

12-INCH WATER MAIN ON DIXIE HIGHWAY (Between SE / SW 3RD ST. and Pembroke Road)

City of Hallandale Beach

Project Number P2415

April 30, 2025
Revision 02

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Background and Purpose

The City of Hallandale Beach (City) has selected AECOM Technical Services, Inc. (AECOM) to provide engineering services related to the construction of approximately 5,350 linear feet of 12-inch water main (WM) to replace an existing 6-inch WM. The method of installation will be by horizontal directional drill (HDD) or open cut or a combination of both on Dixie Highway from SE / SW 3rd Street to Pembroke Road. A jack and bore under the Florida East Coast railroad tracks to connect the WM on SE 3rd St. to Dixie Highway will be required.

The intent of services to be provided by AECOM under this contract is to:

1. Prepare contract documents to support permitting and construction of the new water main.
2. Provide limited construction administrative services during the construction phase, and certification of the project.

A.1 Design Scope of Services

In accordance with Resolution No. 2020-054, RFP #FY 2018-2019-012 Continuing Professional Architectural and Engineering Services and Other Services, the following scope of services is provided by AECOM Technical Services, Inc. (AECOM) as requested by the CITY.:

Data Collection

This Work Authorization (WA) addresses the necessary engineering services for the design, permitting and construction of approximately 5,350 linear feet of 12-inch WM along Dixie Highway. AECOM will undertake a data acquisition exercise to obtain information that is pertinent to developing the final approach in terms of alignment, grade, and construction methodology for constructing the 12-Inch WM. As such, AECOM will conduct a minimum of one (1) reconnaissance visit; review record documents provided by the City including GIS information of water and sewer as-builts, and easement information; secure a utility design ticket; coordinate with stakeholders and utility owners to obtain as-built data for structures within the project corridor, and other utilities including telephone, electric, fiber-optic, gas, and drainage.

Survey / Utility Locates

AECOM will retain ZEMAN Consulting Group Inc., (Zeman) as a subconsultant to prepare the topographic survey and Subsurface Utility Exploration (SUE) services necessary for the preparation of the construction documents. See attached proposal from ZEMAN and the following scope of services and deliverables that they will provide:

A Specific Purpose / Topographic Survey (approx. 3,350 feet) will be prepared and will meet and be certified to the applicable portions of the Standards of Practice as set forth in the Florida Board of Professional Surveyors and Mappers in rule 5J-17.050-0.52, Florida Administrative Code, pursuant to Chapter 472.027, Florida Statutes governing Surveying and Mapping.

The survey will be along Dixie Highway from Right of Way (ROW) to Right of Way (ROW) (approximately 50 feet). Starting at the full intersection of Dixie Highway and Pembroke Road to the full intersection of SE 3rd Street. Survey will extend 100' east to include the railroad crossing.

Above-ground data will be obtained to create a surface of the existing conditions. Topography will include visible fixed improvements such as trees, natural ground, back of curbing, sidewalk, above-ground utilities, etc. Sufficient data will be obtained to create a DTM surface. Grade breaks will be included. The maximum interval between cross-sections will be 50 feet.

Cross Sections as described below:

- 50-foot interval cross sections will be shown on the survey

Subsurface Utility Designation as described below:

- Designated utilities within the project limits utilizing Ground Penetrating Radar (GPR) and Electromagnetic (EM) equipment. Utilities will be painted or flagged and located by survey crew. The designated lines will be added to the survey as Quality Level “B” linework.

Exclusions: – The following utilities and/or components will not be investigated:

- a. Tree tags or separate “Tree Survey”.
- b. Vac Holes are not included in the base survey fee, however, they are provided as Optional Services, below.

Vacuum Excavation Verification Holes (VVH's) or Quality Level “A”.

Up to fifty 50 VVH's (including field survey and office integration).

Geotechnical Investigation

Geotechnical investigation services shall be included in this WA. Geotechnical investigation services will be performed by WIRX Engineering. Their proposal will include up to twelve (12) locations of the soil borings approximately 500 feet apart and two additional soil borings to a depth of 30 feet for the proposed Jack and Bore under the FEC railroad.

Geotechnical Field Exploration

The proposed scope of work for the project consists of the following:

1. Visit the site to field stake/mark the planned boring locations and observe the existing site conditions.
2. Contact Sunshine 811 to request field location and clearance of underground utilities in the areas of the borings as per Florida Statutes. See the next page for further details.
3. Prepare a Temporary Traffic Control Plan and implement it during our field exploration for traffic control and safety purposes in accordance with the FDOT Standard Plans for Road Construction. See the next page for further details.
4. Mobilize a truck-mounted drill rig and personnel.
5. Perform twelve (12) Standard Penetration Test (SPT) borings to a depth of 10 feet in accordance with ASTM D-1586.
6. Perform two (2) Standard Penetration Test (SPT) borings to a depth of 30 feet in accordance with ASTM D-1586.
7. Following completion of the drilling operations, the boreholes will be backfilled with grout and the asphalt surface patched with cold patch.

8. Visually classify the collected soil samples in the field with laboratory confirmation/QC verification of classifications using the Unified Soil Classification System (USCS).
9. Assign laboratory testing of selected soil samples for index property determinations limited to moisture content, fines content, and organic content tests to assist in classifying the soils for engineering purposes (ASTM 2487).
10. Perform a geotechnical analysis and prepare a geotechnical engineering report which will include, but not necessarily be limited to:
 - Detailed graphical logs of the soil borings showing the groundwater level and soil classifications.
 - Results of the laboratory tests.
 - Pavement restoration recommendations.
 - Site preparation recommendations.
 - Recommendations for design regarding excavation, trenching, pipeline installation, shoring requirements, fill and backfill, and compaction for the proposed work.

We presume that a Right-of-Way Construction permit will not be needed. A Temporary Traffic Control Plan will be prepared and implemented during our field exploration for safety purposes. If a permit is required, please notify us and we will revise our fee estimate accordingly.

Prior to the mobilization of the drilling equipment, WIRX will notify Sunshine State One-Call of Florida, Inc. (SSOCOF) of the planned exploration to allow affected utility companies the opportunity to mark the location of buried utility lines in the proposed exploration areas. The locating process will require a lead time of 3 to 5 business days. WIRX cannot take responsibility for damages to private underground lines or structures and/or underground services which do not subscribe to SSOCOF; their locations should be provided by the Client prior to commencement of the fieldwork.

Geotechnical Laboratory Services

Laboratory services shall include the following:

- Classify and stratify the collected soil samples in the field with laboratory confirmations/QC verifications of classifications using the Unified Soil Classification System (USCS). A log presenting this information and groundwater levels shall be prepared for each boring and test excavation.
- Laboratory testing of selected soil samples for index properties limited to moisture content, full sieve analysis, fines content, and organic content.
- Assign and perform a series of laboratory tests to ascertain soil index properties of the soils encountered in each boring.

