The City of Delray Beach
100 NW 1st Avenue
Delray Beach, FL 33444

PURCHASING AND CONTRACT ADMINISTRATION DIVISION

INVITATION TO BID CONSTRUCTION

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

DUE DATE AND TIME: April 30, 2025 @ 2:00 PM., (LOCAL TIME)

INSTRUCTIONS
Sealed Bids must be received on or before the due date and time (local time). All Bids will be publicly opened at City Hall, unless otherwise specified.

The City will only accept electronic submittals for this Invitation to Bid Construction (ITBC). ITBC's will be accepted through a secure mailbox at BidNet Direct www.bidnetdirect.com//cityofdelraybeachuntil the Due Date and Time indicated in this ITBC. Bidnet Direct does not accept electronic Proposals after the Due Date and Time. It is the sole responsibility of the Proposer to ensure its electronic ITBC submission is complete prior to the solicitation Due Date and Time. Electronic submission of Proposals will require the uploading of forms and/or attachments as designated in this RFQ. Electronic submission must include a signed original of the Solicitation Summary form. The submission of forms and attachments containing embedded documents or proprietary file extensions is prohibited.

If the Solicitation Summary form is not included, the City may deem the Bid non-responsive. Proposals must contain all information required to be included in the submittal, as described in this Solicitation.

BROADCAST
The City of Delray Beach utilizes electronic online services for notification and distribution of its Solicitation documents. The City's Solicitation information can be obtained from: (a) Bidnet Direct – https://www.bidnetdirect.com/florida/cityofdelraybeach; (b) Purchasing webpage on the City of Delray Beach https://www.delraybeachfl.gov/government/city-departments/purchasing/current-bids-solicitations; (c) Request via email thompsonc@mydelraybeach.com.

Bidders who obtain Solicitations from sources other than those named above are cautioned that the Invitation to Bid package may be incomplete. The City may not evaluate incomplete Bid packages. Bidnet Direct is an independent entity and is not an agent or representative of the City. Any technical issues must be submitted to Bidnet Direct by contacting (800) 835-4603 (toll free) or support@bidnet.com. The City cannot assist with technical issues regarding submittals and will in no way be responsible for delays caused by any technical or other issue.

Communications to any independent entities does not constitute communications to the City. The City is not responsible for errors and omissions occurring in the transmission or downloading of any documents, addenda, plans, or specifications from these websites. In the event of any discrepancy between information on these websites and the Solicitation documents, the terms and conditions of the documents will prevail.

CONTACT

Any questions regarding the specifications and Solicitation process must be submitted in writing through the "Question" feature on www.bidnetdirect.com//cityofdelraybeach. Requests for clarification and additional information must be received prior to the deadline for Submission of Questions on **April 16, 2025 @ 5:00 PM (LOCAL TIME).**

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The City of Delray Beach
100 N.W. 1st Avenue
Delray Beach, FL 33444

LEGAL ADVERTISEMENT

INVITATION TO BID CONSTRUCTION

ITBC NO.: 2025-015
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

DUE DATE AND TIME: April 30, 2025 @ 2:00 PM., (LOCAL TIME)

The City of Delray Beach, Florida ("City") is seeking bids from qualified firms for the **construction of reclaim water mains and services within 3 main areas inside the City of Delray Beach. The areas for the improvements are in Area 5 towards the west end of Germantown Road providing reclaimed water mains and services to 5 properties; Area #10 near both NW and SW 2nd Avenue providing reclaimed water mains and services to 8 properties; and in Area 14 providing reclaimed water mains and services to 8 properties for a total installation of approximately 4,400 LF of pipe** for the **Area 5, 10, and 14 Reclaim Water Improvements** project, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid Construction.

Invitation to Bid Construction documents are available beginning **March 26, 2025,** on the Purchasing and Contract Administration Division's webpage of the City of Delray Beach website at:

https://www.delraybeachfl.gov/government/city-departments/purchasing/current-bids-solicitations

Documents may also be obtained via BidNet at www.bidnetdirect.com//cityofdelraybeach, by contacting the City Purchasing and Contract Administration Division at thompsonc@mydelraybeach.com or by phone at (561) 243-7163.

Bids will be accepted through a secure mailbox at Bidnet Direct until the Deadline for Submission as indicated in this ITBC (www.bidnetdirect.com//cityofdelraybeach). The Due Date and Time for submission of submittals is April 30**, 2025 @ 2:00 P.M., (LOCAL TIME).** Late Proposals will not be accepted. The City will only accept electronic Proposals for this ITBC.

The City will hold a **Mandatory** Pre-Bid Conference on April 8, 2025, 9:00 AM (LOCAL TIME) at: 434 S Swinton Avenue, SOC Training Room Delray Beach, FL 33444

It is the responsibility of the Bidder to ensure all pages are included in the submission. All Bidders are advised to closely examine the solicitation package.
The City of Delray Beach is exempt from Federal and State Taxes for tangible personal property tax.

The City of Delray Beach reserves the right to accept or reject any or all Bids, in whole or in part, with or without cause, to waive any irregularities and/or technicalities, and to award the contract on such coverage and terms it deems will best serve the interests of the City.

CITY OF DELRAY BEACH

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SECTION 1: INSTRUCTIONS TO BIDDERS

1. Defined Terms.

Terms used in these Instructions to Bidders which are defined in the City of Delray Beach, Florida Standard General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to the CITY, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, most qualified, responsible, and responsive Bidder to whom CITY (on basis of CITY'S evaluation as hereinafter provided) makes an award that is most advantageous to the CITY. The CITY'S evaluation of the bid shall take into consideration the cost (total, unit price, or combination of both), CITY'S prior experience with bidder, demonstrated expertise of bidder, references of bidder, qualifications of bidder and ability of bidder to complete the project in a timely manner. The term "Bidding Documents" includes the Invitation to Bid Construction, Instructions to Bidders, the Bid Form, and the proposed contract documents (including all Addenda issued prior to receipt of Bids). "Addenda" means all written or graphic instruments issued by the City prior to the execution of the Contract that modifies or interprets the Bidding Documents by additions, deletion, clarifications or corrections. "Bid" means a complete and properly signed proposal to do the Work for the sum stipulated therein, submitting in accordance with the Bidding Documents. "Responsible Bidder" means a bidder having the required qualifications to perform the work set forth in the Advertisement for Bids; the Bidder's responsibility is determined by the City's good faith evaluation of whether, in the City's opinion, the Bidder possesses the judgment, skill, experience and financial resources necessary to perform the Contract. "Non-Responsible Bidder" means a bidder who, as judged by the CITY, lacks those attributes of a Responsible Bidder necessary to perform the Contract. "Responsive Bid" means a bid in which the Bidder describes the Work in the same way as it is described in the advertisement for Bids; the Bidder's responsiveness is determined by the CITY'S evaluation of the Bid's conformance in all material respects to the Advertisement for Bids. "Days" means calendar days unless otherwise stated.

2. Copies of Bidding Documents.

2.1. Complete sets of the Bidding Documents in the number and for the sum, if any, stated in the Advertisement for Bids may be obtained from CITY Purchasing and Contract Administration Division.

2.2. Complete sets of Bidding Documents shall be used in preparing Bids; neither CITY nor CONSULTANT assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3. CITY and CONSULTANT in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining bids on the Work and do not confer a license or grant for any other use.

3. Qualifications of Bidders.

3.1. To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within three (3) business days of CITY'S request written evidence, such as financial data, previous experience; present commitments and other such data as may be called for in the Instructions to Bidders. Each Bid must contain evidence of Bidder's qualifications to do business in the state where the Project is located. The CITY reserves the right to make such investigations as it may deem necessary to establish the competency and financial ability of any Bidder to perform the Work and if, after investigation, the evidence of his competency or financial ability is not satisfactory, the CITY reserves the right to reject his bid.

3.2. Bidder shall submit information and documentation requested in this Section that confirms it meets the following qualification requirement(s). For the purposes of this ITBC, a responsible Bidder is a Bidder that meets the minimum qualification requirements below.

3.2.1. Bidder has previously provided acceptable services for the type of work identified in this ITBC. **Provide the following information for up to five (5) client references to verify Bidder has provided acceptable and applicable services.**

A. Owner Name
B. Owner's Primary Contact for Work Provided
i. Name
ii. Title
iii. Phone Number
iv. Email Address
C. Project Information
i. Name
ii. Address
iii. Brief Description
iv. Start/End Date
v. Number of Change Orders and/or Amendments
vi. Within Budget?

3.2.2. Bidder has a Florida State General Contractor's license or current certificate of competency issued by Palm Beach County Examining Board having jurisdiction over licensing of Contractors in the type of work involved in this contract.
Provide proof, in the form of a copy of license(s), that the Bidder meets this qualification.

3.2.3. Bidder must have been in the business of for a minimum of sixty (60) months prior to the Due Date and Time.
Provide supporting documentation (e.g. state, county, city business license; occupational license) that confirms Bidder has been in business for a minimum of sixty months prior to the Due Date and Time.

3.2.4. Bidder must have experience working with FDOT (or following FDOT Standards), in constructing a minimum of **five (5)** similar projects since **2018**, with a minimum contract value of **$1,000,000** that had the following components: **Reclaim water main, reclaim water services, site restoration, roadway restoration; per the construction documents.**

Provide the following information for the five (5) qualifying projects:

A. Name of Project Owner
B. Contact Name
C. Contact Email
D. Location / Address of Project
E. Dates of Project (start/end)
F. Brief Description of Project
G. List of the components of the project as stated above

3.2.5. Bidder has no reported conflict of interests in relation to this ITBC. No additional documentation is required.
The City will verify from Bidder's Conflict of Interest Disclosure Form.

3.2.6. Provide proof that Bidder is registered with the States of Florida, Division of corporations to do business in Florida.
No documentation is required. The City will verify.

4. Examination of Contract Documents and Site.

4.1. In submitting a Bid, the Bidder represents that it has examined the location of the proposed Work, by thorough examination of the Contract Documents, requirements of the Work and the accuracy of the estimate of the quantities of the Work to be done; and shall not at any time after the submission of a bid dispute or complain of such estimate nor the nature or amount of work to be done. The Bidder further represents and warrants that it has visited the site, become familiar with local conditions under which the Work must be performed and has correlated its personal observations with the requirements of the Contract Documents.

4.2. Bidder shall be familiar with and fully comply with all federal, state and local laws, ordinances, rules and regulations that in any way affect the cost, progress or performance of the Work. Failure to familiarize himself with applicable laws, ordinances, rules and regulations will in no way relieve bidder from the responsibility included in the applicable laws. Bidder is solely responsible for compliance with all federal, state and local laws, ordinances, rules, regulations and applicable building codes.

4.3. Information and data reflected in the Contract Documents with respect to Underground Utilities at or contiguous to the site is based upon information and data furnished to the CITY and the CONSULTANT by the owners of such Underground Utilities or others, and the CITY does not assume responsibility for the accuracy or completeness thereof.

4.4. Reference may be made to the Technical Specifications for the Identification of:

4.4.1. Those reports of exploration and tests of subsurface conditions at the site which have been utilized by CONSULTANT in preparation of Contract Documents. Bidder may rely upon the accuracy of the technical data contained in such reports but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for the purposes of bidding or construction.

4.4.2. Those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Facilities) which are at or contiguous to the site which have been utilized by CONSULTANT in preparation of the Contract Documents. Bidder may rely upon the accuracy of the technical data contained in such drawings but not upon the completeness thereof for the purposes of bidding or construction.

4.4.3. Copies of such reports and drawings will be made available by the CITY to any Bidder on request. Those reports and drawings are not part of the Contract Documents, and such technical data has been identified and established in Technical Specifications.

4.5. In submitting a Bid, Bidder warrants the accuracy of the conformation of the ground, the character and quality of the substrata, the types and quantity of materials to be encountered, the nature of the groundwater conditions, the character of equipment and facilities needed preliminary to and during the execution of the work, the general and local conditions and all other matters which can in any way affect the Work of this Project. The prices established for the work to be done will reflect all costs pertaining to the Work. Any claims for extras based on substrata or groundwater table conditions will not be allowed.

4.6. By submission of its bid, Bidder affirms that he has, at his own expense, made or obtained any additional examinations, investigations, explorations, tests, and studies and obtained any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Utilities) at or contiguous to the site or otherwise, prior to bidding which may affect cost, progress, or performance of the Work and which Bidder deems necessary to determine its Bid for performing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents and/or he has satisfied

himself with respect to such conditions and he shall make no claims against the CITY or the CONSULTANT if on carrying out the Work he finds that the actual conditions do not conform to those indicated. In submitting its Bid, Bidder further warrants the accuracy of the plans and specifications with regard to all underground facilities.

4.7. On request, the CITY will provide Bidder access to the site to conduct such investigations and tests as Bidder deems necessary for submission of his Bid. Bidder shall schedule such access in advance with the CITY.

4.8. Upon completion of such additional field investigations and tests, Bidder shall completely restore disturbed areas.

4.9. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by CONTRACTOR. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by CITY unless otherwise provided in the Contract Documents.

4.10. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of Article 4 of the Instructions to Bidders, "Bidder's Examination of Contract Documents and Site", that without exception the Bid is premised upon performing the work required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

5. Pre-Bid Conference

5.1. The City will hold a **Mandatory** Pre-Bid Conference on April 8, 2025, 9:00 AM (LOCAL TIME) at: 434 S Swinton Avenue, SOC Training Room Delray Beach, FL 33444

5.2. The City will **not** conduct a site visit for this solicitation.

5.3. The purpose of the Pre-Bid Conference is to provide and obtain information relative to the scope, purpose, nature, and extent of the work, and any local conditions, which may affect the performance of work. Submission of a Bid shall constitute an acknowledgement by the Bidder that it has thoroughly examined and is familiar with the requirements of this Solicitation package. The failure or neglect of the Bidder to examine the Solicitation package shall in no way relieve the Bidder of any obligation with respect to its Bid or the requirements of the Contract. No claim for additional compensation will be allowed which is based on a lack of knowledge of the requirements of this Solicitation package or the resultant Contract.

5.4. If you need a sign language interpreter or materials in accessible format for this event, please contact the Purchasing and Contract Administration Division at thompsonc@mydelraybeach.com or by phone at (561) 243-7163 at least five (5) days in advance of the scheduled conference.

5.5. All bidders must be present and signed in prior to the start of the mandatory Pre-Bid Conference. Anyone not signed in at the commencement of the meeting will be considered late and will not be allowed to bid on the project.

6. Interpretations and Addenda.

6.1. All questions about the meaning or intent of the Contract Documents are to be directed to the Purchasing and Contract Administration Division. Interpretations or clarifications

considered necessary by the Purchasing and Contract Administration Division in response to such questions will be issued by addenda mailed or delivered to all parties recorded by the Purchasing and Contract Administration Division as having received the Bidding Documents. Questions received less than ten (10) days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6.2. Addenda may also be issued to modify the Bidding Documents as deemed advisable by CITY or CONSULTANT.

6.3. The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the CITY and CONSULTANT errors, inconsistencies for ambiguities discovered.

7. Bid Security.

7.1. Each Bid must be accompanied by Bid security made payable to the City of Delray Beach in an amount of **five percent (5%)** of the Bidder's maximum Bid price and in the form of a certified check or cashiers check drawn upon any State or National Bank of Florida or a Bid Bond issued by a surety meeting the requirements of Paragraph 6.1 of the General Conditions. Said check or bond shall be made payable to the CITY and shall be given as a guarantee that Bidder, upon receipt of notification of tentative award of the contract, will enter into an Agreement with the CITY, and furnish the necessary documents including but not limited to: insurance certificates, Payment Bond and Performance Bond; each of the said bonds to be in the amount stated herein, all bonds shall be written by a surety authorized to conduct business in the State of Florida and shall have a registered agent in the State of Florida, meeting the requirements of Paragraph 6.1 of the General Conditions. Bid Bonds issued on any form, other than those provided herein, will not be acceptable.

No bids will be considered unless accompanied by the required bid security. To submit an original bid security, in lieu of submitting an electronic bid bond using Surety 2000 through Periscope S2G, Vendor must submit an original bid security in a sealed envelope, with the solicitation number, solicitation title, date and the time of bid opening, and address listed on the envelope. A copy of the bid security should also be uploaded into Periscope S2G. The uploaded copy of the bid guarantee does not replace the original bid security submission requirement. Vendors must submit the original bid guarantee, by the solicitation due date and time, to: City of Delray Beach Purchasing Division 100 NW 1st Avenue, Delray Beach, FL 33444.

7.2. The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security whereupon the Bid security will be returned. If the apparent successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within fifteen (15) days after the Notice of Intent to Award, the CITY may annul the Notice of Intent to Award and the Bid security of that Bidder will be forfeited. The CITY may then accept the bid of the next most qualified responsible responsive Bidder, or re-advertise for bids. If the bid of the next most qualified responsible responsive Bidder is accepted, this acceptance shall bind such Bidder as though he was the original successful Bidder. There shall be no binding contract until such time as the CITY accepts the contract and makes final award of the contract. The Bid Security of other Bidders whom CITY believes to have a reasonable chance of receiving the award may be retained by the CITY until the earlier of the seventh day after the effective date of the Agreement or the ninety-first day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security with Bids which are not responsive will be returned within ten (10) days after the Bid opening.

8. Contract Time.

The number of calendar days within which, or the date by which, the Work is to be substantially completed and also completed and ready for final payment (the Contract Time) are set forth in the Bid Form and the Agreement.

9. Liquidated Damages.

Provisions for liquidated damages, if any, are set forth in the Agreement.

10. Substitute or "Or-Equal" Items.

The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to CONSULTANT, application for such acceptance will not be considered by CONSULTANT until after the Effective Date of the Agreement. The procedure for submittal of any such application by Contractor and consideration by CONSULTANT is set forth in Paragraphs 7.6.1, 7.6.2 and 7.6.3 of the General Conditions which may be supplemented in the General Requirements. No substitution will be considered prior to receipt of Bids unless written request for approval has been received by CONSULTANT at least ten (10) days prior to the date for receipt of Bids. Furthermore, no substitutions will be permitted in the absence of the express written consent of CONSULTANT.

11. Subcontractors, Suppliers and Others.

11.1. If the Bid Form requires the identity of certain Subcontractors, Suppliers and other persons and organizations, including those who are to furnish the principal items of material and equipment, to be submitted, the Bidder shall provide such identification. If requested by the CITY or CONSULTANT, Bidder shall provide an experience statement with pertinent information regarding similar projects and other evidence of qualification for each Subcontractor, supplier, person or organization. If the CITY or CONSULTANT after due investigation has reasonable objection to any proposed Subcontractor, supplier, other person or organization, either may, before the Notice of Intent to Award is given, request the apparent successful Bidder to submit an acceptable substitute without an increase in Bid price. If the apparent successful Bidder declines to make any such substitution, the CITY may retract its award of the Contract to Bidder and award the contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the Bid Security of any Bidder. Any Subcontractor, Supplier, other person or organization listed and to whom the CITY or CONSULTANT does not make written objection prior to the giving of the Notice of Intent to Award will be deemed acceptable to the CITY and CONSULTANT subject to revocation of such acceptance after the Effective Date of the Agreement. Subcontractors shall not be changed without the approval of the CITY and the CONSULTANT. No acceptance by the CITY or CONSULTANT of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of the CITY or CONSULTANT to reject defective work or materials not conforming with these specifications.

11.2. In contracts where the Contract Price is on the basis of Cost-of-the-Work Plus a Fee, the apparent successful Bidder, as a condition precedent to being awarded the Contract, shall identify in writing to the CITY those portions of the Work that such Bidder proposes to subcontract. If the Bidder is awarded the Contract based upon such representations, it is precluded from subcontracting out any additional portions of the Work.

11.3. No Bidder shall be required to employ any Subcontractor, other person or organization against whom Bidder has reasonable objection.

11.4. **No more than 60 percent (60%) of the dollar value of the total contract work may be accomplished by subcontractors**. Balance of work must be accomplished by selected

Contractor's own forces. Each bidder must furnish with his proposal, a list of the items he proposes to sub-contract and the estimated cost of these items.

12. Bid Form.

12.1. Bids must be submitted on the Bid Form formulated by the CITY. The Bid Form is included with the Bidding Documents. Failure to submit a Bid on the Bid Form provided herein or to fully complete the Bid in accordance with these instructions renders the Bid void and shall not be considered for award by the CITY.

12.2. All blanks on the Bid Form must be completed in ink or by typewriter and the Bidder will be responsible for its correctness.

12.3. Bids by corporations must be executed in the corporate name by the president, a vice-president, or other corporate officer accompanied by evidence of authority to sign and the corporate seal must be affixed and attested by the secretary or an assistant. The corporate address and state of incorporation shall be shown below the signature.

12.4. Bids by partnerships must be executed in the partnership name and signed by a partner, accompanied by evidence of authority to sign, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

12.5. All names must be typed or printed below the signature.

12.6. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

12.7. The address to which communications regarding the Bid are to be directed must be shown.

12.8. The Bidder shall comply with the Florida Trench Safety Act, Fla. Stat. 553.60 et seq. All Bids shall include all information required by Statute.

12.9. The Bidder shall comply with the Public Entity's Crime Statute, Fla. Stat. 287.133. All Bids shall include the information required by Statute.

12.10. The Bidder shall comply with the Drug-Free Workplace Statute, Fla. Stat. 287.133 and provide information required by Statute.

13. Submission of Bids.

13.1. Sealed Electronic Proposals of the Bid shall be submitted at the time and place indicated in the Bid form. Each bid shall be accompanied by all required documents. Bidder assumes full responsibility for timely delivery of its Bid, which must be sent electronically or be means whereby the Bidder receives positive notification for delivery to the CITY. Oral, telephonic, faxed or telegraphic Bids are invalid and will not receive consideration.

12.2. The CITY shall have the right to reject Bids from Bidders whom the CITY has determined to be Non-Responsible. A Bidder determined to be Non-Responsible shall be prohibited from bidding or receiving Contracts for any future work for the CITY until the CITY, declares the Bidder once again responsible.

14. Modification and Withdrawal of Bids.

14.1. Bids may be modified or withdrawn only by an appropriate electronically submitted document in the same manner the original Bid was duly executed and delivered.

14.2. If any Bidder files a duly signed written notice with the CITY executed by an appropriate official, and promptly thereafter demonstrates to the reasonable satisfaction of the CITY that there was a material and substantial mistake in the preparation of its Bid, that Bidder

may withdraw its Bid and the Bid Security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

15. Opening of Bids.

Bids will be opened and read aloud publicly at the time and place indicated in the Invitation to Bid Construction.

16. Bids to remain Open.

All Bids shall remain subject to acceptance for one hundred and twenty (120) days after the day of the Bid opening, but the CITY may, at the sole discretion of the City, release any Bid and return the Bid Security prior to that date.

17. Award of Contract.

17.1. The CITY reserves the right to accept any Bid or combination of Bid alternates which, in the CITY'S judgment will best serve the City's interest, reject any and all Bids, to waive any and all informalities and/or irregularities, and to negotiate contract terms with the Successful Bidder, and the right to disregard all nonconforming, nonresponsive, unbalanced or conditional Bids. Also, the CITY reserves the right to reject the Bid of any Bidder if the CITY believes that it would not be in the best interest of the City to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the CITY. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit price. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

17.2. In evaluating Bids, the CITY shall consider the cost, CITY'S prior experience with bidder, demonstrated expertise of bidder, references of bidder, qualifications of bidder and ability of bidder to complete the project in a timely manner as well as whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Intent to Award.

