIMENSION RATIO (DR) FOR THE 30-INCH SEGMENT SHALL BE DR-11. WORK INCLUDED SHALL INCLUDE AND NOT BE LIMITED TO PROPER INSTALLATION, TESTING, RESTORATION OF UNDERGROUND UTILITIES AND ENVIRONMENTAL PROTECTION AND RESTORATION.

B. THE DIRECTIONAL DRILL SHALL BE ACCOMPLISHED BY FIRST DRILLING A PILOT HOLE TO DESIGN STANDARDS; THEN ENLARGING THE PILOT HOLE TO SUFFICIENT SIZE TO ACCOMMODATE THE PULL BACK.

II. REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3261: BUTT HEAT FUSION POLYETHYLENE PLASTIC FITTINGS

ASTM F 714-05: SPECIFICATION FOR POLYETHYLENE PIPE

ASTM F 1055: ELECTRO-FUSION FITTINGS FOR OUTSIDE DIAMETER CONTROLLED PE PIPE

ASTM F 1962: MAXI-HORIZONTAL DIRECTIONAL DRILLING

ASTM F 2620: HEAT FUSION JOINING OF POLYETHYLENE PIPE AND FITTINGS

B. AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C 906: STANDARD FOR POLYETHYLENE PRESSURE PIPE AND FITTINGS, 4 IN. THROUGH 63 IN. FOR WATER DISTRIBUTION

III. GENERAL REQUIREMENTS

A. DIRECTIONAL DRILLING AND PIPE INSTALLATION SHALL BE DONE ONLY BY AN EXPERIENCED, LICENSED CONTRACTOR SPECIALIZING IN DIRECTIONAL DRILLING TECHNIQUE. THE SAID CONTRACTOR SHALL HAVE HAD EXPERIENCE IN DIRECTIONAL DRILLING UNDER FLORIDA WATERWAYS.

B. THE HDD CONTRACTOR SHALL VISIT THE SITE AND DETERMINE THE PROXIMITY OF STRUCTURES ON EITHER SIDE OF THE CROSSINGS. THE HDD CONTRACTOR SHALL PROVIDE THE OWNER WITH A DRILLING PLAN OUTLINING PROCEDURES TO PREVENT FRAC-OUT AND DRILLING FLUID OR THE DRILLING PROCESS FROM ADVERSELY AFFECTING THESE STRUCTURES.

C. PRIOR TO PRE-CONSTRUCTION MEETING HDD CONTRACTOR IS TO SUBMIT FRAC-OUT PLAN PER STATE WATER QUALITY STANDARDS, PURSUANT TO RULE 62-302, WITH DETAILS OF THE NON-TOXIC FLORESCENT TRACKING DYES THAT THE CONTRACTOR WILL BE USING WITH THE DRILLING LUBRICANT AS A MONITORING METHOD WITH THE BENTONITE.

D. FIVE WORKDAYS WRITTEN NOTICE PRIOR TO START OF THE ACTUAL WORK SHALL BE GIVEN TO THE OWNER.

E. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND LEAVE IN PLACE ANY SHEETING, UNDERPINNING, CRIBBING, AND OTHER RELATED ITEMS (OTHER THAN THAT REQUIRED FOR THE BORING AND RECEIVING PITS) TO SUPPORT ANY STRUCTURE OR FACILITY AFFECTED BY THE BORING OPERATIONS. THE ENGINEER, DEPENDING UPON EXISTING CONDITIONS, MAY REQUIRE THAT ADDITIONAL SHEETING FOR THE EXCAVATION BE LEFT IN PLACE.

F. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE METHODS AND MEANS OF CONSTRUCTION, THE STABILITY AND ACCURACY OF THE DRILLED AND REAMED HOLE AND CONSTRUCTED PITS.

G. ALL EQUIPMENT USED BY THE CONTRACTOR ON OWNER'S PROPERTY AND RIGHTS-OF-WAY MAY BE INSPECTED BY THE OWNER OR THE OWNER'S REPRESENTATIVES.

H. THE HDD CONTRACTOR'S METHODS AND SCHEDULE SHALL COMPLY WITH THE OVERALL PROJECT REQUIREMENTS. THE HDD CONTRACTOR SHALL BE FAMILIAR WITH THE WORK WITHIN THE LOCAL SUBSURFACE CONDITIONS.

I. THE HDD CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN UP OF PROJECT SITE, DEBRIS, MATERIALS AND EQUIPMENT AND SHALL CLEAR THE SITE OF AND DISPOSE OF THEM IN ACCORDANCE WITH CONTRACT DOCUMENTS.

IV. SUBMITTALS

A. TWO (2) WEEKS PRIOR TO THE START OF THE DIRECTIONAL DRILLING WORK, THE CONTRACTOR SHALL SUBMIT THE DIRECTIONAL DRILLING WORK PLAN FOR THE OWNER'S REVIEW. THE WORK PLAN SHALL INCLUDE THE FOLLOWING INFORMATION.

1. A PLAN SHOWING DETAILS OF THE PROPOSED METHOD OF CONSTRUCTION, SEQUENCE OF OPERATIONS TO BE PERFORMED, NUMBER AND SIZE OF CONSTRUCTION CREW, HOURS TO BE WORKED, PILOT HOLE DRILLING PROCEDURE, REAMING PROCEDURE, PULLBACK PROCEDURE, METHOD OF MONITORING THE DRILLING HEAD AND METHOD OF VERIFYING PIPE LOCATION FOR AS-BUILT DRAWINGS.

2. A DRILLING FLUID PLAN WHICH DETAILS TYPES OF DRILLING FLUIDS, INCLUDING THE NON-TOXIC FLUORESCENT TRACKING DYES, CLEANING AND RECYCLING EQUIPMENT, ESTIMATED FLOW RATES, AND PROCEDURES FOR MINIMIZING DRILLING FLUID ESCAPE.

3. A PLAN IN THE EVENT OF DRILLING FLUID ESCAPE INCLUDING, BUT NOT LIMITED TO, STOPPAGE OF WORK, NOTIFICATION OF APPLICABLE PERMITTING AUTHORITIES WHOSE RIGHT-OF-WAY IS IMPACTED BY THE ESCAPE OF DRILLING FLUID, PROCEDURE TO CONFINE DRILLING FLUIDS/MUDS, AND PROCEDURE FOR REPAIR/PLUGGING OF FISSURES AT NO ADDITIONAL COST TO THE OWNER.

A. THE HDD CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING DRILLING LOGS THAT PROVIDE DRILL BIT LOCATIONS AT LEAST 30 FEET ALONG THE DRILL PATH. IN ADDITION, LOGS WILL BE KEPT THAT RECORD THE FOLLOWING THROUGHOUT EACH DRILL PASS, BACKREAM PASS OR PIPE INSTALLATION PASS:

1. DRILL FLUID PRESSURE
2. DRILLING FLUID FLOW RATE
3. DRILL THRUST PRESSURE
4. DRILL PULLBACK PRESSURE
5. DRILL HEAD TORQUE
6. HORIZONTAL DISTANCE OF DRILL HEAD FROM ENTRY POINT

V. SAFETY

A. THE CONTRACTOR SHALL, AT ALL TIMES, CONFORM TO ALL APPLICABLE STATE AND FEDERAL REGULATIONS.

B. CONTRACTOR IS TO ADHERE TO REQUIREMENTS OF PERMITTING AGENCIES.

C. GUIDED DIRECTIONAL DRILLING EQUIPMENT MACHINE SAFETY REQUIREMENTS WILL INCLUDE A COMMON GROUNDING SYSTEM TO PREVENT ELECTRICAL SHOCK IN THE EVENT OF HIGH VOLTAGE UNDERGROUND CABLE STRIKE. THE GROUNDING SYSTEM WILL CONNECT ALL PIECES OF INTERCONNECTING MACHINERY: THE DRILL, MUD MIXING SYSTEM, DRILL POWER UNIT, DRILL ROD TRAILER, OPERATOR'S BOOTH, WORKER GROUNDING MATS AND ANY OTHER INTERCONNECTED EQUIPMENT TO A COMMON GROUND. THE DRILL WILL BE EQUIPPED WITH AN "ELECTRICAL STRIKE' AUDIBLE AND VISUAL WARNING SYSTEM THAT WILL NOTIFY THE SYSTEM OPERATORS OF AN ELECTRICAL STRIKE.

D. OPERATORS OF THE DRILL WILL WEAR ELECTRICAL SHOCK PROTECTION EQUIPMENT AND OPERATE FROM COMMON GROUNDED MATS AS REQUIRED.

VI. MATERIALS

A. EQUIPMENT (GRADERS, SHOVELS, ETC.) AND MATERIALS (SUCH AS GROUNDSHEETS, HAY BALES, BOOMS, AND ABSORBENT PADS) FOR CLEANUP AND CONTINGENCIES SHALL BE PROVIDED IN SUFFICIENT QUANTITIES BY CONTRACTOR AND MAINTAINED AT ALL SITES FOR USE IN THE EVENT OF INADVERTENT LEAKS, SEEPS OR SPILLS.

VII. HDPE PIPELINE IDENTIFICATION

A. ALL POLYETHYLENE PIPE SHALL BE BLACK, AND SHALL CONTAIN A CONTINUOUS COLORED STRIPE, 2 INCHES WIDE, AT THREE SEPARATE LOCATIONS ALONG THE LENGTH OF THE PIPE. STRIPE COLOR SHALL BE:

SEWER FORCE MAINS – GREEN

VIII. DIRECTIONAL DRILLING OPERATION

A. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, EQUIPMENT, AND FACILITIES REQUIRED FOR DIRECTIONAL DRILLING. PROPER ALIGNMENT AND ELEVATION OF THE OPENING SHALL BE CONSISTENTLY MAINTAINED THROUGHOUT THE DIRECTIONAL DRILLING OPERATION. ENTRANCE AND EXIT ANGLES FOR THE DRILL ARE AT THE CONTRACTOR'S DISCRETION SUCH THAT THE ELEVATION PROFILE MAINTAINS ADEQUATE GROUND COVER TO REASONABLY PRECAUTION AGAINST HYDRAULIC FRACTURES WITH THE DRILLING FLUID AND MAINTAIN THE MINIMUM COVER SHOWN IN THE DRAWINGS AND SPECIFIED HEREIN.

B. THE POSITION OF THE DRILL STRING SHALL BE MONITORED BY THE CONTRACTOR WITH THE DOWNHOLE SURVEY INSTRUMENTS. THE CONTRACTOR SHALL COMPUTE THE POSITION IN THE X, EVERY 30 FEET. SERIOUS DEVIATIONS BETWEEN THE DESIGN POSITION WHICH MAY AFFECT THE INSTALLATION OF THE PIPELINE AND ARE BEYOND THE CONTROL OF THE CONTRACTOR TO CORRECT SHALL BE DOCUMENTED AND IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER FOR DISCUSSION AND/OR APPROVAL. THE PROFILE AND ALIGNMENT DEFINED ON THE CONSTRUCTION DRAWINGS FOR THE BORES DEFINE THE MINIMUM DEPTH AND RADIUS OF CURVATURE. THE CONTRACTOR SHALL MAINTAIN AND PROVIDE TO THE OWNER, UPON REQUEST, THE DATA GENERATED BY THE DOWNHOLE SURVEY TOOLS IN A FORM SUITABLE FOR INDEPENDENT CALCULATION OF THE PILOT HOLE PROFILE.

C. THE USE OF A SEPARATE STEERING SYSTEM EMPLOYING A GROUND SURVEY GRID SYSTEM, SUCH AS "TRU-TRACKER" OR EQUAL SHOULD BE USED, AT THE CONTRACTOR'S DISCRETION, TO ENSURE PROPER MONITORING OF THE DRILL STRING.

D. BORING PITS SHALL BE SHORED WITH SHEETING OR SUCH OTHER MATERIALS AS REQUIRED. SHEETING SHALL BE DRIVEN TO A SUFFICIENT DEPTH BELOW THE INVERT OF THE CARRIER PIPE TO RESIST ANY PRESSURE DEVELOPED BY THE SOIL OUTSIDE THE BORING PIT. SHEETING WHEN USED SHALL TERMINATE NOT LESS THAN 3 FEET 6 INCHES ABOVE EXISTING GRADE.

E. AT THE COMPLETION OF THE DIRECTION DRILLING OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO REMOVE ALL SHEETING IN PLACE. IF STEEL SHEETING IS USED, IT MAY BE REMOVED AFTER INSTALLATION OF THE CARRIER PIPE IN THE BORE HOLE, BUT PRIOR TO INSTALLATION OF THE JOINING CARRIER PIPE. HOWEVER, SHOULD DAMAGE TO THE ROADWAY, PIPELINE OR ANY OTHER ADJACENT STRUCTURE OCCUR, THE CONTRACTOR SHALL LEAVE ALL REMAINING SHEETING IN PLACE AND REDRIVE AND LEAVE IN PLACE ANY SHEETING WHICH IS REQUIRED TO STABILIZE THE SITE AND PREVENT ADDITIONAL DAMAGE FROM OCCURRING. THE TOP OF ALL SHEETING LEFT IN PLACE SHALL BE CUT OFF 36 INCHES BELOW FINISHED GRADE.

F. BENTONITE OR OTHER STABILIZING GELS SHALL BE USED TO PREVENT CALVING OF THE UNSUPPORTED BORE HOLE.

IX. DRILLING FLUIDS AND CUTTINGS

A. TO THE EXTENT PRACTICAL, THE CONTRACTOR SHALL MAINTAIN A CLOSED LOOP DRILLING FLUID SYSTEM AND UTILIZE DRILLING TOOLS AND PROCEDURES WHICH WILL MINIMIZE THE DISCHARGE OF ANY DRILLING FLUIDS.

B. THE GUIDED HORIZONTAL DIRECTION DRILLING OPERATION IS TO BE OPERATED IN A MANNER TO ELIMINATE THE DISCHARGE OF WATER, DRILLING MUD AND CUTTINGS TO THE CANAL OR LAND AREAS INVOLVED DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND PROCEDURES TO MAXIMIZE THE RECIRCULATION OR REUSE OF DRILLING MUD TO MINIMIZE WASTE. ALL EXCAVATED PITS USED IN THE DRILLING OPERATION SHALL BE LINED BY CONTRACTOR WITH HEAVY DUTY PLASTIC SHEETING WITH SEALED JOINTS TO PREVENT THE MIGRATION OF DRILLING FLUIDS AND/OR GROUND WATER.

C. PITS CONSTRUCTED AT THE ENTRY OR EXIT POINT AREA SHALL BE SO CONSTRUCTED TO COMPLETELY CONTAIN THE DRILL FLUID AND PREVENT ITS ESCAPE TO THE SURROUNDING LAND OR CANAL.

D. WASTE CUTTINGS AND DRILLING MUD SHALL BE PROCESSED THROUGH A SOLIDS CONTROL PLANT COMPRISED AS A MINIMUM OF STUMPS, PUMPS, TANKS, DISTILLER/DESANDER, CENTRIFUGES, MATERIAL HANDLERS, AND HAULERS ALL IN A QUANTITY SUFFICIENT TO PERFORM THE CLEANING/SEPARATING OPERATION WITHOUT INTERFERENCE WITH THE DRILLING PROGRAM. THE CUTTINGS AND EXCESS DRILLING FLUIDS SHALL BE DEWATERED AND DRIED BY CONTRACTOR TO THE EXTENT NECESSARY FOR DISPOSAL, AND DISPOSAL IN OFFSITE LANDFILLS AT THE CONTRACTOR'S EXPENSE. WATER FROM THE DEWATERING PROCESS SHALL BE TREATED BY CONTRACTOR TO MEET PERMIT REQUIREMENTS AND DISPOSED OF LOCALLY. THE CUTTINGS AND WATER FOR DISPOSAL ARE SUBJECT TO BEING SAMPLED AND TESTED. THE CONSTRUCTION SITE AND ADJACENT AREAS WILL BE CHECKED FREQUENTLY FOR SIGNS OF UNPLANNED LEAKS OR SEEPS.

E. ALL DRILLING MUD SHALL BE REMOVED FROM THE ENTRY AND EXIT AREA SOILS SUCH THAT WATER WILL PERCOLATE. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONDITIONS.

X. DIRECTIONAL DRILL WORK PLAN & CONTINGENCY

A. THE WORK PLAN SHALL INCLUDE THE FOLLOWING INFORMATION.

1. A PLAN SHOWING DETAILS OF THE PROPOSED METHOD OF CONSTRUCTION.

2. A DRILLING FLUID PLAN WHICH DETAILS TYPES OF DRILLING FLUIDS, CLEANING AND RECYCLING EQUIPMENT, ESTIMATED FLOW RATES, AND PROCEDURES FOR MINIMIZING DRILLING FLUID ESCAPE.

3. A FRAC-OUT PLAN IN THE EVENT OF DRILLING FLUID ESCAPE TO ENSURE THAT PREVENTIVE AND RESPONSIVE MEASURES ARE IMPLEMENTED, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING SECTIONS.

B. CONTINGENCY PLAN

1. IDENTIFY SENSITIVE ENVIRONMENTAL AREAS AND EXISTING STRUCTURES THAT CAN POTENTIALLY BE AFFECTED.

2. ENSURE THAT EXPERIENCED TECHNICIANS PERFORM THE HORIZONTAL DIRECTIONAL DRILLING TO MAINTAIN SAFE LIMITS OF DRILLING FLUID PRESSURE.

3. PROVIDE PROTOCOL FOR THE TIMELY DETECTION OF FRAC-OUTS BY CONSTANTLY MONITORING AND RECORDING OBSERVABLE FRAC-OUT CONDITIONS DURING HORIZONTAL DIRECTIONAL DRILLING ACTIVITIES:

A. DRILLING FLUID PRESSURE
B. PUMP VOLUME RATES
C. LOSS OF CIRCULATION
D. LOCATION OF DRILL HEAD

4. FIELD MEETINGS SHALL BE CONDUCTED FOR THE WORKERS TO IDENTIFY AND LOCATE SENSITIVE AREAS AT THE SITE WHICH INCLUDE THE CENTRAL NEW RIVER, ADJACENT RESIDENTIAL AREAS, ADJACENT RECREATIONAL AREAS, EXISTING UTILITIES, ETC.

5. UNDERSTAND RESPONSIBILITIES FOR TIMELY REPORTING ANY FRAC-OUT.

6. IDENTIFY QUALIFIED COMPETENT PERSON TO SERVE AS A SINGLE POINT OF CONTACT ONSITE FOR IMPLEMENTING THE FRAC-OUT PLAN.

7. IMPLEMENT AND MONITOR PROPER INSTALLATION OF STORMWATER POLLUTION PREVENTION PLAN (SWPPP) DURING HORIZONTAL DIRECTIONAL DRILLING ACTIVITIES.

C. PROTOCOL TO IMPLEMENT IN CASE OF FRAC-OUT

1. WORK WILL BE STOPPED IN THE EVENT OF A SPILL, INCLUDING THE RECYCLING OF DRILLING MUD/LUBRICANT.

2. DETERMINE THE AMOUNT OF DRILLING MUD RELEASED AND POTENTIAL FOR THE RELEASE TO REACH WATERBODIES.

3. DETERMINE THE LOCATION AND EXTEND OF THE FRAC-OUT:

IN LAND:

I. IMPLEMENT AND ENFORCE SWPPP AND ISOLATE THE AREA WITH SAND BAGS, HAY BALES, OR SILT FENCE TO SURROUND AND CONTAIN THE DRILLING MUD.
II. USE VACUUM TRUCKS FOR ASSISTANCE IN THE REMOVAL OF DRILLING FLUID.
III. ONCE EXCESS DRILLING MUD IS REMOVED, THE AREA WILL BE REPLANTED USING SPECIES SIMILAR TO THOSE IN THE ADJACENT AREA.

AQUATIC:

I. MONITOR FRAC-OUT FOR 4 HOURS TO DETERMINE IF THE DRILLING MUD CONGEALS.
II. IMPLEMENT AND ENFORCE SWPPP AND ISOLATE/CONTAIN AREA, AS NECESSARY, WITH THE USE OF UNDERWATER BOOMS AND/OR CURTAINS.
III. IF THE FRACTURE BECOMES EXCESSIVELY LARGE, A SPILL RESPONSE TEAM WOULD BE CALLED IN TO CONTAIN AND CLEAN UP EXCESS DRILLING MUD IN THE WATER. PHONE NUMBERS OF SPILL RESPONSE TEAMS IN THE AREA SHALL BE ON SITE AND PROVIDED BY THE CONTRACTOR.
IV. IF THE SPILL AFFECTS AND AREA THAT IS VEGETATED, THE AREA MUST BE REPLANTED USING SPECIES SIMILAR TO THOSE IN THE ADJACENT AREA.

V. NOTIFY THE CITY OF FORT LAUDERDALE AND ENGINEER WITHIN THE FIRST 24 HOURS.

VI. PROVIDE REPORT OF THE INCIDENT NO MORE THAN 15 CALENDAR DAYS AFTER THE INCIDENT WHICH SHALL INCLUDE:

1. PHOTOGRAPHS AFTER CLEANUP CONDITIONS.

2. FRAC-OUT INCIDENT REPORT DESCRIBING TIME, PLACE, ACTIONS TAKEN TO REMEDIATE FRAC-OUT, AND MEASURES IMPLEMENTED TO PREVENT RECURRENCE.

XI. INSTALLING PIPE

A. THE PIPE INSTALLED WITHIN THE BORING SHALL BE IN FULL CONFORMITY WITH THESE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS. THE PIPE SHALL BE INSTALLED, AS TO A REASONABLE DIRECTIONAL DRILLING ABILITY, TO THE EXACT LINES GRADES REQUIRED AFTER HAVING BEEN SATISFACTORILY APPROVED BY THE ENGINEER FROM THE DIRECTIONAL DRILLERS EXPECTED DRILL PATH PLAN AND PROFILE SHEETS PROVIDED.

B. THE TYPE AND SIZE OF THE PILOT STRING CUTTING HEAD SHALL BE AT THE CONTRACTOR'S DISCRETION. THE TYPE AND OUTSIDE DIAMETER OF THE DRILL PIPE TO BE USED IN THE PILOT STRING SHALL ALSO BE AT THE CONTRACTOR'S DISCRETION.

C. A MINIMUM DEPTH REQUIREMENT OF 25 FEET BELOW THE EXISTING GROUND SHALL BE MAINTAINED. LATERAL POSITIONING AT EXIT SHALL BE NO FURTHER THAN 5 FEET LEFT OR RIGHT OF PLANNED CENTERLINE, AND HORIZONTAL POSITIONING SHALL BE NO FURTHER THAN 5 FEET SHORT OR LONG OF PROPOSED EXIT LOCATION. ENTRY AND EXIT LOCATIONS, AS WELL AS INTERMEDIATE CENTERLINE STATIONING, SHALL BE STAKED BY THE CONTRACTOR.

D. UPON APPROVAL OF THE PILOT HOLE LOCATION, THE HOLE OPENING OR ENLARGING PHASE OF THE INSTALLATION SHALL BEGIN. THE TYPE OF HOLE OPENER OR BACK REAMER TO BE UTILIZED IN THIS PHASE SHALL BE DETERMINED BY THE TYPES OF SUBSURFACE SOIL CONDITIONS THAT HAVE BEEN ENCOUNTERED DURING THE PILOT HOLE DRILLING OPERATION. THE REAMER TYPE SHALL BE AT THE CONTRACTOR'S DISCRETION.

E. THE OPEN BOREHOLE MAY BE STABILIZED BY MEANS OF BENTONITE DRILLING SLURRY BEING PUMPED THROUGH THE INSIDE DIAMETER OF THE DRILL PIPE AND THROUGH OPENING IN THE REAMER. THE SLURRY WILL ALSO SERVE AS AN AGENT TO CARRY THE LOOSE CUTTING TO THE SURFACE THROUGH THE ANNULUS OF THE BOREHOLE. THESE CUTTINGS AND BENTONITE SLURRY ARE TO BE CONTAINED AT THE EXIT OR ENTRY SIDE OF THE DIRECTIONAL BORE IN PITS OR HOLDING TANKS. THE SLURRY MAY BE RECYCLED AT THIS TIME FOR REUSE IN THE HOLE OPENING OPERATION, OR IT SHALL BE HAULED BY THE CONTRACTOR TO AN APPROVED DUMP SITE AND PROPERLY DISPOSED.

F. EACH LENGTH OF PIPE SHALL BE INSPECTED AND CLEANED AS NECESSARY TO BE FREE OF DEBRIS IMMEDIATELY PRIOR TO JOINING.

G. A COMPLETE LIST OF ALL DRILLING FLUID ADDITIVES AND MIXTURES TO BE USED IN THE DIRECTIONAL OPERATION WILL BE SUBMITTED TO THE ENGINEER, ALONG WITH THEIR RESPECTIVE MATERIAL SAFETY DATA SHEETS. ALL DRILLING FLUIDS AND LOOSE CUTTINGS SHALL BE CONTAINED IN PITS OR HOLDING TANKS FOR RECYCLING OR DISPOSAL. NO FLUIDS SHALL BE ALLOWED TO ENTER ANY UNAPPROVED AREAS OR NATURAL WATERWAYS. UPON COMPLETION OF THE DIRECTIONAL DRILL PROJECT, DRILLING FLUID SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED DUMP SITE.

H. A "WEAK-LINK" OR BREAKAWAY DEVICE SHALL BE USED AT THE LEADING END OF THE PIPE TO PROTECT THE PIPE FROM EXCESSIVE PULLING LOADS. THE BREAKAWAY STRENGTH OF THIS DEVICE SHALL BE SET AT OR BELOW THE ALLOWABLE TENSILE LOAD OF THE PIPE.

I. A SUFFICIENT LENGTH OF HDPE PIPE SHALL BE PULLED PAST THE EXIT POINT AND LEFT BEFORE THE ENTRY POINT TO ALLOW FOR RELAXATION.

J. HDPE PIPE SHALL HAVE MECHANICAL JOINT ADAPTERS TO CONNECT TO THE PIPE ON EITHER SIDE OF THE DIRECTIONAL DRILLS. MECHANICAL JOINT ADAPTER USED IS TO MATCH HDPE PIPE MANUFACTURER REQUIREMENTS FOR CONNECTION TO DUCTILE IRON PIPE.

K. HDPE SHALL HAVE SUFFICIENT TIME FOR RELAXATION BEFORE CONNECTING TO THE PIPE ON EITHER SIDE OF THE DIRECTIONAL DRILL.

XII. EXISTING UTILITIES

A. THE DRAWINGS SHOW EXISTING BURIED UTILITIES THAT ARE BELIEVED TO BE NEAR THE DIRECTIONAL DRILL ALIGNMENT. THERE IS NO GUARANTEE THAT THESE UTILITIES ARE LOCATED AS SHOWN OR THAT OTHER UTILITIES ARE NOT PRESENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES OR OTHER SUBSURFACE OBSTRUCTIONS THAT MAY INTERFERE WITH THE WORK.

B. UTILITY LINES AND STRUCTURES INDICATED ON THE DRAWINGS WHICH ARE TO REMAIN IN SERVICE SHALL BE PROTECTED BY THE CONTRACTOR FROM ANY DAMAGE AS A RESULT OF THE OPERATIONS. WHERE UTILITY LINES OR STRUCTURES NOT SHOWN ON THE DRAWINGS ARE ENCOUNTERED, THE CONTRACTOR SHALL REPORT THEM TO THE OWNER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BEAR THE COST OF REPAIR OR REPLACEMENT OF ANY UTILITY LINES OR STRUCTURES WHICH ARE BROKEN OR DAMAGED BY THE CONTRACTOR'S OPERATIONS.

C. ALL UTILITIES IN CLOSE PROXIMITY TO THE DRILL PILOT BORE, BACK REAM OR CARRIER PIPE INSTALLATION MUST BE EXPOSED THROUGH A "POT-HOLE" OR OTHER OPENING, IN ACCORDANCE WITH STATE UTILITY LOCATE LAWS AND REGULATIONS, TO ENSURE, THROUGH VISUAL INSPECTION, THAT THE DRILL, REAMER OR PIPE HAS CAUSED NO DAMAGE TO THE UTILITY AND MAINTAINS ADEQUATE CLEARANCE.