Geotechnical Professional Services

Prepare a geotechnical report which will include, but not necessarily limited to:

- Overall site map showing the locations of all soil borings.
- General evaluation of the site considering the proposed project and estimated subsurface conditions.
- Ground water level elevations (including seasonal fluctuation and anticipation of groundwater levels and methods for handling it during construction).

- Soil borings subsurface profiles showing soil classifications, depth, groundwater, and standard penetration “N values”, and soil description.
- Soil classification along with engineering properties of all soils according to their soil classification
- Results of soil laboratory testing
- Foundation recommendations for all proposed structures.
- Recommended allowable soil bearing pressures.
- Recommended soil Modulus of Subgrade Reaction (K) for each structure (e.g., stormwater manholes).
- Locations and descriptions of any existing fill or potentially deleterious materials encountered at the site that may interfere with construction progress or structure performance.
- Lateral earth pressure and other soil parameters for the design of below grade structures. Engineering properties shall include but not be limited to:
 - Dry unit weight of soil
 - Submerged unit weight of soil
 - Lateral coefficient for at-rest condition
 - Lateral coefficient for passive condition
 - Lateral coefficient for active condition
 - Soil internal friction angle
- Address adequacy of existing soil for use in backfilling under and against structures (e.g., seawalls and stormwater manholes).
- It is anticipated that trenches of 10-feet deep may be needed for construction of proposed pipeline. Provide the following relative to trenching:
 - Permissible excavation slopes
 - General sheeting and shoring recommendations
 - Suitability of excavated material for use as fill or backfill

Deliverables

1. Electronic copy of signed and sealed topographic survey and SUE report.
2. Electronic copy of geotechnical data and engineering report, including one signed and sealed copy.

Design Development - Design Drawings, Specifications and Construction Documents

To develop the Contract documents for this project, AECOM will:

- Prepare construction plans and technical specifications detailing the installation of a new 12-inch WM from SE 3rd Street to Pembroke Road, replacing an existing 6-inch WM (approximately 5,350 linear feet). The WM alignment will be based on the findings of the utility locates. The new WM will be either HDD or open cut or a combination of both. The pipe shall be either C900 PVC, DIP or HDPE or a combination.
- Submit 60%, 90% and 100% progress drawings. The drawings will include details such as plans and profiles, piping interconnections, associated valves for main isolation, and construction notes. Construction Plans will be in AutoCAD latest version. Technical

specifications will be prepared in CSI format. Broward County and the City of Hallandale Beach standard documents will be utilized to the fullest extent possible. Opinion of Probable Construction Cost (OPCC) estimates will be provided with the 60%, 90%, and 100% design submittal. As part of our ISO 9001 certification, AECOM will be conducting internal QA/QC reviews at major completion milestones for the project to enhance value to the City.

- Request that the City of Hallandale Beach review and provide comments on the 60%, 90% and 100% submittals.
- Incorporate all comments provided by the City of Hallandale Beach and permitting agencies in the 100% design package. The final Issued for Bid Plans and Technical Specifications will be prepared based upon the review comments received from City of Hallandale Beach on the 100% submittal. Submit the Final Construction Plans and Technical specifications to the City of Hallandale Beach for advertising and bidding of the construction contract.

Table 1 - Preliminary List of Drawings

<u>GENERAL</u>	
G-1	COVER WITH INDEX OF DRAWING SHEETS AND LOCATION MAP
G-2	NOTES, LEGEND, AND ABBREVIATIONS
G-3	GENERAL NOTES
G-4	TOPOGRAPHIC SURVEY SHEET 1
G-5	TOPOGRAPHIC SURVEY SHEET 2
G-6	TOPOGRAPHIC SURVEY SHEET 3
G-7	TOPOGRAPHIC SURVEY SHEET 4
G-8	TOPOGRAPHIC SURVEY SHEET 5
G-9	TOPOGRAPHIC SURVEY SHEET 6
G-10	TOPOGRAPHIC SURVEY SHEET 7
G-11	SUBSURFACE UTILITY INVESTIGATION - TEST HOLE INVENTORY
<u>CIVIL</u>	
C-1	KEY SHEET
C-2	DIXIE HWY / SE 3 RD ST. WATER MAIN CROSSING AND CONNECTIONS
C-3	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 0+00 – 5+00
C-4	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 5+00 – 10+00
C-5	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 10+00 – 15+00
C-6	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 15+00 – 20+00
C-7	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 20+00 – 25+00
C-8	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 25+00 – 30+00
C-9	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 30+00 – 35+00
C-10	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 35+00 – 40+00
C-11	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 40+00 – 45+00
C-12	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 45+00 – 50+00
C-13	DIXIE HWY WATER MAIN PLAN AND PROFILE STA 50+00 – 53+50
C-14	PROPOSED CONNECTION DETAILS
C-15	PAVEMENT RESTORATION PLAN

C-16	PAVEMENT RESTORATION PLAN
C-17	PAVEMENT RESTORATION PLAN
C-18	PAVEMENT RESTORATION PLAN
C-19	PAVEMENT RESTORATION PLAN
C-20	PAVEMENT RESTORATION PLAN
C-21	PAVEMENT RESTORATION PLAN DETAILS
C-22	PAVEMENT MARKINGS AND SIGNAGE SHEET
C-23	PAVEMENT MARKINGS AND SIGNAGE SHEET
C-24	PAVEMENT MARKINGS AND SIGNAGE SHEET
C-25	PAVEMENT MARKINGS AND SIGNAGE SHEET
C-26	PAVEMENT MARKINGS AND SIGNAGE SHEET
C-27	PAVEMENT MARKINGS AND SIGNAGE SHEET
C-28	PAVEMENT MARKINGS AND SIGNAGE DETAILS 1 OF 2
C-29	PAVEMENT MARKINGS AND SIGNAGE DETAILS 2 OF 2
C-30	DETAIL SHEET 1 OF 4
C-31	DETAIL SHEET 2 OF 4
C-32	DETAIL SHEET 3 OF 4
C-33	DETAIL SHEET 4 OF 4

AECOM will prepare technical requirements and bid ready documents for the project based on the CSI format. The following is a preliminary list of specifications that may be subject to change during design:

Table 2 - Preliminary List of Specifications

<u>DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS – TO BE PROVIDED BY COHB</u>	
<u>DIVISION 01 - GENERAL REQUIREMENTS</u>	
01 11 00	SUMMARY OF WORK
01 14 14	CONTROL OF WORK
01 21 00	ALLOWANCES
01 25 00	SUBSTITUTION PROCEDURES
01 29 01	MEASUREMENT AND PAYMENT (UNIT PRICE)
01 31 19	PROJECT MEETINGS
01 32 17	CONSTRUCTION PROGRESS SCHEDULES
01 32 33	CONSTRUCTION PHOTOGRAPHS
01 33 00	SUBMITTALS
01 35 43	PROTECTION OF ENVIRONMENT
01 42 13	DEFINITIONS
01 43 00	QUALITY REQUIREMENTS
01 45 29	TESTING LABORATORY SERVICES
01 50 00	TEMPORARY FACILITIES
01 50 05	TEMPORARY FLOW BYPASS
01 66 10	DELIVERY, STORAGE AND HANDLING