17.3. The CITY may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the work as to which the identity of Subcontractors, Suppliers and other persons and organizations must be submitted as provided in Section 10. The CITY also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Intent to Award.

17.4. The CITY may conduct such investigations as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility qualifications and financial ability of the Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the work in accordance with the Contract Documents to the CITY'S satisfaction within the prescribed time.

17.5. If the contract is to be awarded, the contract will be awarded to the most responsible, responsive Bidder whose evaluation indicates that the award will serve the highest public interest and be in the best interest of the CITY.

17.6. The CITY reserves the right to reduce the quantities of work to be done and to completely eliminate any items of the work listed in the Proposal in order that the work can be completed within the amount of available funds.

17.7. If the contract is to be awarded, the CITY will give the successful Bidder a Notice of Intent to Award within one hundred and twenty (120) days after the day of the Bid opening.

17.8. In the event of irregularity in the bidding procedure, the CITY reserves the right to reject an unopened Bid, or receive and record it, if in the CITY'S best judgment such action accrues to the best interest of the CITY. Receiving and recording a Bid does not constitute a waiver of irregularities by the CITY.

17.9. Upon the CITY'S award of the Contract, the Bidder's failure to execute the Contract within fifteen (15) calendar days from the date of the notification of award shall be just cause and the CITY may annul and void the award and declare forfeiture of the bid security or good faith deposit in liquidation of all damages sustained.

17.10. Within fifteen (15) calendar days of the Notice of Intent to Award of the Contract, Bidder shall submit to the CITY and Consultant in writing a list of all subcontractors, principal suppliers and fabricators, persons or entities proposed for the principal portions of the Work.

17.11. Upon execution of the Contract by the CITY and the successful Bidder, submittal of the required performance and payment bonds, certificates of insurance, and receipt and approval of the required post-bid information, the CITY will issue the Notice to Proceed.

18. Contract Security and Insurance.

Article 6 of the General Conditions sets forth the CITY'S requirements as to performance and payment Bonds. When the successful Bidder delivers the executed Agreement to the CITY, it must be accompanied by the required performance and payment Bonds and required insurance certificates and policies if applicable. The surety on such bonds shall be a duly authorized nationally recognized surety company satisfactory to the CITY. Such bond shall be executed and issued by a resident agent licensed and having an officer in Palm Beach, Dade, Broward or Martin County, Florida, representing such corporate surety. Attorney-in-fact who signs bonds must file with such bond a certified copy of their Power-of-Attorney to sign said bonds. All bonds and insurance must meet the requirements of Article 6 of the General Conditions.

19. Signing of Agreement.

When CITY gives a Notice of Intent to Award to a successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within fifteen (15) days thereafter, Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to CITY with the required bonds and insurance certificates. Within thirty (30) days thereafter, the CITY upon final award by the City Commission shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

20. Qualification of Surety.

See paragraph 6.1 of the General Conditions for the CITY'S requirements.

21. Apprentices.

In the event this Contract is in excess of $25,000.00, the apprentice employment requirements of Chapter 446.011(3), Florida statutes are hereby incorporated:

21.1. The CONTRACTOR agrees:

21.1.1. That he will make a diligent effort to hire for the performance of the Contract a number of apprentices in each occupation which bears to the average number of the journeyman in that occupation to be employed in the performance of the Contract, the ratio of at least one apprentice to every five journeymen.

21.1.2. That he will, when feasible, assure that 25 percent of such apprentices are in their first year of training, except when the number of apprentices to be hired is fewer

than four. Feasibility here involves a consideration of the availability of training opportunities for first-year apprentices, the hazardous nature of the work for beginning workers and excessive unemployment of the apprentices in their second and subsequent years of training.

21.1.3. That, during the performance of the Contract, he will make diligent efforts to employ the number of apprentices necessary to meet requirements of subparagraphs 1 and 2.

21.2. The CONTRACTOR agrees to return records of employment by trade of the number of apprentices and apprentices by first year of training and of journeymen and the wages paid and hours of work of such apprentices and journeymen, on a form as prescribed by the Bureau of Apprenticeship of the Division of Labor and Employment Opportunities at three-month intervals. Submission of duplicate copies of forms submitted to the United States Department of Labor shall be sufficient compliance with the provisions of this section.

21.3. The CONTRACTOR agrees to supply to the Bureau of Apprenticeship of the Division of Labor and Employment Opportunities, at three-month intervals, a statement describing steps taken toward making a diligent effort and containing a breakdown by craft of hours worked and wages paid for first-year apprentices, other apprentices and journeymen.

21.4. The CONTRACTOR agrees to insert in any subcontract under this Contract the requirements contained in this section. The term "Contractor", as used in such clauses and any subcontract, shall mean the subcontractor."

22. Florida Trench Safety Act-Compliance.

In the event this contract requires trench excavation, the requirement of Florida Statutes 553.60, et seq., shall be adhered to by all Bidders. Every Bidder shall provide a certification on the form provided and other required documentation.

23. Public Entity Crimes.

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

24. Drug-Free Workplace.

Every Bidder shall provide a certification on the form provided indicating whether the Bidder has implemented a drug-free workplace program pursuant to the requirements of Florida Statute Section 287.087. Preference in the award process shall be given, according to the statutory requirements, to a business that certifies it has implemented a drug-free workplace program.

25. Building Permits.

The CONTRACTOR shall make application and obtain the necessary building permits from the CITY or other governing bodies. There shall be no cost for permits issued by the CITY.

26. Sales Tax.

The CONTRACTOR'S attention is directed to the fact that all materials and supplies necessary for completion of this contract are subject to Florida Sales and Use Tax in accordance with Florida Statutes.

27. Sub-Contracting / MBE Participation:

The CITY reserves the right to accept or reject any or all bids wherein a subcontractor is named and to make the award to the Bidder, who, in the opinion of the CITY will be in the best interest of and/or most advantageous to the CITY. The CITY also reserves the right to reject a bid of any Bidder if the bid names a subcontractor who has previously failed in the proper performance of an award or failed to deliver on time contracts of a similar nature, or who is not in a position to perform properly under this award. The CITY reserves the right to make said determination.

It is the policy of the CITY that Minority and Women Business Enterprises (M/WBEs) shall have the maximum opportunity to participate in, and, perform projects financed with CITY, State and Federal Funds. Bidders are hereby informed that the CITY encourages the utilization and participation of Minority and Women Business Enterprises in contracts financed with CITY funds. Since subcontract awards by successful Bidders to minority/women firms are crucial to the achievement of the CITY'S objectives, Bidders are encouraged to seek Minority and Women Business Enterprises for participation in subcontracting opportunities. Assistance in identifying qualified Minority and Women Business Enterprises may be obtained from the CITY'S Purchasing and Contract Administration Division Office.

28. Contractor's Certification.

CONTRACTOR'S bidding on this project must hold a State license or a current certificate of competency issued by Palm Beach County Examining Board having jurisdiction over licensing of CONTRACTORS in the type of work involved in this contract. The Bidder must submit proof this requirement has been met.

29. Indemnification.

The Bid shall include in its price the sum of $10.00 in consideration, for the indemnification provision. The indemnification provision contained in Section 7.28 of the general conditions is incorporated herein, and made a part hereof, as if fully set forth herein.

30. Force Majeure.

No party shall be obligated to perform any duty, requirement or obligation under this Agreement if such performance is prevented by fire, hurricane, earthquake, explosion, wars, sabotage, accident, flood, acts of God, strikes, or other labor disputes, riot or civil commotions, or by reason of any other matter or condition beyond the control of any party, and which cannot be overcome by reasonable diligence and without unusual expense (“Force Majeure”). In no event shall a lack of funds on the part of any party be deemed Force Majeure.

31. Undefined General Allowance.

An undefined general allowance may be included as part of the Schedule of Bid Prices. This allowance is included to cover contract item identified in Section 01020 - Undefined General Allowances. Prior to the initiation of any expenditure of any undefined general allowance, an executed formal Change Order is necessary for the utilization of allowance funds. The method for computing Change Order dollar amounts shall be as specified in the General Conditions.

32. Cone of Silence.

The Palm Beach County Lobbyist Registration Ordinance (Sections 2-351 through 2-357 of the Palm Beach County Code of Ordinances) is applicable in the City of Delray Beach. Section 2-355 of the Palm Beach County Lobbyist Registration Ordinance includes a "Cone of Silence" provision that limits communication during the City's procurement process in regard to this ITBC, which provides as follows:

(a) **Cone of silence** means a prohibition on any communication, except for written correspondence, regarding a particular request for proposal, request for qualification, bid, or any other competitive solicitation between:

(1) Any person or person's representative seeking an award from such competitive solicitation; and

(2) Any county commissioner or commissioner's staff, any member of a local governing body or the member's staff, a mayor or chief executive officer that is not a member of a local governing body or the mayor or chief executive officer's staff, or any employee authorized to act on behalf of the commission or local governing body to award a particular contract.

(b) For the purposes of this section, a person's representative shall include but not be limited to the person's employee, partner, officer, director, CONSULTANT, lobbyist, or any actual or potential subcontractor or CONSULTANT of the person.

(c) Pursuant to Section 2-355 of Palm Beach County Ordinance No. 2011-039, and the purchasing policies of the City of Delray Beach, all Solicitations, once advertised and until the appropriate authority has approved an award recommendation, are under the cone of silence. The cone of silence applies to any person or person's representative who responds to a particular request for proposal, request for qualification, bid, or any other competitive solicitation, and shall remain in effect until such response is either rejected by the county or municipality as applicable or withdrawn by the person or person's representative. Each request for proposal, request for qualification, bid or any other competitive solicitation shall provide notice of cone of silence requirements and refer to this article.

(d) The provisions of this article shall not apply to oral communications at any public proceeding, including prebid conferences, oral presentations before selection committees, contract negotiations during any public meeting, presentations made to the board or local municipal governing body as applicable, and protest hearings. Further, the cone of silence shall not apply to contract negotiations between any employee and the intended awardee, any dispute resolution process following the filing of a protest between the person filing the protest and any employee, or any written correspondence at any time with any employee, county commissioner, member of a local municipal governing body, mayor or chief executive officer that is not a member of the local municipal governing body, or advisory board member or selection committee member, unless specifically prohibited by the applicable competitive solicitation process.

(e) The cone of silence shall not apply to any purchases made in an amount less than the competitive bid threshold set forth in the county purchasing ordinance (County Code, chapter 2, article III, division 2, part A, section 2-51 et seq.) or municipal ordinance as applicable.

(f) The cone of silence shall terminate at the time the board, local municipal governing body, or a county or municipal department authorized to act on behalf of the board or local municipal governing body as applicable, awards or approves a contract, rejects all bids or responses, or otherwise takes action that ends the solicitation process.

(g) Any contract entered into in violation of the cone of silence provisions in this section shall render the transaction voidable.

33. Inspector General.

Contractor is aware that the Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this contract, and may demand and obtain records and testimony from Contractor and its subcontractors and lower tier subcontractors.

Contractor understands and agrees that in addition to all other remedies and consequences provided by law, the failure of Contractor or its subcontractor or lower tier subcontractors to fully cooperate with the Inspector General when requested may be deemed by the City to be a material breach of this Agreement justifying its termination.

34. Protests.

34.1 Standing
Parties that are not actual bidders, proposers or responders, including, but not limited to, subcontractors, material and labor suppliers, manufacturers and their representatives, shall not have standing to protest or appeal any determination made pursuant to this Section.

34.2 Protest Filing

34.2.1 Protest of Failure to Qualify. Upon notification by the City that a bidder, proposer or responder is deemed non-responsive and/or non-responsible, the bidder, proposer or responder who is deemed non-responsive and/or non-responsible may file a protest with the City Clerk by close of business on the third business day after notification (excluding the day of notification) or any right to protest is forfeited. It shall be the sole responsibility of such bidder, proposer or responder to verify the operating hours of City Hall.

34.2.2 Protest of Award of Agreement. After a Notice of Intent to Award an Agreement is posted, any actual bidder, proposer or responder who is aggrieved in connection with the pending award of the agreement or any element of the process leading to the award of the agreement may file a protest with the City Clerk by close of business on the third business day after posting (excluding the day of posting) or any right to protest is forfeited. It shall be the sole responsibility of such bidder, proposer or responder to verify the operating hours of City Hall.

A Notice of Intent to Reject all Bids, Proposals or Responses is subject to the protest procedure.

34.2.3 Content and filing. The protest shall be in writing, shall identify the name and address of the protester, and shall include a factual summary of, and the basis for, the protest. Filing shall be considered complete when the protest and the Protest Bond are received by the City Clerk.

34.3 Protest Bond
Any bidder, proposer or responder filing a protest shall simultaneously provide a Protest Bond to the City in the amount set forth in the Sealed Competitive Method documents. If the protest is decided in the protester's favor, the entire Protest Bond shall be returned to the protester. If the protest is not decided in the protester's favor, the Protest Bond shall be forfeited to the City. The Protest Bond shall be in the form of a cashier's check, and shall be in the amount specified in the Sealed Competitive Method documents.

34.4 Protest Procedures

34.4.1 A bidder or proposer that has submitted a response to a Formal Solicitation and is adversely affected by the decision of award may file a formal written protest within three (3) business days from the time of initial posting of the intended award. Notice of Intent to Award shall be posted in BidSync.
Note: Suspended or debarred vendors are ineligible to submit a bid protest.

34.4.2 Formal written protests shall not exceed fifteen (15) type-written pages (including exhibits and attachments) and in all other respects shall comply with the formatting requirements for an appellate brief as set forth in the Florida Rules of Appellate Procedure. A written protest is considered received by the City when it is delivered to and received by the City Clerk or designee. The City Clerk shall time/date stamp all written protest immediately upon receipt. Delivery to and receipt by any other City employee or staff member shall not constitute receipt by the City of Delray Beach. Protests submitted via email do not meet the requirements of this Section. Protesters shall file their written protests with the City between the hours of 8:00a.m. and 5:00 p.m. Service of a protest by mail or courier shall not expand the time period allowed for delivery of a protest.

34.4.3 In computing any time period prescribed or allowed by this protest policy, the day of the act or event from which the designated time period begins to run shall not be included. The last day of the period so computed shall be included unless it is a Saturday, Sunday, federal holiday, or holiday observed by the City, in which event the period shall run until the end of the next business day which is neither a Saturday, Sunday, federal holiday, nor a holiday observed by the City. A written protest shall not challenge the specifications, scope of work, relative weight of evaluation criteria, or a formula for assigning points.

34.4.4 Fee Required
The letter of protest shall be accompanied by a non-refundable protest application fee in an amount equal to one percent (1%) of the protestor's bid or five thousand dollars ($5,000.00), whichever is less. The protest application fee must be a cashier's check, a certified check, or an attorney's trust account check made payable to the City of Delray Beach. Failure to provide the required protest application fee shall deem the protest as incomplete and invalid.

34.4.5 Authority to Resolve Protests
The City's consideration of a timely written protest shall not necessarily stay the award process, as may be in the best interest of the City. The Purchasing Director may recommend to the City Manager to render moot any written protest that is overtaken by events, in which case the City Manager may abate or dismiss such protest. Within ten (10) business days (excluding Saturdays, Sundays, legal holidays, and City observed holidays) of receipt of the formal written protest, the Chief Financial Officer and the City Attorney shall attempt to settle or resolve the dispute, at the City Attorney's sole discretion. A decision will be rendered in writing and shall: (1) state the reasons for the action taken; and (2) inform the protestor of its right to appeal as provided herein. A copy of the decision of the Chief Financial Officer and the City Attorney shall be mailed or otherwise furnished immediately to the protestor. The protesting party may appeal the decision of the Chief Financial Officer and the City Attorney, by submitting the appeal to the City Manager within seven (7) days (excluding Saturdays, Sundays, legal holidays and City-observed holidays) from the date of the written decision. The appeal shall be in writing and shall state with specificity the grounds therefore and also the action requested of the City Manager. The City Manager shall attempt to settle or resolve the matter at his/her sole option. The City Manager shall render a decision, in writing, within 10 days (excluding Saturdays, Sundays, legal holidays and City observed holidays) following receipt of the appeal. A decision of the City Manager under this section shall be final and conclusive on the protester. Timely submittal of a protest or appeal required. Failure of a party to submit timely a written protest to the Purchasing Director within the time provided in this Section shall constitute a waiver of such party's right to protest pursuant to this Section. Costs. Any and all costs incurred by a protesting party in connection with a protest pursuant to this Section shall be the sole responsibility of the protesting party.

Failure to follow the protest procedures or failure to meet any deadline set forth herein shall automatically nullify any protest or claim brought by an aggrieved

bidder, offeror, or contractor. The City is not subject to or bound by the requirements and/or procedures set forth in Chapter 120, Florida Statutes.

34.5 Stay of Award of Agreement or Sealed Competitive Method

In the event of a timely protest, the City Manager shall stay the award of the Agreement or the Sealed Competitive Method unless the City Manager determines that the award of the Agreement without delay or the continuation of the Sealed Competitive Method is necessary to protect any substantial interest of the City. The continuation of the Sealed Competitive Method or award process under these circumstances shall not preempt or otherwise affect the protest.

34.6 Appeals to City Commission

The protesting party may appeal the decision of the Chief Financial Officer and the City Attorney, by submitting the appeal to the City Manager within seven (7) days (excluding Saturdays, Sundays, legal holidays and City-observed holidays) from the date of the written decision. The appeal shall be in writing and shall state with specificity the grounds therefore and also the action requested of the City Manager. The City Manager shall attempt to settle or resolve the matter at his/her sole option. The City Manager shall render a decision, in writing, within ten (10) days (excluding Saturdays, Sundays, legal holidays and City observed holidays) following receipt of the appeal. A decision of the City Manager under this section shall be final and conclusive on the protester.

34. 7 Failure to File Protest

Any actual bidder, proposer or responder that does not formally protest or appeal in accordance with this Section shall not have standing to protest the City Commission's award.

END OF SECTION 1

[remainder of page intentionally left blank]

SECTION 2: PROPOSAL

Proposal of _____
(Contractor)

_____
(Address)

to furnish and deliver all materials and to do and perform all work in accordance with the Contract Documents for the Project entitled:

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

To: Purchasing and Contract Administration Division
City of Delray Beach
100 NW 1st Avenue
Delray Beach, Florida 33444

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the CITY in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid Security. This Bid will remain open for one hundred and twenty (120) days after the day of Bid opening. Bidder will sign and deliver to the CITY the Agreement and submit the Contract Security, Insurance Certificates and other documents required by the Contract Documents within fifteen (15) days after the date of OWNER'S Notice of Intent to Award. If Bidder fails to sign the Agreement and deliver the Agreement to the CITY accompanied by the required security, insurance certificates and other documents within the time specified, the CITY has the authority to rescind the bid award and retain the bid security which shall be forfeited as liquidated damages.

3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

   a. Bidder has examined copies of all the Contract Documents and of the following addenda:

Number	Date	Number	Date

[ ] Attached Bid Security in the amount of five percent (5%) of the Bidders maximum bid price

[ ] Acknowledgement of all addendums

receipt of all of which is hereby acknowledged and also copies of the Advertisement for Bids and the Instructions to Bidders;

b. Bidder has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as Bidder deems necessary. **Bidder warrants and represents that there are no defects, errors or inconsistencies in the plans, specifications or any of the Contract Documents and that the actual site conditions comport to the conditions set forth therein.**

c. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over the CITY; no City official nor any City employee has a direct or indirect interested in said bid, in the supplies or work to which it relates, to any person associated with the firm performing the work, or to the profits resulting from the work.

[remainder of page intentionally left blank]

4. Bidder agrees that the Work will be substantially completed within **three hundred and thirty-five (335)** calendar days from the date of the issuance of the Notice to Proceed and completed and ready for final payment in accordance with paragraph 15.13 of the General Conditions within **thirty (30) calendar days** from the date of Substantial Completion.

   Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work on time.

5. The undersigned agrees as follows:

   Accompanying this Proposal is a certified check, cashier's check or bid bond, in the amount of **five percent (5%)** of total Bid Price, meeting the requirements of the Contract Documents for $_____ payable to the City of Delray Beach which is to be forfeited if, in the event that this Proposal is accepted, the undersigned shall fail to execute the contract and furnish satisfactory Contract Security and furnish insurance certificates under the conditions and within the time specified in the Instructions to Bidders; otherwise, said certified check, cashier's check or bid bond is to be returned as provided herein.

6. Communications concerning this Bid shall be addressed to the Bidder as indicated below.

7. The terms used in this Bid which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

Submitted on _____.
(date)

If a Corporation

Signature of Bidder Corporate Seal

By: _____

Print Name:_____

Address of Bidder: _____

_____

_____

Incorporated under the laws of the State of _____.

If an Individual, Partnership, or Non-Incorporated Organization

Signature of Bidder

By: _____

Print Name: _____

Address of Bidder: _____

_____

_____

Certificate of Competency number _____

The names of the corporate officers, or partners, or individuals doing business under trade name, is as follows:

Signature of Bidder

By: _____

Print Name: _____

Title: _____

Business Address: _____

_____

_____

Incorporated under the laws of the State of _____.

CERTIFICATE
(If a Corporation)

STATE OF _____)
) SS
COUNTY OF _____)

I HEREBY CERTIFY that a meeting of the Board of Directors of _____, a Corporation under the laws of the State of _____ held on _____, 20__ the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Corporation, be and he is hereby authorized to execute the Proposal dated _____, 20__, between the City of Delray Beach, Florida and this Corporation, and that his execution thereof, attested by the Secretary of the Corporation and with corporate seal affixed, shall be the official act and deed of this Corporation".

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 20___.

By:_____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

CERTIFICATE
(If a Partnership)

STATE OF _____)
) SS
COUNTY OF _____)

I HEREBY CERTIFY that a meeting of the partners of _____, a Partnership under the laws of the State of _____ held on _____, 20__ the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Partnership, be and he is hereby authorized to execute the Proposal dated _____, 20__, between the City of Delray Beach, Florida and this Partnership, and that this execution thereof, attested by the _____ of the Partnership be the official act and deed of this Partnership."

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 20___.

By:_____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

CONFLICT OF INTEREST DISCLOSURE FORM

The award of this contract is subject to the provisions of Chapter 112, *Florida Statutes*. All Proposers must disclose within their Proposal: the name of any officer, director, or agent who is also an employee of the City of Delray Beach.

Furthermore, all Proposers must disclose the name of any City employee who owns, directly or indirectly, an interest of more than five percent (5%) in the Proposer's firm or any of its branches.

The purpose of this disclosure form is to give the City the information needed to identify potential conflicts of interest for evaluation team members and other key personnel involved in the award of this contract.

The term "conflict of interest" refers to situations in which financial or other personal considerations may adversely affect, or have the appearance of adversely affecting, an employee's professional judgment in exercising any City duty or responsibility in administration, management, instruction, research, or other professional activities.

Please check one of the following statements and attach additional documentation if necessary:

_____ To the best of our knowledge, the undersigned firm has no potential conflict of interest due to any other Cities, Counties, contracts, or property interest for this Proposal.

_____ The undersigned firm, by attachment to this form, submits information which may be a potential conflict of interest due to other Cities, Counties, contracts, or property interest for this Proposal.

Acknowledged by:

_____
Firm Name

_____
Signature

_____
Name and Title (Print or Type)

_____
Date

[remainder of page intentionally left blank]

NOTIFICATION OF PUBLIC ENTITY CRIMES LAW

Pursuant to Section 287.133, *Florida Statutes*, you are hereby notified that a person or affiliate who has been placed on the convicted contractors list following a conviction for a public entity crime may not submit a Proposal on a contract to provide any goods or services to a public entity; may not submit a Proposal on a contract with a public entity for the construction or repair of a public building or public work; may not submit Proposal on leases or real property to a public entity; may not be awarded or perform work as a contractor, supplier, sub-consultant, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017 [F.S.] for Category Two [$35,000.00] for a period of thirty-six (36) months from the date of being placed on the convicted contractors list.