XIII. TESTING

1. CONTRACTOR IS REQUIRED TO PERFORM A PRESSURE TEST PRIOR TO INSTALLATION OF PIPE. A LEAKAGE TEST SHALL ALSO BE PERFORMED POST PULLING. ALL LEAKAGE TESTS SHALL BE COMPLETED AND APPROVED PRIOR TO PLACING OF PERMANENT RESURFACING. WHEN LEAKAGE EXCEEDS THE AMOUNT ALLOWED BY THE SPECIFICATIONS, THE CONTRACTOR, AT ITS EXPENSE, SHALL LOCATE THE LEAKS AND MAKE THE NECESSARY REPAIRS OR REPLACEMENTS IN ACCORDANCE WITH THE SPECIFICATIONS TO REDUCE THE LEAKAGE TO THE SPECIFIED LIMITS. ANY INDIVIDUALLY DETECTABLE LEAKS SHALL BE REPAIRED, REGARDLESS OF THE RESULTS OF THE TESTS.

2. HDPE HYDROSTATIC LEAKAGE TESTS: THE LEAKAGE TESTING SHALL BE AS FOLLOWS:

THIS HYDROSTATIC LEAK TEST PROCEDURE CONSISTS OF FILLING, AN INITIAL EXPANSION PHASE, A TEST PHASE, AND DEPRESSURIZING. THERE ARE TWO ALTERNATIVES FOR THE TEST PHASE.

ENSURE THAT THERE IS NO AIR TRAPPED IN THE TEST SECTION. FAILURE WITH ENTRAPPED AIR CAN RESULT IN EXPLOSIVE RELEASE AND RESULT IN DEATH OR SERIOUS BODILY INJURY. USE EQUIPMENT VENTS AT HIGH POINTS TO REMOVE AIR.

A. INITIAL EXPANSION PHASE

GRADUALLY PRESSURIZE THE TEST SECTION TO TEST PRESSURE, AND MAINTAIN TEST PRESSURE FOR THREE (3) HOURS. DURING THE INITIAL EXPANSION PHASE, POLYETHYLENE PIPE WILL EXPAND SLIGHTLY. ADDITIONAL TEST LIQUID WILL BE REQUIRED TO MAINTAIN PRESSURE. IT IS NOT NECESSARY TO MONITOR THE AMOUNT OF WATER ADDED DURING THE INITIAL EXPANSION PHASE.

TEST PHASE

IMMEDIATELY FOLLOWING THE INITIAL EXPANSION PHASE, REDUCE TEST PRESSURE BY 10 PSI, AND STOP ADDING TEST LIQUID. IF TEST PRESSURE REMAINS STEADY (WITHIN 5% OF THE TARGET VALUE) FOR ONE (1) HOUR, NO LEAKAGE IS INDICATED.

ENGINEER: Werner J. Reinefeld
REG. No: 63042
DATE: 6/18/2020
TEL: 305-514-3166
FAX: N/A

DRAWN BY: JC | DATE: 02/17/2021
DESIGNED BY: JC | SCALE: N/A
CHECKED BY: WR
FIELD BOOK:

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
HDD AND HDPE REQUIREMENTS
BAYVIEW DRIVE

PROPOSAL SUBMITTAL

SHEET NO. G-4 | OF
TOTAL:
CAD FILE: 12567-004-NOTES
DRAWING FILE NO. 4-XXX-XX

M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\SHEET FILES (NOTES & DETAILS)\12567-004-NOTES.DWG

KEY PLAN

1"=300'-0"

PROPOSAL SUBMITTAL

ENGINEER:
Werner J. Reinefeld
REG. No: 63042
DATE:6/18/2020

TEL: 305-514-3166
FAX: N/A

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JC	02/17/2021
DESIGNED BY:	SCALE:
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WR	
FIELD BOOK:	

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

REVISIONS

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PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
KEY PLAN
BAYVIEW DRIVE

SHEET NO.	OF
C-0	

TOTAL:

CAD FILE:
12567-004-NOTES

DRAWING FILE NO.
4-XXX-XX

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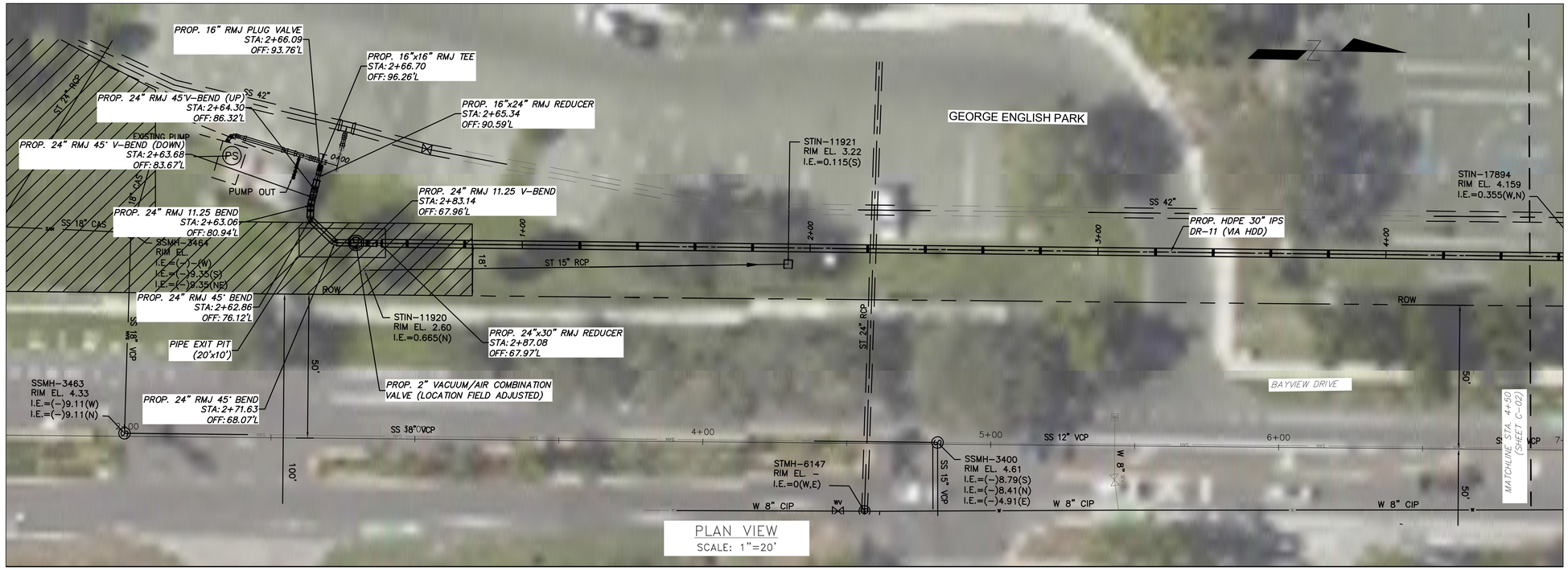
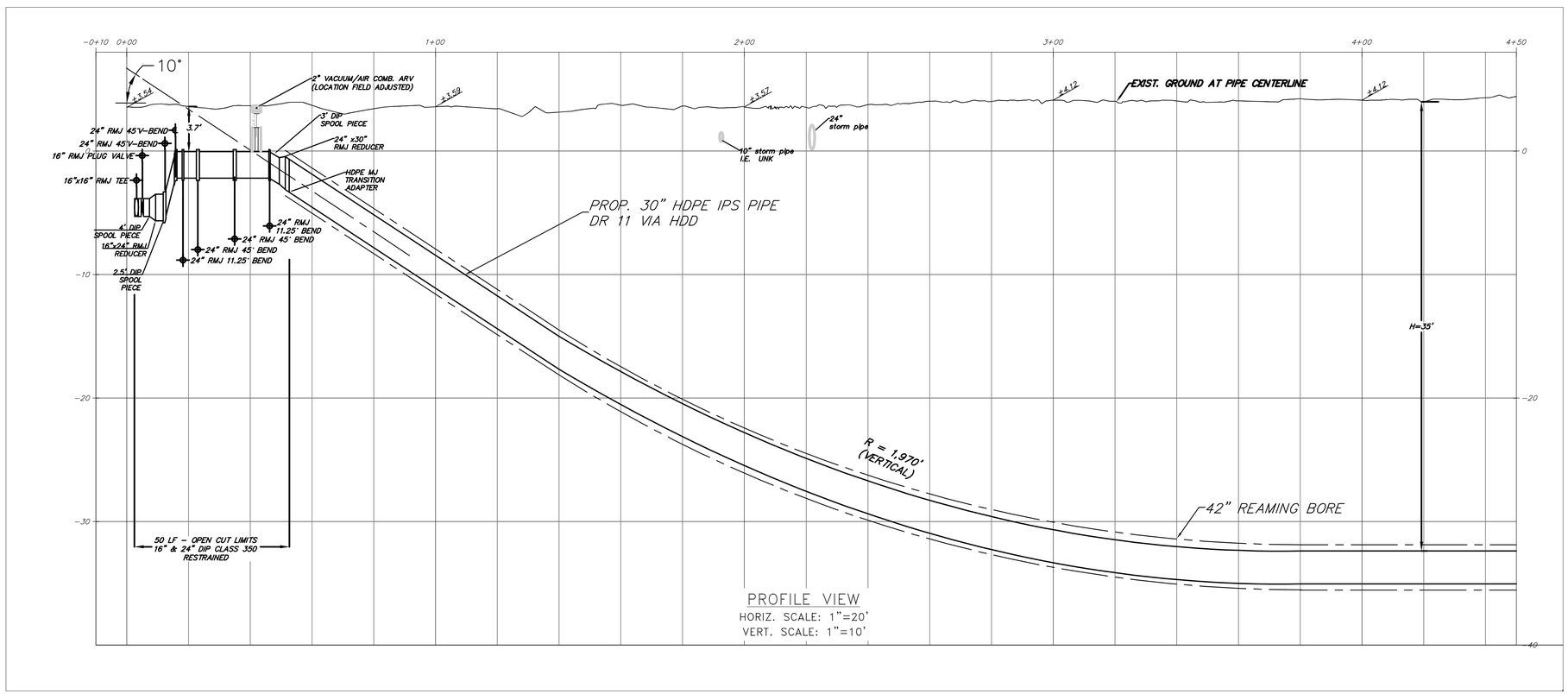


PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=10'

NOTES:

1. PROFILE STATIONING HAS BEEN PREPARED ALONG THE CENTERLINE OF THE PROPOSED FORCE MAIN.
2. GROUND ELEVATION TAKEN FROM LIDAR MAPS FROM USGS. LAND SURVEY IS NEEDED FOR DETAILED DESIGN.
3. ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C-105.
4. ALL DIP JOINTS SHALL BE RESTRAINED.

ENGINEER:
#Name
REG. No: #NO.
DATE: #DATE
TEL: #Tel
FAX: #Fax

DRAWN BY: JC | DATE: 10/6/2020
DESIGNED BY: JC | SCALE: AS SHOWN
CHECKED BY: WR | FIELD BOOK:

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

REVISIONS

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PROPOSAL PLANS

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-1 | OF
TOTAL:
CAD FILE:
DRAWING FILE NO. 4-XXX-XX

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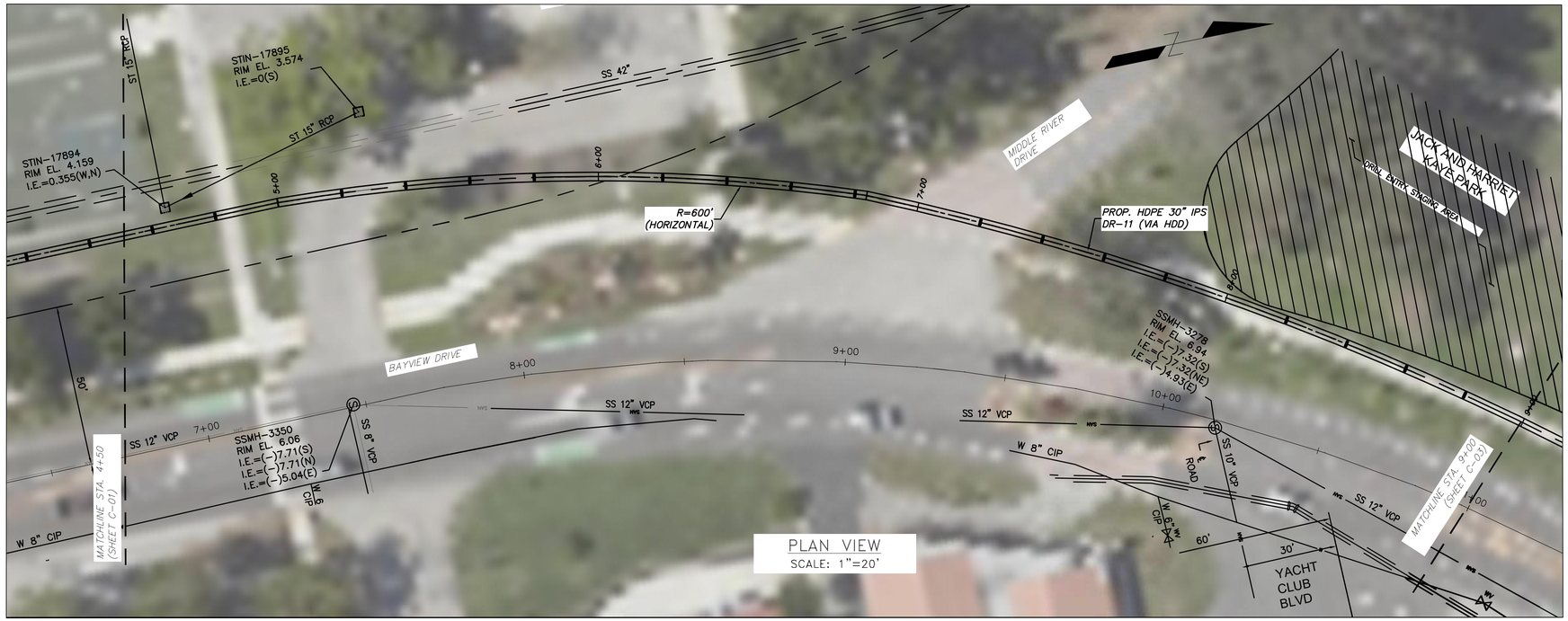

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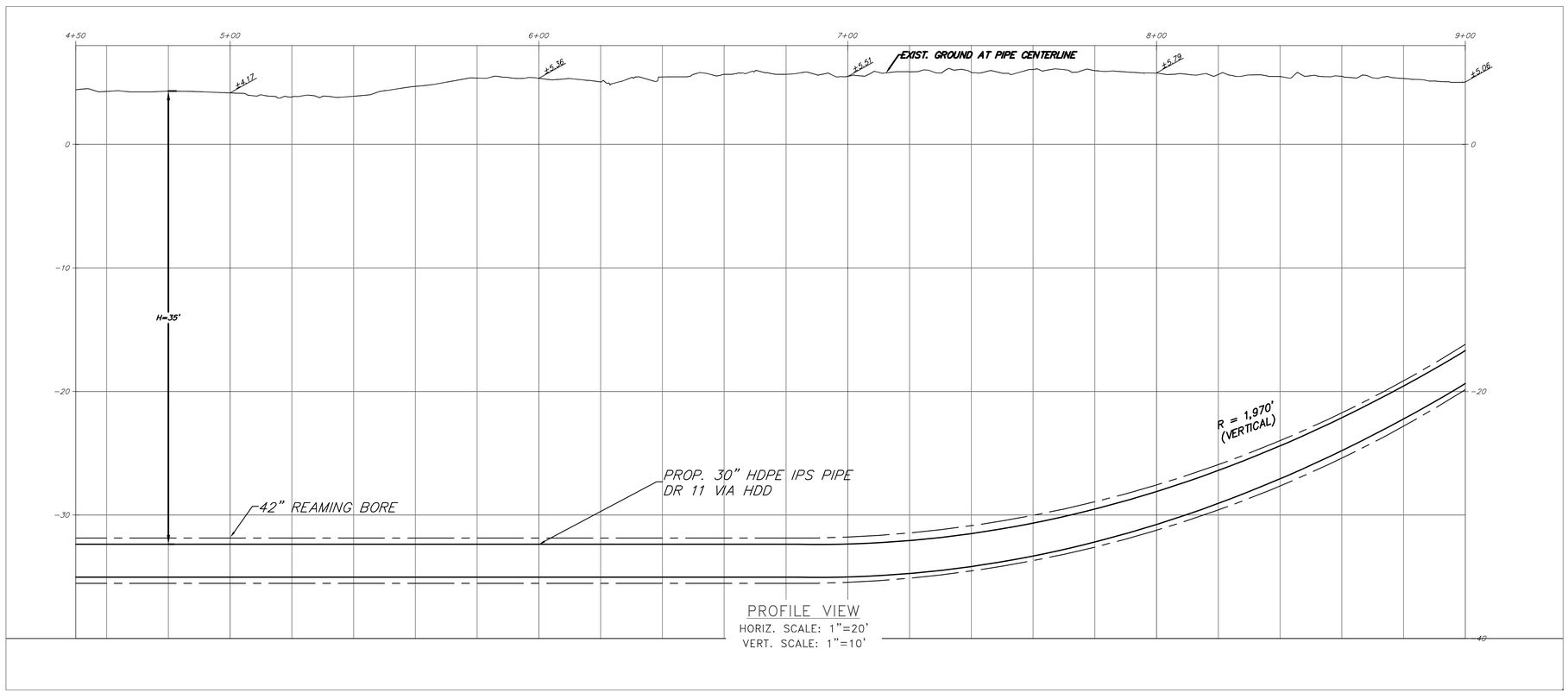

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ENGINEER: #Name
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TEL: #Tel
FAX: #Fax

DRAWN BY: JC	DATE: 10/6/2020
DESIGNED BY: JC	SCALE: AS SHOWN
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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

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-2 OF
TOTAL:
CAD FILE:
DRAWING FILE NO. 4-XXX-XX

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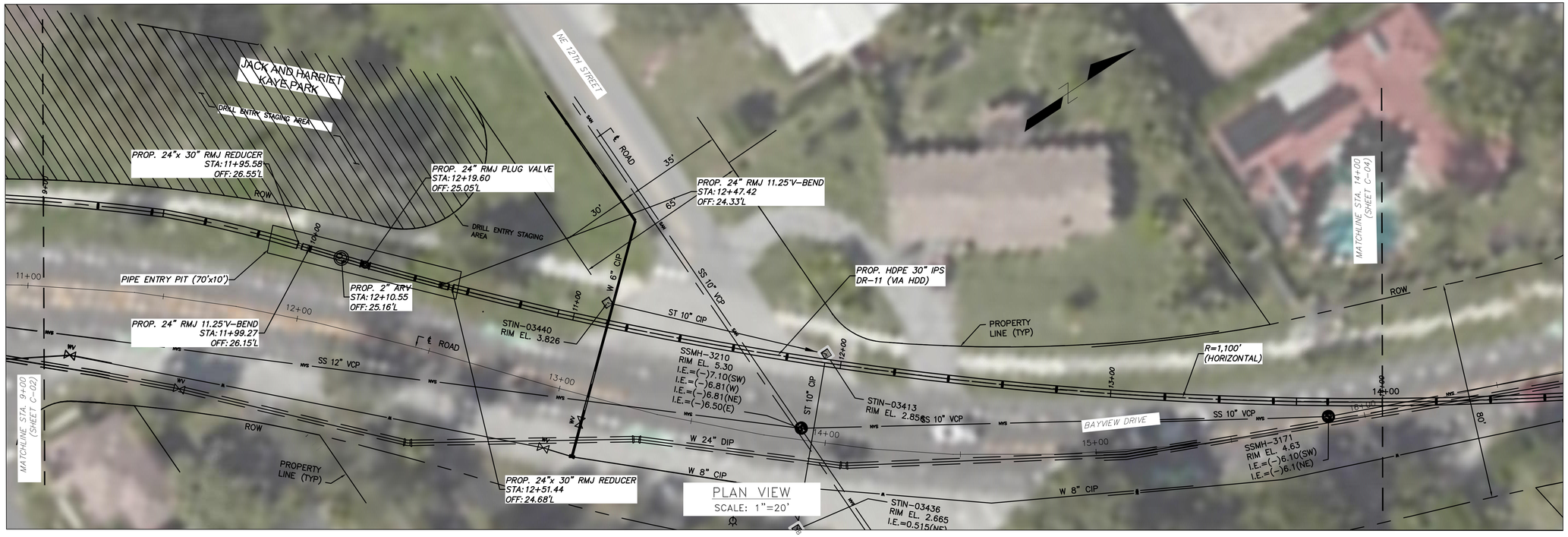

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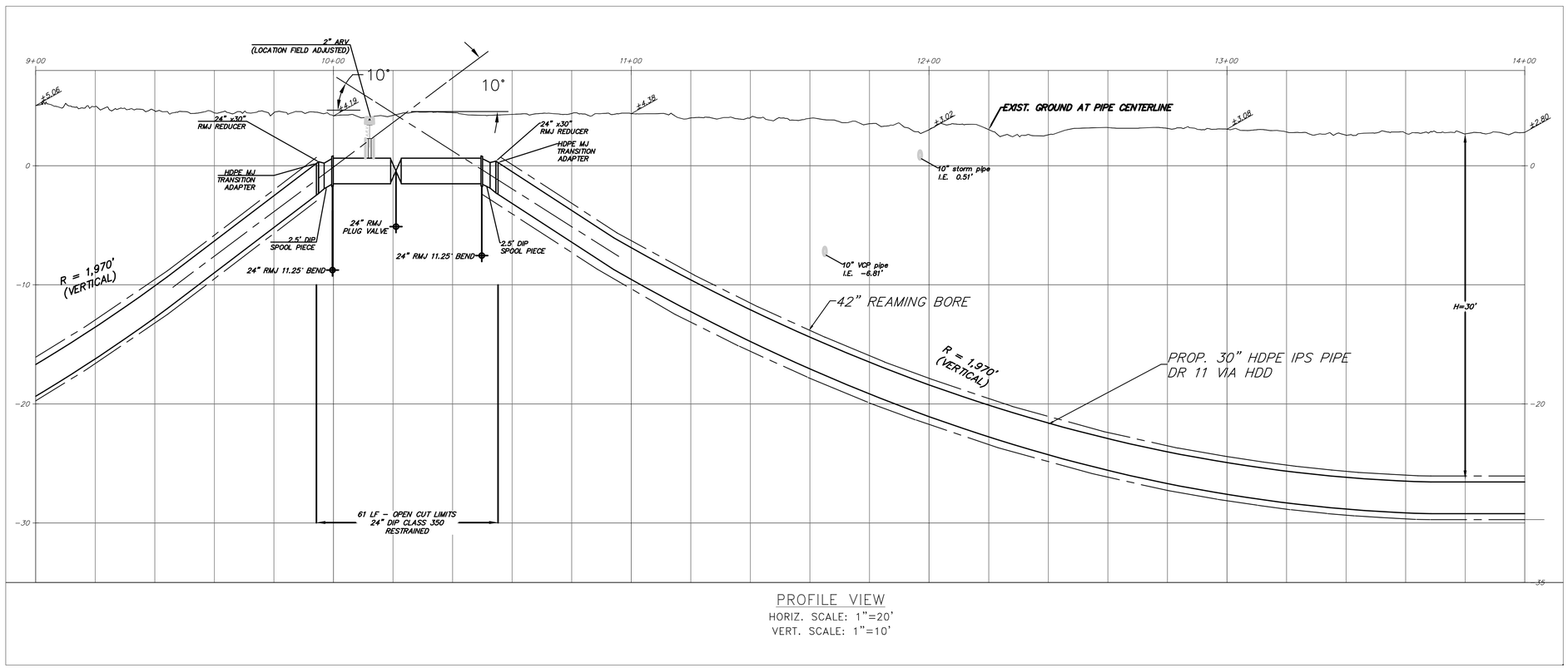
SCALE: 1"=20'



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REG. No.:
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TEL: #Tel
FAX: #Fax

DRAWN BY: JC | DATE: 10/6/2020
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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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PROPOSAL PLANS

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-3 | OF
TOTAL:
CAD FILE:
DRAWING FILE NO. 4-XXX-XX

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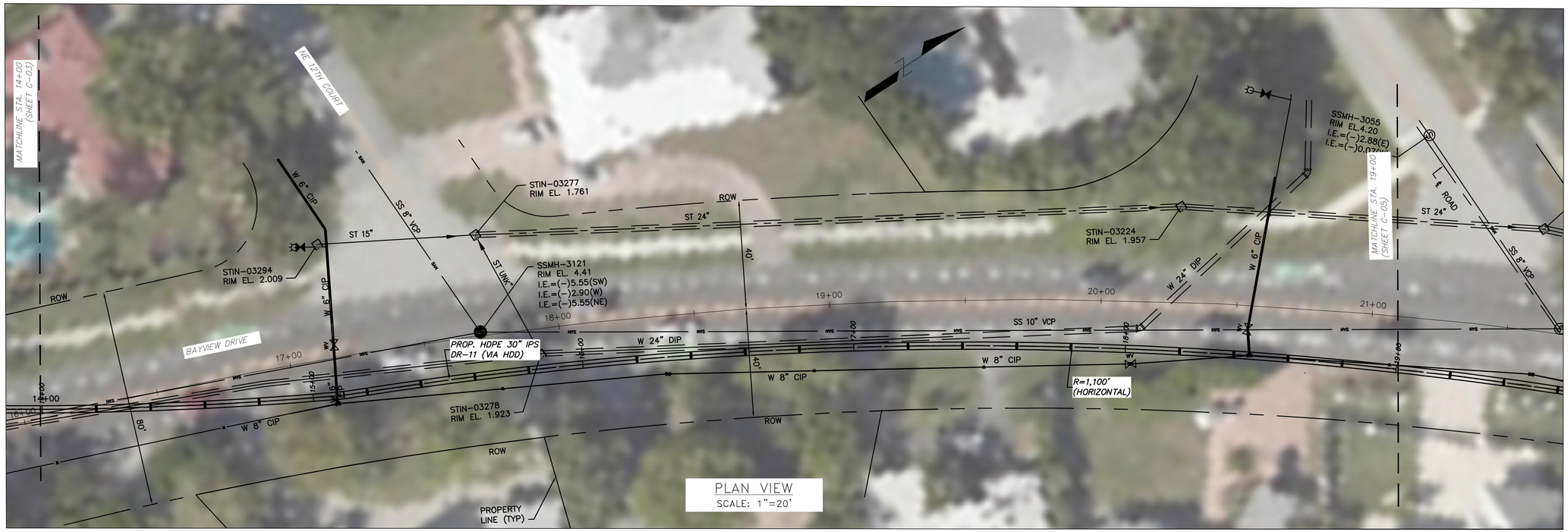

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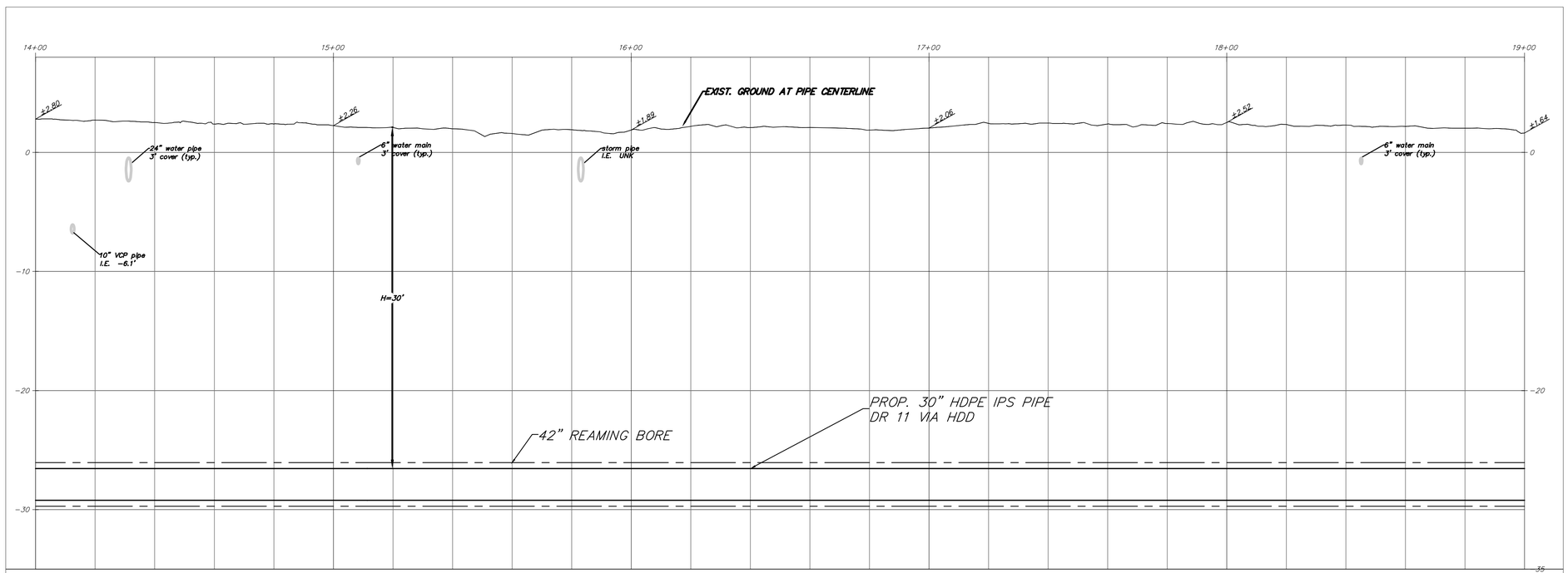
SCALE: 1"=20'