01 74 23	CLEANING UP
01 77 00	CONTRACT CLOSEOUT
01 78 00	PROJECT RECORD DRAWINGS
<u>DIVISION 02 - EXISTING CONDITIONS</u>	
02 01 20	PROTECTING EXISTING UNDERGROUND UTILITIES
02 01 30	CONNECTIONS TO EXISTING BURIED PIPELINES
<u>DIVISION 03 - CONCRETE</u>	
03 30 00	CAST-IN-PLACE CONCRETE
<u>DIVISION 09 - FINISHES</u>	
09 90 02	COATINGS
<u>DIVISION 31 - EARTHWORK</u>	
31 10 00	SITE CLEARING
31 22 00	FINISH GRADING
31 23 00	EXCAVATION AND FILL
31 23 19	DEWATERING
31 23 33	TRENCHING, BACKFILLING AND COMPACTION
<u>DIVISION 32 - EXTERIOR IMPROVEMENTS</u>	
32 11 13	STABILIZED SUBGRADE
32 11 26	LIMEROCK BASE
32 12 00	FLEXIBLE PAVING
32 12 33	PAVEMENT REPAIR AND RESURFACING
32 16 13	CONCRETE CURB AND GUTTER RESTORATION
32 16 23	CONCRETE SIDEWALK RESTORATION
32 17 23	PAVEMENT MARKINGS AND TRAFFIC SIGNS
<u>DIVISION 33 – UTILITIES</u>	
33 05 23.13	HORIZONTAL DIRECTION DRILLING (FOR PIPE DIAMETER LESS THAN 24 INCHES)
33 05 23.16	PIPE JACKING (RR OR HIGHWAY ROW CROSSING)
<u>DIVISION 40 - PROCESS INTEGRATION</u>	
40 05 64	BUTTERFLY VALVES
40 05 78	AIR RELEASE VALVES
40 23 19.04	DUCTILE IRON PIPE AND FITTINGS
40 23 19.05	PROCESS PIPING AND APPURTENANCES

Deliverables

1. Electronic (PDF) copy of meeting minutes
2. Electronic copies of 60% (PDF), 90% (PDF) and 100% (PDF and CADD) Design Plans
3. Electronic (PDF) copies of 60%, 90% and 100% Specification Package
4. Electronic (PDF) copy of Engineer's OPCC for the 60%, 90%, and 100%
5. Bid submittal packages

Hard copies of deliverables are available upon request.

Permitting

AECOM will prepare permit applications to obtain approvals from several entities including Florida Department of Environmental Protection (FDEP), Broward County Traffic Engineering Division (BCTED), Florida Department of Transportation (FDOT), City of Hallandale Beach (COHB) Public Works - Engineering, and Florida East Coast Railway, LLC (FEC).

As permitting is a long lead item, AECOM will coordinate on a bi-weekly basis with the Agencies having jurisdiction ensuring that the review and approval process advances expeditiously and RFIs are promptly addressed so as not to delay progress.

The listed permit applications include:

- FDEP Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs – DEP Form No. 62-555.900(7)
- BCTED – Pavement Marking/Signage Plan Approval, Traffic Signals and Maintenance of Traffic Approval
- FDOT – Utility Permit
- COHB Public Works / Engineering – Utility ROW Use Permit
- FEC – Non-Telecom Utility License Application

Deliverables

1. FDEP Permit Application
2. BCTED Permit Application(s)
3. FDOT Utility Permit Application
4. COHB ROW Permit Application
5. FEC Utility License Application

A.2 Construction Bid Services Scope

This effort will include assisting the City during a pre-bid meeting, responding to Contractor questions, creating addenda as necessary, and evaluating bids if requested by the City.

1. **RFP Questions Response and Addenda** – Responses to potential bidders' questions will be provided, a total of ten (10) RFIs and issuing three (3) addenda, as necessary. This effort will be coordinated directly with City engineering and procurement to ensure established protocol is followed.

Deliverables

1. Responses to RFI questions from bidders and creating three (3) addenda.

Conformed Documents

After Bid/Procurement Support/Assistance Services, AECOM will prepare Conformed Documents that reflect the actual documents bid by the contractor.

Deliverables

1. Electronic copy of the Conformed Documents

A.3 Limited Construction Contract Administration Scope

The AECOM Team will remain involved during the construction phase and provide limited support on the project via the following services:

- Attend a pre-construction meeting, including preparation of an Agenda and Minutes of the meeting.
- Attend up to nine (9) monthly progress meetings, including preparation of Agenda and Minutes of the meetings.
- Review up to twelve (12) shop drawings for materials proposed for construction and provide comments.
- Attend up to six (6) field meetings to address any questions and/or comments.
- Review up to nine (9) contractor pay requests and provide recommendation for payment. COHB staff will provide the required inspection of the Project and verify the quantities installed for each pay application.
- AECOM will review and respond to up to ten (10) Contractor generated Requests for Information (RFIs).
- Attend a site meeting for “Substantial Completion” and provide a punch list of items for correction.
- Review and provide comments on as-built survey as prepared by the Contractor’s Florida registered professional Surveyor.
- Contractor to provide final signed and sealed as-built survey by the Contractor’s Florida registered professional Surveyor. AECOM shall review final as-built Record Drawings for the new WM.
- Attend a site meeting for Final Completion of Project, based on the punch list items generated as part of the Substantial Completion.

If more services are required than what is listed above, then this will be additional work by AECOM as a change order to the agreement.

Deliverables

1. Shop Drawings and RFI reviews
2. Certifications and reviewed Final As-builts

Schedule

A preliminary schedule for the work is included below. Assumptions that impact the overall schedule include:

1. Notice-to-Proceed dates for engineering and construction are estimated and subject to City approvals.
2. City review and comment durations for deliverables and contract documents.
3. Permitting agency review and approval durations.
4. Construction duration with the understanding that the construction scope is not yet defined.