Acknowledged by:

_____
Firm Name

_____
Signature

_____
Name and Title (Print or Type)

_____
Date

[remainder of page intentionally left blank]

NOTIFICATION OF PUBLIC RECORDS LAW
Pertaining to Public Contracts and Requests for Contractor Records
Pursuant to Chapter 119, *Florida Statutes*

Pursuant to Chapter 119, *Florida Statutes*, Contractor shall comply with the public records law by keeping and maintaining public records required by the City of Delray Beach in order to perform the service. Upon request from the City of Delray Beach' custodian of public records, contract shall provide the City of Delray Beach 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* or as otherwise provided by law. Contractor shall 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 the contract. If the Contractor does not transfer the records to the City of Delray Beach. Contractor upon completion of the contract, shall transfer, at no cost, to the City of Delray Beach all public records in possession of the Contractor or keep and maintain public records required by the City of Delray Beach in order to perform the service. If the Contractor transfers all public records to the City of Delray Beach upon completion of the 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 the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City of Delray Beach, upon request from the City of Delray Beach' custodian of public records, in a format that is compatible with the information technology systems of the City of Delray Beach.

IF 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 OFFICE OF THE CITY CLERK LOCATED AT 100 NW 1ST AVENUE, DELRAY BEACH, FLORIDA 33444, PHONE NUMBER (561) 243-7000, EMAIL ADDRESS: JOHNSONK@MYDELRAYBEACH.COM

Acknowledged:

Firm Name

Signature

Name and Title (Print or Type)

Date

[remainder of page intentionally left blank]

DRUG FREE WORKPLACE CERTIFICATION

IDENTICAL TIE BIDS: Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quantity, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program (Florida Statutes Section 287.087). In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, and available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

_____
Bidders Signature

_____
(Print or type)

[remainder of page intentionally left blank]

NON-COLLUSIVE AFFIDAVIT

STATE OF _____)
) SS
COUNTY OF _____)

_____ being first duly sworn, deposes and says that:

(1) He is the _____,
(Owner, Partner, Officer, Representative or Agent)

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representative, employees or parties in interest, including this affidavit, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted; or to refrain from bidding in connection with such Contract; or have in any manner, directly or indirectly, sought by agreement or collusion, or communications, or conference with any Bidder, firm, or person to fix the price or prices in the attached Bid or any other Bidder, or to fix any overhead, profit, or cost element of the Bid Price or the Bid Price of any other Bidder, or to secure through any collusion conspiracy, connivance, or unlawful agreement any advantage against (Recipient), or any person interested in the proposed Contract;

(5) The price of items quoted in the attached Bid are fair and proper and are not tainted by collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any other of its agents, representatives, owners, employees or parties in interest, including this affidavit.

By:_____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

TRUTH-IN-NEGOTIATION CERTIFICATE

The undersigned warrants (i) that it has not employed or retained any company or person, other than bona fide employees working solely for the undersigned, to solicit or secure the Agreement and (ii) that it has not paid or agreed to pay any person, company, corporation, individual, or firm other than its bona fide employees working solely for the undersigned or agreed to pay any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of the Agreement.

The undersigned certifies that the wage rates and other factual unit costs used to determine the compensation provided for in the Agreement are accurate, complete, and current as of the date of the Agreement.

Name: _____

Title: _____

Date: _____

Signature: _____

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SCRUTINIZED COMPANY CERTIFICATION

This certification is required pursuant to Florida State Statute Section 287.135.

As of July 1, 2011, a company that, at the time of bidding or submitting a proposal for a new contract or renewal of an existing contract, is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List is ineligible for, and may not bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services of $1 million or more.

Companies must complete and return this form with its response.

Company: _____ FID or EIN No.: _____

Address: _____

City: _____ State: _____ Zip: _____

I, _____, as a representative of _____ certify and affirm that this company is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

Name: _____

Title: _____

Date: _____

Signature: _____

[remainder of page intentionally left blank]

TRENCH SAFETY ACT
Florida Statutes Section 553.60 et seq.

"Trench Safety Act" Compliance

Bidder acknowledges that the Florida Trench Safety Act, Section 553.60 et. seq., which became effective October 1, 1990, shall be in effect during the period of construction of the project. The Bidder by signing and submitting the bid is, in writing, assuring that it will perform any trench excavation in accordance with the applicable trench safety standards. The Bidder further identifies the following separate item of cost of compliance with the applicable trench safety standards as well as the method of compliance.

Method of Compliance	Cost

Bidder acknowledges that this cost is included in the applicable items of the Proposal and in the Grand Total Bid Price. Failure to complete the above may result in the bid being declared non-responsive.

The Bidder is, and the Owner and Engineer are not, responsible to review or assess City's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act". Bidder is, and the City and Engineer are not, responsible to determine if any safety or safety related standards apply to the project, including, but not limited to, the "Trench Safety Act".

Name: _____

Title: _____

Date: _____

Signature: _____

[remainder of page intentionally left blank]

CONE OF SILENCE

The Palm Beach County Lobbyist Registration Ordinance (Sections 2-351 through 2-357 of the Palm Beach County Code of Ordinances) is applicable in the City of Delray Beach. Section 2-355 of the Palm Beach County Lobbyist Registration Ordinance includes a "Cone of Silence" provision that limits communication during the City's procurement process in regard to this ITBC, which provides as follows:

(a) **Cone of silence** means a prohibition on any communication, except for written correspondence, regarding a particular request for proposal, request for qualification, bid, or any other competitive solicitation between:

(1) Any person or person's representative seeking an award from such competitive solicitation; and

(2) Any county commissioner or commissioner's staff, any member of a local governing body or the member's staff, a mayor or chief executive officer that is not a member of a local governing body or the mayor or chief executive officer's staff, or any employee authorized to act on behalf of the commission or local governing body to award a particular contract.

(b) For the purposes of this section, a person's representative shall include but not be limited to the person's employee, partner, officer, director, CONSULTANT, lobbyist, or any actual or potential subcontractor or CONSULTANT of the person.

(c) Pursuant to Section 2-355 of Palm Beach County Ordinance No. 2011-039, and the purchasing policies of the City of Delray Beach, all Solicitations, once advertised and until the appropriate authority has approved an award recommendation, are under the cone of silence. The cone of silence applies to any person or person's representative who responds to a particular request for proposal, request for qualification, bid, or any other competitive solicitation, and shall remain in effect until such response is either rejected by the county or municipality as applicable or withdrawn by the person or person's representative. Each request for proposal, request for qualification, bid or any other competitive solicitation shall provide notice of cone of silence requirements and refer to this article.

(d) The provisions of this article shall not apply to oral communications at any public proceeding, including prebid conferences, oral presentations before selection committees, contract negotiations during any public meeting, presentations made to the board or local municipal governing body as applicable, and protest hearings. Further, the cone of silence shall not apply to contract negotiations between any employee and the intended awardee, any dispute resolution process following the filing of a protest between the person filing the protest and any employee, or any written correspondence at any time with any employee, county commissioner, member of a local municipal governing body, mayor or chief executive officer that is not a member of the local municipal governing body, or advisory board member or selection committee member, unless specifically prohibited by the applicable competitive solicitation process.

(e) The cone of silence shall not apply to any purchases made in an amount less than the competitive bid threshold set forth in the county purchasing ordinance (County Code, chapter 2, article III, division 2, part A, section 2-51 et seq.) or municipal ordinance as applicable.

(f) The cone of silence shall terminate at the time the board, local municipal governing body, or a county or municipal department authorized to act on behalf of the board or local municipal governing body as applicable, awards or approves a contract, rejects all bids or responses, or otherwise takes action that ends the solicitation process.

(g) Any contract entered into in violation of the cone of silence provisions in this section shall render the transaction voidable.

Contractor's Name: _____ Signature: _____

Date: _____

BID BOND

STATE OF _____)
) SS
COUNTY OF _____)

KNOW ALL MY BY THESE PRESENTS that _____ as Principal, and

_____ as surety, are held and firmly bound unto the City of Delray

Beach, Florida, hereinafter called the City in the penal sum of _____ dollars ($) lawful money of the United States, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that whereas the Principal has submitted the

accompanying bid, dated _____, for project titled:

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

NOW, THEREFORE,

(a) It is a condition precedent to the submission of said bid that a certified check, cashiers check or bid bond in the amount of **five percent (5%)** of the base bid be submitted with said bid as a guarantee that Bidder would, if awarded the contract, enter into a written contract with the CITY for the completion of the Work specified in the Contract Documents for the amount indicated in the Bid.

(b) If the Principal shall not withdraw said bond within one hundred and twenty (120) days after date of the same, and shall within fifteen (15) days after the prescribed forms are presented to him for signature, enter into a written contract with the CITY in accordance with the bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligation shall be void and of no effect, otherwise the sum herein stated shall be due and payable to the CITY and the surety herein agrees to pay said sum immediately upon demand of the CITY in good and lawful money of the United States of America as liquidated damages for failure thereof of said principal.

IN WITNESS WHEREOF, the above-bounded parties executed this instrument under their several seals,

this _____ day of _____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

I _____ (person), on behalf of
(surety)

_____(surety company) have read

and examined the Performance and Payment Bonds attached to Bid No. _____.

_____ _____
Signature Date

WITNESS: If Sole Ownership or Partnership, two (2) Witnesses required. If Corporation, Secretary Only will attest and affix seal.

WITNESSES:

PRINCIPAL

_____

_____
(firm name)

Print Name: _____

By: _____
(Signature of Authorized Officer)

_____

(affix Seal)

Print Name: _____

Print Name:_____

Title:_____

Business Address: _____

_____

_____

WITNESSES:

SURETY

_____

_____
(firm name)

Print Name: _____

By:_____
(Signature of Authorized Officer)

_____

(affix Seal)

Print Name: _____

Print Name:_____

Title:_____

Business Address: _____

_____

_____

Name of Local Insurance Agency_____

INFORMATION REQUIRED OF BIDDER

BIDDER'S GENERAL INFORMATION:

Bidder shall furnish the following information. Failure to comply with this requirement will render Bid non-responsive and may cause its rejection. Additional sheets shall be attached as required.

(1) CONTRACTOR'S name and address:

_____

_____

_____

_____

(2) CONTRACTOR'S telephone number: _____

(3) Number of years as a CONTRACTOR in this type of work: _____

(4) Names and titles of all officers of CONTRACTOR'S firm:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(5) Name, address, and telephone number of surety company and agent who will provide the required bonds on this contract:

_____

_____

_____

_____

(6) Principal Materials Manufactures and Subcontractors. This proposal is being submitted by the hereinafter stated CONTRACTOR who proposes to perform work specified and shown on the Drawings. The Bid Proposal shown on the preceding page(s) has been calculated and tabulated using basic material prices. The following is a list of material manufactures and subcontractors whose materials and services said CONTRACTOR propose to furnish and utilize if the awarded a CONTRACT for the work specified herein and shown on the Plans. It is understood that the following list is not complete but includes the names of manufacturers of the principal components and subcontractors supplying principal services to said project. It is also understood that if awarded a Contract, the CONTRACTOR will furnish the materials of the manufactures and utilize the services of the subcontractors stated herein and that if for any reason whatsoever CONTRACTOR wishes to substitute materials or subcontractors he shall request permission in writing from the City stating fully the reason for making such a request prior to ordering same.

All of said manufactures or their authorized vendors have been made aware of all the appropriate portions of the Contract Documents and agree that their materials will meet all of the requirements stated therein and that deliveries will be scheduled so as not to impede the progress of the work.

Materials	Manufacturer
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Subcontractors

Name	Duties
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Signature of Bidder

By:_____

Print Name:_____

QUESTIONNAIRE

The undersigned guarantees the truth and accuracy of all statements and answers herein contained.

1. How many years has your organization been in business in the State of Florida as a Contractor?

2. What is the last project of this nature that you have completed?

3. Have you ever failed to complete work awarded to you: If so where and why?

4. Name three individuals or corporations for which you have performed work and to which you refer?

5. List the following information concerning all contracts on hand as of the date of submission of this proposal. (In case of co-venture, list the information of all co-venturers).

NAME OF PROJECT	OWNER	TOTAL CONTRACT VALUE	CONTRACTED DATE/OF COMPLETION	%OF COMPLETION TO DATE

(Continue list on insert sheet, if needed)

6. Have you personally inspected the proposed work and have you a complete plan for its performance?

7. Will you sublet any part of this work? If so, give details.

8. What equipment do you own that is available for the work?
(Attach additional sheets as necessary)

9. What equipment will you purchase for the proposed work?

10. What equipment will you rent for the proposed work?

State the true, exact, correct and complete name of the partnership, corporation or trade name under which you do business and the address of the place of business. (If a corporation, state the name of the President and Secretary. If a partnership, state the names of all partners. If a trade name, state the names of the business under the trade name. It is absolutely necessary that this information be furnished).

_____
Correct Name of Bidder

a) The business is a (Sole Proprietorship) (Partnership) (Corporation)

b) The address of principal place of business is _____

_____

_____

c) The names of the corporate officers or partners, or individuals doing business under a trade name, is as follows:

Signature of Bidder

By: _____

Print Name: _____

Business Address: _____

_____

_____

Incorporated under the laws of the State of _____.

END OF SECTION 2

SECTION 3: AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____, 20___, by and between the CITY OF DELRAY BEACH, FLORIDA, hereinafter called the CITY or OWNER, and _____, hereinafter called CONTRACTOR.

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK.

1.1 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. For the project entitled:

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

1.2 The Contractor, in full and complete satisfaction of its role as general contractor, hereby accepts responsibility for the completion of the Work as provided by the Contract Documents, and will perform the procurement of materials and equipment required by the Contract Documents, construction coordination, construction, supervision and project management as may be required in order to construct the Work in accordance with the Contract Documents such that the finished Work shall be performed and completed and the Work will be performed in accordance with all required state and local code requirements as are described in the Contract Documents. Notwithstanding, the foregoing shall not be construed to impose any design responsibility on Contractor except where such design responsibility is an existing contractual requirement of the Contractor pursuant to Florida law in performance of the Work or the Contract Documents.

1.3 The Contractor shall schedule and attend regular meetings with the City and Consultant as required for the timely and proper completion of the Project, but in no event less than twice a week. The following people shall attend the meeting on behalf of Contractor: Project Executive and General Superintendent.

1.4 The Contractor hereby represents and warrants to the City that the Contractor has and will continue, to the extent appropriate during the Project: (1) to evaluate the scope, schedule and budget established by the City, for the Project in order, among other things, (a) to assess the quality and soundness of such program, schedule and budget, (b) to identify and evaluate alternatives to the City's schedule so as to reduce the time required for construction, (c) to evaluate and recommend alternative materials and systems and methods of achieving the City's program schedule and cost requirements or other design parameters, and (2) as and when requested by the City or the Consultant, to discuss and review the cost, scope and schedule any suggested revisions to same.

1.5 The Contractor hereby represents and warrants to the City that (a) the Contractor has carefully reviewed and shall continue to review the Drawings (including all notes and specifications contained in the Drawings), designs and other Contract Documents, (b) the responsibilities of the Contractor are properly identified and assigned therein, and (c) the Contractor will timely bring to the attention of City (via written notification) if it discovers that the Drawing (including all notes and specifications contained in the Drawings) contain any errors, omissions, inconsistencies, or areas of conflict or overlap in the Work to be performed by the Contractor, with sufficient advanced notice so as not to delay the progress of the Work.

1.6 The Contractor shall coordinate and integrate the activities of the Consultant, Contractor, the City, and other persons or entities participating in the construction of the Project.

1.7 The Contractor hereby represents and warrants that the Contractor has particular expertise and experience in the construction of projects similar to the Project and in the performance of the Work and other services required hereunder.

1.8 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents and applicable Florida Law, either by tests, inspections, approvals, activities, duties, actions or inactions of the Threshold inspectors, special inspectors, the Consultant, building department inspectors, building department officials or by persons or entities other than the Contractor.

1.9 No recovery for changed market conditions.
In entering into the Agreement, the Contractor represents and warrants that it has considered all impacts and potential impacts associated with the following: (1) COVID-19, Monkey Pox, and related worldwide pandemics ("Pandemics"); and (2) the current military conflict involving Russia and the Ukraine (the "Ukraine Military Conflict"). The Contractor further represents and warrants that in entering into this Agreement, it has accounted for any and all labor or material shortages, delivery lead time, or price increases that may be caused by local and or national conditions, including but not limited to impacts from the Pandemics and the Ukraine Military Conflict. The Contractor also represents and warrants that in determining time requirements for procurement, installation, and construction completion, Contractor has taken into account these impacts from the Pandemics and the Ukraine Military Conflict, and has included all of those factors in the Project Schedule and Contract Sum.

The Contractor will not seek any price increases or time extensions relating to or arising from any impacts from the Pandemics or Ukraine Military Conflict.

The City shall not be required to make any adjustment in the Contract Sum or grant an extension to the Contract Time in connection with any failure by the Contractor to comply with the requirements of this Article.

Article 2. CONSULTANT.

The Project will be administered by a third-party construction engineering and inspection firm, who is hereinafter called CONSULTANT and who will assume all duties and responsibilities and will have the rights and authority assigned to CONSULTANT in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. ENTIRE AGREEMENT.

3.1 The Contract Documents consist of this Agreement, all terms and conditions of the solicitation, General and Supplementary Conditions, the City's Bid Package (including M/WBE Program Requirements and Project Manual), Drawings and Specifications, Addenda issued prior to execution of this Agreement, other documents and exhibits listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein (the "Contract Documents").

3.2 The Contract Documents represent the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. If anything in the other Contract Documents, other than a Modification, is inconsistent or in conflict with any of the terms of this Agreement, this Agreement shall govern. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature not set forth herein. NO CHANGES, AMENDMENTS OR MODIFICATIONS OF ANY OF THE TERMS OR CONDITIONS OF THE CONTRACT DOCUMENTS SHALL BE VALID UNLESS REDUCED TO WRITING AND SIGNED BY BOTH PARTIES.

3.3 Any of the Contract Documents not attached hereto but expressly identified in this Agreement are hereby incorporated by reference and shall be deemed to be of the same force and effect as if actually attached hereto.

3.4 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. On the Drawings, given dimensions shall take precedence over scaled measurements and large-scale drawings over small-scale drawings.

3.5 In the event of any conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities, keeping in mind that the better quality or greater quantity of Work shall be provided in accordance with the City's interpretation:

(1) This Agreement, the General Conditions, and all Exhibits hereto, as modified;
(2) Addenda, with those of later date having precedence over those of earlier date;
(3) City's Bid Package; and
(4) Drawings and Specifications.

3.6 In the case of an inconsistency between the Drawings and Specifications or within either document not clarified by an Addendum, the better quality or greater quantity of Work shall be provided in accordance with the City's interpretation.

Article 4. CONTRACT SUM.

4.1 The City shall pay, and the Contractor shall accept, as full and complete payment for the Contractor's timely performance of its obligations hereunder, the Contract Price (which, including Contractor's Fee) is guaranteed by the Contractor not to exceed _____ ($_____), subject to additions and deductions by Change Order as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price or GMP. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the City.

4.2 The Contract Price shall include Contractor's Fee for the proper performance of the Work, which shall be _____ ($_____). Contractor agrees and represents that the level of staffing, administrative resources, and other conditions of General Conditions shall be sufficient for the Project throughout completion of the Work.

4.3 It is the intent and understanding of Contractor in providing a GMP for this Work, that the Contract Documents provide for the construction of the Work by the Contractor, including all devices, fasteners, materials or other work not shown in the Drawings but which are reasonably inferable therefrom and any and all incidental accessories necessary to complete the Work (even if not specified in the description of the Work, but necessary for proper installation and operation (not arising from a design deficiency in the design criteria of the equipment) of the Work as required by the Contract Documents), all of which shall be included as part of the Cost of the Work. The expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Work and exercising the care, skill and diligence of the Contractor by the Contract Documents. Notwithstanding, the foregoing shall not be construed to impose any design responsibility on Contractor except where such design responsibility is contractually required or an existing requirement of Florida law in the performance of the Work or the Contract Documents.

4.4 To the extent that the Drawings and Specifications are anticipated to require further development by the Consultant, Contractor shall include in the GMP for such further development consistent with the Contract Documents and reasonably inferable therefrom as necessary to produce the indicated

results (not arising from a design deficiency in the design criteria). Such further development does not include changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order. Contractor will construct the Project in strict accordance with the Contract Documents.

4.5 Subcontractor Buyout/Value Engineering

4.5.1 Contractor shall work with the City to negotiate the most complete and economical deals with the Subcontractors that have not been "bought out" as of the date of this Agreement in order to establish and or achieve the GMP.

4.5.2 In addition, in order to control costs, the Contractor shall submit to the City, for the City's review for any unbought scope of Work, (i) a bid analysis and list of proposed Subcontractors for the performance of the several portions of the Work, (ii) the scope of Work to be performed under each respective subcontract, (iii) a detailed estimate of the Cost of the Work based on such bids, (iv) a list of alternate selections of persons or entities for each proposed Subcontractor and their respective bids, along with a list of the differences between the alternate bids and those set forth in the bid analysis, and (v) the instructions, clarifications, written responses, and other information given to or submitted by the bidders. The Contractor shall consult with the City before awarding the subcontract and shall provide the City with a copy of each proposed subcontract for the City's review. The Contractor shall provide the City with a complete copy of each executed subcontract.

4.5.3 Until the Subcontractor Buyout is complete, Contractor shall provide City with written ongoing budget updates on a weekly basis or as requested by City.

4.5.4 Contractor shall participate in Value Engineering the Contract Documents with the City and/or Consultant with the goal of finding acceptable means for reducing the Cost of the Work. Upon acceptance by City of recommendation for Value Engineering, the Contract Documents shall be modified to reflect such changes. All savings in connection with Value Engineering of the Work shall revert to City.

4.6 Contractor represents to City that prior to execution of this Agreement, Contractor has compared and reviewed all general and specific details on the Drawings and that all conflicts, discrepancies, errors, and omissions, which are within the commonly accepted knowledge base of a licensed general contractor and subcontractors, or which a reasonably prudent licensed general contractor or subcontractor would have discovered, have been disclosed to the City. Contractor shall represent the same upon inspection of any Drawings prepared after execution of this Agreement. Therefore, Contractor warrants that 1) the GMP includes, without limitation, the cost of correcting all conflicts, discrepancies, errors, or omissions which Contractor identified; 2) that Contractor's review and comparison of all drawings has been taken into consideration the Project can be constructed in accordance with the Contract Documents and therefore, the Contractor represents that the GMP represents the total cost of the Work; 3) that Contractor can complete the Project in the time set forth in the Agreement and the approved Project Schedule; and 4) that Contractor has considered all customary issues that could impact price and time, including the inefficiencies pertaining to the Pandemics as well as the Ukrainian Military Conflict.

4.7 Schedule of Values. The Contractor shall provide to City, for City's written approval, a written Schedule of Values with supporting Subcontractor bids and scope of work used to establish each line item in the GMP, which Schedule of Values shall be used for all payment applications going forward.

Article 5. CONTRACT TIME; LIQUIDATED DAMAGES.

5.1 The work will be substantially completed within **three hundred and thirty-five (335)** calendar days from the date of the issuance of the Notice to Proceed and completed and ready for final payment in accordance with paragraph 15.13 of the General Conditions within **thirty (30) calendar days** from the date of Substantial Completion.