PROFILE VIEW
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DAVID MANCINI & SONS, INC.

wsp

PROPOSAL PLANS

ENGINEER:
#Name
REG. No: #NO.
DATE: #DATE
TEL: #Tel
FAX: #Fax

DRAWN BY: JC
DESIGNED BY: JC
CHECKED BY: WR
DATE: 10/6/2020
SCALE: AS SHOWN
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

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-4 OF

TOTAL:

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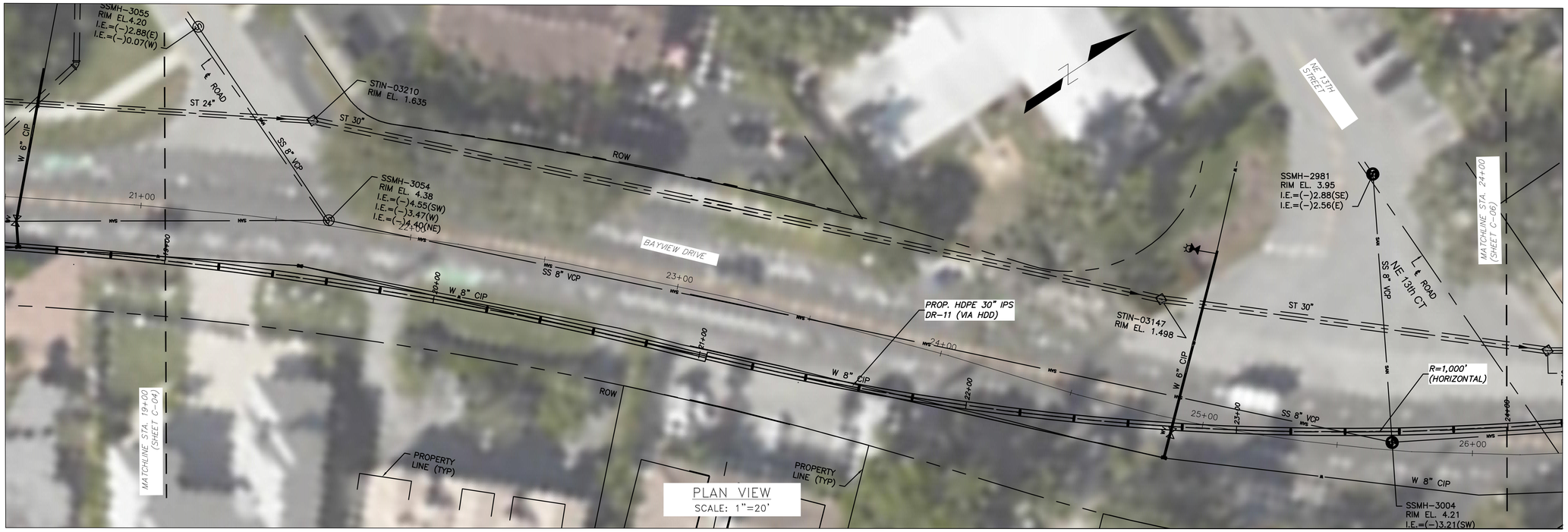

PLAN VIEW
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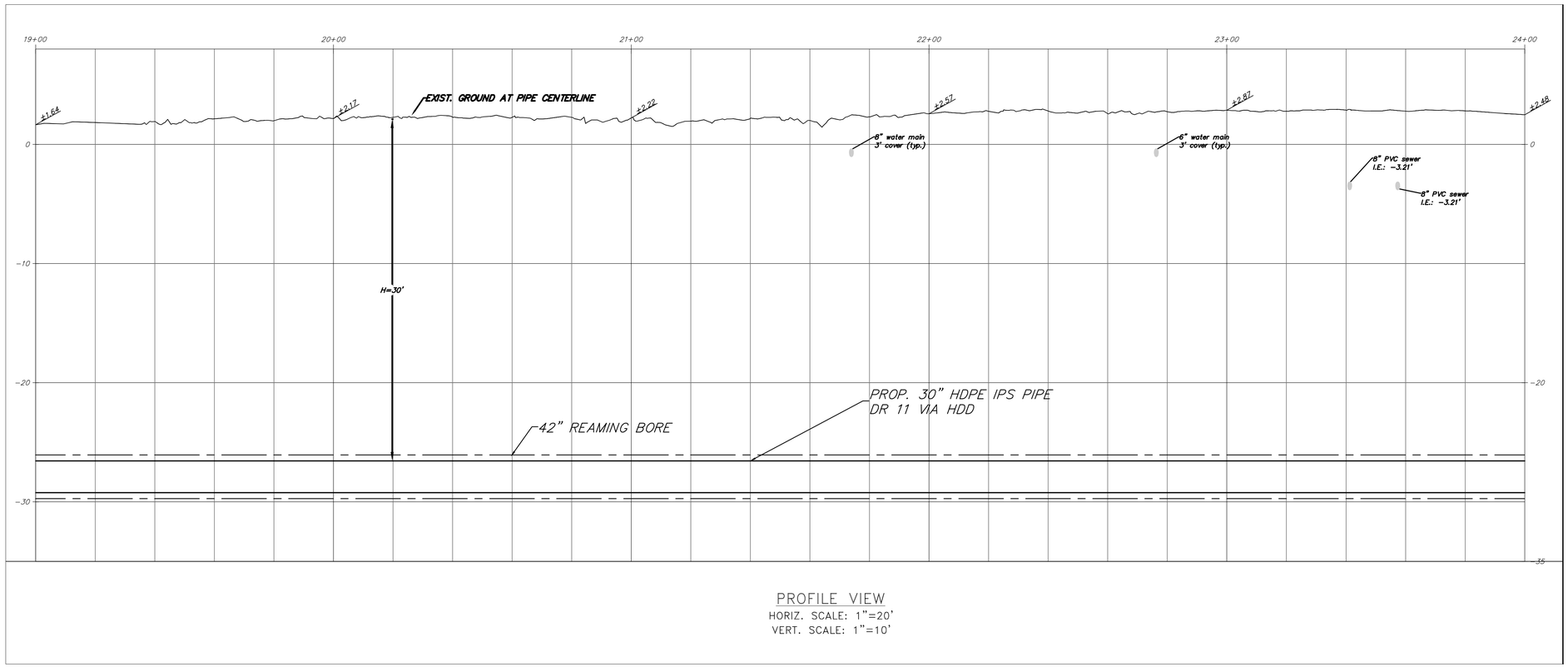

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PROPOSAL PLANS

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TEL: #Tel
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DRAWN BY: JC | DATE: 10/6/2020
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ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-5 OF

TOTAL:

CAD FILE:

DRAWING FILE NO. 4-XXX-XX

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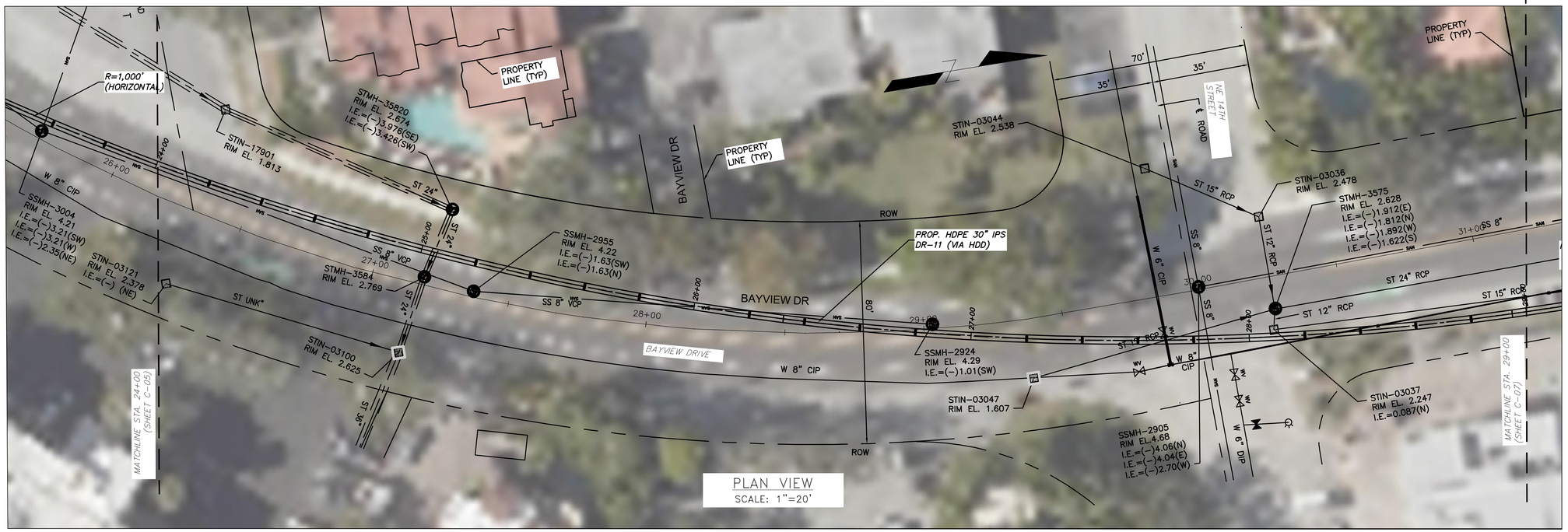
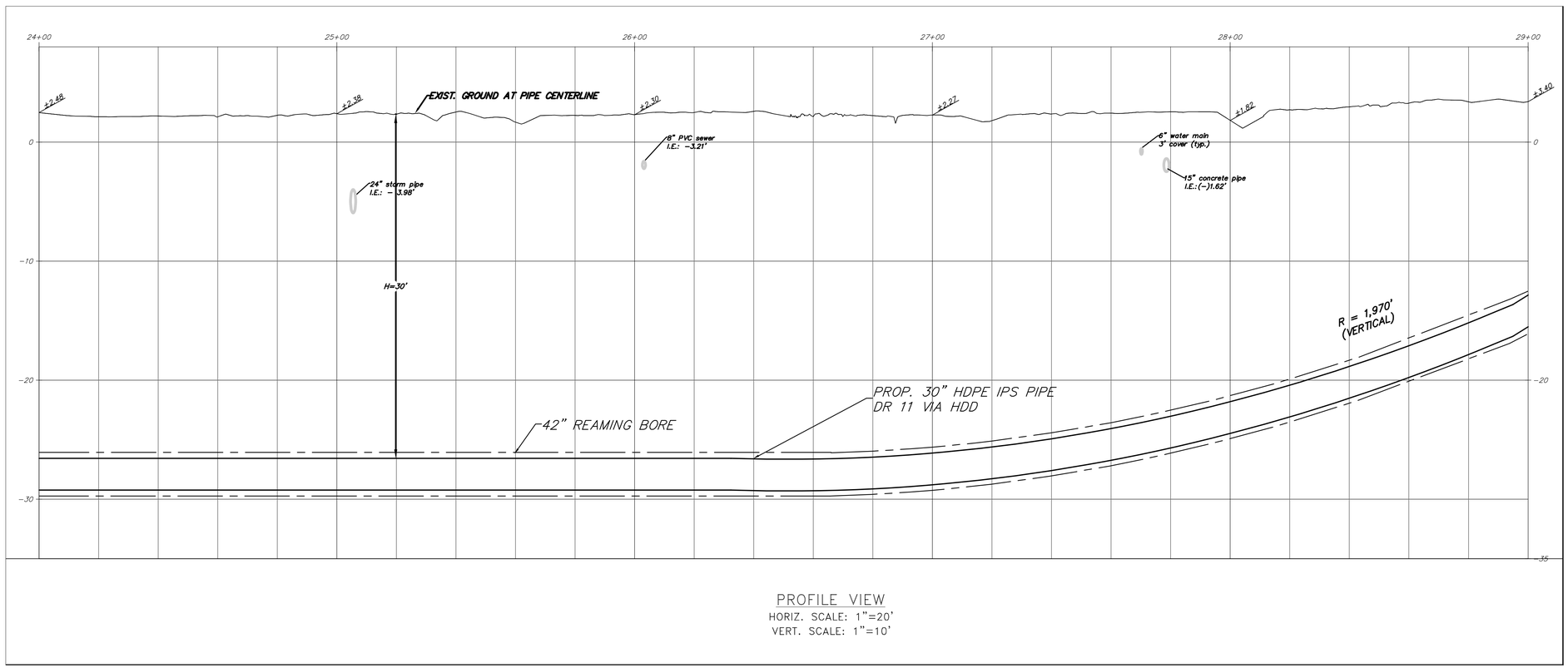


PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
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ENGINEER:
#Name
REG. No: #NO.
DATE: #DATE

TEL: #Tel
FAX: #Fax

DRAWN BY: JC
DATE: 10/6/2020
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SCALE: AS SHOWN
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FIELD BOOK:

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

REVISIONS

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PROPOSAL PLANS

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-6 OF

TOTAL:

CAD FILE:

DRAWING FILE NO.
4-XXX-XX

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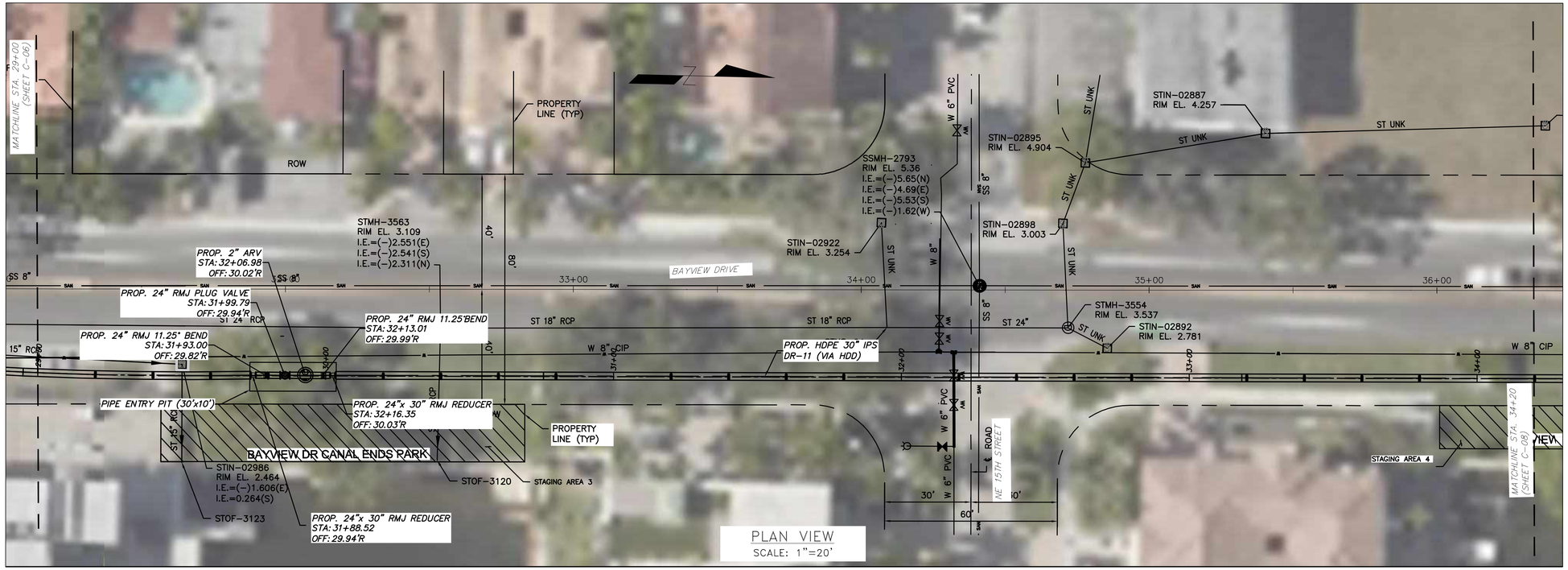
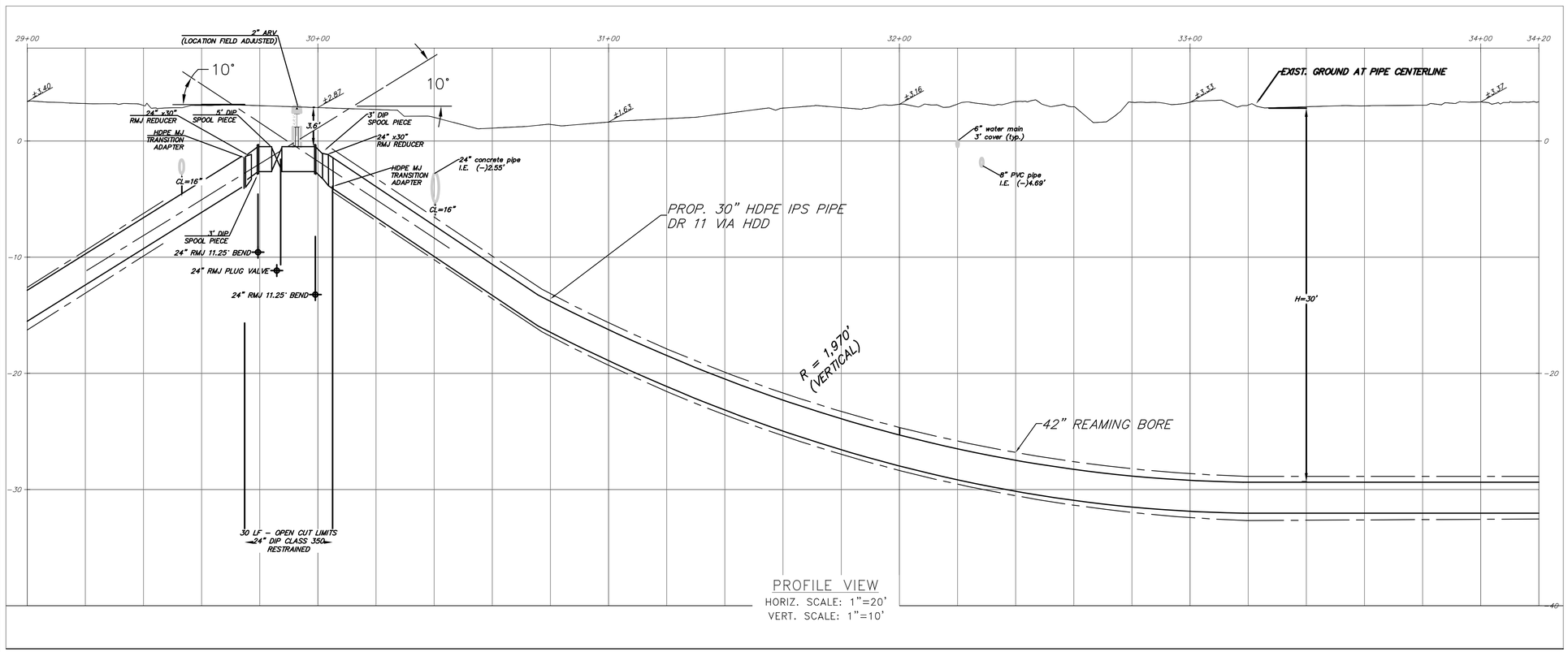


PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
HORIZ. SCALE: 1"=20'
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ENGINEER:
#Name
REG. No: #NO.
DATE: #DATE
TEL: #Tel
FAX: #Fax

DRAWN BY: JC | DATE: 10/6/2020
DESIGNED BY: JC | SCALE: AS SHOWN
CHECKED BY: WR | 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

PROPOSAL PLANS

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-7 OF

TOTAL:

CAD FILE:

DRAWING FILE NO. 4-XXX-XX

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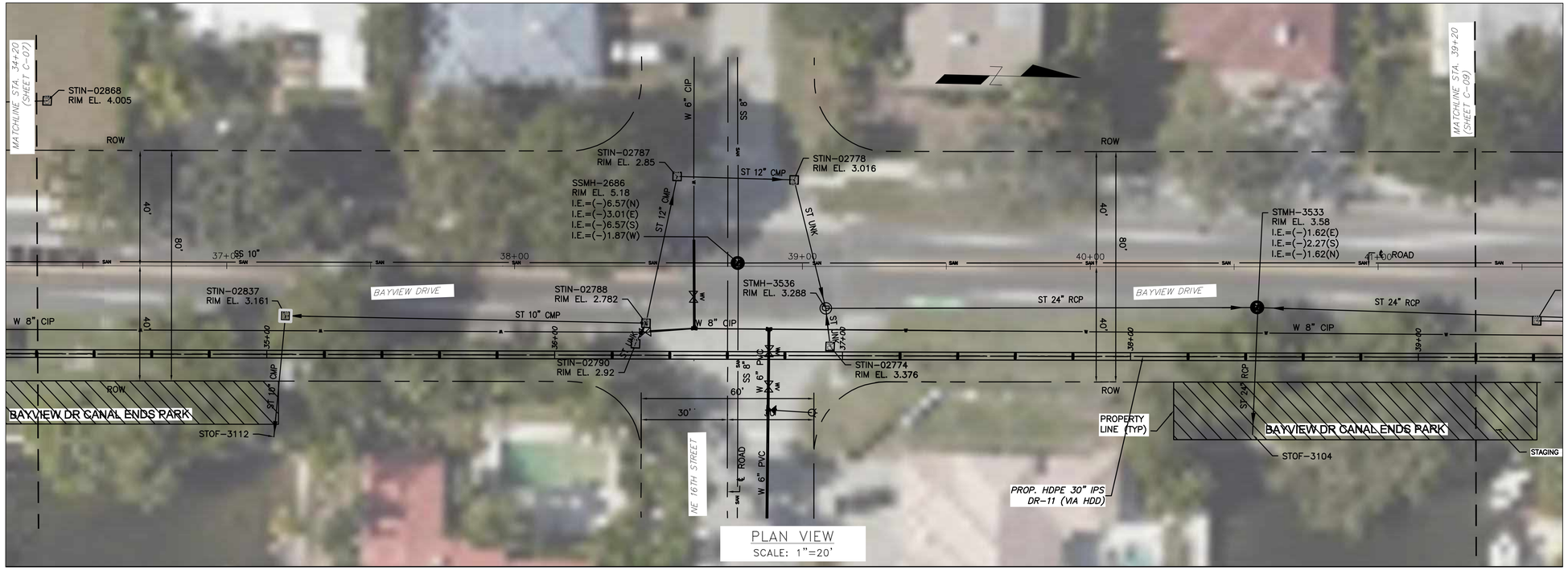
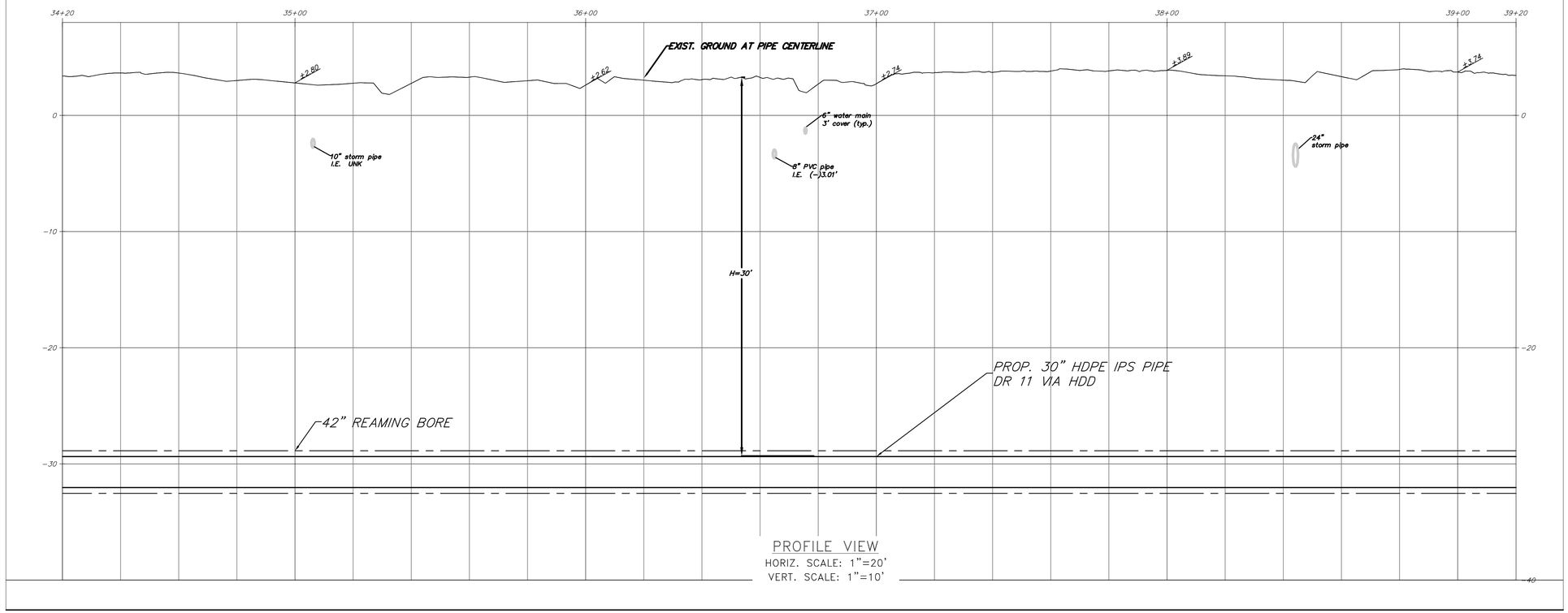


PLAN VIEW
SCALE: 1"=20'