Table 3 - Preliminary Schedule

Schedule Item / Activity	Due Date
Data Collection	NTP + 4 weeks
Geotechnical Boring	NTP + 8 weeks
Topographic Survey	NTP + 10 weeks
Subsurface Utility Investigation	NTP + 14 weeks
60% Design Package	NTP + 24 weeks
90% Design Package	NTP + 32 Weeks
Preparation & Submittal of Permit Package	NTP + 32 Weeks
Permits	NTP + 56 weeks
100% Design Package Submittal	NTP + 60 weeks
Bid Ready Package	NTP + 63 weeks
Conformed Documents	NTP + 64 weeks
Construction Phase Services	12-month construction contract period (9 months of active construction)
Close-out / Certification	4 weeks after final completion

Budget Assumptions

A budget for the work is attached with the understanding that work will be reimbursed on an approved City hourly rate per the labor categories. Assumptions that impact the overall budget estimate include:

1. AECOM will rely on the information provided by the City of Hallandale Beach and others, including any plans, Record Drawings, and studies without an independent review and considers such information to be accurate and reliable.
2. The fee and schedule presented are based on AECOM's current understanding of the applicable permits to date. Any changes in the deliverable structure proposed by the City or Permitting Agencies will consequently affect AECOM's scope and budget.
3. Compensation for engineering work in this proposal will be on a monthly lump-sum method of payment based on percentage complete.
4. Design disciplines will be limited to civil engineering.
5. All deliverables will be in electronic (pdf) format.
6. City of Hallandale Beach Procurement Department will provide the related front-end documents and template for consolidation of all other documents into one bid package.
7. All permit fees and advertising costs will be paid by the City. AECOM shall make an estimate of the required fees as a budget fee allowance and then invoice the actual agency's fees in our monthly invoice to the City to be reimbursed by the City.
8. Bid Phase will be no more than one effort of bidding services.

9. AECOM shall not be responsible for any acts or omissions of the contractor or any other entity performing any portion of the work, or any agents or employees of any of them.
10. No construction trailer will be provided, and the construction inspection professionals will travel to the site from their home office.
11. Owner directed change order revisions of design work, or contractor substitution or modification changes requiring revisions of design work are not budgeted for.
12. No dewatering permits (i.e., SFWMD Water Use Permit) are included in this scope. Such permits shall be obtained by the contractor.
13. This proposal assumes that the Contractor will apply and pay for any Maintenance of Traffic (MOT) Permit(s) required.
14. Mitigation plans for environmental resource impacts are not included.
15. Construction stake-out and preparation of certified as-built drawings shall be the responsibility of the construction contractor's Florida registered professional surveyor.
16. AECOM will not be responsible for updating the City's Hydraulic Model or determining pipe size or pressure.
17. It is assumed that a Jack and Bore under the FEC Railroad to connect the WM on SE 3rd Street to Dixie Highway is required.
18. Construction is assumed to be completed in 280 days from the city issuing a notice to proceed (NTP) to the contractor.

Obligations of the City

1. The City will provide all supporting documentation necessary for the permits including PWD's Director Signature on applications.
2. The City shall provide AECOM no later than two weeks after issuance of the NTP, all requested and available record data and information (in the required format) related to the project as necessary for the performance of the services specified herein.
3. The City shall review all documents presented by AECOM, obtain advice of an attorney, insurance counselor, independent party, and/or others as deems appropriate for such review and render decisions pertaining thereto within reasonable time to not delay the services of the AECOM team.
4. The City will provide the pipe diameter and pressure rating of all the proposed work.

NOTICE / PROJECT MANAGER OF CONSULTANT:

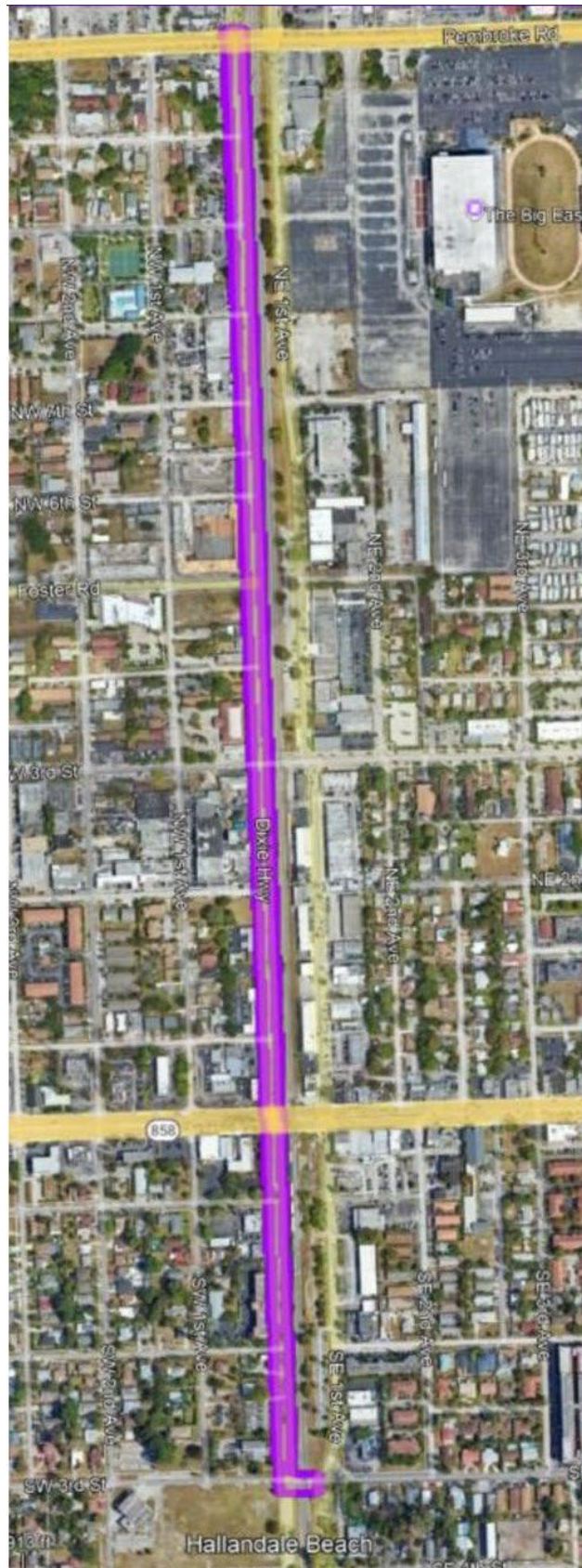


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Appendix A – Project Location Sketch



Appendix B - Fee Schedule

Task A.1 – Design

	Billed At	Number of Hours	Cost Extended
Director Engineer	\$245	16	\$3,920
Associate Engineer	\$210	144	\$30,240
Project Manager	\$195	0	---
Senior Engineer	\$195	570	\$111,150
Project Engineer	\$185	0	---
Engineer	\$155	1178	\$182,590
Junior Engineer	\$120	0	---
CADD Technician	\$110	0	---
Administration	\$85	36	\$3,060
Support Specialist	\$245	76	\$18,620
ODC	NA	---	\$1,000

Total Task A.1 Design Cost: \$350,580.00

Permitting Fee Allowance - \$25,000

Sub Costs:

Geotechnical – \$21,240.00

Survey and SUE – \$83,290.00

Potholes Pipe Locates – \$37,500.00

Task A.2 – Construction Bid Services

	Billed At	Number of Hours	Cost Extended
Director Engineer	\$245	0	---
Associate Engineer	\$210	12	\$2,520
Project Manager	\$195	0	---
Senior Engineer	\$195	30	\$5,850
Project Engineer	\$185	0	---
Engineer	\$155	12	\$1,860
Junior Engineer	\$120	0	---
CADD Technician	\$110	0	---
Administration	\$85	4	\$340
ODC	NA	---	\$500

Total Task A.2 Cost: \$11,070.00

Task A.3 – Limited Construction Contract Administration

	Billed At	Number of Hours	Cost Extended
Director Engineer	\$245	0	---
Associate Engineer	\$210	230	\$48,300
Project Manager	\$195	0	---
Senior Engineer	\$195	256	\$49,920
Project Engineer	\$185	0	---
Engineer	\$155	170	\$26,350
Junior Engineer	\$120	0	---
CADD Technician	\$110	0	---
Administration	\$85	0	---
ODC	NA	---	\$2,500

Total Task A.3 Cost: \$127,070.00

Summary:

Geotechnical	\$21,240
Survey and SUE	\$83,290
Potholes Pipe Locates	\$37,500
Total Subs Costs	\$142,030
Task A1 Design	\$350,580
Task A2 Construction Bid Services	\$11,070
Task A3 Limited Construction Contract Administration	\$127,070
Permit Fee Allowance	\$25,000
Total Project	\$655,750

Appendix C - Zeman Consulting Group Proposal



3970 RCA Blvd. Suite #7750
Palm Beach Gardens, FL 33410

Bill Snow, P.E.
Principal Engineer, Florida South
C 561-962-5254
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March 14, 2025

AECOM
2090 Palm Beach Lakes Blvd. Suite 600
West Palm Beach, FL 33409
O 561-684-3375

Subject: Fee Proposal for Surveying and SUE Services for Watermain Replacement

Project: Dixie Highway between SE 3rd Street and Pembroke Road in Hallandale, FL

Dear Mr. Snow:

Zeman Consulting Group (ZCG) appreciates the opportunity to prepare this fee proposal to provide specific purpose / topographic services on the above-referenced project. Zeman Consulting Group (ZCG) is registered and licensed in the state of Florida. This letter will serve as our official scope of services. Zeman Consulting Group (ZCG) has been requested by the Client to provide above-ground topographic, Subsurface Utility Engineering (SUE) services.

Specific Purpose Survey / Topographic Survey as described below:

A Specific Purpose / Topographic Survey (approx. 1.0 miles) will be prepared and will meet and be certified to the applicable portions of the Standards of Practice as set forth in the Florida Board of Professional Surveyors and Mappers in rule 5J-17.050-0.52, Florida Administrative Code, pursuant to Chapter 472.027, Florida Statutes governing Surveying and Mapping.

The survey will be along Dixie Highway from Right of Way to Right of Way (approximately 50 feet). Starting at the full intersection of Dixie Highway and Pembroke Road to the full intersection of SE 3rd Street. Survey will extend 100' east to include the railroad crossing.

Above-ground data will be obtained to create a surface of the existing conditions. Topography will include visible fixed improvements such as trees, natural ground, back of curbing, sidewalk, above-ground utilities, etc. Sufficient data will be obtained to create a DTM surface. Grade breaks will be included. The maximum interval between cross-sections will be 50'.

Cross Sections as described below:

- 50-foot interval cross sections will be shown on the survey

Subsurface Utility Designation as described below:

- Designated utilities within the project limits utilizing Ground Penetrating Radar (GPR) and Electromagnetic (EM) equipment. Utilities will be painted or flagged and located by survey crew. The designated lines will be added to the survey as Quality Level "B" linework.

Exclusions: – The following utilities and/or components will not be investigated:

- a. Tree tags or separate "Tree Survey".
- b. Vac Holes are not included in the base survey fee, however are provided as Optional Services, below.



3970 RCA Blvd. Suite #7750
Palm Beach Gardens, FL 33410

Deliverables (Basic Services):

- DGN or Civil 3D CAD file
- Digitally signed Specific Purpose/Topographic Survey
- DTM DGN and XML

Fees:

Survey \$49,780

SUE Designates \$28,510

MOT Setup for Lane Closures \$5,000

Total \$83,290

Optional Services: as described below:

- **Vacuum Excavation Verification Holes (VVH's) or Quality Level "A".
50 @ \$750 each (including field survey and office integration).**

Estimated Fee \$37,500

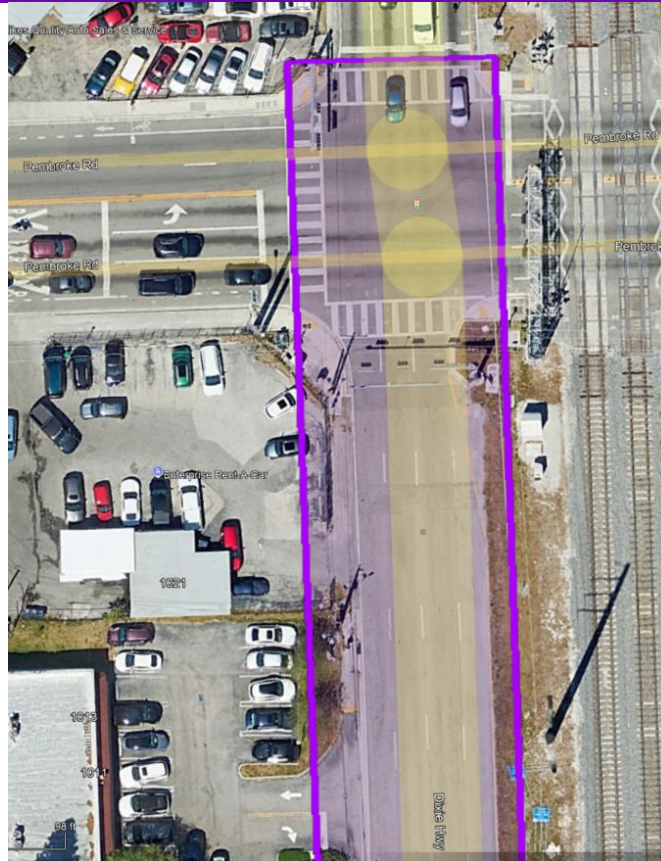
Thank you for the opportunity to offer a proposal as outlined above and we look forward to working with you on this project.