5.2 Liquidated Damages. The CITY and CONTRACTOR recognize that time is of the essence of this Agreement and that the CITY will suffer financial loss if the Work is not completed within the times specified in paragraph 5.1 above, plus any extensions thereof allowed solely in accordance with Article 13 of the General Conditions.

They also recognize that the actual loss suffered by the CITY if the Work is not completed on time is not readily ascertainable at the time of entering this Contract. Accordingly, instead of requiring any such proof, the CITY and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay the CITY for each calendar day that expires after the time specified in paragraphs 5.1 for substantial completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by the CITY, CONTRACTOR shall pay the CITY for each calendar day that expires after the time specified in paragraph 5.1 for completion and readiness for final payment. CONTRACTOR expressly acknowledges that such sum is not payable as a penalty but as liquidated damages representing a reasonable estimate of delay damages, inconvenience, and additional overhead and costs likely to be sustained by the CITY, estimated at the time of executing the Contract. If the CITY reasonably believes in its discretion that Substantial Completion will be delayed, it shall be entitled, but not required to withhold from any amounts otherwise due the CONTRACTOR an amount then believed by the CITY to be adequate to recover liquidated damages applicable to such delays. Partial use or occupancy of the Work shall not result in the Work deemed substantially completed, and such partial use or occupancy shall not be evidence of Substantial Completion.

5.2.1 Amount of Liquidated Damages. Applicable liquidated damages are the amounts established in the following schedule:

Original Contract Amount	Daily Charge Per Calendar Day
$299,999 and under	$980
$300,000 but less than $2,000,000	$1,699
$2,000,000 but less than $5,000,000	$2,650
$5,000,000 but less than $10,000,000	$3,819
$10,000,000 but less than $20,000,000	$4,687
$20,000,000 but less than $40,000,000	$7,625
$40,000,000 and over	$10,467 plus 0.00005 of any amount over $40 million (rounded to nearest whole dollar)

5.2.2 The above liquidated damages provision shall not affect the City's right to terminate this Agreement as provided in this Agreement nor shall it limit any of the other remedies as provided in the Contract Documents. The City's exercise of its right to terminate this Agreement shall not release City's claim for liquidated damages in the amount set forth herein or Contractor's defenses thereto.

5.2.3 Assessments of liquidated damages shall be immediately due and payable to the City or, at the City's option, may be deducted from payments that may be due and owing to Contractor. To the extent the City agrees in writing to phased Substantial Completion, the above-referenced liquidated damages will apply as to each respective phase of Substantial Completion.

5.2.4 Any Subcontract Agreements providing for liquidated damages at a per diem amount lower than the per diem amount set forth in this Agreement is subject to City's prior written approval.

5.3 Recovery of Damages Suffered by Third Parties. In addition to the damages provided for in paragraph 5.2.1 and pursuant to Section 337.18 of the Florida Statutes, when the CONTRACTOR fails to complete the work within the Contract Time the CITY may recover from the CONTRACTOR amounts that the CITY pays for damages suffered by third parties unless the failure to timely complete the work was caused by the CITY's act or omission.

5.4 In addition to the liquidated damages set forth above, City shall also be entitled to proceed directly against Subcontractors and suppliers (in Contractor's name) responsible for delays in achieving Substantial Completion for the full amount of damages City has incurred, plus any and all acceleration and/or Extraordinary Measures costs as provided in the General and Supplementary Conditions. Said pass-through claim shall be at Contractor's sole cost and expense.

Further, Contractor shall make appropriate claim(s) against all available insurance and the Subcontractor, supplier, and/or manufacturer responsible for delays in achieving Substantial Completion, and if the Subcontractor, supplier and/or manufacturer fails to pay costs incurred by Contractor and the City for the City's actual damages, acceleration, and/or Extraordinary Measures costs, Contractor shall default or terminate such Subcontractor and/or supplier and Contractor shall make and diligently pursue, at Contractor's sole cost and expense, the appropriate claim against its Subcontractors, for the benefit of City. Any recovery from Contractor's Subcontractors and suppliers shall be included in fully compensating City, and not in place of City's recovery of liquidated damages from Contractor. To assist City with claims against Subcontractors and suppliers as set forth above, Contractor shall provide City with Project Records as determined by City to assist City in identifying Contractor's Subcontractors and suppliers responsible for delays in achieving Substantial Completion and or Final Completion.

Article 6. PAYMENT PROCEDURES.

CONTRACTOR shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by the CONSULTANT as provided in the General Conditions.

ATTN: Engineering Division Manager
Engineering Division, Utilities Department
Swinton Operations Complex
434 South Swinton Avenue
Delray Beach, Florida 33444

6.1 Progress Payments. The CITY shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by CONSULTANT, on or about the First day of each month during construction as provided below and to the extent Contractor's Applications for Payment are timely submitted pursuant to the Contract Documents. All progress payments will be on the basis of the progress of the Work measured by the Schedule of Values initially submitted by the Contractor and approved by the City as established in Paragraph 3.6.3 of the General Conditions and in the case of Unit Price Work based on the number of units completed or, in the event there is no schedule of values, as provided in the General Requirements. Each Application for Payment submitted by the Contractor shall be accompanied by substantiating data and lien waivers as provided in the Contract Documents.

6.1.1 Prior to Substantial Completion progress payments will be made in an amount equal to 95% of the work completed, less the aggregate of payments previously made and less such amounts as CONSULTANT shall determine, or the CITY may withhold, in accordance with paragraph 15.7 of the General Conditions

6.1.2. Prior to Substantial Completion, progress payments for materials and equipment not incorporated in the Work but delivered and suitably stored and accompanied by documentation satisfactory to the CITY, as provided in paragraph 15.2 of the General Conditions, will be made in an amount equal to 0% as established by the Schedule of Values.

6.1.3 The CITY is entitled to withhold amounts due CONTRACTOR for any defective or non-conforming work as well as for liquidated damages.

6.1.4 In addition, as a further condition to payment of each progress payment, Contractor shall submit to the City and Consultant: (i) a sworn and certified Progress Payment Affidavit, which recites that all laborers, material suppliers and Subcontractors dealing with the Contractor have been paid in full through the date of the prior application for payment which has been received by Contractor from City, with the exception of disputed payments; (ii) a partial release of lien conditioned upon payment from Contractor for the current Application for Payment, (iii) partial releases of lien from all lienors providing Work on the applicable Application for Payment through the date of the last payment made, (iv) partial releases of lien conditioned only upon payment from all lienors providing Work on the applicable Application for Payment, through the date of the current Application for Payment, (v) any evidence of payment of any indebtedness incurred with respect to the Work of Contractor, as may be required by the Consultant and such other evidence that Consultant may reasonably require substantiating that all Work which is the subject of each such Application for Payment has been performed, and (vi) where required by any manufacturers for extended warranties, inspection certificates or other acceptable documentation confirming the acceptable completion of any and all required inspections for the Work performed for which payment is being made.

6.1.5 Each Application for Payment shall be based on the Schedule of Values approved by the City unless subsequently amended by Change Order in accordance with the Contract Documents. If the Schedule of Values is subsequently amended by Change Order in accordance with the Contract Documents, then each subsequent Application for Payment shall be based on the Amended Schedule of Values. The Schedule of Values shall allocate the entire GMP among the various portions of the Work. As individual subcontracts are executed, the actual subcontract value will be identified separately in the Schedule of Values in place of any estimates that made up the original GMP, with any remaining portion of the line item carried in the same scope of Work, to complete the Work in any particular division, as long as the GMP is not increased. The Schedule of Values shall be prepared in such form and supported by such data to substantiate its accuracy as the City or Consultant may require. This Schedule of Values and each update approved by the City shall be used as a basis for reviewing the Contractor's Applications for Payment.

6.1.6 In taking action on the Contractor's Application For Payment, the Consultant and the City shall be entitled to reply on the accuracy and completeness of the information furnished by the Contractor and shall not be deemed to represent that the City and/or Consultant has made a detailed examination, audit, or arithmetic verification of the documentation submitted in accordance with this Article or other supporting data; that the Consultant and/or the City has made exhaustive or continuous on-site inspections; or that the City and/or Consultant has made examinations to ascertain how or for what purposes the Contractor has used amounts previously paid on account of the Agreement. Such examinations, audits, and verifications, if required by City, will be performed by the City's auditors acting in the sole interest of the City.

6.1.7 For each progress payment made prior to Substantial Completion of the Work as defined in the Contract Documents, determined and certified by Consultant and/or the City, the City may withhold the following amount, as retainage, from the payment otherwise due: Five Percent (5%) of all payments until the Work reaches Final Completion as defined in the Contract Documents and determined and certified by Consultant and City. Contractor shall include a similar retainage provision pertaining to its subcontractors and suppliers.

6.1.8 In the event of any default by the Contractor under the Contract Documents for which the Contractor has not cured or commenced to cure, the City may withhold any payment or part of any payment in the amount of the costs and damages incurred by City to correct, remedy and/or mitigate any Contractor defaults or the amount of the costs of damages, including Liquidated Damages (provided the Contract Time has expired), reasonably estimated to be incurred to correct, remedy and/or mitigate any Contractor defaults including, but not limited to: (1) defective Work not remedied; (2) claims or liens filed; (3) failure of the Contractor to make payments in accordance with the terms of this Agreement

and the subcontract agreements for properly performed Work by the Subcontractors or for labor, materials, or equipment; (4) failure to provide waivers of lien for all lienors giving notices; (5) damage to the City's property caused by Contractor, its Subcontractors or anyone working for Contractor, notwithstanding insurance coverage as required by the Contract Documents; (6) failure of the Work to progress satisfactorily or according to schedule; and (7) failure to carry out the Work in accordance with the Contract Documents.

6.2 Final Payment. Upon final completion and acceptance of the Work in accordance with paragraph 15.13 of the General Conditions, the CITY shall pay the remainder of the Contract Price as recommended by CONSULTANT as provided in said paragraph 15.13.

6.3 The making of progress payments or Final Payment shall not constitute or be deemed to be a waiver by the City of any claims which the City may have against the Contractor under the provisions of this Agreement or otherwise: and provided, further, that the making of the Final Payment shall not be deemed a waiver by the City of any claims which the City may have against the Contractor for latent defects or any other defect or an incomplete item which is not readily apparent at the time such Final Payment is made; and provided further, that the making of Final Payment shall not be deemed a waiver by the City of any obligation of the Contractor under the provisions of the Contract Documents or otherwise to repair or correct any Work or materials that prove defective as a result of faulty materials, equipment or workmanship.

6.4 Acceptance of Final Payment by the Contractor, a Subcontractor or material or equipment supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment or as provided in this Agreement.

Article 7. SUBCONTRACTS.

No more than 60 percent (60%) of the dollar value of the total Work under the Contract Documents may be accomplished by subcontractors. The balance of Work must be accomplished by selected CONTRACTOR'S own forces.

Article 8. CONTRACTOR'S REPRESENTATIONS.

In order to induce the CITY to enter into this Agreement CONTRACTOR makes the following representations:

8.1 CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

8.2 CONTRACTOR has obtained at his/her own expense and carefully studied, or assumes responsibility for obtaining and carefully studying, soil investigations, explorations, and test reports which pertain to the subsurface conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

8.3 CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the

other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.3 of the General Conditions

8.4 CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

8.5 CONTRACTOR has given CONSULTANT prompt written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents no later than seven (7) calendar days from discovery of such, and the written resolution thereof by CONSULTANT is acceptable to CONTRACTOR.

Article 9. NO DAMAGES FOR DELAY.

9.1 All time in the Contract Documents is calculated on a consecutive calendar day basis.

9.2 Time is of the essence in this Agreement, and any breach of same shall go to the essence hereof, and CONTRACTOR, in agreeing to complete the Work within the time herein mentioned, has taken into consideration and made allowances for all reasonable hindrances and delays incident to Contractor's Work.

9.3 CONTRACTOR agrees to commence the Work when directed by the CITY and to diligently and continuously perform such Work and to coordinate the Work with other Work being performed on the Project by other trades and/or Separate Contractors, if any, so that the CITY shall not be delayed by any act or omission of CONTRACTOR in completion of the Project within the time specified above.

9.4 CONTRACTOR shall not be entitled to any claim for damages on account of hindrance or delays from any cause whatsoever, but if caused by any act of God or active interference on the part of the CITY, such act, hindrance or delay may only entitle the CONTRACTOR to receive an extension of time as its sole and exclusive remedy for such delay, as set forth in Article 13 of the Contract General Conditions. Contractor shall not be entitled to an increase in the GMP or to payment of any other additional monies from the City for costs incurred as a result of such delay, including additional or extended General Conditions costs or General Requirements costs. The City's exercise of its rights under this Agreement shall in no way be considered active interference.

9.4.1 An extension of time to complete the Work shall be determined by the CONSULTANT provided the CONTRACTOR provides CONSULTANT and CITY with notice in writing of the cause of said act, hindrance, or delay within twenty (20) calendar days after its occurrence.

9.4.2 In the event the request for extension is not made in writing within that twenty-day time period, CONTRACTOR acknowledges and agrees it has forever waived any and all rights to such an extension.

9.4.3 All extensions of time shall be authorized only by a written change order executed by the CITY, CONSULTANT, and CONTRACTOR; in the absence of a written and fully executed change order, CONTRACTOR shall not be entitled to any claim for additional time.

9.4.4 This "no damage for delay" provision shall encompass any damages for delay or disruption even if the CONTRACTOR completes construction of the Work in a timely fashion in accordance with this Agreement.

9.4.5 Damages as referenced in this "no damage for delay" provision shall include any type of damages that are or could be awarded by any court or arbitration panel such as, by way of general example, but not limitation, tort, contract, strict liability, consequential damages, liquidated damages and/or punitive damages.

9.4.6 The CONTRACTOR recognizes and specifically acknowledges the terms and conditions of this "no damage for delay" clause upon execution of this Contract.

Article 10. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire agreement between the CITY and CONTRACTOR concerning the Work consist of the following:

10.1 This Agreement.

10.2 Advertisement for Bids.

10.3 Instructions to Bidders.

10.4 Bid Submittal.

10.5 Bid Bond.

10.6 Florida Performance and Payment Bonds.

10.7 Certificates of Insurance.

10.8 Notice of Intent to Award.

10.9 Notice to Proceed.

10.10 Certificate of Substantial Completion.

10.11 Warranty of Title.

10.12 Final Receipt.

10.13 Standard General Conditions.

10.14 Technical Specifications.

10.15 Construction Plans dated _____.

with each sheet bearing the following general title:

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

10.16 Exhibits to this Agreement.

10.17 Addenda number _____ to _____, inclusive.

10.18 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 4.4 and 4.5 of the General Conditions.

10.19 The documents listed above are attached to this Agreement (except as expressly noted otherwise above). There are no Contract Documents other than those listed above in this Article 10. The Contract Documents may only be amended, modified, or supplemented as provided in paragraphs 4.4 and 4.5 of the General Conditions.

Article 11. INDEMNITY.

11.1 In consideration of Ten Dollars ($10.00) in hand paid and other valuable consideration, receipt of which is hereby acknowledged, CONTRACTOR agrees to defend, indemnify, and hold harmless the CITY, their agents, and employees in accordance with this Article 11 and paragraph 7.28 of the General Conditions which is incorporated herein and made a part hereof as if fully set forth herein. It is the specific intent of the parties hereto that the foregoing indemnification complies with Florida Statutes 725.06, as amended. It is further the specific intent and agreement of said parties that all of the Contract Documents on this Project are hereby amended to include the foregoing indemnification and the "Specific Consideration" therefore.

11.2 To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the City, the Consultant, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees (at the trial and appellate levels), arising out of or resulting from performance of the Work, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Article 11.

11.3 In any and all claims against the Indemnified Parties by any employee of the Contractor, or anyone for whose acts any of them may be liable, the indemnification obligation under this provision of this Agreement shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or on behalf of the Contractor or any Subcontractor under Workers Compensation Acts, Disability Benefit Acts or other employee benefit acts.

11.4 The Parties hereto acknowledge and agree that, to the extent any portion of the indemnification provisions contained herein is deemed void or unenforceable in any action or proceeding, then such portion shall be considered severed such that it will not affect the remaining portions of these indemnification provisions.

11.5 The Indemnitors' indemnity obligations under this Section shall also specifically include, without limitation, all claims, fines, penalties, damages, liability, costs, fees, expenses (including, without limitation, reasonable attorneys' fees and expenses), and punitive and consequential damages (if any) arising out of, or in connection with or attributable to, any claims made against the Indemnified Parties for (i) bodily injury, sickness, disease, death, or destruction of tangible property caused by Contractor and/or any of its Subcontractors and/or Sub-subcontractors, (ii) violation of or failure to comply with any law, statute, ordinance, rule, regulation, code or requirement of a public authority that bears upon the performance of the Work by the Contractor, and/or any of the Indemnitors, or any person or entity for whom they are responsible, (iii) Contractor's failure to comply with any provision of the Contract Documents including Warranty obligations, and obligations to correct damaged and defective work, (iv) means, methods, procedures, techniques, or sequences of execution or performance of the Work, and/or (v) failure to secure and pay for permits, fees, approvals, licenses, and inspections as required under this Agreement and/or the other the Contract Documents, or any violation of any permit or other approval of a public authority applicable to the Work, by the Contractor, a Subcontractor, or any person or entity for whom either is responsible. Moreover, and without limiting the foregoing, the Indemnitor's indemnity obligations under this Section include any and all claims by third parties against Indemnified Parties for consequential damages arising from and/or in connection with this Agreement and/or the performance and/or failure of the Work.

11.6 The Contractor shall indemnify and hold harmless all of the Indemnified Parties from and against any costs and expenses (including reasonable attorneys' fees for all trial and appellate levels) incurred by any of the Indemnified Parties in enforcing any of the Contractor's defense, indemnity, and hold-harmless obligations under this Agreement.

11.7 The Contractor shall include in all Subcontracts provisions by which each Subcontractor agrees to defend, indemnify, and hold harmless Contractor and the Indemnified Parties from and against liability, damages, losses and costs, including, but not limited to, reasonable attorneys' fees for all

trial and appellate levels, arising out of, in connection with, or resulting from the performance of the Work or any Subcontractor's obligations under the Contract Documents to the same extent and in the same manner as the Contractor is liable to the City pursuant to this provision.

11.8 The provisions of this Section shall survive Final Completion and Final Payment or termination of this Agreement.

Article 12. REIMBURSEMENT OF CONSULTANT EXPENSES.

Should the completion of this Agreement be delayed beyond the specified or adjusted time limit authorized by the City, CONTRACTOR shall reimburse the CITY for all expenses of CONSULTING and inspection incurred by the CITY during the period between said specified or adjusted time and the actual date of final completion. All such expenses for CONSULTING and inspection incurred by the CITY will be charged to CONTRACTOR and be deducted from payments due CONTRACTOR as provided by this Contract. Said expenses shall be further defined as CONSULTANT charges associated with the construction contract administration, including resident project representative costs.

Article 13. MISCELLANEOUS.

13.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meaning indicated in the General Conditions.

13.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

13.3 The CITY and CONTRACTOR each binds itself, its partners, its successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.

13.4 The agreement shall be void if not signed by both the CITY and the CONTRACTOR.

13.5 No change or modification of this Agreement shall be valid unless in writing and signed by City and the duly authorized representative of Contractor. No waiver of any of the provisions of this Agreement shall be valid unless in writing and signed by the party against whom it is sought to be enforced.

13.6 The partial or complete invalidity of any one or more provisions of this Agreement shall not affect the validity or continuing force and effect of any other provision. The failure of either party hereto to insist, in any one or more instances, upon the performance of any of the terms, covenants or conditions of this Agreement, or to exercise any right herein, shall not be construed as a waiver or relinquishment of such term, covenant, condition or right as respects further performance.

Article 14. CITY PROVISIONS.

14.1 **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 AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY OF DELRAY BEACH, CITY CLERK, 100 N.W. 1ST AVE., DELRAY BEACH FLORIDA. THE CITY CLERK'S OFFICE MAY BE CONTACTED BY PHONE AT 561-243-7050 OR VIA EMAIL AT CITYCLERK@MYDELRAYBEACH.COM.**

14.2.1 Contractor shall comply with public records laws, specifically to:

14.2.1.1 Keep and maintain public records required by the City to perform the service.

14.2.1.2 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 Florida Statute or as otherwise provided by law.

14.2.1.3 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 Agreement term and following completion of the Agreement if the Contractor does not transfer the records to the City.

14.2.1.4 Upon completion of the Agreement, 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 the Agreement, 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 the Agreement, 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.

14.2.1.5 If the Contractor does not comply with this section, the City shall enforce the contract provisions in accordance with the contract and may unilaterally cancel this contract in accordance with state law.

14.2 Contractor is aware that the Inspector General of Palm Beach County has the authority to investigate and audit matters relating to the negotiation and performance of this contract and may demand and obtain records and testimony from Contractor and its subcontractors and lower tier subcontractors. Contractor understands and agrees that in addition to all other remedies and consequences provided by law, the failure of Contractor or its subcontractors and lower tier subcontractors to fully cooperate with the Inspector General when requested may be deemed by the City to be a material breach of this Agreement justifying its termination.

14.3 The continuation of this Agreement beyond the end of any fiscal year shall be subject to both the appropriation and the availability of funds in accordance with Florida law.

14.4 By entering into this Agreement Contractor acknowledges its obligation to comply with the provisions of Section 448.095, Fla. Stat., "Employment Eligibility." Contractor affirms and represents it is registered with the E-Verify system, utilizing same, and will continue to utilize same as required by law. Compliance with this section includes, but is not limited to, utilization of the E-Verify System to verify the work authorization status of all newly hired employees and requiring all subcontractors to provide an affidavit attesting that the subcontractor does not employ, contract with, or subcontract with, an unauthorized alien. Failure to comply with this section will result in the termination of this Agreement, or if your subcontractor knowingly violates the statute, the subcontract must be terminated immediately. Any challenge to termination under this provision must be filed in the Circuit Court no later than 20 calendar days after the date of termination. If terminated for a violation of the statute by Contractor, the Contractor may be prohibited from conducting future business with the City or awarded a solicitation or contract for a period of 1 year after the date of termination. All costs incurred to initiate and sustain the aforementioned programs shall be the responsibility of the Contractor.

14.5 This Agreement shall be construed in accordance with the City of Delray Beach's Code of Ordinances and the laws of the State of Florida. Any dispute relating to this Agreement shall only be filed in a court of competent jurisdiction in Palm Beach County, Florida, and each of the parties to this Agreement submits itself to the jurisdiction of such court. It is hereby understood and agreed

that in the event any lawsuit in the judicial system, federal or state, is brought to enforce compliance with this contract or interpret same, or if any administrative proceeding is brought for the same purposes, each party shall pay their own attorney's fees and costs, including appellate fees and costs.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the CITY and CONTRACTOR have caused this Agreement to be executed the day and year shown above.

ATTEST:

_____
Alexis Givings, City Clerk

CITY OF DELRAY BEACH

By: _____
Thomas F. Carney, Mayor

Approved as to form and legal sufficiency:

_____
Lynn Gelin, City Attorney

CONTRACTOR

By: _____

Print Name: _____

Title: _____

(SEAL)

STATE OF _____

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this ___ day of _____, 20___, by _____ (name of person), as _____ (type of authority) for _____ (name of party on behalf of whom instrument was executed).