PROFILE VIEW
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PROPOSAL PLANS

ENGINEER: #Name
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TEL: #Tel
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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-8 | OF
TOTAL:
CAD FILE:
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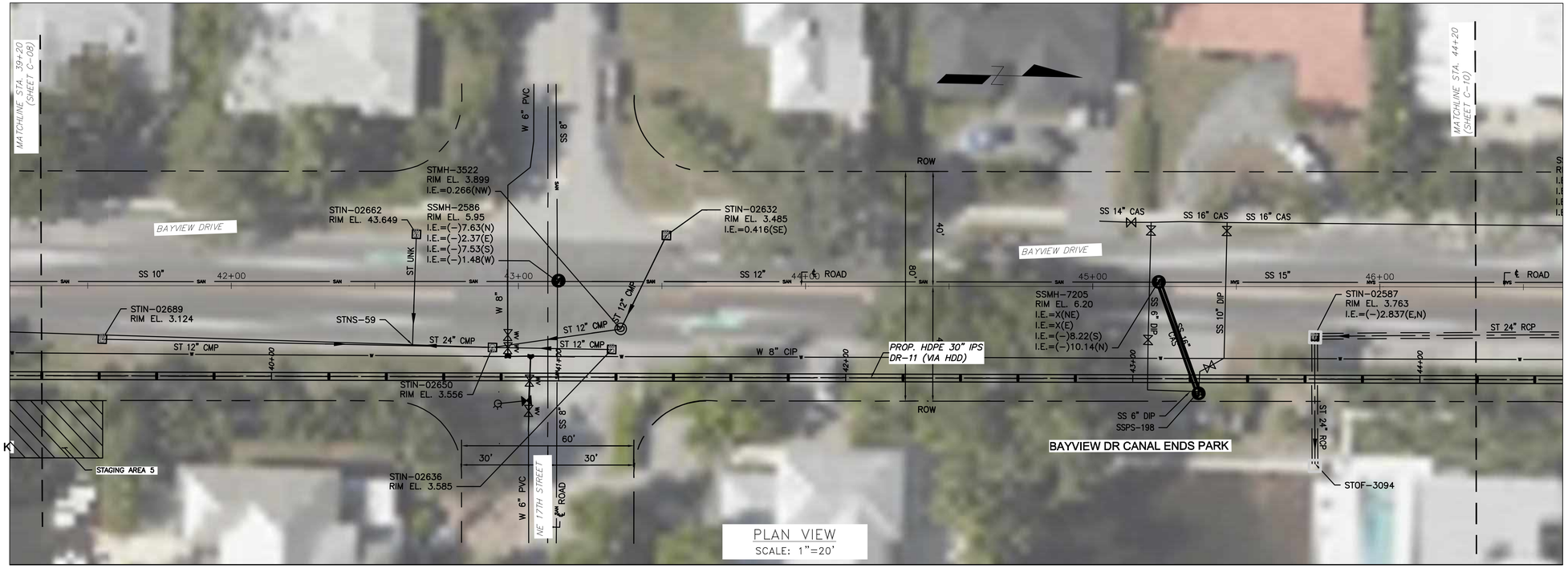
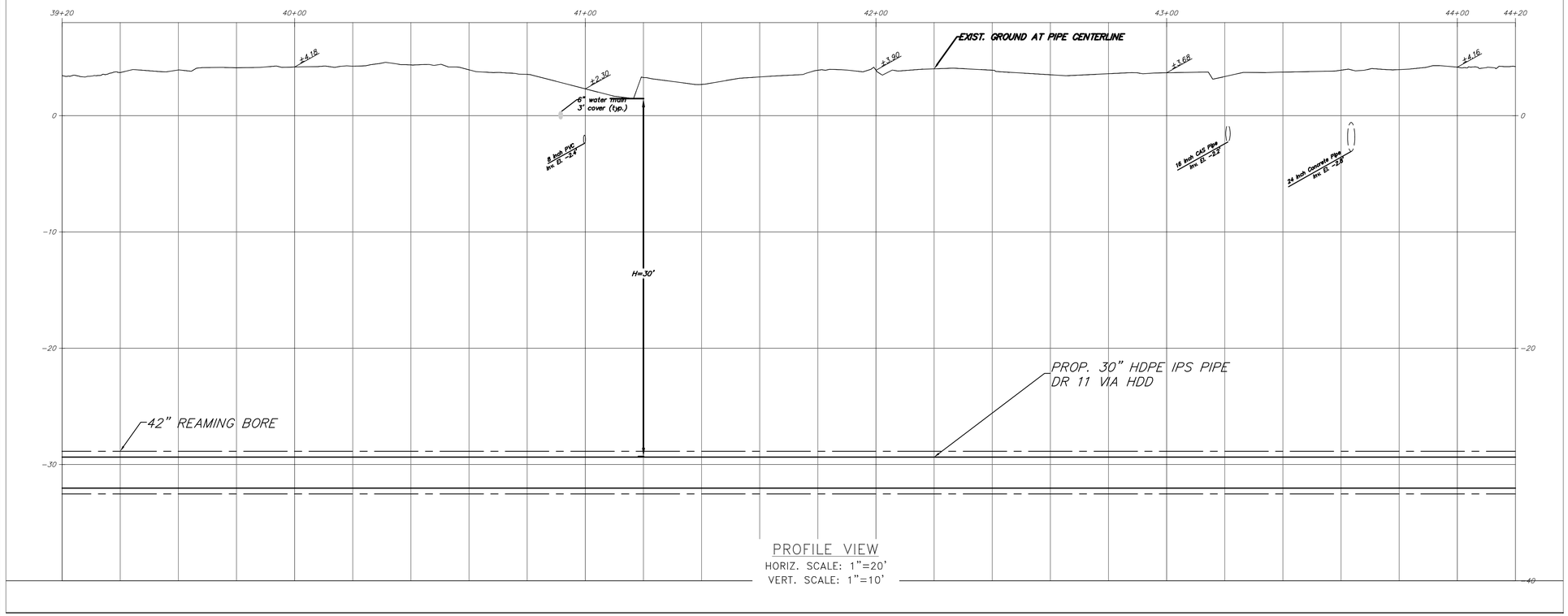


PLAN VIEW
SCALE: 1"=20'



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PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

SHEET NO. C-9 | OF
TOTAL:
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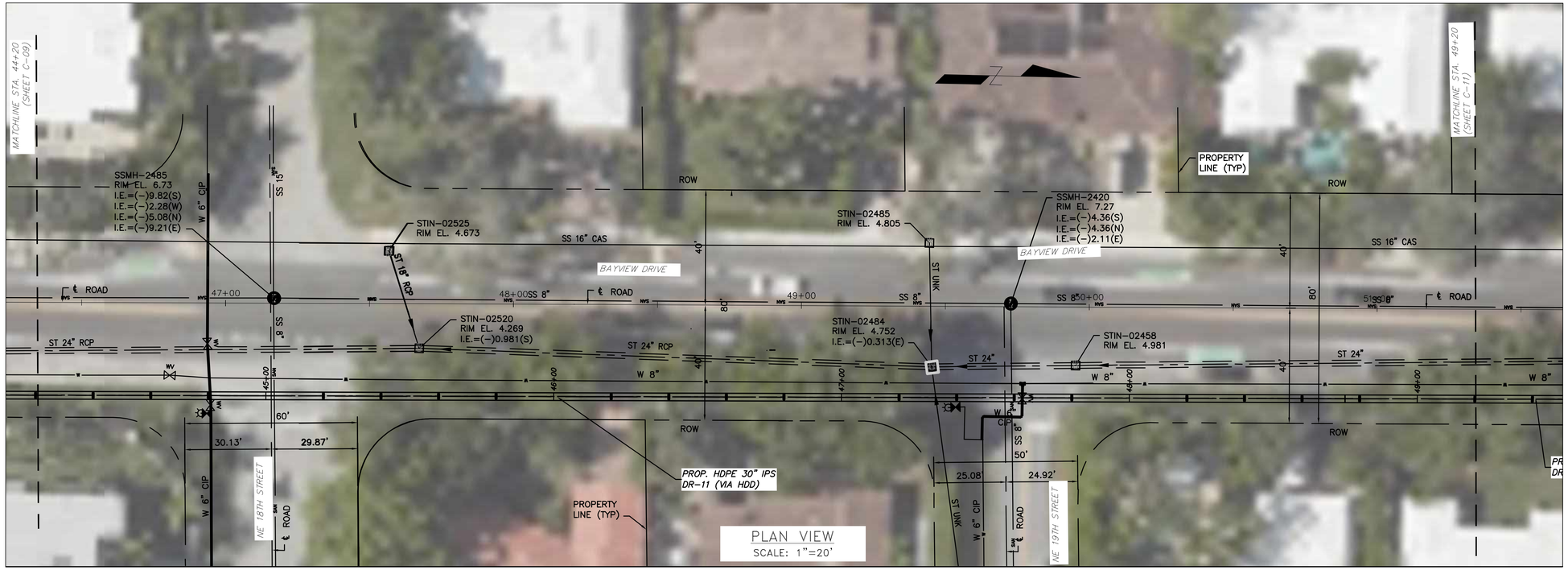
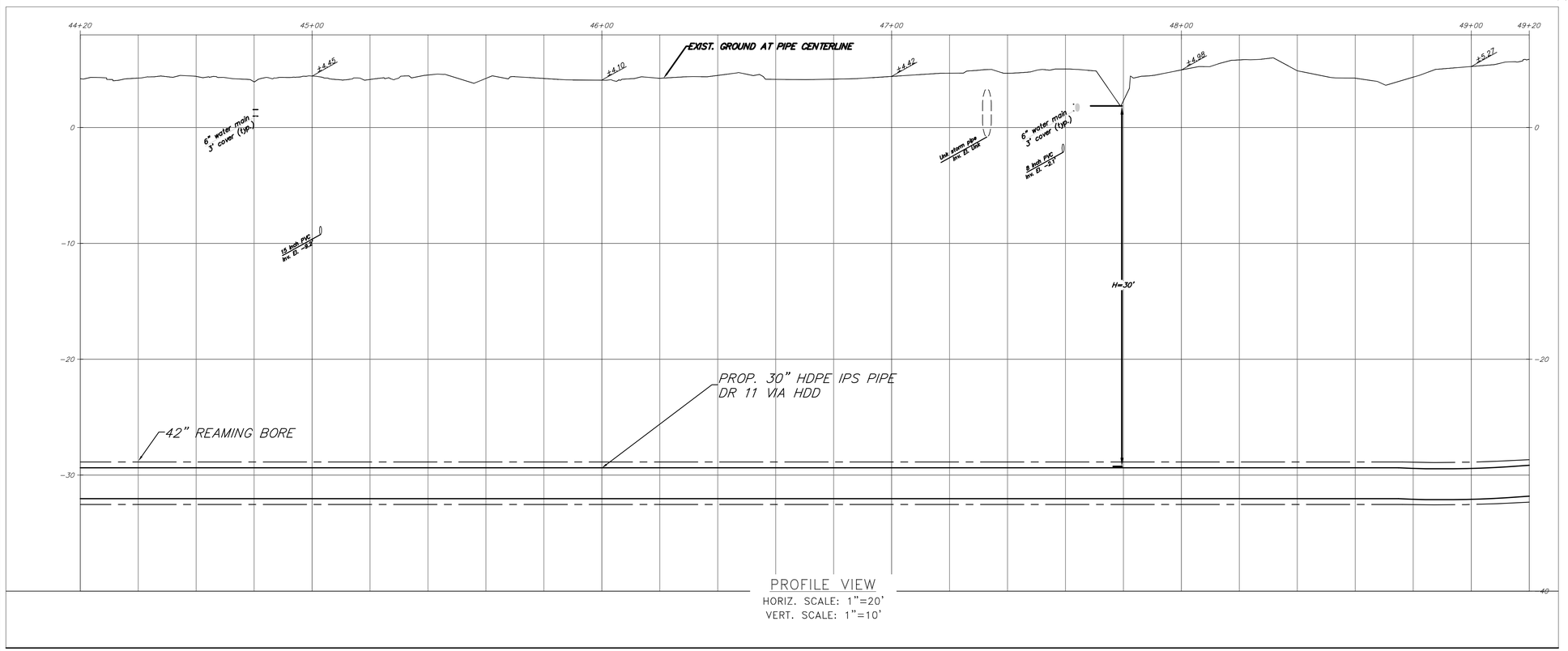


PLAN VIEW
SCALE: 1"=20'



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1. PROFILE STATIONING HAS BEEN PREPARED ALONG THE CENTERLINE OF THE PROPOSED FORCE MAIN.
2. GROUND ELEVATION TAKEN FROM LIDAR MAPS FROM USGS. LAND SURVEY IS NEEDED FOR DETAILED DESIGN.
3. ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C-105.
4. ALL DIP JOINTS SHALL BE RESTRAINED.

PROPOSAL PLANS

ENGINEER:
#Name
REG. No: #NO.
DATE: #DATE
TEL: #Tel
FAX: #Fax

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

DRAWN BY:	DATE:
JC	10/6/2020
DESIGNED BY:	SCALE:
JC	AS SHOWN
CHECKED BY:	
WR	
FIELD BOOK:	

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

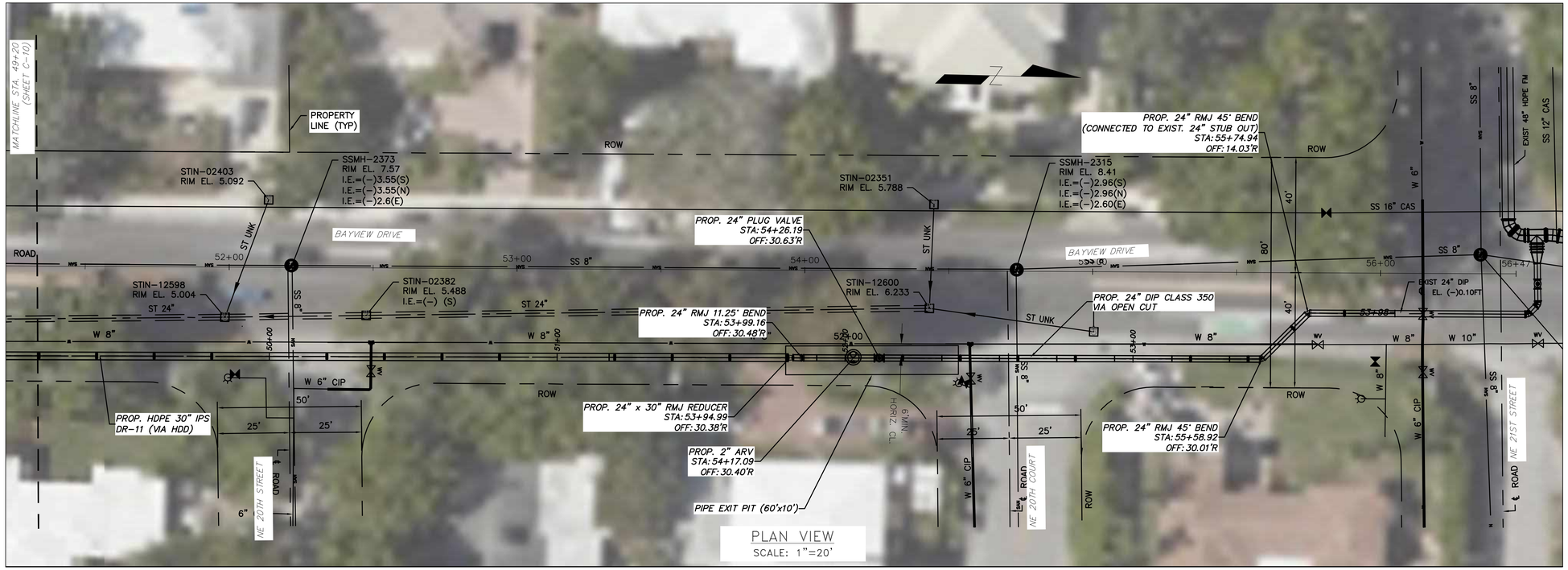
SHEET NO.	OF
C-10	

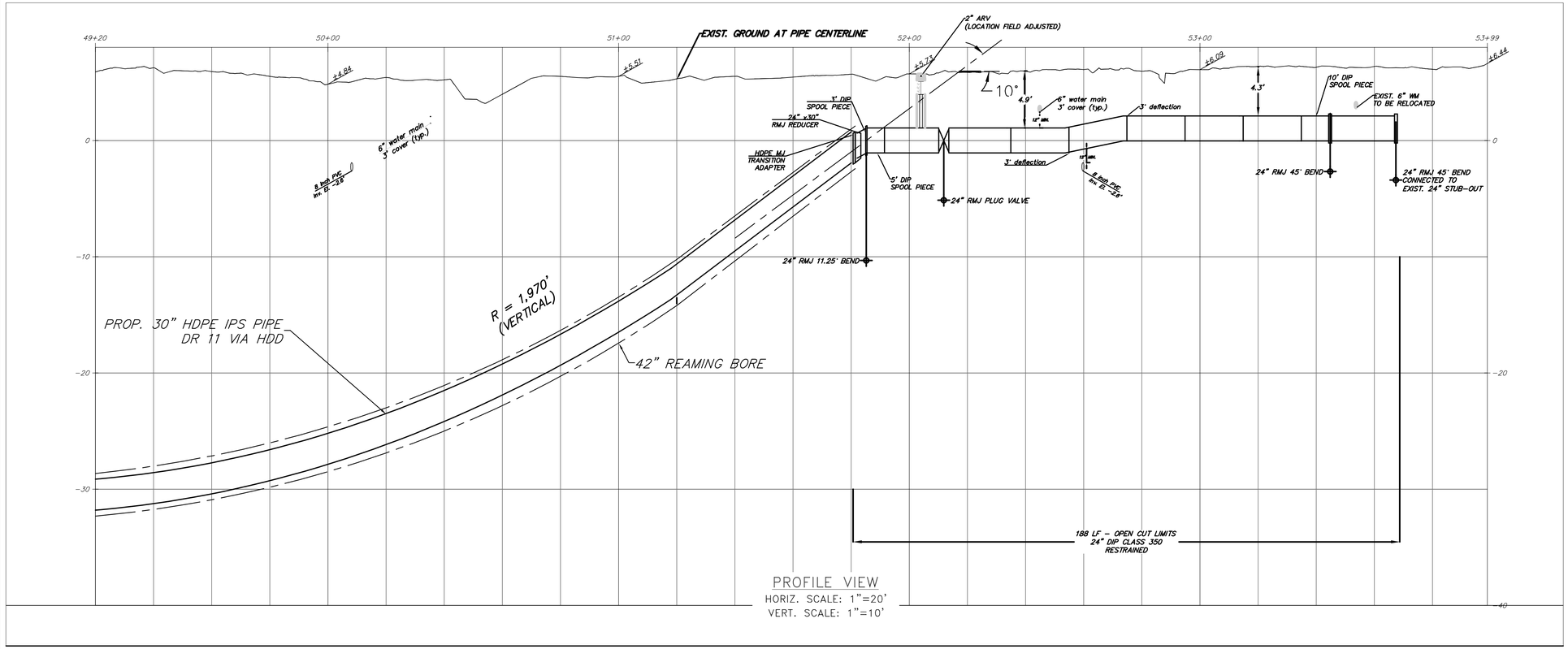
TOTAL:

CAD FILE:

DRAWING FILE NO.
4-XXX-XX

M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\P-C-NSA0101_RECOVER.DWG





NOTES:

1. PROFILE STATIONING HAS BEEN PREPARED ALONG THE CENTERLINE OF THE PROPOSED FORCE MAIN.
2. GROUND ELEVATION TAKEN FROM LIDAR MAPS FROM USGS. LAND SURVEY IS NEEDED FOR DETAILED DESIGN.
3. ALL DUCTILE IRON PIPE SHALL BE ENCASED IN POLYETHYLENE PER AWWA C-105.
4. ALL DIP JOINTS SHALL BE RESTRAINED.

ENGINEER:
#Name
REG. No: #NO.
DATE: #DATE

TEL: #Tel
FAX: #Fax

DRAWN BY: JC | DATE: 10/6/2020
DESIGNED BY: JC | SCALE: AS SHOWN
CHECKED BY: WR | 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

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
PLAN & PROFILE
BAYVIEW DRIVE

PROPOSAL PLANS

SHEET NO. C-11 OF

TOTAL:

CAD FILE:

DRAWING FILE NO.
4-XXX-XX

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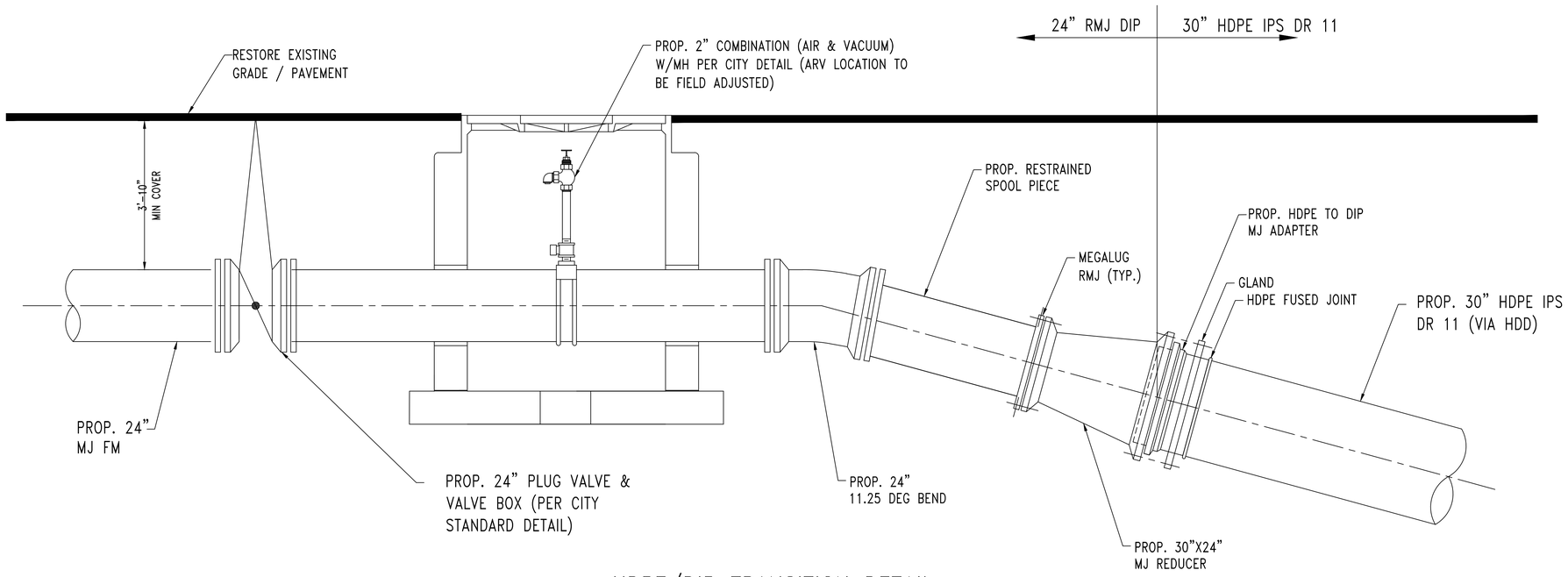
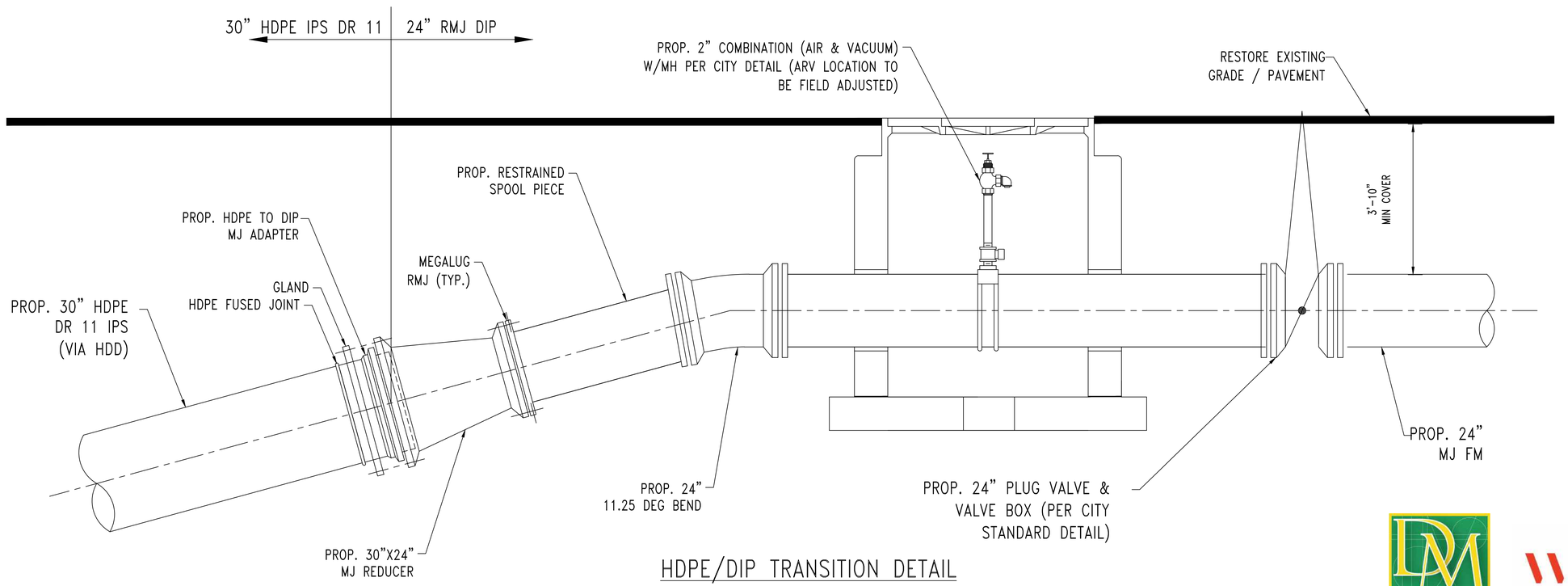


HDPE/DIP TRANSITION DETAIL NEAR PIPE ENTRY PIT



HDPE/DIP TRANSITION DETAIL NEAR PIPE EXIT PIT

ENGINEER:
Werner J. Reinefeld
REG. No: 63042
DATE: 6/18/2020
TEL: 305-514-3186
FAX: N/A

DRAWN BY: JC | DATE: 10/06/2020
DESIGNED BY: JC | SCALE: NTS
CHECKED BY: WR | FIELD BOOK:

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

REVISIONS

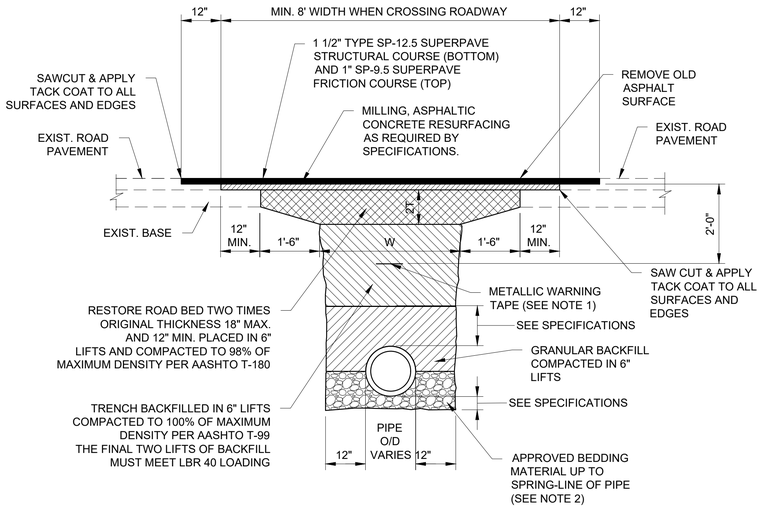
NO.	DATE	BY	CHK'D	DESCRIPTION

PROPOSAL SUBMITTAL

PROJECT # 12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
HDPE TO DIP TRANSITION
BAYVIEW DRIVE

SHEET NO. C-12 | OF
TOTAL:
CAD FILE: 12567-015-DETL
DRAWING FILE NO. 4-XXX-XX

M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\SHEET FILES (NOTES & DETAILS)\12567-015-DETL.DWG



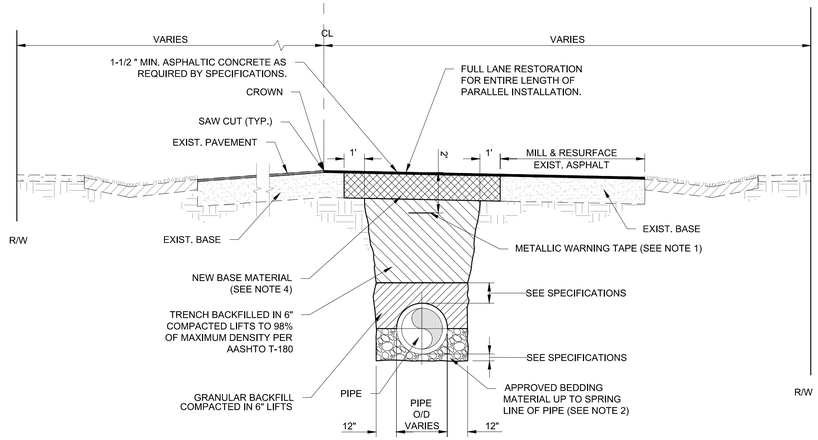
NOTES:

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.
3. 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.

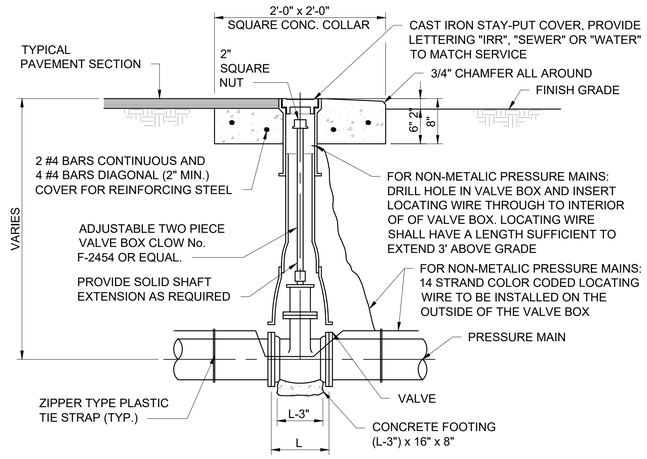
ROAD 001 – TYPICAL TRENCH AND PAVEMENT RESTORATION FOR TRANSVERSE PIPE CROSSING



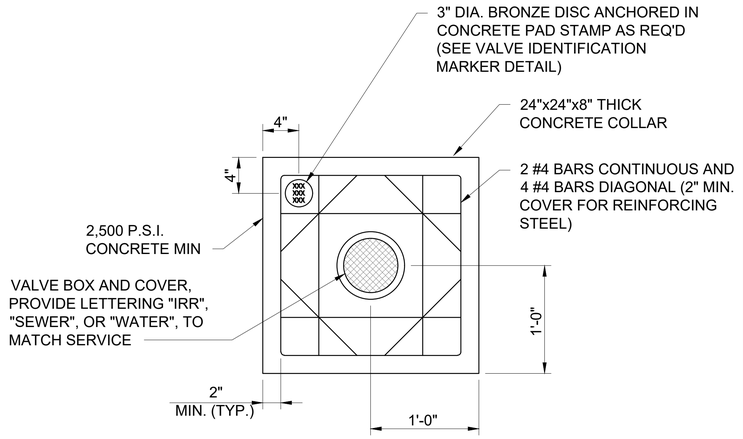
NOTES:

1. 2" WIDE METALLIC WARNING TAPES SHALL BE INSTALLED 24" BELOW FINISH GRADE.
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.