Sincerely,

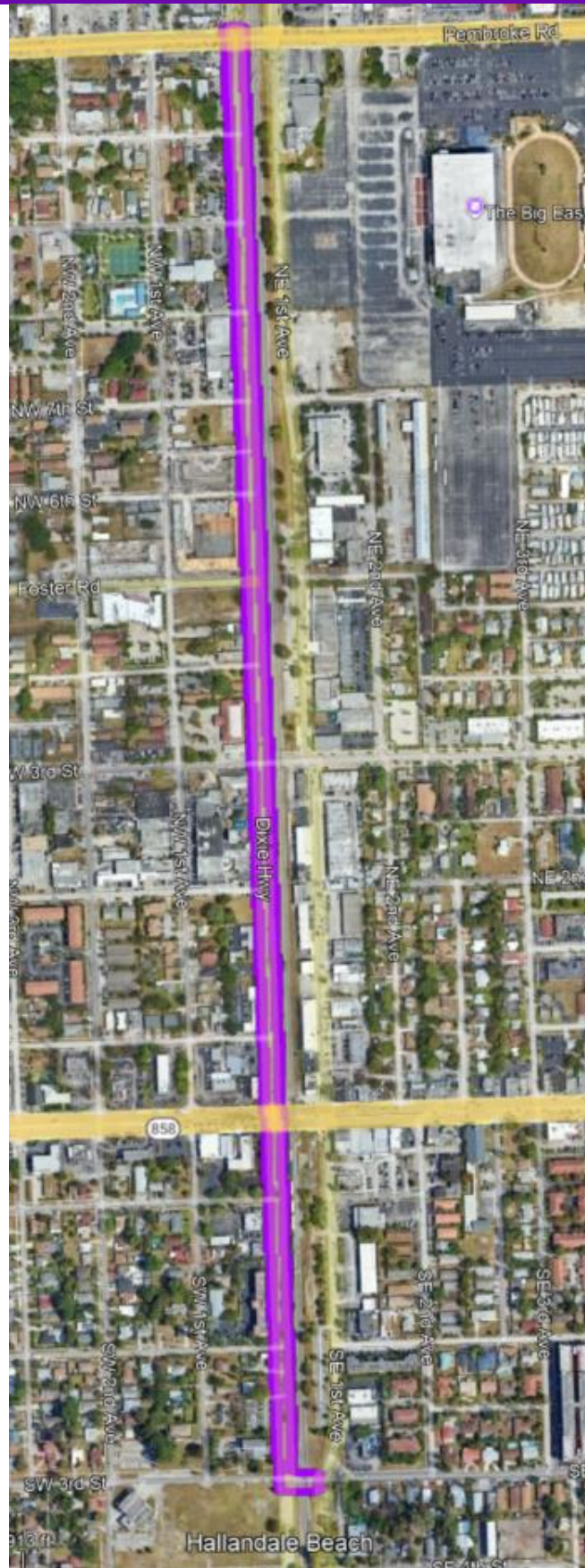
A handwritten signature in blue ink that reads "Derek Zeman". The signature is written in a cursive, flowing style.

**Derek Zeman-President
Zeman Consulting Group**

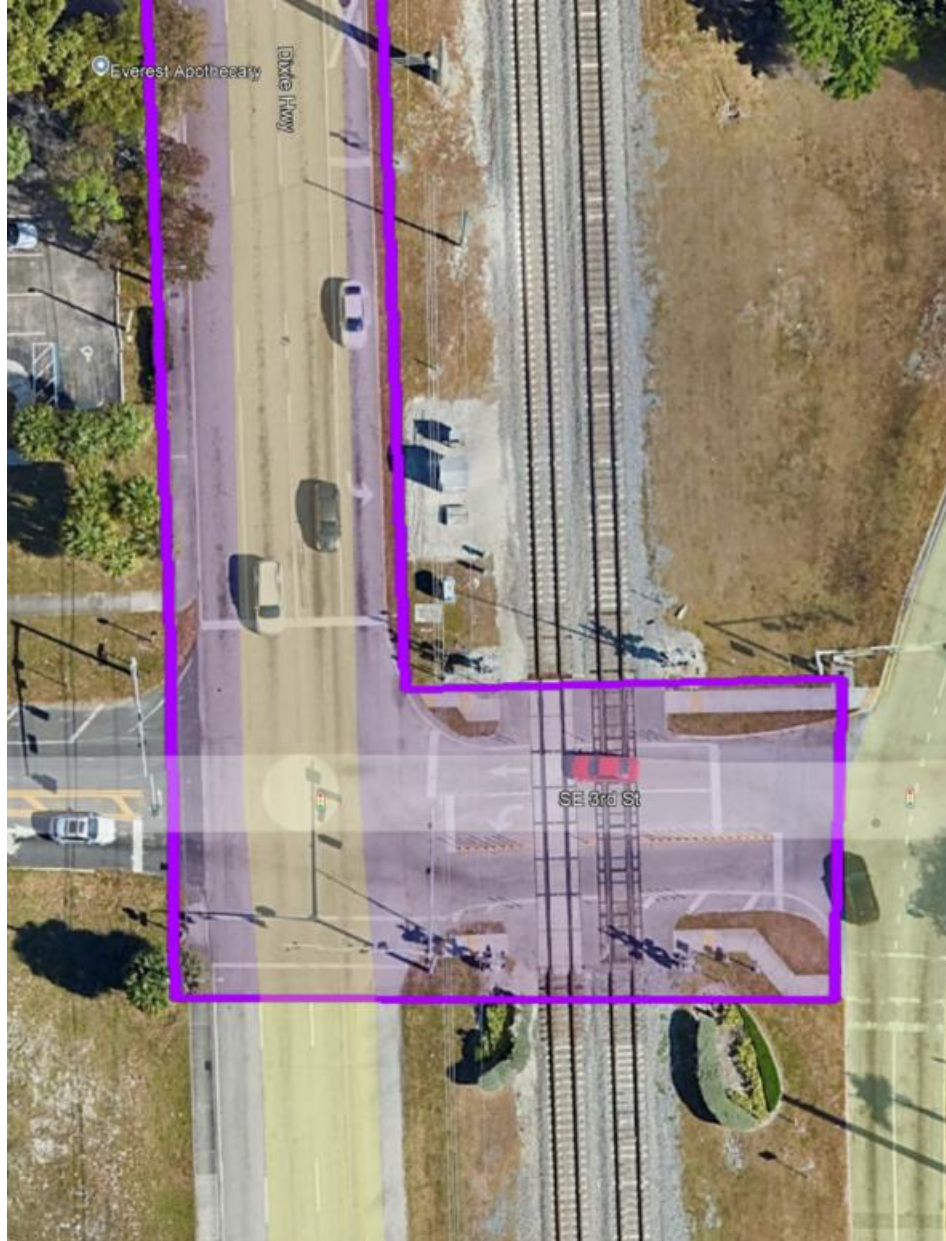
Project Limits: (North Intersection)



Project Limits: (Overall)



Project Limits: (South Intersection)



Appendix D - WIRX Engineering Proposal



March 25, 2025

AECOM

2 Alhambra Place, Suite 900
Coral Gables, FL 33134

Attn: Everette Lopez

Direct: 954.214.4259

Email: everette.lopez@aecom.com

**Subject: Proposal for Geotechnical Engineering Services
City of Hallandale Beach - Dixie Highway 12" Water Main Project
Broward County, Florida
WIRX Proposal No.: 25-P-028**

Dear Everette Lopez,

WIRX Engineering, LLC (WIRX) is pleased to submit this proposal for the above-referenced project. We understand that the proposed project consists of the design of a 12-inch water main along Dixie Highway between Pembroke Road and SE 3rd Street in Hallandale Beach, Florida. The water main will likely be installed using open trench methodology except near the intersection of SE/SW 3rd Street where it will be installed beneath the railroad tracks using the jack and bore, trenchless technology. Therefore, we propose to conduct a subsurface exploration to determine the subsurface conditions along the project alignment. This proposal presents our proposed scope of work and establishes our schedule and fee for performing the work.