Personally known ___ OR Produced Identification ___

Type of Identification Produced _____

_____

Notary Public – State of _____

CERTIFICATE
(If a Corporation)

STATE OF _____)
) SS
COUNTY OF _____)

I HEREBY CERTIFY that a meeting of the Board of Directors of _____, a Corporation under the laws of the State of _____ held on _____, 20__ the following resolution was duly passed and adopted:

"RESOLVED, that _____, as _____ of the Corporation, be and he is hereby authorized to execute the Proposal dated _____, 20__, between the City of Delray Beach, Florida and this Corporation, and that his execution thereof, attested by the Secretary of the Corporation and with corporate seal affixed, shall be the official act and deed of this Corporation".

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 20___.

By:_____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

SAMPLE SURETY PERFORMANCE AND PAYMENT BOND

Bond No _____

By this Bond, We _____, as Principal, whose principal business address and phone number are_____, as Contractor under the contract dated _____, 20____. Between Principal and the City of Delray Beach, whose principal address and phone number are _____ for the construction of:

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

(hereinafter referred to as "Contract") the terms of which Contract are incorporated by reference in its entirety into this Bond and _____, as Surety, whose principal business address and telephone number are _____ the sum of (U.S. dollars) $_____**,** for payment of which we bind ourselves, our heirs, personal representatives**,** successors, and assigns, jointly and severally.

THE CONDITION OF THIS BOND is that Principal:

1. Performs, all the work under the Contract, including but not limited to guarantees, warranties and the curing of latent defects, said Contract being made a part of this bond by reference, and in the times and in the manner prescribed in the Contract, including any and all damages for delay; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1) Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract and

3. Pays City all losses, damages, including damages for delay, expenses, costs and attorney's fees, including appellate proceedings, that City sustains because of a default by Principal under the Contract, including but not Limited to a failure to honor all guarantees and warranties or to cure latent defects in its work or materials within 5 years after completion of the work under the Contract; and

4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the Contract, including all warranties and curing all latent defects within 5 years after completion of the work under the Contract;

then this bond is void; otherwise it remains in full force.

In the event that Principal shall fail to comply fully with, carry out and perform the terms and conditions of the Contract the Surety, following receipt of a written demand by the Obligee to correct Principal's default(s), and having failed to correct such default (s) within a reasonable time , shall be deemed to be in default fifteen (15) days after receipt of an additional written demand by the Obligee to correct the Principal's default, and the Obligee shall be entitled to enforce any remedy against Surety available to the Obligee including, but not limited to recovery of damages for the Surety's delay.

If no specific periods of warranty are stated in the Contract for any particular item or work, material or equipment, the warranty shall be deemed to be a period of one (I) year from the date of final acceptance by the City. This Bond does not limit the City's ability to pursue suits directly with the Principal seeking damages for latent defects in materials or workmanship, such actions being subject to the limitations found in Section 95.11(3)include, Florida Statutes.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05 (2), Florida Statutes.

Any changes in or under the Contract Documents and compliance or noncompliance with any formalities connected with the Contract or the changes does not affect Surety's obligation under this Bond.

IN WITNESS WHEREOF, the above bounden parties have caused this Bond to be executed by their appropriate officials as of the _____ day of _____, 20___.

CONTRACTOR: _____
(Contractor Name)

WITNESS: _____ BY: _____
(President, Managing Partner, or Joint Venturer)

(SEAL)

SURETY: _____

FLORIDA AGENT OF SURETY: _____

(Copy of Agent's current Identification Card as issued by State of Florida Insurance Commissioner must be attached)

WITNESS: _____ BY: _____
(Attorney-in-Fact)

(CORPORATE SEAL)

LETTER OF CREDIT FORMAT

LETTER OF CREDIT NO.: _____

ISSUANCE DATE: _____

APPLICANT:
{Name of Corporation}
{Address}
{City, State, Zip}

BENEFICIARY:
CITY OF DELRAY BEACH
100 N.W. 1ST AVENUE
DELRAY BEACH, FL 33444

FOR U.S.D. $_____
DATE OF EXPIRATION:_____

WE HEREBY ESTABLISH OUR IRREVOCABLE LETTER OF CREDIT NO. _____ IN FAVOR OF THE BENEFICIARY, THE CITY OF DELRAY BEACH, FLORIDA FOR THE ACCOUNT OF THE ABOVE-REFERENCED APPLICANT, AVAILABLE BY YOUR DRAFTS DRAWN ON **{Name of Bank}** PAYABLE AT SIGHT FOR ANY SUM OF MONEY NOT TO EXCEED A TOTAL OF **{Amount of Money}**, THE AMOUNT REFERENCED ABOVE.

DEMANDS OF THE LETTER OF CREDIT MUST BE ACCOMPANIED BY A STATEMENT FROM THE CITY MANAGER OF THE CITY OF DELRAY BEACH CERTIFYING EITHER: (1) THAT SAID LETTER OF CREDIT IS ABOUT TO EXPIRE AND HAS NOT BEEN RENEWED, OR (2) THAT WORK HAS NOT BEEN COMPLETED IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND AGREEMENTS (INCLUDING ANY AMENDMENTS THEREOF) FOR THE FOLLOWING PROJECT: **{Name of Project}** (THE 'PROJECT').

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT WILL BE AUTOMATICALLY EXTENDED FOR PERIODS OF ONE YEAR FROM EXPIRY DATE HEREOF, OR ANY FUTURE EXPIRATION DATE, WITHOUT ANY AMENDMENT, UNLESS THIRTY (30) DAYS BUT NO MORE THAN SIXTY (60) DAYS PRIOR TO ANY EXPIRATION DATE WE SHALL NOTIFY THE CITY OF DELRAY BEACH IN WRITING BY CERTIFIED MAIL RETURN RECEIPT REQUESTED, OR BY COURIER VIA HAND DELIVERY AT THE ABOVE-LISTED ADDRESS, THAT WE ELECT NOT TO CONSIDER THIS LETTER OF CREDIT RENEWED FOR ANY SUCH ADDITIONAL PERIOD.

WE HEREBY AGREE WITH THE DRAWERS, ENDORSERS, AND BONA FIDE HOLDERS OF ALL DRAFTS DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THE CREDIT THAT SUCH DRAFTS WILL BE DULY HONORED UPON PRESENTATION TO **{Name of Bank}** (THE 'BANK'), WHICH IS DULY AUTHORIZED TO CONDUCT BUSINESS IN THE STATE OF FLORIDA IN ACCORDANCE WITH THE TERMS HEREOF. IF A DRAFT, AS DESCRIBED IN THIS LETTER OF CREDIT, IS PRESENTED PRIOR TO THE EXPIRATION DATE AND IN CONFORMITY WITH THE TERMS OF THIS LETTER OF CREDIT AND UPON PRESENTATION IT IS WRONGFULLY DISHONORED BY THE BANK, THE BANK AGREES TO PAY REASONABLE ATTORNEYS FEES AND COSTS, INCLUDING FEES AND COSTS ON APPEAL, INCURRED BY THE CITY OF DELRAY BEACH TO ENFORCE THIS LETTER OF CREDIT SHOULD THE CITY PREVAIL.

DOCUMENTS MUST BE PRESENTED FOR PAYMENT TO:
{Name of Bank Branch}
{Address}
{City, State, Zip}
ATTN: **{Department}**

ALL DRAWINGS UNDER THIS LETTER OF CREDIT MUST BE ACCOMPANIED BY THE ORIGINAL LETTER OF CREDIT INSTRUMENT WHICH WILL BE RETURNED TO THE BENEFICIARY AFTER ENDORSING THE BACK OF SAME WITH THE AMOUNT OF EACH DRAWING BY US.

PARTIAL DRAWINGS ARE PERMITTED.

THE AMOUNT OF ANY DRAFT DRAWN UNDER THIS CREDIT MUST BE ENDORSED ON THE REVERSE OF THE ORIGINAL CREDIT. ALL DRAFTS MUST BE MARKED "DRAWN UNDER **{Name of Bank}** LETTER OF CREDIT NUMBER _____ DATED _____, 20__.

THIS CREDIT IS SUBJECT TO THE "UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS, (2007 REVISION), INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 600", AND TO THE PROVISIONS OF FLORIDA LAW. IF A CONFLICT BETWEEN THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS AND FLORIDA LAW SHOULD ARISE, FLORIDA LAW SHALL PREVAIL. IF A CONFLICT BETWEEN THE LAW OF ANOTHER STATE OR COUNTRY AND FLORIDA LAW SHOULD ARISE, FLORIDA LAW SHALL PREVAIL. VENUE FOR ANY DISPUTES RELATING TO THE ENFORCEMENT OF THIS LETTER OF CREDIT SHALL BE PALM BEACH COUNTY, FLORIDA.

{Name of Bank}

BY: _____
{Name}
{Title}

LIMITED POWER OF ATTORNEY

_____ and _____

(Principal) (Surety)

hereby grants the City Clerk of the City of Delray Beach Power of Attorney to insert the date of execution on the contract, surety bonds to the contract and agreement entitled, _____

_____

In Witness Whereof, we have hereunto set our hand and seal this _____ day of _____, 20___.

_____

Principal (SEAL)

_____

Surety (SEAL)

WITNESS: _____

PRINT NAME: _____

WITNESS: _____

PRINT NAME: _____

[remainder of this page left blank intentionally]

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)
) SS
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20__, by _____ (name of officer or agent, title of officer or agent), of _____(name of corporation acknowledging), a _____ (state or place of incorporation) corporation, on behalf of the corporation. He/She is (personally known to me) (or has produced identification) _____ (type of identification).

By:_____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

[remainder of this page left blank intentionally]

NOTICE OF INTENT TO AWARD

DATE: _____

TO: _____
(Bidder)

ADDRESS: _____

_____

_____

ITBC NO.: 2025-035
Area 5, 10, 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

You are notified that your Bid dated_____, for the above Contract has been considered. You are the apparent Successful Bidder. Accordingly, notice is hereby given of the Tentative Award of this contract to you.

The Contract Price of your contract is: $ _____

_____
Dollars

_____
Cents

Five (5) copies of each of the proposed Contract Documents, (except Drawings) accompany this Notice of Intent to Award.

You must comply with the following conditions precedent within fifteen (15) days of the date of this Notice

of Intent to Award (that is by_____):

1. You must deliver to the CITY five (5) fully executed counterparts of the Agreement including all the Contract Documents. Each of the Contract Documents must bear your signature on the cover page of each set of Contract Documents.

2. You must deliver with the executed Agreement, Insurance Certificates and the Contract Security Bonds as specified in the Instructions to Bidders and in Article 6 of the General Conditions together with Power of Attorney for use by the City for the purpose of inserting the date of execution of the Contract Surety Bonds and the Agreement, within fifteen (15) calendar days from the date of this Notice to you.

3. You should have the following prepared for the preconstruction conference.

   (a) A preliminary project construction progress schedule.
   (b) An itemized schedule of payment and values.
   (c) A detailed shop drawing submission plan.

Failure to comply with these conditions within the time specified will entitle the CITY to consider your bid abandoned, to annul this Notice of Intent to Award and to declare your Bid Security forfeited.

Within forty-five (45) days after you comply with those conditions, if the contract is approved by the City Commission, the CITY will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

City of Delray Beach

By:_____

Print Name:_____

Title:_____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF INTENT TO AWARD is hereby acknowledged by _____ this the _____ day of _____, 20___.

By:_____

Print Name:_____

Title:_____

Copy to: City of Delray Beach
(Use Certified Mail, Return Receipt Requested)

NOTICE TO PROCEED

DATE: _____

TO: _____
(Contractor)

ADDRESS: _____

_____

_____

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

You are notified that the Contract time under the above contract will commence to run on the _____ day of _____, 20___. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement the dates of Substantial Completion and Final Completion are the _____ day of _____, 20___ and the _____ of _____, 20___, respectively.

City of Delray Beach

By:_____

Print Name:_____

Title:_____

Copy to _____
(Use Certified Mail, Return Receipt Requested)

cc: Purchasing Manager
Project file

CERTIFICATE OF SUBSTANTIAL COMPLETION

DATE: _____

TO: _____
(Contractor)

ADDRESS: _____

_____

_____

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

CONTRACT DATE: _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts therof:

_____

_____

_____

_____

TO: City of Delray Beach, Florida

AND TO: _____
(CONTRACTOR)

The Work to which this Certificate applies has been inspected by authorized representatives of the CITY, CONTRACTOR and CONSULTANT, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on:

_____
(Date of Substantial Completion)

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of CONTRACTOR to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by CONTRACTOR within _____ days of Substantial Completion.

The responsibilities between the CITY and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance, and warranties shall be as follows:

RESPONSIBILITIES:

CITY: _____

_____

_____

CONTRACTOR: _____

_____

_____

The following documents are attached to and made a part of this Certificate:

_____

This certificate does not constitute an acceptance of Work not in accordance with the Contract documents nor is it a release of CONTRACTOR'S obligation to complete the Work in accordance with the Contract Documents.

Executed by CONSULTANT on this _____ day of _____, 20__.

By:_____

Print Name:_____

Title:_____

CONTRACTOR accepts this Certificate of Substantial Completion on this _____ day of _____, 20__.

By:_____

Print Name:_____

Title:_____

The CITY accepts this Certificate of Substantial Completion on this _____ day of _____, 20__.

By:_____

Print Name:_____

Title:_____

WARRANTY OF TITLE

(For Periodic Progress Payments)

STATE OF _____)
) SS
COUNTY OF _____)

CONTRACTOR: _____

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

BEFORE ME, the undersigned authority, personally appeared _____ (the "Affiant"), who after being duly sworn, says that he is the "CONTRACTOR", pursuant to a Contract (the "Contract") dated the _____ day of _____, 20__, with the CITY OF DELRAY BEACH, FLORIDA, (the "OWNER"), for the supply of certain labor and/or materials (the "Work"), to certain property, as shown and described in the Contract Documents, subsequent Addenda or Change Orders, and on behalf of the Contractor makes the following warranties:

I. The CONTRACTOR warrants that it has fully completely in accordance with the plans and specifications therefore, that portion of the Work, pursuant to the Contract (the "Completed Work") covered by the attached Periodic Progress Payment Request.

II. The CONTRACTOR further warrants and represents that:

1. All subcontractors, vendors, material men, suppliers, and other parties of whatever kind of nature who are entitled to payment from the CONTRACTOR for providing labor and/or materials to the CONTRACTOR pursuant to the Contract as of the date in the last previous request for payment have been paid in full and therefore have delivered to the CONTRACTOR validly executed Partial Release of claims with respect thereto.

2. Title to all materials and equipment covered by the attached Periodic Pay Request for Payment dated the _____ day of _____, 20___, passes to the City at the time of payment free and clear of all liens.

By:_____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

FINAL RECEIPT

STATE OF _____)
) SS
COUNTY OF _____)

_____ being first duly sworn, deposes and says as follows:

1. HE/SHE is _____ of _____
(Title) (Name of Corporation or Firm)
a _____ corporation which is named in Construction Contract dated the _____ day of _____, 20___, between said corporation as the CONTRACTOR and the CITY OF DELRAY BEACH, FLORIDA (the CITY) as the OWNER for the construction of:

ITBC NO.: 2025-035
Area 5, 10, and 14 Reclaim Water Improvements
PROJECT NO.: 24-101U

2. CONTRACTOR has fully completed all construction and work under the Contract and Title to all work, materials and equipment under the Contract passes to the CITY at the time of final payment, free and clear of all liens, and all labors, and material men and subcontractors have been paid in full for performing or furnishing the work, labor or materials under the Contract.

3. Receipt by CONTRACTOR of the final payment from CITY in the amount of _____ dollars ($_____) shall constitute a full release and discharge by CONTRACTOR to the CITY of all claims or liens of CONTRACTOR against OWNER arising out of, connected with, or resulting from performance of the Contract, including full payment for all extra work and material furnished by the undersigned in the construction of said improvements.

4. The undersigned further certifies that all non-exempt taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax Act), as amended, have been paid and discharged.

5. This statement under oath is given in compliance with Sections 713.05 and 713.06, Florida Statutes.

Affiant Contractor

Signed and sealed in
the presence of:

By: _____

Print Name:_____

Title:_____

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
Signature and Stamp of Notary Public

My Commission Expires:

END OF SECTION 3

SECTION 4: SCOPE OF WORK AND LIST OF EXHIBITS

1. General Requirements

   The Scope of Work requires the furnishing of all services and other deliverables necessary for the successful completion of the proposed project. The contractor shall furnish all labor, equipment, and materials required under this scope. The Scope of Work includes: **Construction of a 6-inch reclaim water main at the west end of Germantown Road and reclaim water services to 5 properties in Area 5; construct a 6-inch reclaim water main on SW 2nd Avenue and reclaim water services to 2 properties in Area 10, and construct reclaim water services to connect 6 properties to existing reclaim water mains in Area 10; and construct reclaim water services to connect 8 properties to existing reclaim water mains in Area 14; per the construction documents.**

2. Specifications

   Specifications for this project are herein incorporated into this solicitation as:

   Exhibit A – Technical Specifications

3. Drawings

   Drawings for this project are herein incorporated into this solicitation as:

   Exhibit B – AREA 5, 10, AND 14 RECLAIM WATETR IMPROVEMENTS Plans;

4. Project Timeline

   The awarded Bidder shall agree to substantially complete the work no later than **three hundred-and thirty-five (335)** calendar days after the Notice to Proceed is issued. The City will adjust contract time for weather days and holidays in accordance with FDOT and City of Delray Beach standard specifications. Final Completion shall be within **thirty (30) calendar days** from the date of Substantial Completion.

5. Bid Items

   Refer to Exhibit A, Technical Specifications, for a complete listing of bid items and descriptions.

6. Permits

   N/A

7. Miscellaneous

   N/A

END OF SECTION 4

SECTION 5: STANDARD GENERAL CONDITIONS

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT FOR THE CITY OF DELRAY BEACH, FLORIDA

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STANDARD GENERAL CONDITIONS

ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

ADDENDA - Written or graphic instruments, explanations, interpretations, changes, corrections, additions, deletions or modifications of the contract documents issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

AGREEMENT - The written agreement between the CITY and CONTRACTOR covering the Work to be performed; when other Contract Documents are attached to the Agreement, they become a part of the Agreement. The Agreement is also referred to as the Contract, interchangeably.

APPLICATION FOR PAYMENT - The form accepted by CONSULTANT which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

BID - The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed, properly signed or guaranteed.

BONDS - Bid, Performance and Payment bonds and other instruments which protect against loss due to inability, failure or refusal of the CONTRACTOR to perform the work specified in the contract documents.

CALENDAR DAY - A calendar day of 24 hours measured from midnight to the next midnight, including Saturdays, Sundays and holidays and regardless of the weather.

CHANGE ORDER - A document recommended by CONSULTANT which is signed by the CONTRACTOR and the CITY which authorizes an addition, deletion, or revision in the work, or an adjustment in the Contract Price or Contract Time, issued on or after the execution of the Agreement. Change Orders must be in writing and verbal agreements of any matter are expressly excluded from any definition.

CITY - The City of Delray Beach, Florida, a Florida municipal corporation, its authorized and legal representatives, the public entity with whom the Contractor has entered into the agreement and for whom the work is to be provided. The City may also be referred to in the Contract Documents as the Owner.

CONSTRUCTION SUPERINTENDENT - The construction superintendent shall be in attendance at the project site during performance of the Work and shall represent the CONTRACTOR. Communications given to the construction superintendent or decisions made by the construction superintendent shall be as binding as if given to or made by the CONTRACTOR. Important communications or decisions shall be confirmed in writing. Other communications or decisions shall be similarly confirmed by written request in each case.

CONSULTANT(S) - City of Delray Beach Public Works Department, Engineering Division or its authorized agents, inspectors or representatives acting within the scope of duties entrusted to them by the CITY.

CONTRACT DOCUMENTS - The Advertisement for Bids, Instructions to Bidders, Proposal, Bid Bond, Agreement, Payment Bond, Performance Bond, Certificate of Insurance, Notice of Intent to Award, Notice to Proceed, Certificate of Substantial Completion, Warranty of Title, Final Receipt - Release of Lien, General Conditions, Supplemental General Conditions, Technical Specifications, Contract Drawings, Addenda and Change Orders executed pursuant to the Contract Documents.

CONTRACT PRICE - The total monies payable by the CITY to the CONTRACTOR under the terms and conditions of the Contract Documents which can be modified only by written change order.

CONTRACT TIME - The number of successive calendar days stated in the Contract Documents for the completion of the Work.

CONTRACTOR - The person, firm, or corporation with whom the CITY has executed the Agreement to furnish the Work called for in the Contract Documents and its representatives, agents, employees, officers, directors and all others affiliated therewith.

DEFECTIVE WORK - Work determined by the City or Consultant to be unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or Work that has been damaged prior to the CONSULTANT'S recommendation of final payment.

DRAWINGS - The drawings, plans, maps, profiles, diagrams, and other graphic representations which show character, location, nature, extent and scope of the Work, which have been prepared or approved by CONSULTANT and which are considered part of the Contract Documents.

EFFECTIVE DATE OF THE AGREEMENT - The date indicated in the Agreement, but if no such date is indicated it means the date on which the Agreement is signed by the last of the two parties to sign the Agreement.

FIELD ORDER - A written order by the CONSULTANT that does not impact the cost or time of performance of the Work and for which no increase in Contract Sum or Contract Amount shall be permitted.

GENERAL REQUIREMENTS - Division 1 of the Technical Specifications.

LAWS AND REGULATIONS; LAWS OR REGULATIONS - Laws, rules, codes, regulations, ordinances and/or orders promulgated by a lawfully constituted body authorized to issue such Laws and Regulations.

NOTICE OF INTENT TO AWARD - The official written notice by the CITY to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein within the time specified, the CITY may enter into an Agreement for the price specified in the Bid.

NOTICE TO PROCEED - The written notice issued by the CITY, or its agents, to the CONTRACTOR requiring the CONTRACTOR to proceed with the Work and establishing the date of commencement of the Contract Time.

PARTIAL UTILIZATION - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

PAYMENT REQUEST - means a request for payment for construction services which conforms with all statutory requirements and with all requirements specified by the City to which the payment request is submitted.

PROJECT - The entire construction to be performed as provided in the Contract Documents.

PROPER INVOICE - means an invoice which conforms with all statutory requirements and with all requirements that have been specified by the City to which the invoice is submitted.

PURCHASE - means the purchase of goods, services, or construction services; the purchase or lease of personal property; or the lease of real property by the City.

RESIDENT PROJECT REPRESENTATIVE (RPR) - The resident project representative, shall be in attendance at the Project site during performance of the Work and shall represent the CITY directly or through the CONSULTANT. Responsibilities of the RPR are further defined in Paragraph 10.3 of these General Conditions.

SHOP DRAWINGS - All drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the CONTRACTOR to illustrate some portion of the Work, and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a supplier and submitted by the CONTRACTOR to illustrate material or equipment for some portion of the Work.

SPECIFICATIONS - (Same definition as for Technical Specifications hereinafter).

SUBCONTRACTOR - An individual, firm, or corporation having a direct contract with the CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

SUBSTANTIAL COMPLETION - The Work (or a specified part thereof) has progressed to the point where, in the opinion of CONSULTANT as evidenced by CONSULTANT'S definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof. When the entire Project is considered to be Substantially Complete, this does not constitute Final Acceptance or Final Completion of the entire Project. Substantial Completion cannot occur in the absence of CONSULTANT'S express written approval of such.

SUPPLEMENTARY CONDITIONS - The part of the Contract Documents which amends or supplements these General Conditions.

SUPPLIER - A manufacturer, fabricator, supplier, distributor, material man or vendor.