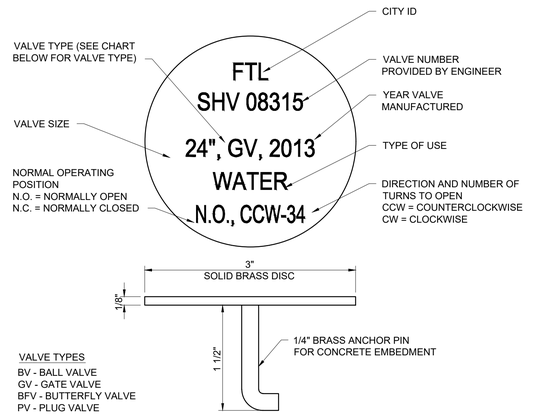
ROAD 002 – TYPICAL ROAD SECTION, TYPICAL TRENCH AND TRENCH RESTORATION FOR PARALLEL PIPE TRENCH



WATR 015 – VALVE BOX



WATR 016 – VALVE BOX COLLAR



VALVE TYPES
BV - BALL VALVE
GV - GATE VALVE
BFV - BUTTERFLY VALVE
PV - PLUG VALVE

NOTES:

1. VALVE INFORMATION TO BE ENGRAVED INTO TOP SURFACE WITH 1/4" CAPITAL LETTERS.
2. ENTIRE MARKER TO BE COATED WITH CLEAR EPOXY TO PREVENT TARNISHING.
3. MARKERS SHALL BE MANUFACTURED BY WAGER COMPANY OF FLORIDA.

WATR 017 – VALVE ID MARKER

PROPOSAL SUBMITTAL

ENGINEER: TEL:
REG. No: FAX: N/A
DATE:

DRAWN BY: JC | DATE: 10/06/2020
DESIGNED BY: JC | SCALE: NTS
CHECKED BY: WR | FIELD BOOK:

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

DAVID MANCINI & SONS, INC.

wsp

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
GENERAL DETAILS
BAYVIEW DRIVE

SHEET NO. C-13 OF

TOTAL:

CAD FILE:

DRAWING FILE NO. 4-XXX-XX

M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\SHEET FILES (NOTES & DETAILS)\C-13.DWG

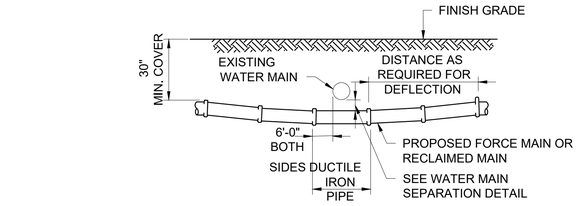
WATER MAIN SEPARATION IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (NOTE 1)	JOINT SPACING AT CROSSINGS (FULL JOINT CENTERED)
STORM SEWER, STORM WATER FORCE MAIN, RECLAIMED WATER (NOTE 2)	WATER MAIN 3 FT. MINIMUM OTHER PIPE	WATER MAIN 12 INCHES IS THE MINIMUM, EXCEPT FOR STORM SEWER, THEN 6 INCHES IS THE MINIMUM AND12 INCHES IS PREFERRED OTHER PIPE	NOTE 4 WATER MAIN JOINT (TYP.)
VACUUM SANITARY SEWER	WATER MAIN 10 FT PREFERRED 3 FT. MINIMUM OTHER PIPE	WATER MAIN 12 INCHES IS PREFERRED 6 INCHES MINIMUM OTHER PIPE	NOTE 4 WATER MAIN
GRAVITY SANITARY SEWER, (NOTE 3) SANITARY SEWER FORCE MAIN, RECLAIMED WATER	WATER MAIN 10 FT PREFERRED 6 FT. MINIMUM OTHER PIPE	WATER MAIN 12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED OTHER PIPE	NOTE 4 WATER MAIN OTHER PIPE (TYP.)
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 FT. MINIMUM	—	—

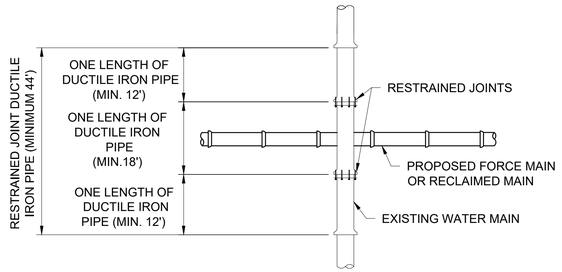
NOTES:

1. WATER MAIN SHOULD CROSS ABOVE OTHER PIPE. WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
2. RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
3. 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
4. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPE SO THAT THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATE JOINT LOCATIONS ALLOWED UNDER FAC 62-555.314 WILL ONLY BE ALLOWED BY THE ENGINEER ON A CASE-BY-CASE BASIS.

WATR 001 – WATER MAIN SEPARATION



SECTION

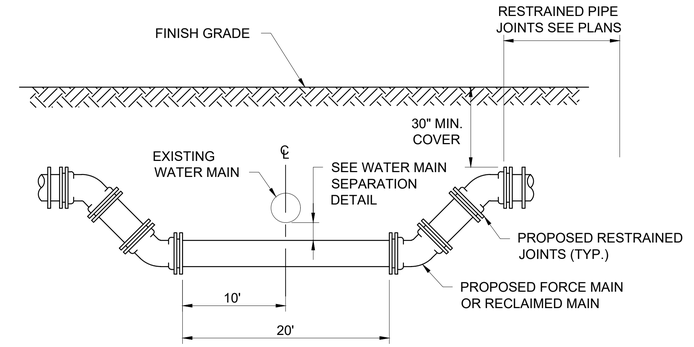


PLAN

NOTE:

1. JOINTS SHALL NOT BE DEFLECTED MORE THAN 50% OF MANUFACTURER'S RECOMMENDED DEFLECTION.

WATR 013 – UTILITY CROSSING DEFLECTION TYPE

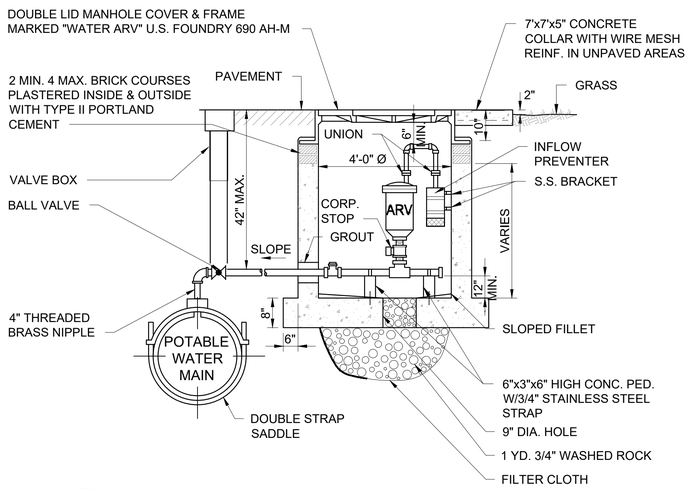


SECTION

NOTE:

1. WHEREVER POSSIBLE, DEFLECTION OF THE PIPE (PER THE DETAIL TITLED "UTILITY CROSSING - DEFLECTION TYPE") SHALL BE USED TO AVOID EXISTING OBSTRUCTIONS. THIS DETAIL SHALL BE USED ONLY WHEN APPROVED BY ENGINEER.

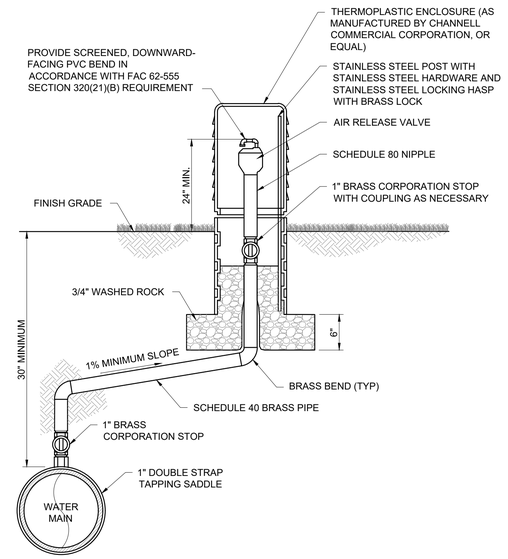
WATR 014 – UTILITY CROSSING FITTING TYPE



NOTES:

1. MANHOLE SHALL BE PRECAST AND DESIGNED BY FABRICATOR TO COMPLY WITH FDOT INDEX 200.
2. ALL VALVES, PIPING AND FITTINGS SHALL BE LEAD-FREE BRASS OR BRONZE.

WATR 007 – AUTOMATIC AIR RELEASE VALVE TYPE 2



WATR 008 – AUTOMATIC AIR RELEASE VALVE TYPE 3

PROPOSAL SUBMITTAL

ENGINEER: #Name
REG. No: #NO.
DATE: #DATE
TEL: #Tel
FAX: #Fax

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

DRAWN BY: | DATE: 10/06/2020 | SCALE: NTS | DESIGNED BY: | CHECKED BY: | FIELD BOOK:

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
STANDARD DETAILS
BAYVIEW DRIVE

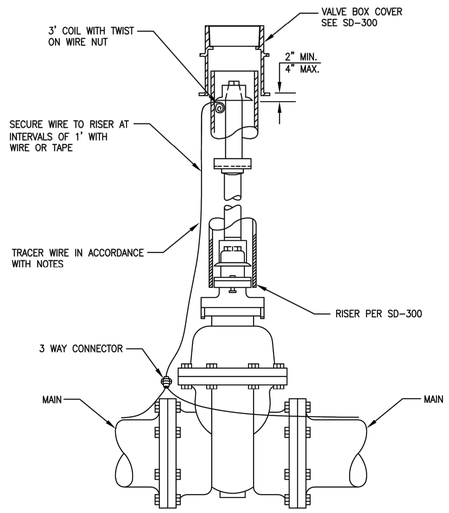
SHEET NO. C-14 OF

TOTAL:

CAD FILE: 12567-111-DETL

DRAWING FILE NO. 4-XXX-XX

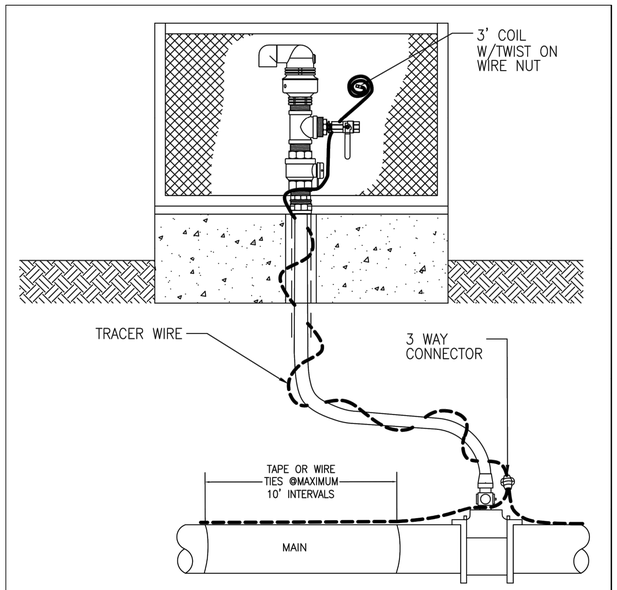
M:\#PROPOSALS\DESIGN-BUILD\FORT LAUDERDALE\BAYVIEW 24-INCH FM\DRAWINGS\SHEET FILES (NOTES & DETAILS)\12567-111-DETL.DWG



CONNECTION TO IN-LINE VALVES

NOTES:

1. TRACER WIRE SHALL BE SECURED TO THE RISER AT MAXIMUM INTERVALS OF 1'.
2. THREAD TRACER WIRE THROUGH ¼" HOLE DRILLED IN THE RISER PIPE 2" TO 4" BELOW THE VALVE BOX. A KNOT SHALL BE TIED IN THE TRACER WIRE INSIDE THE RISER PIPE AND A 3' COIL OF WIRE LEFT NEATLY INSIDE THE RISER.
3. A TWIST ON WIRENUT SHALL BE INSTALLED ON END OF TRACER WIRE INSIDE OF RISER.

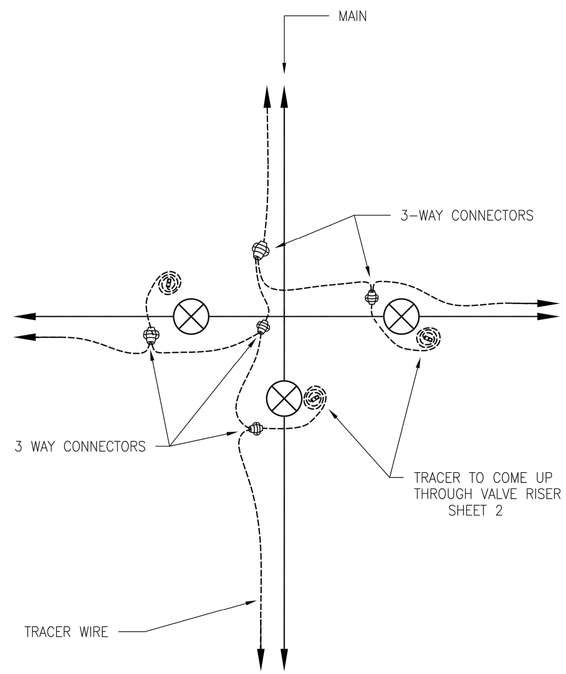


AIR RELEASE VALVE
NOT TO SCALE

NOTES:

1. THE TRACER WIRE SHALL BE ATTACHED TO THE AIR RELEASE LINE WITH TAPE AT 1' INTERVALS. A 3' COIL OF WIRE SHALL BE LEFT IN THE METER BOX
2. THIS DETAIL APPLIES TO AIR RELEASE VALVES IN SD-330 AND SD-331.

EXAMPLE OF 4-WAY CROSS USING 3-WAY CONNECTORS



PROPOSAL SUBMITTAL

ENGINEER:
REG. No:
DATE:
TEL:
FAX:

DRAWN BY: JJ | DATE: 02/17/2021
DESIGNED BY: WR | SCALE: NTS
CHECKED BY: WR | FIELD BOOK:

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

REVISIONS

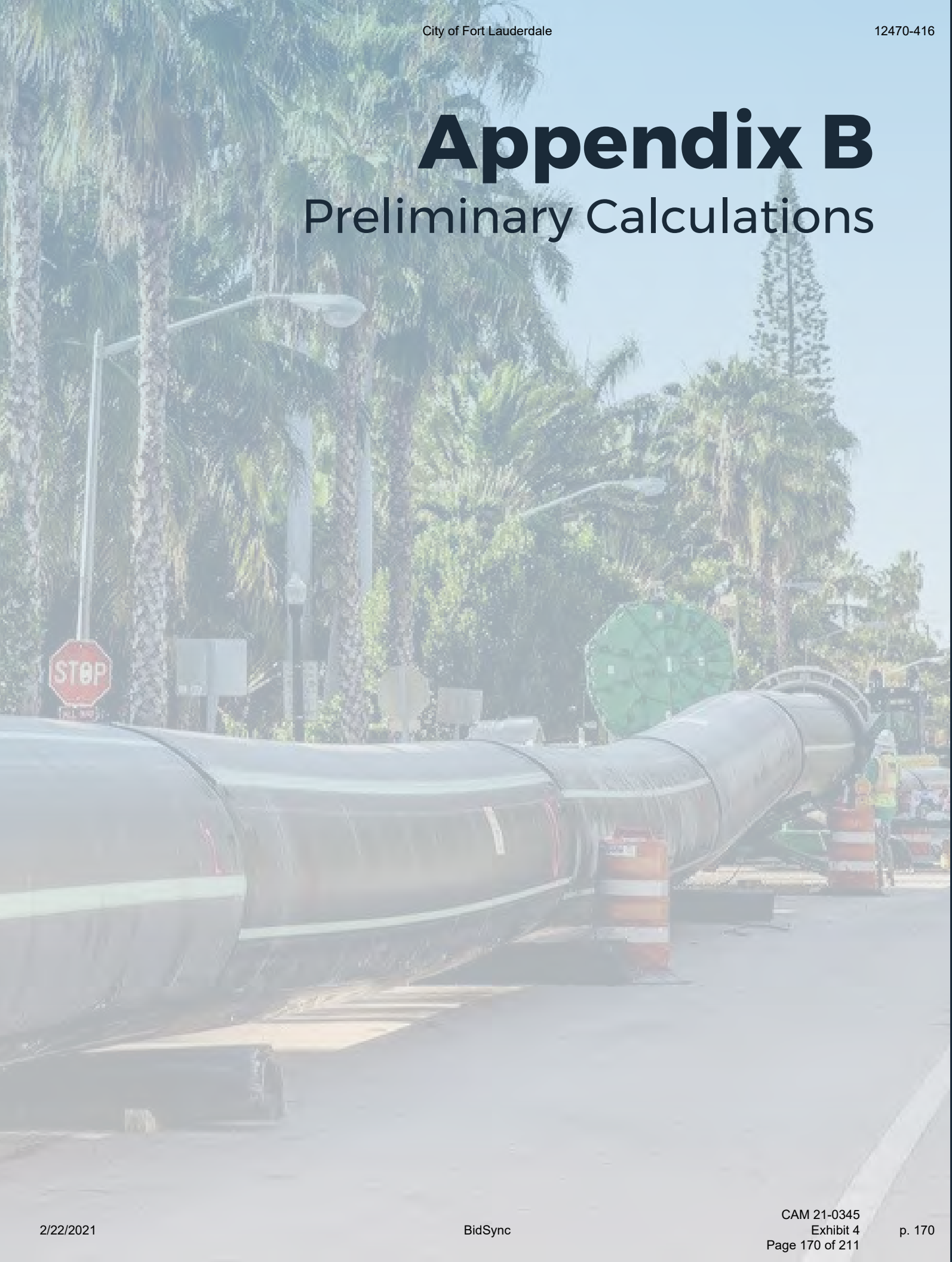
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # P12567
PUMP STATION B-4
REDUNDANT FORCE MAIN
TRACER WIRE INSTALLATION DETAILS
BAYVIEW DRIVE

SHEET NO. C-15 | OF
TOTAL:
CAD FILE:
DRAWING FILE NO. 4-XXX-XX

Appendix B

Preliminary Calculations



Product Pipe

Pipe Type:	HDPE-PE4710
Pipe Application:	M&I - Pressure Pipe
Pipe Classification:	Iron Pipe Size (IPS)
Pipe Nominal Diameter:	30 in
Pipe Dimension Ratio:	11

Bore Construction Inputs

Project Length:	1000 ft
Pipe Entry Angle:	10 degrees
Pipe Exit Angle:	10 degrees
Depth of Cover:	30 ft
Depth to Water Table:	5 ft
Extra Length of Pipe:	100 ft

Bore Construction Calculated Values

Length to Reach Depth of Cover:	343.8 ft
Length Traversed at Depth:	312.5 ft
Length to Rise from Depth:	343.8 ft
Bending Radius, Pipe Entry:	1,969.7 ft
Bending Radius, Pipe Exit:	1,969.7 ft

Site Stratigraphy

Soil Layer 1 Type:	Sand
Layer 1 Thickness:	25 ft
Soil Layer 2 Type:	Lithified Rock

*** Many design and material parameters are assumed in these calculations based upon suggested values from ASTM F1962 - see http://ppi.boreaid.com for a complete list of values.

Calculation Procedure Assumptions

- The earth pressure coefficient used in the calculations is based upon Stein's theory.
- The operational critical collapse calculation displays the result for a water filled pipe (i.e., pressure pipe) and empty pipe (i.e., conduit, gravity-sewer).
- Operational compressive wall stress and buoyant deflection during installation are not shown.
- ¾ of the maximum calculated tensile stress is used in the installation critical collapse calculation since the maximum depth is typically not encountered past three-quarters of the bore distance.
- Entry and exit elevations are assumed equal and additional loads due to variation in topography are not considered (topography is flat).
- The silo width is assumed equal to the bore diameter for calculation of the arching factor during determination of the earth pressure.
- The 1-hr installation critical collapse pressure includes the drag pressure but the 10-hr calculation does not.
- For bores in lithified rock, the earth pressure and deflection is not calculated but an ovality deflection of 3% is assumed for collapse calculations.
- These are preliminary calculations only. Qualified professionals should be contracted to consider all aspects of the design for horizontal directional drilling.

For more information contact support@ppi.boreaid.com

Note: This analysis was downloaded from the PPI-BoreAid website and is for general information only. This information is offered without any warranty, expressed or implied, and is not a substitute for competent professional assistance as required by local and national authorities. Anyone making use of this information, does so at his or her own risk and assumes any resulting liability.

Calculated Design Values

	HDPE-PE4710		OPERATIONAL		INSTALLATION				
	IPS Nom. OD	IPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	Status
	inches		% OD	psi	psi	psi	lbs	lbs	
No Rollers & No Ballast	30	9	3.0	128	272	227	118,154	363,028	PASS
	30	11	3.0	66	137	114	123,134	303,774	PASS
	30	13.5	3.0	34	68	57	127,477	252,103	PASS
With Rollers & No Ballast	30	9	3.0	128	274	228	112,438	363,028	PASS
	30	11	3.0	66	138	115	118,351	303,774	PASS
	30	13.5	3.0	34	69	57	123,507	252,103	PASS
With Rollers & Ballast	30	9	3.0	128	284	237	52,482	363,028	PASS
	30	11	3.0	66	145	121	52,004	303,774	PASS
	30	13.5	3.0	34	74	61	51,588	252,103	PASS

Calculated Factors of Safety

	HDPE-PE4710		OPERATIONAL		INSTALLATION				
	IPS Nom. OD	IPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	Status
	inches		% OD						
No Rollers & No Ballast	30	9	3.0	19.7	9.2	11.6	PASS	-	PASS
	30	11	3.0	10.1	4.6	5.9	PASS	-	PASS
	30	13.5	3.0	5.2	2.3	2.9	PASS	-	PASS
With Rollers & No Ballast	30	9	3.0	19.7	9.3	11.7	PASS	-	PASS
	30	11	3.0	10.1	4.7	5.9	PASS	-	PASS
	30	13.5	3.0	5.2	2.3	2.9	PASS	-	PASS
With Rollers & Ballast	30	9	3.0	19.7	17.2	36.4	PASS	-	PASS
	30	11	3.0	10.1	8.8	18.6	PASS	-	PASS
	30	13.5	3.0	5.2	4.5	9.4	PASS	-	PASS

Product Pipe

Pipe Type:	HDPE-PE4710
Pipe Application:	M&I - Pressure Pipe
Pipe Classification:	Iron Pipe Size (IPS)
Pipe Nominal Diameter:	30 in
Pipe Dimension Ratio:	11

Bore Construction Inputs

Project Length:	1945 ft
Pipe Entry Angle:	10 degrees
Pipe Exit Angle:	10 degrees
Depth of Cover:	30 ft
Depth to Water Table:	5 ft
Extra Length of Pipe:	100 ft

Bore Construction Calculated Values

Length to Reach Depth of Cover:	343.8 ft
Length Traversed at Depth:	1,257.5 ft
Length to Rise from Depth:	343.8 ft
Bending Radius, Pipe Entry:	1,969.7 ft
Bending Radius, Pipe Exit:	1,969.7 ft

Site Stratigraphy

Soil Layer 1 Type:	Sand
Layer 1 Thickness:	25 ft
Soil Layer 2 Type:	Lithified Rock

*** Many design and material parameters are assumed in these calculations based upon suggested values from ASTM F1962 - see http://ppi.boreaid.com for a complete list of values.

Calculation Procedure Assumptions

- The earth pressure coefficient used in the calculations is based upon Stein's theory.
- The operational critical collapse calculation displays the result for a water filled pipe (i.e., pressure pipe) and empty pipe (i.e., conduit, gravity-sewer).
- Operational compressive wall stress and buoyant deflection during installation are not shown.
- ¾ of the maximum calculated tensile stress is used in the installation critical collapse calculation since the maximum depth is typically not encountered past three-quarters of the bore distance.
- Entry and exit elevations are assumed equal and additional loads due to variation in topography are not considered (topography is flat).
- The silo width is assumed equal to the bore diameter for calculation of the arching factor during determination of the earth pressure.
- The 1-hr installation critical collapse pressure includes the drag pressure but the 10-hr calculation does not.
- For bores in lithified rock, the earth pressure and deflection is not calculated but an ovality deflection of 3% is assumed for collapse calculations.
- These are preliminary calculations only. Qualified professionals should be contracted to consider all aspects of the design for horizontal directional drilling.

For more information contact support@ppi.boreaid.com

Calculated Design Values

	HDPE-PE4710		OPERATIONAL		INSTALLATION				
	IPS Nom. OD	IPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	Status
	inches		% OD	psi	psi	psi	lbs	lbs	
No Rollers & No Ballast	30	9	3.0	128	253	211	220,722	363,028	PASS
	30	11	3.0	66	124	103	231,358	303,774	PASS
	30	13.5	3.0	34	59	49	240,632	252,103	PASS
With Rollers & No Ballast	30	9	3.0	128	255	212	215,006	363,028	PASS
	30	11	3.0	66	124	104	226,575	303,774	PASS
	30	13.5	3.0	34	60	50	236,663	252,103	PASS
With Rollers & Ballast	30	9	3.0	128	276	230	99,712	363,028	PASS
	30	11	3.0	66	140	116	98,991	303,774	PASS
	30	13.5	3.0	34	70	59	98,362	252,103	PASS

Calculated Factors of Safety

	HDPE-PE4710		OPERATIONAL		INSTALLATION				
	IPS Nom. OD	IPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	Status
	inches		% OD						
No Rollers & No Ballast	30	9	3.0	19.7	8.6	10.8	PASS	-	PASS
	30	11	3.0	10.1	4.2	5.3	PASS	-	PASS
	30	13.5	3.0	5.2	2	2.5	PASS	-	PASS
With Rollers & No Ballast	30	9	3.0	19.7	8.6	10.9	PASS	-	PASS
	30	11	3.0	10.1	4.2	5.3	PASS	-	PASS
	30	13.5	3.0	5.2	2	2.5	PASS	-	PASS
With Rollers & Ballast	30	9	3.0	19.7	16.8	35.4	PASS	-	PASS
	30	11	3.0	10.1	8.5	17.9	PASS	-	PASS
	30	13.5	3.0	5.2	4.3	9	PASS	-	PASS

Note: This analysis was downloaded from the PPI-BoreAid website and is for general information only. This information is offered without any warranty, expressed or implied, and is not a substitute for competent professional assistance as required by local and national authorities. Anyone making use of this information, does so at his or her own risk and assumes any resulting liability.

Product Pipe

Pipe Type:	HDPE-PE4710
Pipe Application:	M&I - Pressure Pipe
Pipe Classification:	Iron Pipe Size (IPS)
Pipe Nominal Diameter:	30 in
Pipe Dimension Ratio:	11

Bore Construction Inputs

Project Length:	2200 ft
Pipe Entry Angle:	10 degrees
Pipe Exit Angle:	10 degrees
Depth of Cover:	30 ft
Depth to Water Table:	5 ft
Extra Length of Pipe:	100 ft

Bore Construction Calculated Values

Length to Reach Depth of Cover:	343.8 ft
Length Traversed at Depth:	1,512.5 ft
Length to Rise from Depth:	343.8 ft
Bending Radius, Pipe Entry:	1,969.7 ft
Bending Radius, Pipe Exit:	1,969.7 ft

Site Stratigraphy

Soil Layer 1 Type:	Sand
Layer 1 Thickness:	25 ft
Soil Layer 2 Type:	Lithified Rock

*** Many design and material parameters are assumed in these calculations based upon suggested values from ASTM F1962 - see http://ppi.boreaid.com for a complete list of values.