SCOPE OF SERVICES

The proposed scope of work for the project consists of the following:

1. Visit the site to field stake/mark the planned boring locations, and observe the existing site conditions.
2. Contact Sunshine 811 to request field location and clearance of underground utilities in the areas of the borings as per Florida Statutes. See below for further details.
3. Prepare a Temporary Traffic Control Plan and implement it during our field exploration for traffic control and safety purposes in accordance with the FDOT Standard Plans for Road Construction. See below for further details.
4. Mobilize a truck-mounted drill rig and personnel.
5. Perform twelve (12) Standard Penetration Test (SPT) borings to a depth of 10 feet in accordance with ASTM D-1586.
6. Perform two (2) Standard Penetration Test (SPT) borings to a depth of 30 feet in accordance with ASTM D-1586.

7. Following completion of the drilling operations, the boreholes will be backfilled with grout and the asphalt surface patched with cold patch.
8. Visually classify the collected soil samples in the field with laboratory confirmation/QC verification of classifications using the Unified Soil Classification System (USCS).
9. Assign laboratory testing of selected soil samples for index property determinations limited to moisture content, fines content, and organic content tests to assist in classifying the soils for engineering purposes (ASTM 2487).
10. Perform a geotechnical analysis and prepare a geotechnical engineering report which will include, but not necessarily be limited to:
 - Detailed graphical logs of the soil borings showing the groundwater level and soil classifications.
 - Results of the laboratory tests.
 - Pavement restoration recommendations.
 - Site preparation recommendations.
 - Recommendations for design regarding excavation, trenching, pipeline installation, shoring requirements, fill and backfill, and compaction for the proposed work.

We presume that a Right-of-Way Construction permit will not be needed. A Temporary Traffic Control Plan will be prepared and implemented during our field exploration for safety purposes. If a permit is required, please notify us and we will revise our fee estimate accordingly.

Prior to the mobilization of the drilling equipment, WIRX will notify Sunshine State One-Call of Florida, Inc. (SSOCOF) of the planned exploration to allow affected utility companies the opportunity to mark the location of buried utility lines in the proposed exploration areas. The locating process will require a lead time of 3 to 5 business days. WIRX cannot take responsibility for damages to private underground lines or structures and/or underground services which do not subscribe to SSOCOF; their locations should be provided by the Client prior to commencement of the fieldwork.

SCHEDULE/DELIVERABLES

We will start the field exploration program within 4 weeks of notice to proceed. We preliminarily estimate that our field work will have a duration of 2 days. Laboratory testing will require about 3 weeks to complete following completion of the field work. We expect to provide the final report signed and sealed by a registered professional engineer within 8 weeks of notice to proceed; however, accelerations of this schedule may be facilitated, if needed.

COMPENSATION & TERMS

Based upon our understanding of the project and interpretation of your requirements, we propose to perform the scope of work outlined previously for a lump sum fee of **\$21,240.00**, as outlined in Attachment A - Fee Breakdown.



Please sign and return Attachment B - Proposal Acceptance form as an indication of your acceptance of our proposal terms and authorization to proceed with the work. Our work will be performed in accordance with the General Terms and Conditions presented as Attachment C.

CLOSURE

WIRX appreciates the opportunity to provide our services for this project, and trust that the scope of work and fee presented in this proposal are clear and understandable. Should the proposal contents require any clarification or amplification, please feel free to contact us.

Sincerely,

WIRX Engineering, LLC



Andrew Nixon, P.E.

Senior Engineer

AndrewNixon@wirxeng.com

Attachments: A – Fee Breakdown
B – Proposal Acceptance Form
C – General Terms and Conditions





Attachment A - Fee Breakdown

Geotechnical Engineering Services City of Hallandale Beach - Dixie Highway 12" Water Main Project Broward County, Florida WIRX Proposal No.: 25-P-028

	Qty	Unit	Unit Price	Total
1.0 FIELD EXPLORATION				
1.1 <u>Field Work & Utility Coordination</u>				
1.1.1 Project Engineer	8	Hour	\$ 135.00	\$ 1,080.00
1.2 <u>Maintenance of Traffic - Est. 2 Days</u>				
1.2.1 TTC Plan - Project Engineer	4	Hour	\$ 135.00	\$ 540.00
1.2.2 Signs & Cones	2	Day	\$ 1,500.00	\$ 3,000.00
1.3 <u>SPT Borings (12 to 10' & 2 to 30')</u>				
1.3.1 Equipment Mobilization	1	Each	\$ 550.00	\$ 550.00
1.3.2 Pavement Cores & Patching	14	Each	\$ 200.00	\$ 2,800.00
1.3.3 SPT Boring (0' to 50')	180	Foot	\$ 18.00	\$ 3,240.00
1.3.4 Grout Seal (0' to 50')	180	Foot	\$ 7.00	\$ 1,260.00
1.4 <u>MOT Supervisor, Field Supervision & Soil Classification</u>				
1.4.1 Staff Engineer - 2 Days	16	Hour	\$ 115.00	\$ 1,840.00
		TOTAL FIELD WORK	\$	14,310.00
2.0 LABORATORY TESTING SERVICES				
2.1 Natural Moisture Content	21	Test	\$ 25.00	\$ 525.00
2.2 Fines Content (-200)	14	Test	\$ 65.00	\$ 910.00
2.3 Organic Content	7	Test	\$ 65.00	\$ 455.00
		TOTAL LABORATORY SERVICES	\$	1,890.00
3.0 PROFESSIONAL ENGINEERING AND REPORTING SERVICES				
3.1 Senior Engineer	4	Hour	\$ 185.00	\$ 740.00
3.2 Project Engineer	8	Hour	\$ 155.00	\$ 1,240.00
3.3 Staff Engineer	16	Hour	\$ 135.00	\$ 2,160.00
3.4 CAD Technician	12	Hour	\$ 75.00	\$ 900.00
		TOTAL PROFESSIONAL SERVICES	\$	5,040.00
TOTAL AMOUNT				\$ 21,240.00



Attachment B – Proposal Acceptance Form

PROJECT INFORMATION:

Project Name _____ City of Hallandale Beach - Dixie Highway 12" Water Main Project
Project Location _____ Broward County, Florida
Proposal Number and Date _____ 25-P-028 / March 25, 2025
Description of Services _____ Geotechnical Engineering
Estimated Fee _____ **\$21,240.00**

PAYMENT TERMS:

Payment shall be due within 30 days after date of each periodic invoice. Interest at the rate of 18% per annum (or the highest rate allowable by law) shall accrue on all amounts not paid within 30 days after date of invoice. All attorney fees and expenses associated with collection of past due invoices will be paid by Client. Failure to timely pay any invoice shall constitute a waiver of any and all claims against WIRX Engineering, LLC.