SURETY - Any person, firm or corporation who is bound by bid or contract bond with and for the CONTRACTOR.

TECHNICAL SPECIFICATIONS - Those portions of the Contract Documents consisting of the General Requirements and written technical descriptions of products and execution of the Work.

UNDERGROUND FACILITIES - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water supply or distribution, sewage and drainage removal, traffic or other control systems.

UNIT PRICE WORK - Work to be paid for on the basis of unit prices rather than on a lump-sum basis.

WORK – The totality of any and all obligations, duties and responsibilities necessary to (or reasonably inferable for) the successful completion of the Project assigned to or undertaken by the CONTRACTOR under the Contract Documents, whether completed or partially completed, including all labor, materials, equipment and other incidentals and the furnishing thereof.

WORK DIRECTIVE CHANGE - A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by the CITY and recommended by the CONSULTANT, ordering an addition, deletion or revision in the Work, or which references an emergency or unforeseen physical conditions under which the Work is to be performed. A Work Directive Change may not change the Contract Price or the Contract Time, but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time.

WRITTEN AMENDMENT - A written amendment of the Contract Documents, signed by the CITY and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or nontechnical rather than strictly Work-related aspects of the Contract Documents.

ARTICLE 2 – THE WORK

2.1 The CONTRACTOR shall perform all of the Work required by the Contract Documents and shall provide materials, supplies, tools, equipment, labor, and services directly related to the Work, and shall perform the Work in a good and workmanlike manner with sufficient manpower to perform the Work in accordance with the time requirements set forth in the Contract Documents, and shall perform all other acts and supply all other things necessary to complete the Work in strict accordance with the Contract

Documents. The Work includes the construction and services required by the Contract Documents. The Contractor shall promptly commence the Work required hereby and fully and diligently execute the entire Work as described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others. Contractor represents to the City that Contractor shall furnish at all times a sufficient supply of workers, materials, tools and equipment to complete the Work in strict accordance with the Contract Documents, and perform all general requirements and supervision for the construction of the Project in accordance with the Drawings (including all notes and specifications contained in the Drawings) and Specifications. "Work" includes all Work that is reasonably inferable therefrom as being necessary to accomplish the intent of the Contract Documents, being a complete, fully functioning Project. Further, "Work" includes all associated systems needed for a complete, fully functioning Project. All Work is to be performed in accordance with and as required by all applicable building codes, laws, ordinances, rules, and regulations. The Work includes all labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. Contractor shall not hinder or delay the City or any separate contractor of the City in the performance of their respective obligations on the Project.

2.2 When completed the Work shall conform to the requirements of the Contract Documents and be completely ready for occupancy and finally completed.

2.3 The CONTRACTOR represents and warrants that:

2.3.1 It is financially solvent and has sufficient working capital to perform obligations under this Construction Contract;

2.3.2 It is experienced and skilled in the construction of the type of project described in this Contract Document;

2.3.3 It is able to provide the labor, materials, equipment and machinery necessary to complete the Work for the agreed upon price;

2.3.4 It is a fully licensed under all applicable laws and authorized to do business in the State of Florida in the name of the entity identified as the "CONTRACTOR" in the Construction Contract;

2.3.5 It has visited the jobsite and examined its nature and location, including without limitation: the surface conditions of the site and any structure or obstruction both natural or man-made; the surface water conditions and waterways of the site and surrounding area; the subsurface conditions of the land as disclosed by soil test borings; and the location of electric and utility lines and water, sanitary, sewer and storm drain lines. The Contract acknowledges receipt and has reviewed the site geotechnical report as provided by the CITY.

2.3.6 It will comply with all federal, state and local government laws, rules regulations and building codes relating to its responsibilities as set forth in the Contract Documents.

ARTICLE 3 – PRELIMINARY MATTERS

DELIVERY OF DOCUMENTS:

3.1. When the CONTRACTOR delivers the signed Agreements to the CITY, the CONTRACTOR shall also deliver to the CITY such Bonds and Insurance Policies, Certificates or other documents as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

COPIES OF DOCUMENTS:

3.2. The CITY shall furnish to CONTRACTOR five copies (unless otherwise specified in the Supplementary Conditions) of the Contract Documents or as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED:

3.3. The Contract Time will commence to run on the day indicated in any Notice to Proceed. A Notice to Proceed may be given at any time within ninety (90) days after the Effective Date of the Agreement.

STARTING THE PROJECT:

3.4. CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract time commences to run.

BEFORE STARTING CONSTRUCTION:

3.5. Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to CONSULTANT any conflict, error, ambiguity or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from CONSULTANT before proceeding with any Work affected thereby; CONTRACTOR shall have a continuing obligation to promptly report any conflicts, errors, ambiguities or discrepancies in the Contract Documents to the CONSULTANT over the duration of the Project.

3.5.1 The CONTRACTOR and Subcontractor have fully examined and compared all Drawings, Specifications and other Contract Documents and have compared and reviewed all general and specific details on the Drawings and the various technical and administrative requirements of the Specifications.

3.5.2 With respect to all construction materials, labor, methods, means, techniques and sequence of procedures required to carry out the Work or safety precautions and programs required in connection with carrying out the Work, all conflicts, discrepancies, errors and omissions that CONTRACTOR is aware of as a result of the examination and comparison of the Contract Documents have been either corrected or clarified to the satisfaction of the CONTRACTOR prior to execution of this Construction Contract.

3.5.3 The Contract Sum is reasonable compensation and represents the total lump sum cost for the Work and that all systems and Work shall be functional and in accordance with the requirements of the Contract Documents.

3.5.4 The Contract Time is adequate for the performance of the Work.

3.5.5 The CONTRACTOR is responsible for all means, methods, techniques and sequencing of construction.

3.5.6 If, after execution of this Construction Contract, the CONTRACTOR detects a conflict, discrepancy, error or omission in the Contract Documents then it shall immediately notify CONSULTANT and CITY prior to proceeding with the specific potion of the Work**.**

3.5.7 CONTRACTOR shall have a continuing duty to read, examine, review, compare and contrast each of the documents which make up this Contract and shall immediately give written notice to the CITY and CONSULTANT of any conflict, ambiguity, error or omission which the CONTRACTOR may find with respect to these documents before proceeding with the affected Work.

3.5.8 In the event of a conflict among the Contract Documents, the most stringent requirement to the CONTRACTOR shall control.

3.5.9 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. In case off discrepancy between the Drawings (including all notes and specifications contained in the Drawings) and Specifications, or inconsistencies within or between parts of the Contract Documents, or between any of the Contract Documents and applicable standards, codes, and ordinances, the Contractor shall (1) provide the better quality or greater quantity of Work, (2) comply with the more stringent requirement, and (3) provide that which is most beneficial to the City; either or all in accordance with the Consultant's interpretation. On the Drawings, given dimensions shall take precedence over scaled measurements, and large-scale drawings over small-scale drawings. Before ordering any materials or doing any Work, the Contractor shall verify measurements at the Project site and shall be responsible for the correctness of such measurements. The Contractor must call any such conflict or discrepancy between the Contract Documents and/or between the Contract Documents and applicable standards, codes and ordinances and/or between the Contract Documents it discovers to the City's attention, in writing, prior to proceeding with the Work and in sufficient time so as to not to delay the progress. No extra charge, compensation or time adjustment will be allowed on account of differences between actual dimensions encountered in the performance of the Work and the dimensions indicated on the Drawings. Contractor must verify all grades, elevations, dimensions, locations and quantities indicated on the Contract Drawings prior to the performance of Work. The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions, locations and quantities. In all cases of interconnection of its Work with existing or other Work, it shall verify at the site all grades, elevations, dimensions, locations and quantities relating to such existing or other Work. Any errors due to the Contractor's failure to so verify all such grades, elevations, dimensions, locations and quantities shall be promptly rectified by the Contractor without any additional cost to the City and without any time extension to Contractor. Any differences found shall be submitted to the Consultant for resolution before proceeding with the Work and in such time so as not to delay the progress of the Work.

3.5.10 Whenever a product to be furnished by Contractor requires it to be in accordance with a Federal Specification, an ASTM Standard, an American National Standards Institute Specification or other Association Standard, including the requirement of compliance with any local certifications for products such as a Notice of Acceptance approving the product, the Contractor shall present an affidavit from the manufacturer when provided by the manufacturer and, when requested by the Consultant or the City or as set forth in the Contract Documents, customary documents from the manufacturer certifying that the product complies with the particular Standard. When provided by the manufacturer and requested by the Consultant or the City, the specified support test data shall be submitted by the Contractor to substantiate compliance.

3.6 At the preconstruction conference, CONTRACTOR shall submit to CONSULTANT for review:

3.6.1. a proposed progress schedule indicating the starting and completion dates of the various stages of the Work; and

3.6.2. a preliminary schedule of Shop Drawing submissions and those shop drawings necessary to begin the work; and

3.6.3. a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission; and,

3.6.4. Preconstruction video tapes if required by the technical specifications

3.7. The CONTRACTOR shall not commence construction operations until the construction progress schedule, schedule of values and the shop drawing submission schedule described above have been reviewed by the CONSULTANT for general conformance with the Contract documents. Failure of the CONTRACTOR to timely submit the required documents for the CONSULTANT'S review shall not entitle Contractor to an extension of time or additional compensation under any circumstances. After review of the schedules, no deviation shall be made without prior written acceptance by the CITY for general conformance with the Contract Documents.

PRECONSTRUCTION CONFERENCE:

3.8. After the Effective Date of the Agreement, but before CONTRACTOR starts Work at the site, a conference attended by CONTRACTOR, CONSULTANT and others as deemed appropriate by the CITY, CONSULTANT, or CONTRACTOR will be held to discuss the schedules referred to in paragraph 3.6, to discuss procedures for handling Shop Drawings and other submittals and for processing Applications for Payment , and to establish a working understanding among the parties as to the Work. Nothing herein shall relieve the CONTRACTOR from the responsibility of contacting local utilities and any other necessary agencies.

FINALIZING SCHEDULES:

3.9. At least ten (10) business days before submission of the first Application for Payment a conference attended by CONTRACTOR, CITY, CONSULTANT and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 3.6. The finalized progress schedule will be acceptable to the CITY as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on the CITY responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility therefore. The finalized schedule of Shop Drawing submissions will be acceptable to the CITY as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to the CITY as to form and substance.

ARTICLE 4 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

INTENT:

4.1. The Contract Documents comprise the entire agreement between the CITY and CONTRACTOR concerning the Work. The Contract Documents are complementary: what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the laws of the State of Florida with exclusive venue in Palm Beach County, Florida.

4.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereto) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties or responsibilities of the CITY, CONTRACTOR or CONSULTANT or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to CONSULTANT'S, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 10.15 or 10.16. Clarifications and interpretations of the Contract Documents shall be issued by the CONSULTANT as provided in paragraph 10.4.

4.3. If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall **immediately** so notify the CONSULTANT, in writing, at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification.

The captions or subtitles of the several articles and divisions of these Contract Documents constitute no part of the context and hereof, but are only labels to Assist in locating and reading the provisions hereof.

AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS:

4.4. The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

4.4.1. a formal Written Amendment.

4.4.2. a Change Order (pursuant to paragraph 11.4), or

4.4.3. a Work Directive Change (pursuant to paragraph 11.2).

As indicated in paragraphs 11.2 and 12.2, Contract Price and Contract Time may only be changed by a Change Order or by a Written Amendment.

4.5. In addition, the requirements of the Contract Documents may be supplemented and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

4.5.1. a Field Order (pursuant to paragraph 10.5)

4.5.2. CONSULTANT'S approval of a Shop Drawing or sample (pursuant to paragraphs 7.26 and 7.27), or

4.5.3. CONSULTANT'S written interpretation or clarification (pursuant to paragraph 10.4).

REUSE OF DOCUMENTS:

4.6. Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with the CITY shall have or acquire any title to or ownership rights in any of the Contract Documents, drawings, technical specifications or other documents used on the work; and, they shall not reuse any of them on extensions of the Project or any other project without prior written consent of the CITY and CONSULTANT.

ARTICLE 5 – AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

AVAILABILITY OF LANDS:

5.1. The CITY shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the CITY, unless otherwise provided in the Contract Documents. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.1.1. Occupying Private Land: The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, equipment or materials, any land outside the rights-of-way or property of the City. A copy of the written consent shall be given to the CITY.

5.1.2. Work in State, County and City Rights-of-Way and Easements: When the Work involves the installation of sanitary sewers, storm sewers, drains, water mains, manholes, underground structures, or other disturbances of existing features in or across street, rights-of-way, easements, or other property, the CONTRACTOR shall (as the Work progresses) promptly back-fill, compact, grade and otherwise restore the disturbed area to a basic condition which will permit resumption of pedestrian or vehicular traffic and any other critical activity or function consistent with the original use of the land. Unsightly mounds of earth, large stones, boulders, and debris shall be removed so that the site presents a neat appearance.

5.1.3. Work Adjacent to Telephone, Power, Cable TV and Gas Company Structures: In all cases where Work is to be performed near telephone, power, water, sewer, drainage, cable TV, or gas company facilities, the Contractor shall provide written notification to the respective companies of the areas of which Work is to be performed, prior to the actual performance of any Work in these areas.

5.1.4. Use of Public Streets: The use of public streets and alleys shall be such as to provide a minimum of inconvenience to the public and to other vehicular and non-vehicular traffic. Any earth or excavated material spilled from trucks shall be removed by the CONTRACTOR and the streets cleaned to the satisfaction of the CITY, the CONSULTANT, the Florida Department of Transportation, or other agency or governmental entity having jurisdiction, as applicable.

PHYSICAL CONDITIONS:

5.2.1. Explorations and Reports: Where applicable, reference is made in the technical specifications, for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon nontechnical data, interpretations, or opinions contained therein or for the completeness for CONTRACTOR'S purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. Except as indicated in the immediately preceding sentence and in paragraph 5.3, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

5.2.2. Existing Structures: Where applicable, reference is made to the technical specifications, for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 5.3) which are at or contiguous to the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the general accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. Except as indicated in the immediately preceding sentence and in paragraph 5.3, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures. However, where the dimensions and locations of existing structures are of critical importance in the installation or connection of new work, the CONTRACTOR shall verify such dimensions and locations in the field before the fabrication of any materials or equipment which is dependent on the correctness of such information. There shall be no additional cost to the CITY for CONTRACTOR'S failure to verify such dimensions and locations, or for inaccurate verifications by CONTRACTOR.

5.2.3. Report of Differing Conditions: If CONTRACTOR believes that:

5.2.3.1. Any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 5.2.1 and 5.3.3 is inaccurate, or

5.2.3.2. Any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 7.22), notify the CITY and the CONSULTANT in writing about the inaccuracy or difference. Should the CONTRACTOR fail to notify the CITY and CONSULTANT within five (5) calendar days of discovering such differing site condition, it waives its right to seek additional time or compensation for such deficiency and is precluded from seeking a change order for such work under any circumstances.

5.2.4. CONSULTANT'S Review: CONSULTANT will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise the CITY in writing (with a copy to the CONTRACTOR) of CONSULTANT'S findings and conclusions.

5.2.5. Possible Document Change: If CONSULTANT concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Work Directive Change or a Change Order will be issued as provided in Article 11 to reflect and document the consequences of the inaccuracy or difference.

5.2.6. Possible Price and Time Adjustments: In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference. If the CITY and CONTRACTOR are unable to agree as to the amount or length thereof, a claim may be made therefore as provided in Article 12 and 13.

PHYSICAL CONDITIONS - UNDERGROUND FACILITIES:

5.3.1. The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to the CITY or CONSULTANT by the owners of such Underground Facilities or by others.

5.3.1.1. The CITY and CONSULTANT shall not be responsible for the accuracy or completeness of any such information or data; and,

5.3.1.2. CONTRACTOR warrants that it has examined the information and data presented and that it is accurate and free from any and all defects, inconsistencies, errors and omissions. Further, the CONTRACTOR shall be responsible for locating all Underground Facilities whether or not shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 7.20, and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

5.3.1.3. All water pipes, sanitary sewers, storm drains, force mains, gas mains, or other pipe, telephone or power cables or conduits, pipe or conduit casings, curbs, sidewalks, service lines and all other obstructions, whether or not shown, shall be temporarily removed from or supported across utility line excavations. Where it is necessary to temporarily interrupt services, the CONTRACTOR shall notify the owner or occupant of such facilities both before the interruption and again immediately before service is resumed. Before disconnecting any pipes or cables, the CONTRACTOR shall obtain permission from their owner, or shall make suitable arrangements for their disconnection by their owner. The CONTRACTOR shall be responsible for any damage to any such pipes, conduits or cables, and shall restore them to service promptly as soon as the Work has progressed past the point involved. Approximate locations of known water, sanitary, drainage, natural gas, power, telephone and cable TV installations along the route of new pipelines or in the vicinity of new work are shown, but are to be verified in the field by the Contractor prior to performing the work. The CONTRACTOR shall uncover these pipes, ducts, cables, etc., carefully, by hand prior to installing his Work. Any discrepancies or differences found shall be immediately brought to the attention of the CONSULTANT in order that necessary changes may be made to permit installation of the Work.

5.3.2. If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown, nor located by the facilities owner and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 7.22), identify the owner of such Underground Facility and give written notice thereof to that owner and to the CITY and the CONSULTANT. The CONSULTANT will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 7.20.

5.3.3. CONTRACTOR is expressly limited to an extension of the Contract Time to the extent that they are attributable to the existence of any such Underground Facility CONTRACTOR could not reasonably have been expected to have been aware of. CONSULTANT, in its sole discretion, shall determine whether to award an extension of time under such circumstances. Furthermore, should CONTRACTOR fail to provide the CITY and CONSULTANT with written notice of the error, omission or discrepancy in the Underground Facility within five (5) calendar days of discovering such, it waives its right to a time extension for such error, omission or discrepancy.

REFERENCE POINTS:

5.4. The CITY shall provide engineering surveys to establish reference points for construction which in CONSULTANT'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of the CITY. The CONTRACTOR shall promptly report to the CONSULTANT whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

5.5 Contractor shall maintain at the Project Site, and shall make available to the City and Consultant, one record copy of the Drawings marked to indicate any deviations from the Contract Documents (the "As-Built Drawings") in good order. The As-Built Drawings shall be prepared and updated during the prosecution of the Work. The prints for As-Built Drawings used will be a set of black-line prints provided by Consultant to Contractor at the start of construction. Contractor shall maintain said set in good condition and shall use colored pencils to mark-up said set with "as-built information" in a legible manner to show: (i) deviations from the Drawings made during construction; (ii) details in the Work not previously shown; (iii) changes to existing conditions or existing conditions found to differ from those shown on any existing drawings; (iv) the actual installed position of equipment, piping, conduits, light switches, electric fixtures, circuiting, ducts, dampers, access panels, control valves, drains, openings and stub-outs; and (v) such other information as either the City or Consultant may reasonably request.

5.6 At the completion of the Work, Contractor shall deliver all As-Built Drawings to the City. Final Payment and any retention shall not be due and owing to Contractor until the final As-Built Drawings required above are delivered to the City.

5.6.1. As-Built Drawings shall be provided in accordance with the City of Delray Beach's Minimum Construction Standards and Specifications, which can be found at:

https://www.delraybeachfl.gov/home/showdocument?id=13909&t=638657915970924444

ARTICLE 6 – BONDS AND INSURANCE

BONDS:

6.1. CONTRACTOR shall upon delivery of the executed Agreement to the City furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR'S obligations under the Contract Documents. These Bonds shall remain in effect at least **one (1) year** after the date when final payment becomes due based on Contractor's completion of all requirements for Final Payment set forth in these Contract Documents, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. Each Bond shall be furnished in an amount equal to 100% of the amount of the Contract award. The form and conditions of the Bonds and the Surety shall be acceptable and satisfactory to the CITY and Surety shall be a nationally recognized Surety Company acceptable to the City, listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, V.S. Treasury Department, for projects not exceeding ($500,000) five hundred thousand dollars and meet

the other requirements of Florida Statutes Section 287.0935 (2001). For projects exceeding five hundred thousand dollars, all bonds shall be placed with sureties with a Best Rating of no less than A-VII. Bonds shall be executed and issued by a resident agent, licensed and having an office in Florida, representing such corporate sureties. If the CONTRACTOR is a partnership, the Bond should be signed by each of the individuals who are partners; if a corporation, the Bond should be signed in the correct corporate name by duly authorized officer, agent or attorney-in-fact. There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts in the Contract. Each executed bond should be accompanied by (a) appropriate acknowledgment of the respective parties; (b) appropriate duly certified copy of Power-of-Attorney or other certification of authority where bond is executed by agent, officer or other representative of Contractor or Surety; (c) duly certified extract from by-laws or resolutions of Surety under which Power-of-Attorney, or other certificate of Authority of its agent, officer or representative was issued.

6.2. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in the state of Florida or it ceases to meet the requirements of paragraph 6.1., CONTRACTOR shall within five (5) calendar days thereafter substitute another Bond and Surety, both of which must be in conformance with paragraph 6.1. CONTRACTOR'S failure to timely furnish a substitute surety shall constitute a material breach of the Contract and shall give the CITY the immediate right to terminate the CONTRACTOR for cause in accordance with Article 16 of the Contract's General Conditions.

CONTRACTOR'S INSURANCE:

6.3. General: CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR'S performance and furnishing of the Work and CONTRACTOR'S other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located and having an A.M. BEST's rating of "A-X" or better. The City and Consultant shall be named as additional insureds by endorsement under the Contractor's applicable policies or as otherwise described in the Contract Documents. Before starting and during the term of this Contract, the CONTRACTOR shall procure and maintain insurance of the types and to the limits specified in paragraph 6.4, inclusive below.

6.4 Coverage: Except as otherwise stated, the amounts and types of insurance shall conform to the following minimum requirements which Contractor shall procure, carry, maintain and pay for from commencement of the Work through Final Acceptance of the Work:

6.4.1. Workers' Compensation. Coverage to apply for all employees for Statutory Limits in compliance with the applicable State and Federal laws. CONTRACTOR shall require all subcontractors to maintain workers compensation coverage during the term of the agreement and up to the date of final acceptance. CONTRACTOR shall defend, indemnify and save the CITY and CONSULTANT harmless from any damage resulting to them for failure of either CONTRACTOR or any subcontractor to take out or maintain such insurance.

6.4.1.1. Employers' Liability with Statutory Limits of $100,000/$500,000/ $100,000.

6.4.1.2. Notice of Cancellation and/or Restriction. The policy must be endorsed to provide the City with thirty (30) days' written notice of cancellation and/or restriction.

6.4.1.3. If any operations are to be undertaken on or about navigable waters, coverage must be included for the U.S. Longshoremen and Harbor Workers Act and/or Jones Act if applicable.

6.4.2. Comprehensive General Liability or Commercial General Liability Coverage must be afforded on a form no more restrictive than the latest edition of the Comprehensive General Liability Policy or Commercial General Liability filed by the Insurance Services Office, and must include:

6.4.2.1. Minimum Limits of total Commercial General Liability Insurance coverage shall be $3,000,000.00 per occurrence and in the aggregate combined single limit for Bodily Injury Liability and Property Damage Liability, the basic policy to be in said form with any excess coverage (and the carrier) to meet $3,000,000.00 minimum to be acceptable to the CITY.

6.4.2.2. Premises and/or Operations.

6.4.2.3. Independent Contractor.

6.4.2.4. Products and/or Completed Operations. CONTRACTOR shall maintain in force until at least seven (7) years after completion of all services required under the Contract, coverage for products and completed operations, including Broad Form Property Damage.