Calculation Procedure Assumptions

- The earth pressure coefficient used in the calculations is based upon Stein's theory.
- The operational critical collapse calculation displays the result for a water filled pipe (i.e., pressure pipe) and empty pipe (i.e., conduit, gravity-sewer).
- Operational compressive wall stress and buoyant deflection during installation are not shown.
- ¾ of the maximum calculated tensile stress is used in the installation critical collapse calculation since the maximum depth is typically not encountered past three-quarters of the bore distance.
- Entry and exit elevations are assumed equal and additional loads due to variation in topography are not considered (topography is flat).
- The silo width is assumed equal to the bore diameter for calculation of the arching factor during determination of the earth pressure.
- The 1-hr installation critical collapse pressure includes the drag pressure but the 10-hr calculation does not.
- For bores in lithified rock, the earth pressure and deflection is not calculated but an ovality deflection of 3% is assumed for collapse calculations.
- These are preliminary calculations only. Qualified professionals should be contracted to consider all aspects of the design for horizontal directional drilling.

For more information contact support@ppi.boreaid.com

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Calculated Design Values

	HDPE-PE4710		OPERATIONAL		INSTALLATION				
	IPS Nom. OD	IPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	Status
	inches		% OD	psi	psi	psi	lbs	lbs	
No Rollers & No Ballast	30	9	3.0	128	248	206	248,399	363,028	PASS
	30	11	3.0	66	120	100	260,561	303,774	PASS
	30	13.5	3.0	34	56	47	271,166	252,103	FAIL
With Rollers & No Ballast	30	9	3.0	128	249	207	242,683	363,028	PASS
	30	11	3.0	66	120	100	255,778	303,774	PASS
	30	13.5	3.0	34	57	47	267,197	252,103	FAIL
With Rollers & Ballast	30	9	3.0	128	274	228	112,457	363,028	PASS
	30	11	3.0	66	138	115	111,670	303,774	PASS
	30	13.5	3.0	34	70	58	110,984	252,103	PASS

Calculated Factors of Safety

	HDPE-PE4710		OPERATIONAL		INSTALLATION				
	IPS Nom. OD	IPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	Status
	inches		% OD						
No Rollers & No Ballast	30	9	3.0	19.7	8.4	10.6	PASS	-	PASS
	30	11	3.0	10.1	4.1	5.1	PASS	-	PASS
	30	13.5	3.0	5.2	1.9	2.4	FAIL	-	FAIL
With Rollers & No Ballast	30	9	3.0	19.7	8.4	10.6	PASS	-	PASS
	30	11	3.0	10.1	4.1	5.1	PASS	-	PASS
	30	13.5	3.0	5.2	1.9	2.4	FAIL	-	FAIL
With Rollers & Ballast	30	9	3.0	19.7	16.6	35.2	PASS	-	PASS
	30	11	3.0	10.1	8.4	17.7	PASS	-	PASS
	30	13.5	3.0	5.2	4.2	8.9	PASS	-	PASS

dipra Ductile Iron Pipe Research Association

Strength and **Durability** for **Life**®

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Thickness Design of Ductile Iron Pipe

Project Name

Fort Lauderda Save Load

Project Data

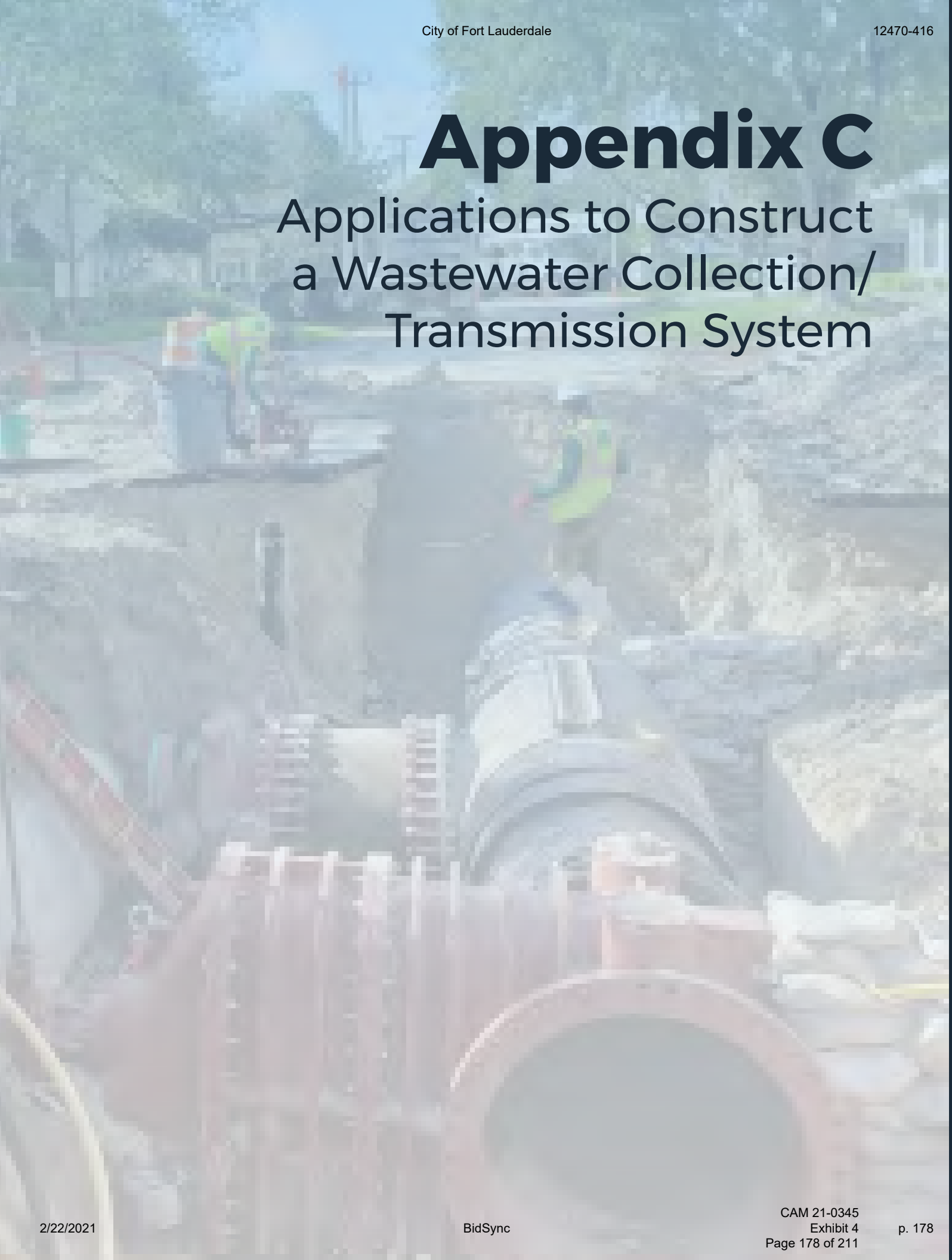
Nominal Pipe Size	24	inches
Working Pressure	100	psi
Surge Allowance	150	psi
Depth of Cover	4	ft
Trench Type	Type	
Special Loading Conditions	Opti	
Soil Weight	120	pcf
Wheel Load	16000	lbs
Lining Type	Cem	

Result

Total Calculated Thickness	**0.30**	inches
Select **Pressure Class**	**200**	psi
Nominal Thickness	**0.33**	inches

Inherent Safety Factors

Minimum Manufacturing Thickness	**0.26**	inches
Ring Bending Stress Design	**6.7**	
Deflection Design	**4.4**	
Internal Pressure Design	**3.4**	



Appendix C

Applications to Construct a Wastewater Collection/ Transmission System

Florida Department of Environmental Protection

NOTIFICATION/APPLICATION FOR CONSTRUCTING A DOMESTIC WASTEWATER COLLECTION/TRANSMISSION SYSTEM

PART I - GENERAL

Subpart A: Permit Application Type

Permit Application Type (mark one only)	EDUs Served	Application Fee*	"X"
Are you applying for an individual permit for a domestic wastewater collection/transmission system? Note: an EDU is equal to 3.5 persons. Criteria for an individual permit are contained in Rule 62-604.600(7), F.A.C.	≥ 10	$500	
	< 10	$300	
Is this a Notice of Intent to use the general permit for wastewater collection/transmission systems? Criteria for qualifying for a general permit are contained in Rule 62-604.600(6), F.A.C. Projects not meeting the criteria in Rule 62-604.600(6), F.A.C., must apply for an individual permit.	N/A	$250	

*Note: Each non-contiguous project (i.e., projects that are not interconnected or are not located on adjacent streets or in the same neighborhood) requires a separate application and fee.

Subpart B: Instructions

(1) This form shall be completed for all domestic wastewater collection/transmission system construction projects as follows:
- If this is a Notice of Intent to use the general permit, this notification shall be submitted to the Department **at least 30 days prior to initiating construction**.
- If this is an application for an individual permit, the permit must be obtained prior to initiating construction.

(2) One copy of the completed form shall be submitted to the appropriate DEP district office or delegated local program along with the appropriate fee, and one copy of the following supporting documents. Checks should be made payable to the Florida Department of Environmental Protection, or the name of the appropriate delegated local program.

- If this is a Notice of Intent to use the general permit, attach a site plan or sketch showing the size and approximate location of new or altered gravity sewers, pump stations and force mains; showing the approximate location of manholes and isolation valves; and showing how the proposed project ties into the existing or proposed wastewater facilities. The site plan or sketch shall be signed and sealed by a professional engineer registered in Florida.
- If this is an application for an individual permit, one set of plans and specifications shall be submitted with this application, or alternatively, an engineering report shall be submitted. Plans and specifications and engineering reports shall be prepared in accordance with the applicable provisions of Chapters 10 and 20 of *Recommended Standards for Wastewater Facilities*. The plans and specifications or engineering report shall be signed and sealed by a Professional Engineer registered in Florida.

(3) All information shall be typed or printed in ink. Where attached sheets (or other technical documentation) are utilized in lieu of the blank spaces provided, indicate appropriate cross-references on the form. For Items (1) through (4) of Part II of this application form, if an item is not applicable to your project, indicate "NA" in the appropriate space provided.

PART II – PROJECT DOCUMENTATION

(1) Collection/Transmission System Permittee

Name Omar Castellon Title Chief Engineer
Company Name City of Fort Lauderdale
Address 100 North Andrews Ave.
City Fort Lauderdale State FL Zip 33301
Telephone 954-828-5064 Fax Email ocastellon@fortlauderdale.gov

(2) General Project Information

Project Name Pump Station B-4 Redundant Force Main
Location: County Broward City Fort Lauderdale Section 036 Township 049 S Range 042 E
Project Description and Purpose (including pipe length, range of pipe diameter, total number of manholes, and total number of pump stations):

Project includes the installation of approximately 5,365 LF of a 30" HDPE Force Main (Internal Diameter 24") from Pump Station B-4 to NE 20th Street along Bayview Drive. The installation method is horizontal directional drilling and open cut for the tie-ins to the existing system.

Estimated date for: Start of construction April 2021 Completion of construction June 2021
Connections to existing system or treatment plant One (1) tie-in to the 42" force main on NE 20th Street

(3) Project Capacity

A = Type of Unit	B = Number of Units	C = Population Per Unit	D = Total Population (Columns B x C)	E = Per Capita Flow	F = Total Average Daily Flow (Columns D x E)	G = Peak hour flow
Single-Family Home						
Mobile Home						
Apartment						
Commercial, Institutional, or Industrial Facility*						
Total						

* Description of commercial, institutional, and industrial facilities and explanation of method used to estimate per capita flow for these facilities:

This is a replacement of the existing aging force main. No additional connections/units are being added to the system nor the size of the existing force main is being reduced.

(4) Pump Station Data (attached additional sheets as necessary)

		Estimated Flow to the Station (GPD)			
Location	Type	Maximum	Average	Minimum	Operating Conditions [GPM @ FT (TDH)]

(5) Collection/Transmission System Design Information

A. This information must be completed for all projects by the applicant's professional engineer, and if applicable, those professional engineers in other disciplines who assisted with the design of the project.

If this project has been designed to comply with the standards and criteria listed below, the engineer shall initial in ink before the standards or criteria. If any of the standards or criteria do not apply to this project or if this project has not been designed to comply with the standards or criteria, mark "X" before the appropriate standard or criteria and provide an explanation, including any applicable rule references, in (5)B. below.

Note, if the project has not been designed in accordance with the standards and criteria set forth in Rules 62-604.400(1) and (2), F.A.C., an application for an individual permit shall be submitted. However, if Rules 62-604.400(1) and (2), F.A.C., specifically allow for another alternative that will result in an equivalent level of reliability and public health protection, the project can be constructed using the general permit.

General Requirements

WR 1. The project is designed based on an average daily flow of 100 gallons per capita plus wastewater flow from industrial plants and major institutional and commercial facilities unless water use data or other justification is used to better estimate the flow. The design includes an appropriate peaking factor, which covers I/I contributions and non-wastewater connections to those service lines. [RSWF 11.243]

WR 2. Procedures are specified for operation of the collection/transmission system during construction. [RSWF 20.15]

WR 3. The project is designed to be located on public right-of-ways, land owned by the permittee, or easements and to be located no closer than 100 feet from a public drinking water supply well and no closer than 75 feet from a private drinking water supply well; or documentation is provided in Part II.(5)B., showing that another alternative will result in an equivalent level of reliability and public health protection. [62-604.400(1)(b) and (c), F.A.C.]

WR 4. The project is designed with no physical connections between a public or private potable water supply system and a sewer or force main and with no water pipes passing through or coming into contact with any part of a sewer manhole. [RSFW 38.1 and 48.5]

WR 5. The project is designed to preclude the deliberate introduction of storm water, surface water, groundwater, roof runoff, subsurface drainage, swimming pool drainage, air conditioning system condensate water, non-contact cooling water except as provided by Rule 62-610.668(1), F.A.C., and sources of uncontaminated wastewater, except to augment the supply of reclaimed water in accordance with Rule 62-610.472(3)(c), F.A.C. [62-604.400(1)(d), F.A.C.]

WR 6. The project is designed so that all new or relocated, buried sewers and force mains, are located in accordance with the separation requirements from water mains and reclaimed water lines of Rules 62-604.400(2)(g)(h) and (i) and (3), F.A.C. Note, if the criteria of Rules 62-604.400(2)(g) 4. or (2)(i) 3., F.A.C., are used, describe in Part II.(5)B~~C~~. alternative construction features that will be provided to afford a similar level of reliability and public health protection. [62-604.400(2)(g), (h), and (i) and (3), F.A.C.]

Gravity Sewers

X 7. The project is designed with no public gravity sewer conveying raw wastewater less than 8 inches in diameter. [RSWF 33.1]

X 8. The design considers buoyancy of sewers, and appropriate construction techniques are specified to prevent flotation of the pipe where high groundwater conditions are anticipated. [RSWF 33.3}

X 9. All sewers are designed with slopes to give mean velocities, when flowing full, of not less than 2.0 feet per second, based on Manning's formula using an "n" value of 0.013; or if it is not practicable to maintain these minimum slopes and the depth of flow will be 0.3 of the diameter or greater for design average flow, the owner of the system has been notified that additional sewer maintenance will be required. The pipe diameter and slope are selected to obtain the greatest practical velocities to minimize solids deposition problems. Oversized sewers are not specified to justify flatter slopes. [RSWF 33.41, 33.42, and 33.43]

X 10. Sewers are designed with uniform slope between manholes. [RWSF 33.44]

X 11. Where velocities greater than 15 fps are designed, provisions to protect against displacement by erosion and impact are specified. [RSWF 33.45]

X 12. Sewers on 20% slopes or greater are designed to be anchored securely with concrete, or equal, anchors spaced as follows: not over 36 feet center to center on grades 20% and up to 35%; not over 24 feet center to center on grades 35% and up to 50%; and not over 16 feet center to center on grades 50% and over. [RSWF 33.46]

X 13. Sewers 24 inches or less are designed with straight alignment between manholes. Where curvilinear sewers are proposed for sewers greater than 24 inches, the design specifies compression joints; ASTM or specific pipe manufacturer's maximum allowable pipe joint deflection limits are not exceeded; and curvilinear sewers are limited to simple curves which start and end at manholes. [RSWF 33.5]

X 14. Suitable couplings complying with ASTM specifications are required for joining dissimilar materials. [RSWF 33.7]

X 15. Sewers are designed to prevent damage from superimposed loads. [RSWF 33.7]

X 16. Appropriate specifications for the pipe and methods of bedding and backfilling are provided so as not to damage the pipe or its joints, impede cleaning operations and future tapping, nor create excessive side fill pressures and ovalation of the pipe, nor seriously impair flow capacity. [RSWF 33.81]

X 17. Appropriate deflection tests are specified for all flexible pipe. Testing is required after the final backfill has been in place at least 30 days to permit stabilization of the soil-pipe system. Testing requirements specify: 1) no pipe shall exceed a deflection of 5%; 2) using a rigid ball or mandrel for the deflection test with a diameter not less than 95% of the base inside diameter or average inside diameter of the pipe, depending on which is specified in the ASTM specification, including the appendix, to which the pipe is manufactured; and 3) performing the test without mechanical pulling devices. [RSWF 33.85]

X 18. Leakage tests are specified requiring that: 1) the leakage exfiltration or infiltration does not exceed 200 gallons per inch of pipe diameter per mile per day for any section of the system; 2) exfiltration or infiltration tests be performed with a minimum positive head of 2 feet; and 3) air tests, as a minimum, conform to the test procedure described in ASTM C-828 for clay pipe, ASTM C 924 for concrete pipe, ASTM F-1417 for plastic pipe, and for other materials appropriate test procedures. [RSWF 33.93, 33.94, and 33.95]

X 19. If an inverted siphon is proposed, documentation of its need is provided in Part II.(5)B~~C~~. Inverted siphons are designed with: 1) at least two barrels; 2) a minimum pipe size of 6 inches; 3) necessary appurtenances for maintenance, convenient flushing, and cleaning equipment; and 4) inlet and discharge structures having adequate clearances for cleaning equipment, inspection, and flushing. Design provides sufficient head and appropriate pipe sizes to secure velocities of at least 3.0 fps for design average flows. The inlet and outlet are designed so that the design average flow may be diverted to one barrel, and that either barrel may be cut out of service for cleaning. [RSWF 35]

Manholes

X 20. The project is designed with manholes at the end of each line; at all changes in grade, size, or alignment; at all intersections; and at distances not greater than 400 feet for sewers 15 inches or less and 500 feet for sewers 18 inches to 30 inches, except in the case where adequate modern cleaning equipment is available at distances not greater than 600 feet. [RSWF 34.1]

X 21. Design requires drop pipes to be provided for sewers entering manholes at elevations of 24 inches or more above the manhole invert. Where the difference in elevation between the incoming sewer and the manhole invert is less than 24 inches, the invert is designed with a fillet to prevent solids deposition. Inside drop connections (when necessary) are designed to be secured to the interior wall of the manhole and provide access for cleaning. Design requires the entire outside drop connection be encased in concrete. [RSWF 34.2]

X 22. Manholes are designed with a minimum diameter of 48 inches and a minimum access diameter of 22 inches. [RSWF 34.3]

X 23. Design requires that a bench be provided on each side of any manhole channel when the pipe diameter(s) are less than the manhole diameter and that no lateral sewer, service connection, or drop manhole pipe discharges onto the surface of the bench. [RSWF 34.5]

X 24. Design requires: 1) manhole lift holes and grade adjustment rings be sealed with non-shrinking mortar or other appropriate material; 2) inlet and outlet pipes be joined to the manhole with a gasketed flexible watertight connection or another watertight connection arrangement that allows differential settlement of the pipe and manhole wall; and 3) watertight manhole covers be used wherever the manhole tops may be flooded by street runoff or high water. [RSWF 34.6]

X 25. Manhole inspection and testing for watertightness or damage prior to placing into service are specified. Air testing, if specified for concrete sewer manholes, conforms to the test procedures described in ASTM C-1244. [RSWF 34.7]

X 26. Electrical equipment specified for use in manholes is consistent with Item 46 of this checklist. [RSWF 34.9]

Stream Crossings

X 27. Sewers and force mains entering or crossing streams are designed to be constructed of ductile iron pipe with mechanical joints or so they will remain watertight and free from changes in alignment or grade. Appropriate materials which will not readily erode, cause siltation, damage pipe during placement, or corrode the pipe are specified to backfill the trench. [RSWF 36.21 and 48.5]

X 28. Stream crossings are designed to incorporate valves or other flow regulating devices (which may include pump stations) on the shoreline or at such distances from ~~form~~ the shoreline to prevent discharge in the event the line is damaged. [62-604.400(2)(k)5., F.A.C.]

X 29. Sewers and force mains entering or crossing streams are designed at a sufficient depth below the natural bottom of the stream bed to protect the line. At a minimum, the project is designed with subaqueous lines to be buried at least three feet below the design or actual bottom, whichever is deeper, of a canal and other dredged waterway or the natural bottom of streams, rivers, estuaries, bays, and other natural water bodies; or if it is not practicable to design the project with less than three-foot minimum cover, alternative construction features (e.g. a concrete cap, sleeve, or some other properly engineered device to insure adequate protection of the line) are described in Part II.C. [62-604.400(2)(k)1., F.A.C., and RSWF 36.11]

X 30. Specifications require permanent warning signs be placed on the banks of canals, streams, and rivers clearly identifying the nature and location (including depths below design or natural bottom) of subaqueous crossings and suitably fixed signs be placed at the shore, for subaqueous crossings of lakes, bays, and other large bodies of water, and in any area where anchoring is normally expected. [62-604.400(2)(k)2., F.A.C.]

X 31. Provisions for testing the integrity of subaqueous lines are specified. [62-604.400(2)(k)4., F.A.C.]

X 32. Supports are designed for all joints in pipes utilized for aerial crossings and to prevent overturning and settlement. Expansion jointing is specified between above ground and below ground sewers and force mains. The design considers the impact of floodwaters and debris. [RSWF 37 and 48.5]

X 33. Aerial crossings are designed to maintain existing or required navigational capabilities within the waterway and to reserve riparian rights of adjacent property owners. [62-604.400(2)(k)3., F.A.C.]

Pump Stations

X 34. In areas with high water tables, pump stations are designed to withstand flotation forces when empty. When siting the pump station, the design considers the potential for damage or interruption of operation because of flooding. Pump station structures and electrical and mechanical equipment are designed to be protected from physical damage by the 100-year flood. Pump stations are designed to remain fully operational and accessible during the 25-year flood unless lesser flood levels are appropriate based on local considerations, but not less than the 10-year flood. [62-604.400(2)(e), F.A.C.]

X 35. Pump stations are designed to be readily accessible by maintenance vehicles during all weather conditions. [RSWF 41.2]

X 36. Wet well and pump station piping is designed to avoid operational problems from the accumulation of grit. [RSWF 41.3]

X 37. Dry wells, including their superstructure, are designed to be completely separated from the wet well. Common walls are designed to be gas tight. [RSWF 42.21]

X 38. The design includes provisions to facilitate removing pumps, motors, and other mechanical and electrical equipment. [RSWF 42.22]

X 39. The design includes provisions for: 1) suitable and safe means of access for persons wearing self-contained breathing apparatus are provided to dry wells, and to wet wells; 2) stairway access to wet wells more than 4 feet deep containing either bar screens or mechanical equipment requiring inspection or maintenance; 3) for built-in-place pump stations, a stairway to the dry well with rest landings at vertical intervals not to exceed 12 feet; 4) for factory-built pump stations over 15 feet deep, a rigidly fixed landing at vertical intervals not to exceed 10 feet unless a manlift or elevator is provided; and 5) where a landing is used, a suitable and rigidly fixed barrier to prevent an individual from falling past the intermediate landing to a lower level. If a manlift or elevator is provided, emergency access is included in the design. [RSWF 42.23]

X 40. Specified construction materials are appropriate under conditions of exposure to hydrogen sulfide and other corrosive gases, greases, oils, and other constituents frequently present in wastewater. [RSWF 42.25]

X 41. Except for low-pressure grinder or STEP systems, multiple pumps are specified, and each pump has an individual intake. Where only two units are specified, they are of the same size. Specified units have capacity such that, with any unit out of service, the remaining units will have capacity to handle the design peak hourly flow. [RSWF 42.31 and 42.36]

X 42. Bar racks are specified for pumps handling wastewater from 30 inch or larger diameter sewers. Where a bar rack is specified, a mechanical hoist is also provided. The design includes provisions for appropriate protection from clogging for small pump stations. [RSWF 42.322]

X 43. Pumps handling raw wastewater are designed to pass spheres of at least 3 inches in diameter. Pump suction and discharge openings are designed to be at least 4 inches in diameter. [RSWF 42.33] (Note, this provision is not applicable to grinder pumps.)

X 44. The design requires pumps be placed such that under normal operating conditions they will operate under a positive suction head, unless pumps are suction-lift pumps. [RSWF 42.34]

X 45. The design requires: 1) pump stations be protected from lightning and transient voltage surges; and 2) pump stations be equipped with lighting arrestors, surge capacitors, or other similar protection devices and phase protection. Note, pump stations serving a single building are not required to provide surge protection devices if not necessary to protect the pump station. [62-604.400(2)(b), F.A.C.]

X 46. The design requires 1) electrical systems and components (e.g., motors, lights, cables, conduits, switch boxes, control circuits, etc.) in raw wastewater wet wells, or in enclosed or partially enclosed spaces where hazardous concentrations of flammable gases or vapors may be present, comply with the National Electrical Code requirements for Class I Group D, Division 1 locations; 2) electrical equipment located in wet wells be suitable for use under corrosive conditions; 3) each flexible cable be provided with a watertight seal and separate strain relief; 4) a fused disconnect switch located above ground be provided for the main power feed for all pump stations; 5) electrical equipment exposed to weather to meet the requirements of weatherproof equipment NEMA 3R or 4; 6) a 110 volt power receptacle to facilitate maintenance be provided inside the control panel for pump stations that have control panels outdoors; and 7) ground fault interruption protection be provided for all outdoor outlets. [RSWF 42.35]

X 47. The design requires a sump pump equipped with dual check valves be provided in dry wells to remove leakage or drainage with discharge above the maximum high water level of the wet well. [RSWF 42.37]

X 48. Pump station design capacities are based on the peak hourly flow and are adequate to maintain a minimum velocity of 2 feet per second in the force main. [RSWF 42.38]

X 49. The design includes provisions to automatically alternate the pumps in use. [RSWF 42.4]

X 50. The design requires: 1) suitable shutoff valves be placed on the suction line of dry pit pumps; 2) suitable shutoff and check valves be placed on the discharge line of each pump (except on screw pumps); 3) a check valve be located between the shutoff valve and the pump; 4) check valves be suitable for the material being handled; 5) check valves be placed on the horizontal portion of discharge piping (except for ball checks, which may be placed in the vertical run); 6) all valves be capable of withstanding normal pressure and water hammer; and 7) all shutoff and check valves be operable from the floor level and accessible for maintenance. [RSWF 42.5]

X 51. The effective volume of wet wells is based on design average flows and a filling time not to exceed 30 minutes unless the facility is designed to provide flow equalization. The pump manufacturer's duty cycle recommendations were utilized in selecting the minimum cycle time. [RSWF 42.62]

X 52. The design requires wet well floors have a minimum slope of 1 to 1 to the hopper bottom and the horizontal area of hopper bottoms be no greater than necessary for proper installation and function of the inlet. [RSWF 42.63]

X 53. For covered wet wells, the design provides for air displacement to the atmosphere, such as an inverted "j" tube or other means. [RSWF 42.64]

X 54. The design provides for adequate ventilation all pump stations; mechanical ventilation where the dry well is below the ground surface; permanently installed ventilation if screens or mechanical equipment requiring maintenance or inspection are located in the wet well. Pump stations are designed with no interconnection between the wet well and dry well ventilation systems. [RSWF 42.71]

X 55. The design requires all intermittently operated ventilation equipment to be interconnected with the respective pit lighting system and the manual lighting/ventilation switch to override the automatic controls. [RSWF 42.73]

X 56. The design requires the fan wheels of ventilation systems be fabricated from non-sparking material and automatic heating and dehumidification equipment be provided in all dry wells. [RSWF 42.74]

X 57. If wet well ventilation is continuous, design provides for at least 12 complete 100% fresh air changes per hour; if wet well ventilation is intermittent, design provides for at least 30 complete 100% fresh air changes per hour; and design requires air to be forced into wet wells by mechanical means rather than solely exhausted from the wet well. [RSWF 42.75]

X 58. If dry well ventilation is continuous, design provides at least 6 complete 100% fresh air changes per hour; and dry well ventilation is intermittent, design provides for at least 30 complete 100% fresh air changes per hour, unless a system of two speed ventilation with an initial ventilation rate of 30 changes per hour for 10 minutes and automatic switch over to 6 changes per hour is used to conserve heat. [RSWF 42.76]

X 59. Pump stations are designed and located on the site to minimize adverse effects from odors, noise, and lighting. [62-604.400(2)(c), F.A.C.]