PROPOSAL ACCEPTANCE:

By accepting this Proposal, the General Terms and Conditions of this Proposal, including the Terms on this page, are incorporated herein by reference.

Accepted this _____ day of _____, 2025.

Individual, Firm or Corporate Body Name _____

Authorized Contact Person _____ Title _____

Address _____

City _____ State _____ Zip Code _____

Phone _____ Fax _____ Email _____

(Signature of authorized representative)

Attachment C - General Terms & Conditions

Parties And Scope Of Work – WIRX Engineering, LLC (hereinafter referred to as “WIRX”) shall include said company, its division, subsidiary, parent or affiliate performing the Work. “Work” means the specific services to be performed by WIRX as set forth in WIRX’s proposal as well as any additional services requested or accepted by Client. “Client” refers to the person or business entity ordering the Work to be done by WIRX. If the Client is ordering the Work on behalf of a third party, the Client represents and warrants that the Client is the duly authorized agent of said third party for the purpose of ordering and directing said Work. In the event Client is not the authorized agent of said third party, Client shall be individually liable hereunder. Further, Client shall disclose any such agency relationship to WIRX in writing before the commencement of WIRX’s Work hereunder. Client agrees that WIRX’s professional duties are specifically limited to the Work as set forth in WIRX’s proposal. The Client assumes sole responsibility for determining whether the quantity and the nature of the Work ordered by the Client is adequate and sufficient for the Client’s intended purpose. WIRX’s Work is for the exclusive use of Client, and its properly disclosed principal. In no event shall WIRX have any duty or obligation to any third party. Directing WIRX to proceed with the Work shall constitute acceptance of the terms of WIRX’s proposal and these General Conditions.

Right-of-Entry – Unless otherwise agreed, Client will furnish right-of-entry on the property for WIRX to make the planned borings, surveys, and/or explorations. WIRX will take reasonable precautions to minimize damage to the property caused by its equipment and sampling procedures, but the cost of restoration or damage which may result from the planned operations is not included in the contracted amount.

Damage to Existing Man-made Objects – It shall be the responsibility of the Client to disclose the presence and accurate location of all hidden or obscure man-made objects relative to field tests, sampling, or boring locations. Client waives any claim against WIRX arising from any damage to existing man-made objects. In addition, Client shall defend, indemnify and hold WIRX harmless from any third party claim arising from damage to existing man-made objects.

Limitation of Liability - WIRX shall perform services for Client in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of competent consultants practicing in the same or a similar locality as the project. In the event any portion of the services fails to comply with this obligation and WIRX is promptly notified in writing prior to one year after completion of such portion of the services, WIRX will re-perform such portion of the services, or if re-performance is impracticable, WIRX will refund the amount of compensation paid to WIRX for such portion of the services. In no event shall WIRX be liable for any special, indirect, incidental, or consequential damages. The remedies set forth herein are exclusive and the total liability of WIRX whether in contract, tort (including negligence whether sole or concurrent), or otherwise arising out of, connected with or resulting from any and all services provided by WIRX, including but not limited to the Work, shall not exceed the total fees paid by Client or \$50,000.00, whichever is greater. Client may, upon written request received within five days of Client’s acceptance hereof, increase the limit of WIRX’s liability by agreeing to pay WIRX an additional sum as agreed in writing prior to the commencement of WIRX’s services. This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the greater liability involved. WIRX’s individual professionals, employees, and agents are third party beneficiaries to these General Conditions.

PURSUANT TO §558.0035, FLORIDA STATUTES, CONSULTANT’S INDIVIDUAL EMPLOYEES AND/OR AGENTS MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM THEIR SERVICES PROVIDED PURSUANT TO THIS AGREEMENT.

Sampling or Testing Location – Unless specifically stated to the contrary, the unit fees included in this proposal do not include costs associated with professional land surveying of the site or the accurate horizontal and vertical locations of tests. Field tests or boring locations described in our report or shown on our sketches are based on specific information furnished to us by others or estimates made in the field by our technicians. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in the report.

Sample Handling and Retention – Generally test samples or specimens are consumed and/or substantially altered during the conduct of tests and WIRX, at its sole discretion, will dispose (subject to the following) of any remaining residue immediately upon completion of test unless required in writing by the Client to store or otherwise handle the samples. (a) NON HAZARDOUS SAMPLES: At Client’s written request, WIRX will maintain preservable test samples and specimens or the residue therefrom for thirty (30) days after submission of WIRX’s report to Client free of storage charges. After the initial 30 days and upon written request, WIRX will retain test specimens or samples for a mutually acceptable storage charge and period of time. (b) HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES: In the event that samples contain substances or constituents hazardous or detrimental to human health, safety or the environment as defined by federal, state or local statutes, regulations, or ordinances (“Hazardous Substances” and “Hazardous Constituents”, respectively), WIRX will, after completion of testing and at Client’s expense: (i) return such samples to Client; (ii) using a manifest signed by Client as generator, will have such samples transported to a location selected by Client for final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of such samples.

Indemnification – Client agrees to defend, indemnify and save harmless WIRX from all claims, including negligence claims, suits, losses, personal injuries, death and property liability resulting from the actions or inactions of Client, Client’s contractors, representatives, agents and employees.

Legal Jurisdiction – The parties agree that any litigation shall only be brought in a court of competent jurisdiction located in Palm Beach County, Florida. All causes of action, including but not limited to actions for indemnification and contribution, arising out of WIRX’s Work shall be deemed to have accrued and the applicable statutes of limitation shall commence to run not later than the date of issuance of WIRX’s final invoice for the Work. Each of the parties hereto irrevocably waives any and all right to trial by jury in any legal proceeding arising out of or relating to this agreement.

Force Majeure - WIRX shall not be held responsible for any delay or failure in performance caused by fire, flood, explosion, war, strike, embargo, government requirement, civil or military authority, acts of God, act or omission of subcontractors, carrier, clients or other similar causes beyond its control.

Drafting and Severability – This Agreement has been drafted by all Parties hereto and shall not be construed against one Party or in favor of any other Party. In the event that any provision of this Agreement is held invalid, the remainder of this Agreement shall be fully enforceable.