6.4.2.5. XCU Coverages.

6.4.2.6. Broad Form Property Damage including Completing Operations.

6.4.2.7. Broad Form Contractual Coverage applicable to this specific Contract, including any hold harmless and/or indemnification agreement.

6.4.2.8. Personal Injury coverage with employees and contractual exclusions removed.

6.4.2.9. Additional Insured. The CITY is to be specifically included as an additional insured (including products).

6.4.2.10. Notice of Cancellation and/or Restriction. The policy must be endorsed to provide the City with thirty (30) days' written notice of cancellation and/or restriction.

6.4.2.11. The CONTRACTOR shall either require each subcontractor to procure and maintain, during the life of the subcontract, insurance of the type and in the same amounts specified herein or insure the activities of subcontractors in his own insurance policy.

6.4.3. Business Auto Policy. Coverage must be afforded on a form no more restrictive than the latest edition of the Business Auto Policy filed by the Insurance Service Office and must include:

6.4.3.1. Minimum limit of $1,000,000.00 per occurrence combined single limit for Bodily Injury Liability and Property Damage Liability.

6.4.3.2. Owned Vehicles.

6.4.3.3. Hired and Non-Owned Vehicles

6.4.3.4. Employee Non-Ownership

6.4.3.5. Notice of Cancellation and/or Restriction. The policy must be endorsed to provide the City with thirty (30) days' written notice of cancellation and/or restriction.

6.4.4. All Risk Property Insurance - When Applicable. Coverage must include real and personal property and in an amount equal to the replacement cost of all real and personal property of the CITY'S for which the CONTRACTOR is responsible and over which he exercises control. Builders Risk insurance must be provided to cover Property under construction and an Installation Floater must cover all machinery, vessels, air conditioners or electric generators to be installed. This insurance shall include a waiver of

subrogation as to the CONSULTANT, the CITY, the CONTRACTOR, and their respective officers, agents, employees, and subcontractors.

6.4.4.1. Coverage to be provided on a full replacement cost basis.

6.4.4.2. Losses in excess of ten thousand dollars ($10,000) shall be jointly payable to the CONTRACTOR and the CITY.

6.4.4.3. Waiver of occupancy clause or warranty. Policy must be specifically endorsed to eliminate any "Occupancy Clause" or similar warranty or representation that the building(s), addition(s) or structure(s) will not be occupied by the CITY.

6.4.4.4. Maximum Deductible - $5,000 each claim.

6.4.4.5. Copy of Policy. A certified copy of the policy must be provided to the CITY prior to the commencement of work.

6.4.4.6. Named Insured. The CITY must be included as a named insured.

6.4.4.7. Notice of Cancellation and/or Restriction. The policy must be endorsed to provide the City with thirty (30) days written notice of cancellation and/or restriction.

6.4.4.8. Flood Insurance. When the buildings or structures are located within an identified special flood hazard area, flood insurance protecting the interest of the CONTRACTOR and the CITY must be afforded for the lesser of the total insurable value of such buildings or structures, or, the maximum amount of flood insurance coverage available under the National Flood Program.

6.4.5. Excess Liability Coverage. Excess Liability shall be an occurrence based with regard to coverage and endorsements specified in this Agreement policy and have a limit in an amount not less than $25,000,000.00 per occurrence and $25,000,000.00 in the aggregate where applicable and “drop down” for defense and indemnity in the event of exhaustion of the underlying insurance. By its terms, the Excess Policy shall cover:

(1) Personal injury;
(2) Contractual Liability;
(3) X.C.U. Liability;
(4) Off-Site CGL;
(5) Automobile Liability;
(6) Employer’s Liability; and,
(7) City and the Additional Insureds on a primary and noncontributory basis by means of an endorsement acceptable to the City.

6.4.6 Contractual Liability Insurance. This coverage shall be carried, on a blanket broad form basis, throughout the period of time that the Work is being performed and thereafter for a period of three (3) years and shall be in a minimum amount of Ten Million and 00/100 Dollars ($10,000,000). This coverage is to insure Contractor’s indemnity under the Contract Documents, and shall insure against the risks enumerated therein.

6.4.7 Pollution Liability Insurance. Contractor shall provide pollution liability insurance that provides coverage for liability arising from Contractor’s construction activities, whether occurring at or away from the Project Site with per occurrence and aggregate limits of Five Million and 00/100 Dollars ($5,000,000). Contractor’s pollution liability insurance shall cover property damage abatement/cleanup, whether on-site or off-site as well as bodily injury, repair and defense costs resulting from liability arising out of pollution conditions as including, but not limited to, exposures arising from silica, water intrusion, petroleum related products, asbestos, lead paint, tank removal, removal of contaminated soil, EIFS, bacteria, fungi and mold. Contractor’s pollution liability insurance policy shall cover liability of Contractor during the process of construction, installation, removal, storage, encapsulation, transport and disposal of

Hazardous Waste, and shall include coverage for bodily injury and loss of damage to, or loss of use of property, arising out of the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon the Project Site, the Project, the atmosphere, any water course or body of water. Contractor shall maintain its pollution liability insurance coverage from the Commencement Date of the Work through Substantial Completion of the Work and shall renew such coverage annually for the seven (7) years immediately following the date of Substantial Completion of the Work.

6.4.8 A Best Rating of no less than A-7 is required for any carriers providing coverage required under the terms of this Contract. Failure to comply with the insurance requirements as herein provided shall constitute default of this Agreement. Neither **Contractor** nor any subcontractor shall commence work under the Contract until they have all insurance required under this Section and have supplied the CITY with evidence of such coverage in the form of certified copies of policies (where required) and certificates of insurance, and such policies and certificates have been approved by the CITY. CONTRACTOR shall be responsible for and shall obtain and file insurance certificates on behalf of its subcontractors. All certified copies of policies and certificates of insurance shall be filed with the CITY.

6.4.9 Contractor's failure to provide and maintain the insurance required by this Article shall be grounds for termination for cause, and Contractor shall be liable for all losses, damages, costs and expenses associated with the failure to maintain the required insurance.

6.4.10 The Contractor shall secure, pay for, and maintain whatever insurance they may deem necessary for protection against loss of owned or rented capital equipment and tools, including any tools owned by mechanic, any tools, equipment, stagings, towers and forms owned or rented by its subcontractors or agents under this Agreement. Failure of the Contractor to secure such insurance or to maintain adequate levels of coverage shall not obligate the City or its agents and employees for any losses of owned or rented equipment or for any Work damaged. If the Contractor secures such insurance, the insurance policy shall include a waiver of subrogation as follows: "It is agreed that in no event shall this insurance company have any right of recovery against the City." The Contractor agrees to cooperate fully with the insurance company or companies in carrying out the provisions and conditions of all policies applicable to Work to be done, as well as all rules and recommendations of such company or companies in regard to accident prevention, reports and audits. The Contractor further agrees that notice of every accident will not only be reported immediately to the City, and also to such insurance company or companies.

6.4.11 Every subcontract shall contain complete insurance provisions identical to Sections included herein for the benefit, protection, and indemnification of the Contractor and the City.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SUPERVISION AND SUPERINTENDENCE:

7.1. The CONTRACTOR has the obligation to deliver to the CITY the completed job in a good and workmanlike condition in accordance with the requirements of the Contract Documents. CONTRACTOR shall supervise and direct the Work completely and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents. The CONTRACTOR shall bear all losses resulting on account of the weather, fire, the elements, or other acts of God or causes of every kind or nature prior to Final Acceptance. The supervision of the execution of this Agreement and the Work thereunder is vested wholly in the CONTRACTOR.

The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

LABOR, MATERIALS AND EQUIPMENT; HOURS OF WORK:

7.2. CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without the CITY'S written consent (which shall not be unreasonably withheld) given after prior written notice to CONSULTANT. The CONTRACTOR is hereby informed, and understands that unless otherwise approved by the City, the City restricts the work between the hours of 5:00 p.m. and 8:00 a.m., unless emergency conditions exist that are endangering life or property as may be determined by the CITY. If the CONTRACTOR is authorized to operate equipment twenty-four (24) hours per day, the engines shall be provided with residential type silencers approved by the CITY.

The CONTRACTOR shall receive no additional compensation for overtime work. However, additional compensation will be paid to the CONTRACTOR for overtime work only in the event extra work is ordered by the CONSULTANT and the change order specifically authorizes the use of overtime work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime work of a similar nature in the same locality.

All costs of inspection and testing performed by the CITY during overtime work by the CONTRACTOR which is allowed solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The CITY shall have the authority to deduct the cost of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR.

7.3. Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and final completion of the work.

7.4. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by CONSULTANT, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to the CITY, CONSULTANT, or any of the CITY'S or CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 10.15 or 10.16.

ADJUSTING PROGRESS SCHEDULE:

7.5. CONTRACTOR shall submit to CONSULTANT for review and comment (to the extent indicated in paragraph 3.9) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

SUBSTITUTES OR "OR-EQUAL" ITEMS:

7.6.1. The technical specifications shall govern the use of substitute or "or-equal" items. **Consultant shall be solely responsible for determining whether to permit the proposed substitution and Contractor expressly agrees to be bound by Consultant's decision.** The procedure for review by CONSULTANT will include the following as supplemented in the technical specifications. Requests for review of substitute items of material and equipment will not be accepted by CONSULTANT from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to CONSULTANT for acceptance thereof,

certifying that the proposed substitute will perform equally or better the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR'S achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with the CITY for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by CONSULTANT in evaluating the proposed substitute. CONSULTANT may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute.

7.6.2. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to CONSULTANT, if CONTRACTOR submits sufficient information to allow CONSULTANT to determine that the substitute proposed is equal or better to that indicated or required by the Contract Documents. The procedure for review by CONSULTANT will be governed by the procedure provided in paragraph 7.6.1 as applied by CONSULTANT and as may be supplemented in the Technical Specifications.

7.6.3. Substitution requests must include the CONTRACTOR’S written waiver of its right to additional compensation or time for the failure of the proposed substitution to properly perform.

7.6.4 In order for a substitution to be considered, one or more of the following conditions must be met:

a. The substitution request must be timely, fully documented and properly submitted in writing.

b. The request is directly related to an “or equal” clause in the Contract Documents.

c. The product or method prescribed in the Contract Documents is no longer available and Contractor has evidence of such.

d. There is a substantial advantage offered to the CITY in terms of cost, time, energy conservation or other considerations of merit.

7.6.5. CONSULTANT will be allowed a reasonable time within which to evaluate each proposed substitute. CONSULTANT will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without CONSULTANT'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. The CITY may require the CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute.

CONCERNING SUBCONTRACTORS, SUPPLIERS AND OTHERS:

7.7.1 CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to the CITY and the CONSULTANT as indicated in paragraph 7.7.2), whether initially or as a substitute, against whom the CITY or the CONSULTANT may have objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

7.7.2 If the Technical Specifications or Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal

items of materials and equipment) shall be submitted to the CITY for acceptance by the CITY and CONSULTANT, and if CONTRACTOR has submitted a list thereof, the CITY or CONSULTANT'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. If after bid opening and prior to the award of the contract, the CITY objects to certain suppliers or subcontractors, the CITY may permit CONTRACTOR to submit an acceptable substitute so long as there is no change in the contract price or contract time. If the contract price or contract time is increased, the CITY may return the bid bond and award the contract to the next qualified, competent bidder. If after the award of the contract, the CITY objects to certain suppliers or subcontractors, the CITY shall permit CONTRACTOR to make an appropriate and acceptable substitution which is also acceptable to the CITY. No acceptance by the CITY or the CONSULTANT of any such Subcontractor, supplier or other person or organization shall constitute a waiver of any right of the CITY or CONSULTANT to reject defective Work. The Contractor shall not substitute a Subcontractor, person or entity for one previously selected if the City or Consultant makes objection to such substitution.

7.8. CONTRACTOR shall be fully responsible to the CITY and CONSULTANT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work on the Project just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the CITY or the CONSULTANT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the CITY or CONSULTANT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

7.9. The divisions and sections of the Technical Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

7.10. All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the CITY and the CONSULTANT.

7.10.1 By written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor’s Work that the Contractor, by these Contract Documents, assumes toward the City and Consultant. Each subcontract agreement shall preserve and protect the rights of the City and Consultant under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the City. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

7.10.2 Contractor hereby agrees that each subcontract agreement shall contain provisions granting the Contractor the right to terminate the subcontract at any time for the Contractor’s convenience and without cause.

7.10.3 Contractor hereby agrees that the City has the right to direct the Contractor to terminate any Subcontractor at any time for the City’s convenience and without cause.

7.10.4 Contractor shall have each Subcontractor performing Work at this Project execute warranties for a minimum period of **one (1) year** in favor of the City utilizing forms approved by the City. Contractor shall also have the Subcontractors and material or equipment manufacturers execute Extended Warranties if required by the Contract Documents in favor of the City utilizing the forms approved by the City.

7.10.5 It is further agreed that all Subcontracts and material and equipment purchase contracts entered into by Contractor or its Subcontractors or material suppliers, shall contain a provision stating that, if after termination of Contractor for Contractor's default or completion of the Work, the City may bring any claim directly against any Subcontractor of Contractor, including any surety bond furnished for or on behalf of such Subcontractor, for breach of contract, warranty rights, quality of workmanship, and create third party beneficiary rights of the City in said agreements. It is further agreed and understood that such assignment(s) and third party beneficiary rights are part of the consideration to the City for entering into this Agreement with Contractor and may not be withdrawn. Subcontractor or equipment and material suppliers shall be notified of the City's rights. Additionally, nothing contained in this Agreement shall constitute an assignment of Contractor's rights against the City or create any third party beneficiary rights in any Subcontractors or material and equipment suppliers of Contractor. The purpose of this provision is to allow the City, in addition to Contractor, to make claim for damage or indemnification directly against any Subcontractors or material and equipment suppliers that may be ultimately responsible for defects or deficiencies in the Work or materials and equipment. Additionally, this assignment is for the purpose of permitting the City to require any such Subcontractor or materials and equipment suppliers to complete the unperformed obligations under such Subcontract, should the Contractor be in default or be terminated by City.

7.10.6 The City shall have no obligation to pay, or to see to the payment of, any monies to any Subcontractor. Nothing in this Article or Agreement shall be deemed to create any contractual relationship between the City and any Subcontractor, material provider or supplier or to create any rights of any Subcontractor against the City for any actions, debts, obligations, responsibilities or liabilities occurring prior to any assignment executed pursuant to this Article.

PATENT FEES AND ROYALTIES:

7.11. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of the CITY or CONSULTANT its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to other, the existence of such rights shall be disclosed by the CITY in the Contract Documents. CONTRACTOR shall indemnify and hold harmless the CITY and anyone directly or indirectly employed by the CITY from and against all claims, damages, losses and expenses (including attorney's fees and court costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

PERMITS:

7.12. CONTRACTOR shall obtain and pay for all construction permits and licenses. The CITY shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for prosecution of the Work, which are applicable at the time of opening of Bids. There will be no cost for permits issued by the CITY. CONTRACTOR shall pay all charges of utility for connections to the Work, and the CITY shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

LAWS AND REGULATIONS:

7.13.1. CONTRACTOR shall give all notices and comply with all laws, ordinances, rules regulations and building codes applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable laws, ordinances, rules and regulations, neither the CITY nor

the CONSULTANT shall be responsible for monitoring CONTRACTOR'S compliance with any Laws, ordinances, rules or regulations. In addition, Contractor shall be responsible for ensuring the compliance of all subcontractors, suppliers or other entities furnishing labor, services or materials on the Project with all laws, ordinances, rules, regulations and building codes. Contractor's failure to comply with any of the applicable laws, ordinances, rules, regulations or building codes shall constitute a material breach of the Contract.

7.13.2. If CONTRACTOR observes that the Specifications or Drawings are at variance with any laws, ordinances, rules or regulations, CONTRACTOR shall give CITY and CONSULTANT prompt, written notice thereof (no later than seven (7) days from discovery), and any necessary changes will be authorized by one of the methods indicated in Paragraph 4.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such laws, ordinances, rules or regulations, and without such notice to the CITY and CONSULTANT, CONTRACTOR shall bear all costs arising there from.

7.13.3. Contractor shall comply with all public records laws in accordance with Chapter 119, Fla. Stat. In accordance with state law, Contractor agrees to:

a) Keep and maintain all records that ordinarily and necessarily would be required by the City.

b) Provide the public with access to public records on the same terms and conditions that the City would provide for the records and at a cost that does not exceed the costs provided in Chapter 119, Fla. Stat. or as otherwise provided by law.

c) Ensure that public records that are exempt or confidential and exempt from public records disclosure are not disclosed except as authorized by law.

d) Meet all requirements for retaining public records and transfer, at no cost, to the City all records in possession of the Contractor at the termination of the contract and destroy any public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the City. All records shall be transferred to the City prior to final payment t being made to the Contractor.

e) If Contractor does not comply with this section, the City shall enforce the contract provisions in accordance with the contract and may unilaterally cancel this contract in accordance with state law.

TAXES:

7.14. CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the laws, ordinances and regulations of the place of the Project which are applicable during the performance of the Work.

USE OF PREMISES:

7.15. CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by laws, ordinances, and regulations, rights-of-way, permits and easements, and shall not reasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the CITY or CONSULTANT by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim. CONTRACTOR shall, to the fullest extent permitted by laws and regulations, indemnify and hold the CITY and CONSULTANT harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court costs) arising directly, indirectly or consequentially

out of any action, legal or equitable, brought by any such other party against the CITY or CONSULTANT to the extent based on a claim arising out of CONTRACTOR'S performance of the Work or the Work of its subcontractor, suppliers, material men or other entities performing Work under the supervision of CONTRACTOR on the Project.

7.16. During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by the CITY. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

7.17. CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

RECORD DOCUMENTS:

7.18.1 CONTRACTOR shall maintain in accordance with the Technical Specifications in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders, and written interpretations and clarifications (issued pursuant to paragraph 10.4) in good order and annotated to show all changes made during construction. The record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to the CONSULTANT for reference. Upon completion of the Work, these record documents, samples, and Shop Drawings will be delivered to CONSULTANT for the CITY.

7.18.2 The Contractor shall keep full and detailed records and accounts related to the Cost of the Work, and exercise such controls, as may be necessary for proper financial management under this Agreement and to substantiate all costs incurred. The accounting and control systems shall be satisfactory to the City. The City (and its auditors) shall, during regular business hours and upon reasonable notice, be afforded access to, and shall be permitted to audit and copy, the Contractor's records and accounts, including complete documentation supporting accounting entries, books, job cost reports, correspondence, instructions, drawings, receipts, subcontracts, Subcontractor's proposals, Subcontractor's invoices, purchase orders, vouchers, memoranda, and other data relating to this Agreement. The Contractor shall preserve these records for a period of four (4) years after Final Payment, or for such longer period as may be required by law. This Section is applicable to all Change Orders or Claims by or against the Contractor and or a Subcontractor of any tier whether or not they affect the GMP. To the extent Contractor is able, Contractor agrees to include the provisions of this Section in all its contracts and all tier subcontracts with regard to any audits of payments received by the Contractor to verify that such payments were made and that such payments were made for the use required by the Project. Audits conducted under this Section shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing audit agency. The Contractor agrees to the disclosure of all information and reports resulting from access to records under this paragraph to the City, provided that the Contractor is afforded the opportunity for an audit exit conference. If the City audits the Contractor's books and records and discovers actual costs or an error in the Contractor's favor by more than one percent (1%) of the Cost of the Work to date, the Contractor shall reimburse the City for the cost of such audit and the Contractor shall promptly refund the amount overpaid to the City.

7.18.3. At the completion of the Work, Contractor shall deliver all As-Built Drawings to the City. Final Payment and any retention shall not be due and owing to Contractor until the final As-Built Drawings required above are delivered to the City.

7.18.3.1. As-Built Drawings shall be provided in accordance with the City of Delray Beach's Minimum Construction Standards and Specifications, which can be found at:
https://www.delraybeachfl.gov/home/showdocument?id=13909&t=638657915970924444

SAFETY AND PROTECTION:

7.19. CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

7.19.1. All employees on the Work and other persons and organizations who may be affected thereby; and

7.19.2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

7.19.3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable laws, ordinances, rules and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss on or off the Work and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraphs 7.19.1 to 7.19.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work for anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of the CITY or the CONSULTANT or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR'S duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and CONSULTANT has issued a notice to the CITY and CONTRACTOR in accordance with paragraph 15.13 that the Work is acceptable (Except as otherwise expressly provided in connection with Substantial Completion).

The safety provisions of applicable laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Local Public Agency involved may determine to be reasonably necessary Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" as published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable laws.

The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of an and in the course of employment on Work under the Contract. The Contractor shall promptly furnish the Local Public Agency with reports concerning these matters.

7.20. CONTRACTOR shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR'S superintendent unless otherwise designated in writing by CONTRACTOR to the CITY.

EMERGENCIES AND PRECAUTIONS DURING ADVERSE WEATHER:

7.21.1. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto. CONTRACTOR, without special instruction or authorization from CONSULTANT or the CITY, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give CONSULTANT prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If CONSULTANT determines that a change in the Contract Documents is required because of the action taken in response to an emergency,

a Work Directive Change Order or Change Order will be issued to document the consequences of the changes or variations.

7.21.2. During adverse weather, and against the possibility thereof, the CONTRACTOR shall take all necessary precautions to ensure that the Work shall be done in a good and workmanlike condition and is satisfactory in all respects. When required, protection shall be provided by the use of tarpaulins, wood and building paper shelters, or other acceptable means. The CONTRACTOR shall be responsible for all changes caused by adverse weather, including unusually high winds and water levels and he shall take such precautions and procure such additional insurance as he deems prudent. The CONSULTANT may suspend construction operations at any time when, in his judgment, the conditions are unsuitable or the proper precautions are not being taken, whatever the weather or water level conditions may be, in any season.

SHOP DRAWINGS AND SAMPLES:

7.22. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, CONTRACTOR shall submit to CONSULTANT for review in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 3.9), ordinances, rules and all Shop Drawings which will bear the stamp that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as CONSULTANT may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable CONSULTANT to review the information as required.

7.23. CONTRACTOR shall also submit to CONSULTANT for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

7.23.1. Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

7.23.2. At the time of each submission, CONTRACTOR shall give CONSULTANT specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition shall cause a specific notation to be made on each Shop Drawing submitted to CONSULTANT for review of each such variation.

7.24. CONSULTANT will review within ten (10) days of receipt thereof, Shop Drawings and samples but CONSULTANT'S review will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate review of the assembly in which the item functions. CONTRACTOR shall make corrections required by CONSULTANT, and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by CONSULTANT on previous submittals. CONSULTANT will review one (1) re-submittal for each shop drawing or product data. All costs of reviewing additional submittals shall be at the CONTRACTOR'S expense.

7.25. CONSULTANT'S review of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called CONSULTANT'S attention to each such variation at the time of submission as required

by paragraph 7.23.2 and CONSULTANT has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any review by CONSULTANT relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 7.23.1.

7.26. Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to CONSULTANT'S review and acceptance of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

CONTINUING THE WORK:

7.27. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the CITY. No Work shall be delayed or postponed pending resolution of any disputes or disagreements. While a change order request is pending, CONTRACTOR is still obligated to fully perform all work in accordance with the Contract Documents and as directed by the Consultant. Contractor shall also continue performance of the work during the pendency of a Claim.