X 60. The design requires pump stations be enclosed with a fence or otherwise designed with appropriate features to discourage the entry of animals and unauthorized persons. Posting of an unobstructed sign made of durable weather resistant material at a location visible to the public with a telephone number for a point of contact in case of emergency is specified. [62-604.400(2)(d), F.A.C.]

X 61. The design requires suitable devices for measuring wastewater flow at all pump stations. Indicating, totalizing, and recording flow measurement are specified for pump stations with a 1200 gpm or greater design peak flow. [RSWF 42.8]

X 62. The project is designed with no physical connections between any potable water supplies and pump stations. If a potable water supply is brought to a station, reduced-pressure principle backflow-prevention assemblies are specified. [RSWF 42.9 and 62-555.30(4), F.A.C.]

Additional Items to be Completed for Suction-Lift Pump Stations

X 63. The design requires all suction-lift pumps to be either self-priming or vacuum-priming and the combined total of dynamic suction-lift at the "pump off" elevation and required net positive suction head at design operating conditions not to exceed 22 feet. For self-priming pumps, the design requires: 1) pumps be capable of rapid priming and repriming at the "lead pump on" elevation with self-priming and repriming accomplished automatically under design operating conditions; 2) suction piping not to exceed the size of the pump suction or 25 feet in total length; and 3) priming lift at the "lead pump on" elevation to include a safety factor of at least 4 feet from the maximum allowable priming lift for the specific equipment at design operating conditions. For vacuum-priming pump stations, the design requires dual vacuum pumps capable of automatically and completely removing air from the suction-lift pumps and the vacuum pumps be adequately protected from damage due to wastewater. [RSWF 43.1]

X 64. The design requires: 1) suction-lift pump equipment compartments to be above grade or offset and to be effectively isolated from the wet well to prevent a hazardous and corrosive sewer atmosphere from entering the equipment compartment; 2) wet well access not to be through the equipment compartment and to be at least 24 inches in diameter; 3) gasketed replacement plates be provided to cover the opening to the wet well for pump units to be remove for service; and 4) no valving be located in the wet well. [RSWF 43.2]

Additional Items to be Completed for Submersible Pump Stations

X 65. Submersible pumps and motors are designed specifically for raw wastewater use, including totally submerged operation during a portion of each pump cycle and to meet the requirements of the National Electrical Code for such units. Provisions for detecting shaft seal failure or potential seal failure are included in the design. [RSWF 44.1]

X 66. The design requires submersible pumps be readily removable and replaceable without dewatering the wet well or disconnecting any piping in the wet well. [RSWF 44.2]

X 67. In submersible pump stations, electrical supply, control, and alarm circuits are designed to provide strain relief; to allow disconnection from outside the wet well; and to protect terminals and connectors from corrosion by location outside the wet well or through use of watertight seals. [RSWF 44.31]

X 68. In submersible pump stations, the design requires the motor control center to be located outside the wet well, readily accessible, and protected by a conduit seal or other appropriate measures meeting the requirements of the National Electrical Code, to prevent the atmosphere of the wet well from gaining access to the control center. If a seal is specified, the motor can be removed and electrically disconnected without disturbing the seal. The design requires control equipment exposed to weather to meet the requirements of weatherproof equipment NEMA 3R or 4. [RSWF 44.32]

X 69. In submersible pump stations, the design requires: 1) pump motor power cords be flexible and serviceable under conditions of extra hard usage and to meet the requirements of the National Electrical Code standards for flexible cords in wastewater pump stations; 2) ground fault interruption protection be used to de-energize the circuit in the event of any failure in the electrical integrity of the cable; and 3) power cord terminal fittings be corrosion-resistant and constructed in a manner to prevent the entry of moisture into the cable, provided with strain relief appurtenances, and designed to facilitate field connecting. [RSWF 44.33]

X 70. In submersible pump stations, the design requires all shut-off and check valves be located in a separate valve pit. Provisions to remove or drain accumulated water from the valve pit are included in the design. [RSWF 44.4]

Emergency Operations for Pump Stations

X 71. Pump stations are designed with an alarm system which activates in cases of power failure, sump pump failure, pump failure, unauthorized entry, or any cause of pump station malfunction. Pump station alarms are designed to be telemetered to a facility that is manned 24 hours a day. If such a facility is not available and a 24-hour holding capacity is not provided, the alarm is designed to be telemetered to utility offices during normal working hours and to the home of the responsible person(s) in charge of the lift station during off-duty hours. Note, if an audio-visual alarm system with a self-contained power supply is provided in lieu of a telemetered system, documentation is provided in Part II.(5)B~~C~~. showing an equivalent level of reliability and public health protection. [RSWF 45]

X 72. The design requires emergency pumping capability be provided for all pump stations. For pump stations that receive flow from one or more pump stations through a force main or pump stations discharging through pipes 12 inches or larger, the design requires uninterrupted pumping capability be provided, including an in-place emergency generator. Where portable pumping and/or generating equipment or manual transfer is used, the design includes sufficient storage capacity with an alarm system to allow time for detection of pump station failure and transportation and connection of emergency equipment. [62-604.400(2)(a)1. and 2., F.A.C., and RSWF 46.423 and 46.433]

X 73. The design requires: 1) emergency standby systems to have sufficient capacity to start up and maintain the total rated running capacity of the station, including lighting, ventilation, and other auxiliary equipment necessary for safety and proper operation; 2) special sequencing controls be provided to start pump motors unless the generating equipment has capacity to start all pumps simultaneously with auxiliary equipment operating; 3) a riser from the force main with rapid connection capabilities and appropriate valving be provided for all pump stations to hook up portable pumps; and 4) all pump station reliability design features be compatible with the available temporary service power generating and pumping equipment of the authority responsible for operation and maintenance of the collection/transmission system. [62-604.400(2)(a)3., F.A.C., and RSWF 46.431]

X 74. The design provides for emergency equipment to be protected from operation conditions that would result in damage to the equipment and from damage at the restoration of regular electrical power. [RSWF 46.411, 46.417, and 46.432]

X 75. For permanently-installed internal combustion engines, underground fuel storage and piping facilities are designed in accordance with applicable state and federal regulations; and the design requires engines to be located above grade with adequate ventilation of fuel vapors and exhaust gases. [RSWF 46.414 and 46.415]

X 76. For permanently-installed or portable engine-driven pumps are used, the design includes provisions for manual start-up. [RSWF 46.422]

X 77. Where independent substations are used for emergency power, each separate substation and its associated transmission lines is designed to be capable of starting and operating the pump station at its rated capacity. [RSWF 46.44]

Force Mains

WR 78. Force mains are designed to maintain, at design pumping rates, a cleansing velocity of at least 2 feet per second. The minimum force main diameter specified for raw wastewater is not less than 4 inches. [RSWF 48.1]

WR 79. The design requires: 1) branches of intersecting force mains be provided with appropriate valves such that one branch may be shut down for maintenance and repair without interrupting the flow of other branches; and 2) stubouts on force mains, placed in anticipation of future connections, be equipped with a valve to allow such connection without interruption of service. [62-604.400(2)(f), F.A.C.]

WR 80. The design requires air relief valves be placed at high points in the force main to prevent air locking. [RSWF 48.2]

WR 81. Specified force main pipe and joints are equal to water main strength materials suitable for design conditions. The force main, reaction blocking, and station piping are designed to withstand water hammer pressures and stresses associated with the cycling of wastewater pump stations. [RSWF 48.4]

WR 82. When the Hazen and Williams formula is used to calculate friction losses through force mains, the value for "C" is 100 for unlined iron or steel pipe for design. For other smooth pipe materials, such as PVC, polyethylene, lined ductile iron, the value for C does not exceed 120 for design. [RSWF 48.61]

WR 83. Where force mains are constructed of material, which might cause the force main to be confused with potable water mains, specifications require the force main to be clearly identified. [RSWF 48.7]

WR 84. Leakage tests for force mains are specified including testing methods and leakage limits. [RSWF 48.8]

*RSWF = *Recommended Standards for Wastewater Facilities* (1997) as adopted by rule 62-604.300(5)(g), F.A.C.

B. Explanation for Requirements or Standards Marked "X" in II(5)A. Above (Attach additional sheets if necessary):

Item 7-19: No Gravity Sewer is proposed as part of this Project.
Item 20-26: No sewer Manholes are proposed as part of this Project.
Item 27-33: No Stream Crossing is proposed as part of this Project.
Item 34-77: No Pump Station is proposed as part of this Project.

PART III - CERTIFICATIONS

(1) Collection/Transmission System Permittee

I, the undersigned owner or authorized representative* of Omar Castellon am fully aware that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. I agree to retain the design engineer or another professional engineer registered in Florida, to conduct on-site observation of construction, to prepare a certification of completion of construction, and to review record drawings for adequacy. Further, I agree to provide an appropriate operation and maintenance manual for the facilities pursuant to Rule 62-604.500(4), F.A.C., and to retain a professional engineer registered in Florida to examine (or to prepare if desired) the manual. I am fully aware that Department approval must be obtained before this project is placed into service for any purpose other than testing for leaks and testing equipment operation.

Signed _____ Date 11/17/2020

Name Omar Castellon Title Chief Engineer

**Attach a letter of authorization.*

(2) Owner of Collection/Transmission System

I, the undersigned owner or authorized representative* of Omar Castellon certify that we will be the Owner of this project after it is placed into service. I agree that we will operate and maintain this project in a manner that will comply with applicable Department rules. Also I agree that we will promptly notify the Department if we sell or legally transfer ownership of this project.

Signed _____ Date 11/17/2020
Name Omar Castellon Title Chief Engineer
Company Name City of Fort Lauderdale
Address 100 North Andrews Ave.
City Fort Lauderdale State FL Zip 33301
Telephone 954-828-5064 Fax _____ Email ocastellon@fortlauderdale.gov
** Attach a letter of authorization.*

(3) Wastewater Facility Serving Collection/Transmission System**

If this is a Notice of Intent to use a general permit, check here:

☒ The undersigned owner or authorized representative* of the George T. Lohmeyer wastewater facility hereby certifies that the above referenced facility has the capacity to receive the wastewater generated by the proposed collection system; is in compliance with the capacity analysis report requirements of Rule 62-600.405, F.A.C.; is not under a Department order associated with effluent violations or the ability to treat wastewater adequately; and will provide the necessary treatment and disposal as required by Chapter 403, F.S., and applicable Department rules.

If this is an application for an individual permit, check one:

☐ The undersigned owner or authorized representative* of the _____ wastewater facility hereby certifies that the above referenced facility has and will have adequate reserve capacity to accept the flow from this project and will provide the necessary treatment and disposal as required by Chapter 403, F.S., and applicable Department rules.

☐ The undersigned owner or authorized representative* of the _____ wastewater facility hereby certifies that the above referenced facility currently does not have, but will have prior to placing the proposed project into operation, adequate reserve capacity to accept the flow from this project and will provide the necessary treatment and disposal as required by Chapter 403, F.S., and applicable Department rules.

Name of Treatment Plant Serving Project George T. Lohmeyer
County Broward City Fort Lauderdale
DEP permit number FL Expiration Date
Maximum monthly average daily flow over the last 12 month period _____ MGD Month(s) used
Maximum three-month average daily flow over the last 12 month period _____ MGD Month(s) used
Current permitted capacity _____ MGD ☐ AADF ☐ MADF ☐ TMADF
Current outstanding flow commitments (including this project) against treatment plant capacity:

Signed _____ Date 11/20/2020
Name Omar Castellon Title Chief Engineer
Address 100 North Andrews Ave.
City Fort Lauderdale State FL Zip 33301
Telephone 954-828-5064 Fax _____ Email ocastellon@fortlauderdale.gov
** Attach a letter of authorization.*
*** If there is an intermediate collection system, a letter shall be attached certifying that the intermediate downstream collection system has adequate reserve capacity to accept the flow from this project.*

(4) Professional Engineer Registered in Florida

I, the undersigned professional engineer registered in Florida, certify that I am in responsible charge of the preparation and production of engineering documents for this project; that plans and specifications for this project have been completed; that I have expertise in the design of wastewater collection/transmission systems; and that, to the best of my knowledge and belief, the engineering design for this project complies with the requirements of Chapter 62-604, F.A.C.

(Affix Seal)

Signed Werner J Reinefeld
Date 11/16/2020

Name Werner J. Reinefeld Florida Registration No. 63042
Company Name WSP USA
Address 7650 Corporate Center Drive Suite 300
City Miami State FL Zip 33126
Telephone 305-514-31 Fax _____ Email werner.reinefeld@wsp.com
Portion of Project for Which Responsible Force Main Design

(Affix Seal)

Signed _____
Date _____

Name _____ Florida Registration No. _____
Company Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____ Fax _____ Email _____
Portion of Project for Which Responsible _____

(Affix Seal)

Signed _____
Date _____

Name _____ Florida Registration No. _____
Company Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____ Fax _____ Email _____
Portion of Project for Which Responsible _____

Environmental Protection and Growth Management Department
Environmental Engineering and Permitting Division
Domestic Wastewater Licensing Program
1 North University Drive, Mailbox #201 • Plantation, Florida 33324
954-519-1483 • FAX **954-519-1412** • ***broward.org/environment***

Application to Construct a Wastewater Collection/Transmission System

Pump Station in project ☐ Yes ☑ No
Utility Maintenance Provided for Project by ☑ Public ☐ Private

All items MUST be completed in full, and typed or printed in ink. All Signatures MUST be original.

Project Information:

Project Name: Pump Station B-4 Redundant Force Main File No.:

Street Address of Project: Bayview Drive WWTP: George T. Lohmeyer WWTP

Project Boundaries (if applicable): From George English Park to NE 21st Street (Along Bayview Drive)

City: Fort Lauderdale Zip Code: 33304

Section: 036 Township: 049 S Range: 042 E Folio Number: 494236000330

Applicant Information

Applicant Name: Omar Castellon, P.E.

Title: Chief Engineer ☑ Owner ☐ ☐ Agent (authorization letter needed)

Agency/Corporation: City of Fort Lauderdale

Agency/Corporate Address: 100 North Andrews Ave. Suite: 4th Floor

City: Fort Lauderdale State: FL Zip Code: 33301

Telephone No.: 954-828-5064 E-mail: ocastellon@fortlauderdale.gov

Engineer of Record

Engineer of Record (EOR): Werner J. Reinefeld, P.E.

EOR Address: 7650 Corporate Center Drive Suite: 300

City: Miami State: FL Zip Code: 33126

EOR Telephone No.: 305-514-3166 E-mail: werner.reinefeld@wsp.com

Flow Calculations

Ordinances, Chapter 27, Section 27-201.

☑ Single Family Home ☑ Multi Family ☐ Mobile Home ☑ Other

Other Standard Description: The project entails the replacement of the aging existing 16" force main with a new HDPE force main. No additional connections are being added.

Show Standard Calculation: GPD

Attach a required 8.5" x 11" sketch(s) which clearly delineates all boundaries to be serviced and the site location. anything of an environmental nature (I.E., wetlands, well contamination, etc.) on or adjacent to the construction site. This information must be kept current with the Environmental Engineering and Permitting Division (EEPD). Attach additional sheets as required.

Checklist for Project Submission

A. ■ General Permit:
For publicly maintained sanitary sewer systems, and when designed to all applicable standards, one (1) copy of this application and one (1) copy of the Florida DEP Form #62-604.300(8)(a) Notification/Application for Constructing a Domestic Wastewater Collection/Transmission System. Check the General Permit box on Page 1 of 11.

☐ Individual Permit:
For privately maintained sanitary sewer systems, projects requiring a Request for Information (RFI) for further staff review, a plant moratorium, dry line, designs other than standard, etc., one (1) copy of this application and the Florida DEP Form #62-604.300(8)(a) Notification/Application for Constructing A Domestic Wastewater Collection/Transmission System. Check Individual box on Page 1 of 11.

☐ Reuse/Reclaimed Water:
One (1) copy of the application along with the fee (see Page 3, Line 5) payable to the Broward County Board of County Commissioners.

☐ The appropriate fee is required, as calculated on Page 3, Line 7, payable to the: Broward County Board of County Commissioners.

B. ■ One (1) set of standard size engineering drawings no larger than 24" x 36" (folded to 9" x 12" maximum size), along with any other specifications the Engineer deems necessary to show the scope of the project.

Note: Minimum design information requirements:

1) Gravity sewers using anything greater than an 8" pipe or any other non-standard design criteria requires justification in writing.

2) A sewage pump station requires design calculations which consider superimposed pump curves, flotation calculations, and pipe sizes. Each lift station requires a new application package.

3) Any new project generating 10,000 GPD or larger flows into existing sanitary systems will require a study to assure adequate system capacities through the WWTP.

4) Existing sewage pump stations which have been in service for more than five years, or are approaching a built-out condition, will require an operational assessment prior to new construction licensing.

5) Signage is required in a conspicuous location at the lift station. The print should be a minimum 1" black block letter size and set indelibly to a flat contrasting color surface. It shall read (with appropriate phone numbers inserted) as follows:

FOR EMERGENCIES CALL... (***)*-****
FOR PUMP OUT CALL... (***)*-****
FOR MAINTENANCE CALL... (***)*-****
TO REPORT POLLUTION, CALL Broward County (954)-519-1499

Final certification requires a picture of the signage. Private maintenance also requires a contract between the Applicant and Sanitary Sewage Maintenance Contractor. This contract requires a termination clause.

Wastewater Collection System Construction License Fee Calculation

(Per Broward County Code, Chapter 40.23, effective 10/01/07)

1. Calculate the total length of all sanitary sewer piping (8" and larger), plus any size force main and reuse main piping (Do not include any lengths of the lateral piping 6" and smaller which serve a single building). If various sizes and/or materials have been used, list these assorted sizes, materials, and lengths on an attachment page 4A.

Total linear feet of gravity sewer 0

Total linear feet of force main 5,365

Total linear feet of reuse main 0

Total linear feet of pipe 5,365 X $0.30 = $ 1,609.50

Rounded off to the nearest dollar = $ 1,610.00 (1)

2. Determine number of sanitary manholes plus the number of sanitary conflict manholes.

Total manholes 0 X $50.00 = $ 0 (2)

3. New wetwell (Do not include those being refurbished).

New wetwell fee = $170.00 = $ 0 (3)

4. Determine the total horsepower per wetwell by adding up all individual pump horsepower in the wetwell. See chart below for applicable fee. Multiple lift stations must complete a separate application package for each station.

Operating condition 0 GPM @ 0 Ft. TDH

Total Wetwell Pump Horsepower 0 Total HP Fee(s) = $ 0 (4)

TOTAL HORSEPOWER	FEE
> 0 BUT ≤ 5	= $ 140.00
> 5 BUT < 15	= $ 260.00
≥ 15 BUT < 45	= $ 420.00
≥ 45 BUT < 65	= $ 530.00
≥ 65 BUT < 125	= $ 700.00
≥ 125 BUT < 200	= $ 800.00
≥ 200 PLUS	= $ 1,060.00

5. BC-EPGMD Fee Total* 1, 2, 3, & 4 (*If total is less than $210, fee is = to $210) = $ 1,610.00 (5)

6. Florida DEP Fee (See Below for appropriate fee) = $ 250 (6)

Florida DEP Form #62-604.300(8)(a) Notice of Intent to Use General Permit=$250
Florida DEP Form #62-604.300(8)(a) Individual Permit for a Domestic Wastewater Collection/Transmission System serving less than 10 EDUs =$300
Florida DEP Form #62-604.300(8)(a) Individual Permit for a Domestic Wastewater Collection/Transmission System serving 10 EDUs or more =$500
Reuse Systems are not delegated to EPGMD by DEP, thus require no state fee

7. Total DEP/BC-EPGMD Fee* (Total 5 & 6) = $ 1,860 (7)

***Submit a check payable to the BROWARD COUNTY BOARD OF COUNTY COMMISSIONERS**

Signatures of Project Principals

The undersigned agree to comply with Chapter 27 of the Broward County Code of Ordinances and all statements on the attached Florida DEP Forms. Construction of a sanitary sewer system without a valid Broward County License for Installation of Wastewater Collection/Transmission System is a violation of the Broward County Code of Ordinances, and may be subject to enforcement action resulting in civil penalties and/or fines.

A. Applicant Name/Title: Omar Castellon/Chief Engineer

Signature: _____ Date: 11/18/2020

B. Maintenance

Will any portion of this project be privately maintained? ☐ Yes ■ No

If yes define limit: N/A

NOTE: A Private Maintenance Contract is required at the time of certification, as prepared and signed by the Applicant, Public Utility Representative, and Contractor. The Private to Public maintenance boundaries must be defined, along with the connection point. A termination clause is required, and it must notify the Public Utility Representative and the Environmental Protection and Growth Management Department at 954-519-1483 of contract changes. In addition, the Applicant must provide a maintenance plan with emergency procedures and appropriate contacts for staff approval.

C. Collection/Transmission System Utility Representative/Title: Omar Castellon

Signature: _____ Date: 11/18/2020

Telephone No.: 954-828-5064 E-mail: Ocastellon@fortlauderdale.gov

Will any portion of this project be maintained by your public utility? ■ Yes ☐ No

If yes define limit: From tie-in at existing B-4 Pump Station to Tie-in to existing 42" force main along NE 20th St.

D. Wastewater Treatment Plant Authority/Title: Omar Castellon

Signature: _____ Date: 11/18/2020

Telephone No.: 954-828-5064 E-mail: Ocastellon@fortlauderdale.gov

E. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA:

I hereby certify that the engineering features of this wastewater collection/transmission system have been designed by me in accordance with Chapter 27 of the Broward County Code of Ordinances and Chapter 62-604 of the Florida Administrative Code.

Werner J Reinefeld

Digitally signed by Werner J Reinefeld
DN: cn=Werner J Reinefeld, c=US, o=WSP USA INC., ou=A01410D0000016E5A9A085900003E10, email=Werner.Reinefeld@wsp.com
Date: 2020.11.17 08:55:04 -05'00'

WERNER J. REINEFELD LICENSE No. 63042 STATE OF FLORIDA PROFESSIONAL ENGINEER

Signature of Engineer

Werner J. Reinefeld — Name (please type)

63042 — Florida Registration No.

WSP USA — Company Name

11/16/2020 — Date

7650 Corporate Center Drive Suite 300 — Company Address

(Affix Seal)

Miami — City

33126 — Zip

Please submit all application packages to:
Environmental Engineering and Permitting Division
Domestic Wastewater Licensing Program
1 North University Drive, Mailbox 201 • Plantation, Florida 33324
954-519-1483 • FAX 954-519-1412

Save Print

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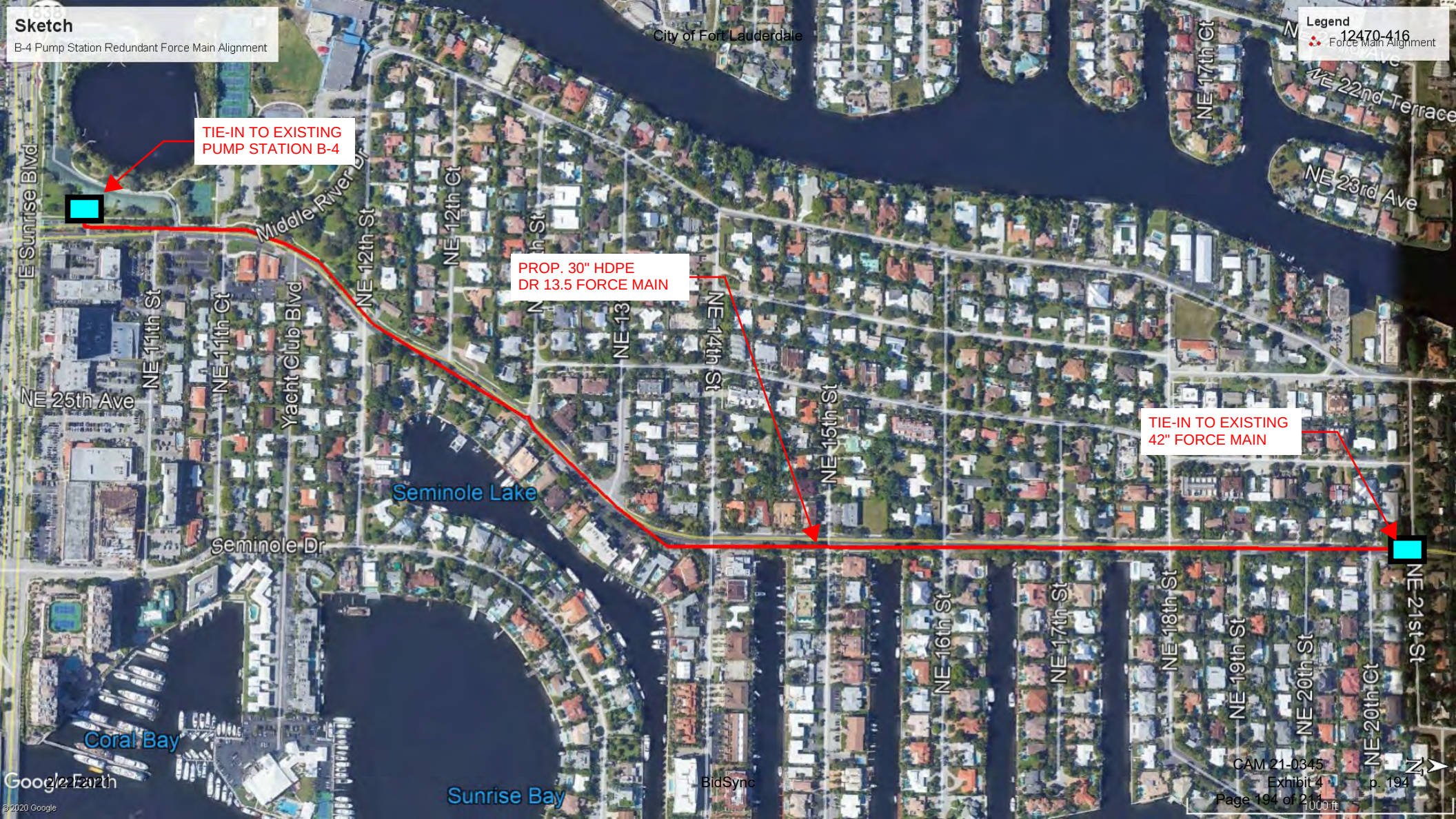
Sketch
B-4 Pump Station Redundant Force Main Alignment
Legend
12470-416
Force Main Alignment
City of Fort Lauderdale
TIE-IN TO EXISTING
PUMP STATION B-4
PROP. 30" HDPE
DR 13.5 FORCE MAIN
TIE-IN TO EXISTING
42" FORCE MAIN
E Sunrise Blvd
Middle River Dr
NE 12th St
NE 12th Ct
NE 13th St
NE 14th St
NE 15th St
NE 17th Ct
NE 22nd Terrace
NE 23rd Ave
NE 11th St
NE 11th Ct
Yacht Club Blvd
NE 25th Ave
Seminole Lake
Seminole Dr
NE 16th St
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NE 18th St
NE 19th St
NE 20th St
NE 20th Ct
NE 21st St
Coral Bay
Sunrise Bay
Google Earth
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BidSync
CAM 21-0345
Exhibit 4
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David Mancini & Sons, Inc.

2601 Wiles Road,
Pompano Beach, Florida 33073

(P): (754) 264-9594
(Fax): (954) 944-2040

WSP USA Inc.

7650 Corporate Center Drive, Suite 300
Miami, Florida 33126

(P): (305) 514-3169
(Fax): Number: (305) 261-5735

GENERAL CONDITIONS

Unless otherwise modified in the Projects Special Conditions, the following General Conditions shall be part of the Contract:

GC - 01 - DEFINITIONS - The following words and expressions, or pronouns used in their stead, shall wherever they appear in the Contract and the Contract Documents, be construed as follows:

"Addendum" or "Addenda" - shall mean the additional Contract provisions issued in writing, by the Engineer, prior to the receipt of bids.

"Bid" – shall mean the offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

"Bidder" – shall mean any person, firm, company, corporation or entity submitting a Bid for the Work.

"Bonds" –shall mean bid, performance and payment bonds and other instruments of security, furnished by Contractor and his surety in accordance with the Contract Documents.

“City” – shall mean the City of Fort Lauderdale, Florida, a Florida municipal corporation. In the event the City exercises its regulatory authority as a government body, the exercise of such regulatory authority and the enforcement of any rules, regulations, codes, laws and ordinances shall be deemed to have occurred pursuant to City’s authority as a governmental body and shall not be attributable in any manner to the City as a party to this Contract. For the purpose of this Contract, “City” without modification shall mean the City Commission, and/or City Manager or his/her designee(s) as applicable.

“Construction Manager” - shall mean the Public Works Director or his/her designee.

“Construction Project Manager” - shall mean the Public Works Director or his/her designee.

"Consultant" – shall mean a person, firm, company, corporation or other entity employed by the City to perform the professional services for the project.

“Contract Work” - shall mean everything expressed or implied to be required to be furnished and furnished by the Contractor by any one or more of the parts of the Contract Documents referred to in the Contract hereof except Extra Work as hereinafter defined, it being understood that, in case of any inconsistency in or between any part or parts of this Contract, the Public Works Director shall determine which shall prevail.

“Design Documents” – shall mean the construction plans and specifications included as part of a Bid/Proposal Solicitation prepared either by the City or by the Consultant under a separate Agreement with the City.

“Engineer” - shall mean the Public Works Director or his/her designee.

"Extra Work" - shall mean work other than that required by the Contract.

"Inspector" – shall mean an authorized representative of the City assigned to make necessary inspections of materials furnished by Contractor and of the Work performed by Contractor.

"Notice" - shall mean written notice sent by certified United States mail, return receipt requested, or sent by commercial express carrier with acknowledgement of delivery, or via fax or email, or by hand delivery with a request for a written receipt of acknowledgment of delivery and shall be served upon the Contractor either personally or to its place of business listed in the Bid.

“Owner” - shall mean the City of Fort Lauderdale.

“Project Manager” - shall mean the Public Works Director or his/her designee.

"Public Works Director" – shall mean the Public Works Director of the City of Fort Lauderdale, Florida or his/her designee(s).

"Site" - shall mean the area upon or in which the Contractor's operations are carried out and such other areas adjacent thereto as may be designated as such by the Public Works Director.

"Sub-contractor" - shall mean any person, firm, company, corporation or other entity, other than employees of the Contractor, who or which contracts with the contractor, to furnish, or actually furnishes labor and materials, or labor and equipment, or labor, materials and equipment at the site.

"Surety" - shall mean any corporation or entity that executes, as Surety, the Contractor's performance and payment bond securing the performance of this Contract.

GC - 02 - SITE INVESTIGATION AND REPRESENTATION - The Contractor acknowledges that it has satisfied itself as to the nature and location of the Work under the Contract Documents, the general and local conditions of the Site, particularly those bearing upon availability of transportation, disposal, handling and storage of materials, availability of labor, water, electric power, and roads, the conformation and conditions at the ground based on City provided reports, the type of equipment and facilities needed preliminary to and during the prosecution of the Work and all other matters which can in any way affect the Work or the cost thereof under the Contract Documents.

The Contractor acknowledges that it has conducted extensive tests, examinations and investigations and represents and warrants a thorough familiarization with the nature and extent of the Contract Documents, the Work, locality, soil conditions, moisture conditions and all year-round local weather and climate conditions (past and present), and, in reliance on such tests, examination and investigations conducted by Contractor and the Contractor’s experts, has determined that no conditions exist that would in any manner affect the Bid Price and that the project can be completed for the Bid Price submitted.

The Contractor, on its own, has made or caused to be made examinations, investigations, tests and studies of reports and related data in addition to those referred above, as Contractor deemed necessary to perform the Work at the Bid price set by the Contractor, within the contract time and in accordance with the other terms and conditions of the Contract Documents and the bid made by the Contractor; and no additional examinations, investigations, tests, reports or similar data are, or will be, required by Contractor to assure that the Work can be done at the Bid price set by the Contractor.

The Contractor further acknowledges that it has satisfied itself based on any geotechnical reports the City may provide and inspection of the project Site as to the character, quality, and quantity of surface and subsurface materials to be encountered from inspecting the site and from evaluating information derived from exploratory work that may have been done by the City or included in the Contract Documents and finds and has further determined that no conditions exist that would in any manner affect the Bid price and that the project can be completed for the Bid price submitted.

Any failure by the Contractor to acquaint itself with all the provided information and information obtained by visiting the project Site will not relieve Contractor from responsibility for properly estimating the difficulty or cost thereof under the Contract Documents. In the event that the actual subsurface conditions vary from the actual City provided reports, the Contractor shall notify the City and the Contract amount may be adjusted depending on the conditions, at the approval of the City.

GC - 03 - SUBSTITUTIONS - If the Contractor desires to use materials and/or products of manufacturer's names different from those specified in the Contract Documents, the Bidder requesting the substitution shall make written application as described herein. The burden of proving the equality of the proposed substitution rests on the Bidder making the request. To be acceptable, the proposed substitution shall meet or exceed all expressed requirements of the Contract Documents and shall be submitted upon the Contractor's letterhead, in addition to the "Contractor's Request for Substitution" form provided by the Public Works Director. The following requirements shall be met in order for the substitution to be considered:

1. Requests for substitution shall reach the Public Works Director no less than ten (10) Working Days prior to the date set for opening of Bids; and

2. Requests for substitution shall be accompanied by such technical data, as the party making the request desires to submit. The Public Works Director will consider reports from reputable independent testing laboratories, verified experience records from previous users and other written information valid in the circumstances; and

3. Requests for substitution shall completely and clearly indicate in what respects the materials and/or products differ from those indicated in the Contract Documents; and

4. Requests for substitution shall be accompanied by the manufacturer's printed recommendations clearly describing the installation, use and care, as applicable, of the proposed substitutions; and

5. Requests for substitution shall be accompanied by a complete schedule of changes in the Contract Documents, if any, which must be made to permit the use of the proposed substitution; and

If a proposed substitution is approved by the Public Works Director, an addendum will be issued to prospective bidders not less than three (3) working days prior to the date set for opening of bids. Unless substitutions are received and approved as described above, the successful Bidder shall be responsible for furnishing materials and products in strict accordance with the Contract Documents.

GC - 04 - CONTROL OF THE WORK - The Public Works Director shall have full control and direction of the Work in all respects. The Public Works Director and/or his authorized designee(s) shall, at all times, have the right to inspect the Work and materials. The Contractor shall furnish all reasonable facilities for obtaining such information, as the Public Works Director may desire respecting the quality of the Work and materials and the manner of conducting the Work. Should the Contractor be directed or permitted to perform night Work, or to vary the period which work is ordinarily carried on in the daytime, he shall give ample notice to the Public Works Director so that proper and adequate inspection may be provided. Such Work shall be done only under such regulations as are furnished in writing by the Public Works Director, and no extra compensation shall be allowed to the Contractor therefore. In the event of night work, the Contractor shall furnish such light, satisfactory to the Public Works Director, as will ensure proper inspection. Nothing herein contained shall relieve the Contractor from compliance with any and all City ordinances relating to noise or Work during prohibited hours.

The Contractor shall keep the Public Works Director informed, a reasonable time in advance, as to his need for grades and lines in order that the same may be furnished and all necessary measurements made for records and for payment with the minimum of inconvenience to the Public Works Director or of delay to the Contractor. The Contractor shall submit to the Public Works Director or Inspector on the job a written request outlining the streets, etc., for which the Contractor desires lines and grades. It is the intention not to delay the Work for the giving of lines and grades, but when necessary, work operations shall be suspended for such reasonable time as the Public Works Director may require for this purpose. However, such cost increases shall be authorized either by the City Manager and/or designee, or the City Commission based upon the purchasing threshold amounts provided for in Chapter 2 of the City of Fort Lauderdale’s Code of Ordinances.

GC - 05 - SUB-CONTRACTOR - The Contractor shall not sublet, in whole or any part of the Work without the written consent and approval of the Public Works Director. Within ten (10) days after official notification of starting date, the Contractor must submit in writing, to the Public Works Director, a list of all Sub-contractors. No Work shall be done by any Sub-contractor until such Subcontractor has been officially approved by the Public Works Director. A sub-contractor not appearing on the original list will not be approved without written request submitted to the Public Works Director and approved by the Public Works Director. In all cases, the Contractor shall give his personal attention to the Work of the Sub-contractors and the Sub-contractor is liable to be discharged by the Contractor, at the direction of the Public Works Director, for neglect of duty, incompetence or misconduct.

Acceptance of any sub-contractor, other person, or organization by the Public Works Director shall not constitute a waiver of any right of Public Works Director to reject defective Work or Work not in conformance with the Contract Documents.

Contractor shall be fully responsible for all acts and omissions of his Sub-contractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between City and any sub-contractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of City to pay or to see to the payment of any moneys due to any sub-contractor or other person, or organization, except as may otherwise be required by law.

GC - 06 - QUANTITIES - It is mutually agreed that the proposal shows the approximate amounts only along with the Plans and the general location. It is also mutually agreed that no change will be made involving any departure from the general scheme of the Work and that no such change involving a material change in cost, either to the City or Contractor, shall be made, except upon written permission of the City. However, the Public Works Director shall have the right to make minor alternations in the line, grade, plan, form or materials of the Work herein contemplated any time before the completion of the same. That if such alterations shall diminish the quantity of the Work to be done, such alterations shall not constitute a claim for damages or anticipated profits. That if such alterations increase the amount of the Work to be done, such increase shall be paid for according to the quantity actually performed and at the unit price or prices stipulated therefore in the Contract.

The City shall, in all cases of dispute, determine the amount or quantity of the several kinds of Work which are to be paid for under this Contract, and shall decide all questions relative to the execution of the same, and such estimates and decisions shall be final and binding.

Any Work not herein specified, which might be fairly implied as included in the Contract, of which the City shall judge, shall be done by the Contractor without extra charge. However, such cost increases shall be authorized either by the City Manager and/or designee, or the City Commission based upon the purchasing threshold amounts provided for in Chapter 2 of the City of Fort Lauderdale's Code of Ordinances.

GC - 07 - NO ORAL CHANGES - Except to the extent expressly set forth in the Contract, no change in, or modification, termination or discharge of the Contract in any form whatsoever, shall be valid or enforceable unless it is in writing and signed by the parties charged, therewith or their duly authorized representative.

GC - 08 - PERMITS AND PROTECTION OF PUBLIC – Permits on file with the City and or those permits to be obtained, shall be considered directive in nature, and will be considered a part of this Contract. A copy of all permits shall be given to the City and become part of the Contract Documents. Terms of permits shall be met prior to acceptance of the Work and release of the final payment.

The Contractor shall be required to observe all the ordinances in relation to obtaining permits for occupying, excavating, or in any way obstructing the streets and alleys. He shall erect and maintain barricades and sufficient safeguards around all excavations, embankments or obstructions; he shall place sufficient warning lights at or near the Work; keep the same burning from sunset to sunrise, employ watchmen, and strictly obey all laws and ordinances controlling or limiting those engaged in similar work.

Where there are telephones, light or power poles, water mains, conduits, pipes or drains or other construction, either public or private, in or on the streets or alleys, the Work shall be so conducted that no interruption or delay will be caused in the operation or use of the same. Proper written notice shall be given, and all the facilities, afforded the owners of such construction encountered or likely to be encountered, as will enable them to preserve the same from injury.

The Contractor shall not be permitted to interfere with public travel and convenience by grading or tearing up streets indiscriminately, but the Work of constructing the various items in this contract shall proceed in an orderly, systematic and progressive manner.

Contractor shall not load nor permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

Where lifting operations involving the use of specialized cranes are required as part of construction, Contractor must undertake the following investigation and submit the results and documentation to the Engineer prior to commencing any lifting operations: marking a very specific area in the field for the placement of the crane; a drawing showing the limitations of the job operation (i.e. not over adjacent properties or pedestrian and high vehicular traffic areas); underground utility exploration in the vicinity of the crane location, which may include ground penetrating radar to identify voids or old pipe or other subsurface features that could lead to sudden failure; assessment of the underlying soil and roadway materials and a worst case analysis based on entire load being distributed on just one or two outriggers; provision of properly sized pads under the outriggers; loading charts from manufacturer showing allowable configurations/loads; and inspection to make sure crane operation is in accordance with the permit conditions.

GC - 09 - DISEASE REGULATIONS - The Contractor shall enforce all sanitary regulations and take all precautions against infectious diseases as the Public Works Director may deem necessary. Should any infectious or contagious diseases occur among his employees, he shall arrange for the immediate removal of the employee from the Site and isolation of all persons connected with the Work.

GC - 10 - CONTRACTOR TO CHECK PLANS, SPECIFICATIONS, AND DATA - The Contractor shall verify all dimensions, quantities, and details shown on the plans, supplementary drawings, schedules, or other data received from the Public Works Director, and shall notify the Public Works Director of all errors, omissions, conflicts and discrepancies found therein within three (3) working days of discovery. Failure to discover or correct errors, conflictions, or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory Work, faulty construction, or improper operation resulting therefrom nor from rectifying such condition at its own expense.

GC - 11 - SUPPLEMENTARY DRAWINGS - When, in the opinion of the Public Works Director, it becomes necessary to explain more fully the Work to be done, or to illustrate the work further, or to show any changes which may be required, drawings, known as supplementary drawings, with specifications pertaining thereto, will be prepared by the Public Works Director and copies will be given to the Contractor.

The supplementary drawings shall be binding upon the Contractor with the same force as the original Plans. Where such supplementary drawings require either less or more than the estimated quantities of work, credit to the City or compensations therefore to the Contractor shall be subject to the terms of the Contract.

GC - 12 - MATERIALS AND WORKMANSHIP - All material and workmanship shall, in every respect, be in conformity with approved modern practice and with prevailing standards of performance and quality. In the event of a dispute, the Public Works Director's decision shall be final. Wherever the Plans, Specifications, Contract Documents, or the directions of the Public Works Director are unclear as to what is permissible and/or fail to note the quality of any Work, that interpretation will be made by the Public Works Director, which is in accordance with approved modern practice, to meet the particular requirements of the Contract.

In all cases, new materials shall be used, unless this provision is waived by notice from the City in writing.

GC - 13 - SAFEGUARDING MARKS - The Contractor shall safeguard all points, stakes, grade marks, monuments, and bench marks made or established on the Work, bear the cost of re-establishing same if disturbed, or bear the entire expense of rectifying Work improperly installed due to not maintaining or protecting or for removing without authorization, such established points, stakes and marks. The Contractor shall safeguard all existing and known property corners, monuments and marks not related to the Work and, if required, shall bear the cost of having them re-established by a licensed surveyor if disturbed or destroyed during the course of construction.

GC - 14 - EXISTING UTILITY SERVICE - All existing utility service shall be maintained with a minimum of interruption at the expense of the Contractor.

GC - 15 - JOB DESCRIPTION SIGNS – Contractor, at Contractor's expense, shall furnish, erect, and maintain suitable weatherproof signs on jobs over $100,000 containing the following information:

1. City Seal (in colors)
2. Project or Improvement Number
3. Job Description
4. Estimated Cost
5. Completion Date

Minimum size of sign shall be four feet high, eight feet wide and shall be suitably anchored. The entire sign shall be painted and present a pleasing appearance. Exact location of signs will be determined in the field. Two (2) signs will be required, one at each end of the job. All costs of this work shall be included in other parts of the work.

GC - 16 - FLORIDA EAST COAST RIGHT-OF-WAY - Whenever a City contractor is constructing within the Florida East Coast Railway Company's Right-of-Way, it will be mandatory that the contractor carry bodily injury and property damage insurance in amounts satisfactory to the Florida East Coast Company. This insurance requirement shall be verified by the contractor with the Florida East Coast Company prior to commencing work, and maintained during the life of the Contract.

GC - 17 - ACCIDENTS - The Contractor shall provide such equipment and facilities as are necessary and/or required, in the case of accidents, for first aide services to be provided to a person who may be injured during the project duration. The Contractor shall also comply with the OSHA requirements as defined in the United States Labor Code 29 CFR 1926.50.

In addition, the Contractor must report immediately to the Public Works Director every accident to persons or damage to property, and shall furnish in writing full information, including testimony of witnesses regarding any and all accidents.

GC - 18 - SAFETY PRECAUTIONS - Contractor must adhere to the applicable environmental protection guidelines for the duration of a project. If hazardous waste materials are used, detected or generated at any time, the Project Manager must be immediately notified of each and every occurrence. The Contractor shall comply with all codes, ordinances, rules, orders and other legal requirements of public authorities (including OSHA, EPA, DERM, the City, Broward County, State of Florida, and Florida Building Code), which bear on the performance of the Work.

The Contractor shall take the responsibility to ensure that all Work is performed using adequate safeguards, including but not limited to: proper safe rigging, safety nets, fencing, scaffolding, barricades, chain link fencing, railings, barricades, steel plates, safety lights, and ladders that are necessary for the protection of its employees, as well as the public and City employees. All riggings and scaffolding shall be constructed with good sound materials, of adequate dimensions for their intended use, and substantially braced, tied or secured to ensure absolute safety for those required to use it, as well as those in the vicinity. All riggings, scaffolding, platforms, equipment guards, trenching, shoring, ladders and similar actions or equipment shall be OSHA approved, as applicable, and in accordance with all Federal, State and local regulations.

GC - 19 - DUST PREVENTION - The Contractor shall, by means of a water spray, or temporary asphalt pavement, take all necessary precautions to prevent or abate a dust nuisance arising from dry weather or Work in an incomplete stage. All costs of this Work shall be included in cost of other parts of the Work.

Should the Contractor fail to abate a dust nuisance by the above methods, he will be required to immediately construct temporary patches per City standards.

GC - 20 - PLACING BARRICADES AND WARNING LIGHTS - The Contractor shall furnish and place, at his own expense, all barricades, warning lights, automatic blinker lights and such devices necessary to properly protect the work and vehicular and pedestrian traffic. Should the Contractor fail to erect or

maintain such barricades, warning lights, etc., the Public Works Director may, after 24 hours' notice to the Contractor, proceed to have such barricades and warning lights placed and maintained by City or other forces and all costs incurred thereof charged to the Contractor and may be retained by the City from any monies due, or to become due, to the Contractor.

GC - 21 - TRAFFIC CONTROL - The Contractor shall coordinate all Work and obtain, through the City's Transportation and Mobility Department, Broward County, Florida Department of Transportation, as applicable, any permits required to detour traffic or close any street before starting to work in the road. The following section: Part VI Traffic Controls for Street and Highway Construction and Maintenance Operations, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, U.S. Department of Transportation Federal Highway Administration, 2009, or current edition, shall be used as a guide for requirement and placement of traffic control devices, signs and barricades. The Public Works Director shall determine requirements for the above. The above publication is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. In the event that a Maintenance of Traffic (MOT) Plan is required, the Plan shall be prepared by an A.A.S.T.A. certified technician.

All traffic control devices, flashing lights, signs and barricades shall be maintained in working condition at all times.

GC - 22 - COORDINATION - The Contractor shall notify all utilities, transportation department, etc., in writing, with a copy to the Public Works Director before construction is started and shall coordinate its Work with them. The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal, construction and rearrangement operations in order that services rendered by these parties will not be unnecessarily interrupted.

The Contractor shall arrange its Work and dispose of his materials so as to not interfere with the operation of other contractors engaged upon adjacent work and to join its Work to that of others in a proper manner and to perform its Work in the proper sequence in relation to that of other contractors all as may be directed by the Public Works Director.

Each Contractor shall be responsible for any damage done by it or its agents to the work performed by another contractor.

The Contractor shall contact the Broward County Transportation Department and the Florida Department of Transportation, as applicable, to verify and obtain location of any and all traffic conduits, loops, and street light underground services.

GC - 23 - WATER - Bulk water used for construction, flushing pipelines, and testing shall be obtained from fire hydrants. Contractor shall make payment for hydrant meter at Treasury Billing Office, 1st Floor, City Hall, 100 N. Andrews Avenue. With the paid receipt, contractor can pick up hydrant meter at the utility location office. No connection shall be made to a fire hydrant without a meter connected.

GC - 24 - PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES - As to any contract for goods or services of $1 million or more and as to the renewal of any contract for goods or services of $1 million or more, subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2019), as may be amended or revised. As to any contract for goods or services of any amount and as to the renewal of any contract for goods or services of any amount, the Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2019), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2019), or is engaged in a boycott of Israel or has been

engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2019), as may be amended or revised.

GC - 25 - LOCATION OF UNDERGROUND FACILITIES - If the Proposer, for the purpose of responding to this solicitation, requests the location of underground facilities through the Sunshine State One-Call of Florida, Inc. notification system or through any person or entity providing a facility locating service, and underground facilities are marked with paint, stakes or other markings within the City pursuant to such a request, then the Proposer shall be deemed non-responsive to this solicitation in accordance with Section 2-184(5) of the City of Fort Lauderdale Code of Ordinances.

GC - 26 - USE OF FLORIDA LUMBER TIMBER AND OTHER FOREST PRODUCTS - In accordance with Florida Statute 255.20 (3), the City specifies that lumber, timber, and other forest products used for this Project shall be produced and manufactured in the State of Florida if such products are available and their price, fitness, and quality are equal. This requirement does not apply to plywood specified for monolithic concrete forms, if the structural or service requirements for timber for a particular job cannot be supplied by native species, or if the construction is financed in whole or in part from federal funds with the requirement that there be no restrictions as to species or place of manufacture. The Bidder affirms by submitting a bid response to this solicitation that they will comply with section 255.20 (3) Florida Statutes.

GC - 27 - PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT: The Proposer's response to the Solicitation is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this Solicitation and the Contract to be executed for this Solicitation, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the Solicitation purporting to require confidentiality of any portion of the Proposer's response to the Solicitation, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the Solicitation constitutes a Trade Secret. The City's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals purporting to be subject to copyright protection in full or in part will be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE SOLICITATION AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE SOLICITATION OR ANY PART THEREOF AS COPYRIGHTED.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Telephone Number: (954) 828-5002

Mailing Address: **City Clerk's Office**
100 N. Andrews Avenue
Fort Lauderdale, Florida 33301-1016

E-mail: **prrcontract@fortlauderdale.gov**

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.

2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2019), as may be amended or revised, or as otherwise provided by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the Contractor does not transfer the records to the City.

4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

Rev. 5/8/2020

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

> 3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).
>
> 3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME	RELATIONSHIPS

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

David Mancini Authorized Signature	**President** Title
David Mancini Name (Printed)	**02/17/2021** Date

CONTRACT PAYMENT METHOD

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept these credit cards or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below you agree with these terms.

Please indicate which credit card payment you prefer:

- [ ] MasterCard
- [x] Visa

David Mancini & Sons Inc
Company Name

David Mancini
Name (Printed)

David Mancini
Signature

02/17/2021
Date

President
Title

CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH NON-DISCRIMINATION PROVISIONS OF THE CONTRACT

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-187(c), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

The Contractor shall not, in any of his/her/its activities, including employment, discriminate against any individual on the basis of race, color, national origin, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, or marital status.

1. The Contractor certifies and represents that he/she/it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, as amended by Ordinance C-18-33 (collectively, "Section 2-187").

2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.

3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.

4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.

5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

David Mancini
Authorized Signature

David Mancini, President
Print Name and Title

02/17/2021
Date

TRENCH SAFETY

Bidder acknowledges that included in the appropriate bid items of his bid and in the Total Bid Price are costs for complying with the Florida Trench Safety Act, Florida Statutes 553.60 – 553.64. The bidder further identifies the costs of such compliance to be summarized below:

Trench Safety Measure (Description)	Units of Measure (LF/SF)	Unit (Quantity)	Unit Cost	Extended Cost
A. **Trench Box**	**LS**	**1**	$**10,000**	$**10,000**
B.			$	$
C.			$	$
D.			$	$

Total: $**10,000**

The bidder certifies that all trench excavation done within his control in excess of five feet (5') in depth shall be in accordance with the Occupational Safety and Health Administration's excavation safety standards, C.F.R. s. 1926.650 Subpart P., and the Florida Trench Safety Act, Florida Statutes 553.60-553.64.

Failure to complete the above may result in the bid being declared non-responsive.

DATE: **02/17/2021** **David Mancini**
(SIGNATURE)

STATE OF: **Florida**COUNTY OF: **Broward**

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

David Mancini
(Name of Individual Signing)

David Manciniwho, after first being duly sworn by me,
David Mancini affixed his/her signature in the space provided above on this **17**day of **February**, 20**21**.

Alejandra Suarez
NOTARY PUBLIC

My Commission Expires: **05/24/2023**

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT

MINORITY BUSINESS ENTERPRISE (MBE) - WOMEN BUSINESS ENTERPRISE (WBE)

PRIME CONTRACTOR IDENTIFICATION FORM

In order to assist us in identifying the status of those companies doing business with the City of Fort Lauderdale, this form must be completed and returned with your bid package.

Name of Firm:	**David Mancini & Sons Inc**
Address of Firm:	**2601 Wiles Rd Pompano Beach FL 33073**
Telephone Number:	**954-977-3556**
Name of Person Completing Form:	**David Mancini**
Title:	**President**
Signature:	**David Mancini**
Date:	**02/17/2021**
City Project Number:	**Bid No. 12470-416**
City Project Description:	**Re-Bid Design Build Services for Pump Station B-4 Redundant Force Main P12567**

Please check the item(s) which properly identify the status of your firm:

- [x] Our firm is not a MBE or WBE.
- [ ] Our firm is a MBE, as at least 51 percent is owned and operated by one or more socially and economically disadvantaged individuals.
  - [ ] American Indian [ ] Asian [ ] Black [ ] Hispanic
- [ ] Our firm is a WBE, as at least 51 percent is owned and operated by one or more women.
  - [ ] American Indian [ ] Asian [ ] Black [ ] Hispanic

MBE/WBE CONTRACTOR INFORMATION

The City, in a continuing effort, is encouraging the increased participation of minority and women-owned businesses in Public Works Department related contracts. Along those lines, we are requiring that each firm provide documentation detailing their own programs for utilizing minority and women-owned businesses.

Submit this information as a part of this bid package and refer to the checklist, to ensure that all areas of concern are covered. The low responsive bidder may be contacted to schedule a meeting to discuss these objectives. It is our intention to proceed as quickly as possible with this project, so your cooperation in this matter is appreciated.

CONTRACTOR CHECKLIST

☑ List Previous City of Fort Lauderdale Contracts

- Water Main and Force Main Intracoastal waterway crossings via HDD at Las Olas Blvd
-Grit Chamber Rehabilitation
-Prospect Rd Butterfly Valves
-Rio Vista Emergency 54-Inch New Redundant Sewer Force Main Design Build

☑ Number of Employees in your firm **86**
--Percent (**8**%) Women
--Percent (**87**%) Minorities
--Job Classifications of Women and Minorities

Project Managers, administra ve office personnel, Field Supervisors, Foremen, Equipment Operators, drivers, and labors.

☑ Use of minority and/or women subcontractors on past projects.

- E&N Construc on.
- Bird's Eye View.
- Champion Control, Inc.
- Corcel Corp.
- South Florida Electrical

☑ Nature of the work subcontracted to minority and/or women-owned firms.

- Asphalt Milling & Resurfacing.
- Pre-construc on Video
- Instrumenta on.
- Material Supplier.
- Electrician

☑ How are subcontractors notified of available opportunities with your firm?

Bids plan-holder lists and direct quote request.

☑ Anticipated amount to be subcontracted on this project.

20% - 25%

☑ Anticipated amount to be subcontracted to minority and/or women-owned businesses on this project.

2%

E-VERIFY AFFIRMATION STATEMENT

RFP/Bid /Contract No: **Bid No. 12470-416**

Project Description: **Re-Bid Design Build Services for Pump Station B-4 Redundant Force Main P12567**

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

(a) all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,

(b) all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: **David Mancini & Sons, Inc.**

Authorized Company Person's Signature: **David Mancini**

Authorized Company Person's Title: **President**

Date: **02/17/2021**

9/15/2020