INDEMNIFICATION:

7.28. Contractor is bound to the indemnification provisions set forth in Article 11 of the Agreement. In addition, in consideration of ten dollars ($10.00) and other valuable consideration, the CONTRACTOR shall defend, indemnify and save harmless the CITY, its officers, agents and employees, from or on account of any liabilities, damages, received or sustained by any person or persons by or in consequence of any negligence (excluding the gross negligence, or actions based upon the willful, wanton or intentional misconduct of the CITY as well as other exclusions provided by F.S. 725.06(1)(c), recklessness or intentional wrongful misconduct of the CONTRACTOR and any persons employed or utilized by the CONTRACTOR in the performance of this Project. CONTRACTOR agrees that negligent, reckless or intentional wrongful misconduct includes but is not limited to, use of any improper materials or liabilities, damages, losses or costs caused by or on account of the use of any improper materials. CONTRACTOR agrees that negligent, reckless, or intentional wrongful misconduct also includes but is not limited to the violation of any Federal, State, County or City laws, by-laws, ordinances or regulations by the CONTRACTOR, his subcontractors, agents, servants or employees. CONTRACTOR further agrees to defend, indemnify and save harmless the CITY from all such claims and fees, and from any and all suits and actions of every name and description that may be brought against the CITY on account of any claims, fees, royalties, or costs for any invention or patent, and from any and all suits and actions that may be brought against the CITY for the infringement of any and all patents or patent rights claimed by any person, firm, or corporation.

The indemnification provided above shall obligate the CONTRACTOR at Contractor's own expense to provide such defense by counsel of the City's choosing, for any and all claims or liability and all suits and actions of every name and description that may be brought against the CITY which may result from the operations and activities under this Contract whether the construction operations be performed by the CONTRACTOR, his subcontractor or by anyone directly or indirectly employed by either. This indemnification includes all costs and fees including attorney's fees and costs at trial and appellate levels.

CONTRACTOR further acknowledges and agrees that as additional inducement to the CITY'S execution of this agreement, CONTRACTOR does hereby release and forever indemnify and hold harmless the CITY from any and all causes of action and/or claims of any kind at law or in equity, relating to any and all prior agreements between CONTRACTOR and CITY.

The CITY will pay to the CONTRACTOR the specific consideration of ten dollars and other good and valuable consideration as specific consideration for the indemnification provided herein. Furthermore, the CONTRACTOR acknowledges that the bid price includes said consideration for the indemnification provision.

Initials: _____

ARTICLE 8 – OTHER WORK

RELATED WORK AT SITE:

8.1. Without invalidating any portion of the Agreement, the CITY may perform other work related to the Project at the site by the CITY'S own forces, let other direct contracts therefore which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if CONTRACTOR believes that such performance will involve additional time and the parties are unable to agree as to the extent thereof, CONTRACTOR may make a claim therefore as provided in Article 13; Contractor, however, shall, under no circumstances, be entitled to any additional compensation and is limited to making a claim for an extension of time. If the performance of additional Work by other contractors (the "Separate Contractors") or the Owner is noted in the Contract Documents, no additional adjustment of time or compensation shall be considered.

8.2. CONTRACTOR shall afford the CITY and Separate Contractors who are a party to such a direct contract (or the CITY, if the CITY is performing the additional work with the CITY'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the CITY and CONSULTANT and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of the CITY and the Separate Contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between the CITY and the Separate Contractors.

8.3. If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such Separate Contractor (or the CITY), CONTRACTOR shall inspect and promptly report to CONSULTANT in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for such proper execution and results of CONTRACTOR'S work. CONTRACTOR'S failure to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work and CONTRACTOR shall not be entitled to any additional time or compensation therefore.

COORDINATION:

8.4. If the CITY contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Technical Specifications and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided in the Technical Specifications. Unless otherwise provided in the Technical Specifications, neither the CITY nor the CONSULTANT shall have any authority or responsibility in respect of such coordination.

8.4.1 The Contractor shall provide for coordination of the activities of the City's own forces and of each Separate Contractor with the Work of the Contractor. The Contractor shall participate with any Separate Contractors and the City in reviewing their construction schedules. The parties acknowledge that the Contractor's schedule has included time for all known Separate Contractors to perform their work, based on Contractor's experience and knowledge. The Contractor shall review those portions of the Contract Documents to be performed by the Separate Contractors, if any, that may impact Contractor's performance of its Work, and that may be interrelated with the Work to be performed by the Contractor, and shall schedule those separate contractors' work so as to cause no delay to the Work.

8.4.2 The Contractor shall coordinate its construction activities with the activities of the Separate Contractors and shall provide the necessary personnel and services which are included in the GMP necessary to connect and coordinate its Work with theirs at the proper time and in a manner so as not to delay the Work or increase costs.

8.4.3 If any part of the Work depends upon proper execution of work performed by the City or the Separate Contractors, the Contractor, its Subcontractors, and their respective Sub-subcontractors shall, prior to proceeding with the Work, inspect such Work and promptly report to the City any apparent discrepancies or defects in such other Work. Failure of the Contractor, its Subcontractors, or their respective Sub-subcontractors to comply with these requirements shall bar any claims thereafter that defects in Contractor's Work, or delays in the schedule, are due to defects in the Work performed by others.

ARTICLE 9 – THE CITY'S RESPONSIBILITIES

9.1. The CITY shall issue all communications to CONTRACTOR through CONSULTANT or CITY staff.

9.2. In case of termination of the employment of CONSULTANT, the CITY shall appoint a consultant whose status under the Contract Documents shall be that of the former CONSULTANT.

9.3. The CITY shall furnish the data required of the CITY under the Contract Documents and shall make payments to CONTRACTOR promptly after they are due as provided in paragraphs 15.4 and 15.13.

9.4. The CITY'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 5.1 and 5.4. Paragraph 5.2 refers to the CITY'S identifying and making available to CONTRACTOR copies of all reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by CONSULTANT in preparing the Drawings and Specifications.

9.5. The CITY may execute Change Orders as indicated in paragraph 11.4 if recommended by CONSULTANT. CONSULTANT'S decision, however, is not binding upon the CITY, who may decide, in its sole discretion, to reject a Change Order submitted by the CONTRACTOR.

9.6. In connection with the CITY'S right to stop Work or suspend Work, see paragraph 14.10 and 16.1. Paragraph 16.2 deals with the CITY'S right to terminate services of CONTRACTOR.

ARTICLE 10 – CONSULTANT'S STATUS DURING CONSTRUCTION

CITY REPRESENTATIVE:

10.1. The CONSULTANT will be the CITY'S representative during the construction period. The duties and responsibilities and the limitations of authority of CONSULTANT and the CITY'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of the CITY and CONSULTANT.

VISITS TO SITE:

10.2. After written notice to proceed with the work, the CONSULTANT shall make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents; he will not be responsible for the construction means, methods, procedures, techniques and sequences of construction, for which CONTRACTOR is solely responsible, and he will not be responsible for the CONTRACTOR'S failure to perform the construction Work in accordance with the Contract Documents; he will not be responsible for safety precautions and procedures in connection with the Work; and during such visits and on the basis of his on-site observations, as an experienced and qualified design professional, he will keep the CITY informed of the progress of the work, will endeavor to guard the CITY against defects and deficiencies in the Work of the CONTRACTOR and may reject Work as failing to conform to the Contract Documents and require CONTRACTOR to repair or replace all defective work at no additional cost to the CITY.

PROJECT REPRESENTATION:

10.3. A Resident Project Representative may be assigned to assist CONSULTANT in carrying out his responsibilities to CITY at the site. Resident Project Representative is CONSULTANT'S agent at site, will act as directed by and under the supervision of CONSULTANT, and will confer with CONSULTANT regarding Resident Representative's actions. Resident Project Representative's dealing in matters pertaining to the on-site work shall in general be with CONSULTANT and CONTRACTOR keeping the CITY advised as necessary. Resident Project Representative's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. Resident Project Representative shall generally communicate with the City with the knowledge of and under the direction of CONSULTANT.

10.3.1. Resident Project Representative shall where applicable:

10.3.1.1. Review the progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by CONTRACTOR and consult with CONSULTANT concerning its general acceptability.

10.3.1.2. Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

10.3.1.3. Working principally through CONTRACTOR'S superintendent, assist CONSULTANT in serving as the City's liaison with CONTRACTOR, when CONTRACTOR'S operations affect the City's on-site operations.

10.3.1.4. Assist in obtaining from the City additional details or information, when required for proper execution of the Work.

10.3.1.5. Record date of receipt of Shop Drawings and samples.

10.3.1.6. Receive samples which are furnished at the site by CONTRACTOR, and notify the CONSULTANT of availability of samples for examination.

10.3.1.7. Advise the CONSULTANT and CONTRACTOR of the commencement of any Work requiring a Shop Drawing if the submittal has not been approved by the CONSULTANT.

10.3.1.8. Conduct on-site observations of the Work in progress to assist the CONSULTANT in determining if the Work is, in general, proceeding in accordance with the Contract Documents.

10.3.1.9. Report to the CONSULTANT whenever Residential Project Representative believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise the CONSULTANT of Work that Resident Project Representative believes should be uncovered for observation, or requires special testing, inspection or approval. Nothing herein shall relieve the CONTRACTOR or the CONSULTANT from the duties imposed by contract.

10.3.1.10. Verify that tests, equipment and systems startups, and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record and report to the CONSULTANT appropriate details relative to the test procedures and startups.

10.3.1.11. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to the CONSULTANT.

10.3.1.12. Report to CONSULTANT when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by the CONSULTANT.

10.3.1.13. Consider and evaluate CONTRACTOR'S suggestions for modifications in Drawings or Specifications and report with Resident Project Representative's recommendations to the CONSULTANT. Transmit to CONTRACTOR decisions as issued by the CONSULTANT.

10.3.1.14. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, CONSULTANT'S clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.

10.3.1.15. Keep a diary or log book, recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to the CONSULTANT.

10.3.1.16. Record all names, addresses and telephone numbers of the CONTRACTOR, all subcontractors and major suppliers of material and equipment.

10.3.1.17. Furnish the CONSULTANT periodic reports as required of progress of the Work of the CONTRACTOR'S compliance with the progress schedule and schedule of Shop Drawing and sample submittals.

10.3.1.18. Consult with the CONSULTANT in advance of schedule major tests, inspections or start of important phases of the Work.

10.3.1.19. Draft proposed Change Orders and Work Directive Changes, obtaining backup material from CONTRACTOR and recommend to the CONSULTANT, Change Orders, Work Directive Changes, and Field Orders.

10.3.1.20. Report immediately to the CONSULTANT and the CITY upon the occurrence of any accident.

10.3.1.21. Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to the CONSULTANT, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.

10.3.1.22. During the course of the work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to the CONSULTANT for review and forwarding to City prior to final payment for the Work.

10.3.1.23. Before the CONSULTANT issues a Certificate of Substantial Completion, submit to CONTRACTOR a list of observed items requiring completion or correction.

10.3.1.24. Conduct final inspection in the company of the CONSULTANT, the City and the CONTRACTOR and prepare a final list of items to be completed or corrected.

10.3.1.25. Observe that all items on final list have been completed or corrected and make recommendations to the CONSULTANT concerning acceptance.

10.3.2. The Resident Project Representative shall not:

10.3.2.1. Authorize any deviation from the Contract Documents or substitution of materials or equipment.

10.3.2.2. Exceed limitations of the CONSULTANT'S authority as set forth in the Contract Documents.

10.3.2.3. Undertake any of the responsibilities of CONTRACTOR, subcontractors, or CONTRACTOR'S superintendent.

10.3.2.4. Advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

10.3.2.5. Advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.

10.3.2.6. Accept Shop Drawing or sample submittals from anyone other than CONTRACTOR.

10.3.2.7. Authorize the City to occupy the Project in whole or in part.

10.3.2.8. Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by the CONSULTANT.

CLARIFICATIONS AND INTERPRETATIONS:

10.4. The Initial Decision Maker is the person identified in the Contract Documents to render initial decisions on Claims in accordance with the Contract Documents. The Initial Decision Maker shall not show partiality to the City or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith. The Consultant shall serve as the Initial Decision Maker. CONTRACTOR expressly agrees that CONSULTANT is the sole judge of the requirements of the Contract Documents and the judge of CONTRACTOR'S performance thereunder and thus agrees that all decisions made by CONSULTANT regarding such issues shall be binding upon CONTRACTOR and the CITY. The CONSULTANT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as the CONSULTANT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

AUTHORIZED VARIATIONS OF WORK:

10.5. CONSULTANT may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a field Order and will be binding on the CITY, and also on CONTRACTOR who shall perform the Work involved promptly. As such Field Orders involve minor variations to the Work, CONTRACTOR shall not be entitled to any additional time or compensation for performing such work and is precluded from submitting change order requests for furnishing such work.

10.6. The CONSULTANT will have authority to disapprove or reject Work which CONSULTANT believes to be defective or believes to be in nonconformance with the intent of the contract documents, and will also have authority to require special inspection or testing of the Work as provided in paragraph 14.9, whether or not the Work is fabricated, installed or completed.

SHOP DRAWINGS, CHANGE ORDERS AND PAYMENTS:

10.7. In connection with CONSULTANT'S responsibility for Shop Drawings and samples, see paragraphs 7.22 through 7.26 inclusive.

10.8. In connection with CONSULTANT'S responsibilities as to Change Orders, see Article 11, 12, and 13.

10.9. In connection with CONSULTANT'S responsibilities in respect of Applications for Payment, etc., see Article 15.

DETERMINATIONS FOR UNIT PRICES:

10.10. CONSULTANT will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. CONSULTANT will review with CONTRACTOR CONSULTANT'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). CONSULTANT'S written decisions thereon will be final and binding upon the CITY or CONTRACTOR unless, within ten (10) days after the date of any such decision, either the CITY or CONTRACTOR delivers to the other party to the Agreement and to CONSULTANT written notice of intention to appeal from such a decision.

DECISIONS ON DISPUTES:

10.11. As CONSULTANT is the Initial Decision Maker and, in that role will serve as the interpreter of the requirements of the Contract Documents and judge of the acceptability of the Contractor's Work there under, claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and Claims under this section 10.11 and Articles 12 and 13 in respect of changes in the Contract Price or Contract Time will be referred to CONSULTANT in writing with a request for a formal decision in accordance with this paragraph, which CONSULTANT will render in writing within the time set forth in these Articles. Written notice of each such claim, dispute and other matter will be delivered by the claimant to CONSULTANT and the other party to the Agreement promptly as set forth in paragraph 10.13 below.

10.12. When functioning as interpreter and judge under paragraphs 10.4, 10.10 and 10.11, CONSULTANT will not show partiality to the CITY or CONTRACTOR. The rendering of a decision by CONSULTANT pursuant to paragraphs 10.4, 10.10 and 10.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 15.13) will be a condition precedent to any exercise by the CITY or the CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter. CONTRACTOR'S failure to timely submit a claim to the CONSULTANT in accordance with the requirements of the Contract Documents constitutes a waiver of its claim.

10.12.1 Notice of Claims. Claims by either the City or Contractor shall be initiated by notice to the other party and to the Initial Decision Maker. Claims by the Contractor for an increase in the GMP or the Contract Time must be made within five (5) days after occurrence of the event giving rise to such Claim.

10.12.2 Continuing Contract Performance. Pending final resolution of a Claim, except as otherwise agreed in writing or as provided elsewhere in the Contract Documents, the Contractor shall proceed diligently with performance of the Contract and the City shall continue to make payments in accordance with the Contract Documents.

10.12.3 The GMP and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 10. The City will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

10.12.3.1 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the GMP, notice as provided in paragraph 10.12.1 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim.

10.12.3.2 Claims for Additional Time. If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in paragraph 10.12.1 shall be given. The Contractor's Claim shall include a Time Impact Analysis and probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

10.12.3.3 If exceptional and unusual adverse weather conditions are the basis for a Claim for additional time, such Claim shall be made consistent with the provisions of this Article 10 and in accordance with delay and extension of time provisions of the Contract Documents and must meet all of the requirements for a time extension as set forth in the Contract Documents. Such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the critical path of the scheduled construction.

10.12.4 Initial Decision. Claims shall be referred to the Initial Decision Maker for initial decision. The Initial Decision Maker will be the Consultant, unless otherwise indicated in the Agreement. An initial decision shall be required as a condition precedent to mediation or litigation of any Claim. If an initial decision has not been rendered within thirty (30) days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation followed by litigation without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the City. Contractor must continue with its Work when a Claim is pending before the Initial Decision Maker.

10.12.4.1 The Initial Decision Maker will review Claims and within ten (10) days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

10.12.4.2 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision.

10.12.4.3 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten (10) days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

10.12.4.4 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties of any change in the GMP or Contract Time or both.

LIMITATIONS ON CONSULTANT'S RESPONSIBILITIES:

10.13. Neither CONSULTANT'S authority to act under this Article 10 or elsewhere in the Contract Documents nor any decision made by CONSULTANT either to exercise or not exercise such authority shall give rise to any duty or responsibility of CONSULTANT or CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

10.14. Whenever in the Contract Documents the term "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of the like effect or import are used to describe a requirement, direction, review or judgment of CONSULTANT as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to CONSULTANT any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 10.15 or 10.16.

10.15. CONSULTANT will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and CONSULTANT will not be responsible to CONTRACTOR for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

10.16. CONSULTANT will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 11 – CHANGES IN THE WORK

11.1 A “Change Order” is defined, for purposes of the Contract Documents, as a written order to the CONTRACTOR executed by the CITY and the CONSULTANT after execution of the Contract, directing a change in the Work and may include a change in the Contract Price or the time for the CONTRACTOR’S performance, or any combination thereof.

11.2 Without invalidating the Agreement and without notice to any surety, the CITY may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Written Amendment, a Change Order, or a Work Directive Change. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

If the CITY and CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Work Directive Change, a Claim may be made therefore as provided in Articles 10, 12 and/or Article 13.

11.3. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 4.4 and 4.5, except in the case of an emergency as provided in paragraph 7.21 and except in the case of uncovering Work as provided in paragraph 14.9.

11.4. The CITY and CONTRACTOR shall execute appropriate Change Orders (or Written Amendments) covering:

11.4.1. Changes in the work which are ordered by the CITY pursuant to paragraph 11.2, are required because of acceptance of defective Work under paragraph 14.13 or correcting defective Work under paragraph 14.14, or are agreed to by the parties.

11.4.2. Changes in the Contract Price or Contract time which are agreed to by the parties

11.4.3. Changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by CONSULTANT pursuant to paragraph 10.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provision of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 7.27.

11.4.4. Execution of a Change Order by the CONTRACTOR constitutes conclusive evidence of the CONTRACTOR'S agreement to the ordered changes in the Work and the change in the Contract Price and the time for performance by the CONTRACTOR. The CONTRACTOR, by executing the Change Order, waives and forever releases any claim against the CITY for additional time or compensation for issues or matters relating to or arising out of or resulting from the Work included within or affected by the executed Change Order.

11.4.5. All Change Orders and adjustments shall be in writing and executed by the CONTRACTOR and CITY; otherwise, no claim for additional compensation or time will be permitted.

11.4.6. All Change Orders in which the CONTRACTOR seeks additional time must include a Time Impact Analysis which includes an analysis of how the change shall be incorporated into the construction schedule; the status of construction at that time; and the start/finish dates of all affected activities utilizing the dates included in the latest construction schedule. Where the CONTRACTOR fails to append a Time Impact Analysis to the Change Order, it agrees that the delay has no affect on Contract Time.

11.5. It is distinctly agreed and understood that any changes made in the Contract Documents for this Work (whether such changes increase or decrease the amount thereof) or any change in the manner or time of payments or time of performance made by the CITY to the CONTRACTOR shall in no way annul, release or affect the liability and surety on the Bonds given by the CONTRACTOR. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or contract Time) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

11.6. Notwithstanding, anything to the contrary contained within the Contract Documents, all change orders involving additional cost or extensions of time, shall be governed by the ordinances of the City of Delray Beach.

ARTICLE 12 – CHANGE OF CONTRACT PRICE

12.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

12.2. The Contract Price may only be changed by a Change Order or by a Written Amendment. Although the CONTRACTOR acknowledges the "no damages for delay" provision set forth in Article 9 of the Contract Agreement, should it be entitled to any Claim for additional compensation under any circumstances, any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the Claim to the other party and to CONSULTANT as set forth in Article 10. Notice of the amount of the Claim with supporting data shall be delivered within five (5) days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect) to which the claimant believes it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined solely by CONSULTANT in accordance with Article 10 if the CITY and CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 12.2. Failure by the CONTRACTOR to strictly comply with such notice requirements shall constitute a complete waiver by the CONTRACTOR of any claim for additional compensation. Furthermore, should the CONTRACTOR be entitled to an increase in the Contract Sum, it shall be strictly limited to the direct cost of labor and materials incurred by the CONTRACTOR at the jobsite and shall in no event include indirect costs, overhead, lost profits or consequential damages incurred by the Contractor. Furthermore, the CITY shall not be liable to the CONTRACTOR for claims of third parties including, but not limited to, subcontractors, suppliers, laborers, etc.

12.3. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

12.3.1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 12.9.1. and 12.9.2.).

12.3.2. By mutual acceptance of a lump sum (which shall include an allowance for overhead and profit in accordance with paragraph 12.6.2.1).

12.3.3. On the basis of the Cost of the Work (determined as provided in paragraphs 12.4 and 12.5) plus a CONTRACTOR'S Fee for overhead and profit (determined as provided in paragraphs 12.6 and 12.7).

COST OF THE WORK:

12.4. The term Cost of the Work means the sum of all costs necessary incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by the CITY, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 12.5.

12.4.1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classification agreed upon by the CITY and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays shall be included in the above to the extent authorized by the CITY.

12.4.2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless the CITY deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to the CITY. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the CITY, and CONTRACTOR shall make provisions so that they may be obtained by the City in the most expeditious manner possible

12.4.3. Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by the CITY, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to the CITY who will then determine, with the advice of the CONSULTANT, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

12.4.4. Supplemental costs include the following:

12.4.4.1. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and tools not owned by the workers, which are consumed in the performance of Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

12.4.4.2. Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by the CITY with the advice of CONSULTANT, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof--all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work. For special equipment and machinery such as power driven pumps, concrete mixers, trucks, front end loaders, backhoes, and tractors, or other

equipment, required for the economical performance of the authorized Work, the CONTRACTOR shall receive payment based on the weekly rate divided by 40 to arrive at an hourly cost. The weekly rate shall be from the latest edition of the Rental Rate blue book for Construction Equipment, published by Equipment Guide Book Co., reduced by 25 percent. Equipment cost shall be calculated based upon the actual time the equipment is used in the Work. If said Work required the use of machinery not on the Work or not to be used on the Work, the cost of transportation, not exceeding a distance of one hundred (100) miles, of such machinery to and from the Work shall be added to the fair rental rate; provided, however, that this shall not apply to machinery or equipment already required to be furnished under the terms of the Contract.

12.4.4.3. Sales, consumer, use or similar taxes related to the work and for which CONTRACTOR is liable, imposed by laws and regulations.

12.4.4.4. Royalty payments and fees for permits and licenses.

12.4.4.5. The site costs of utilities, fuel and sanitary facilities.

12.4.4.6. Cost of premiums for additional bonds and insurance required because of changes in the Work.

12.5. The term Cost of the Work shall not include any of the following:

12.5.1. Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1, which are to be considered administrative costs covered by the CONTRACTOR'S Fee.

12.5.2. Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site. CONTRACTOR expressly agrees that Home Office Overhead is not included within the costs of the work.

12.5.3. Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

12.5.4. Cost of premiums for all Bonds and for all Insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 12.4.4.6 above).

12.5.5. Costs due to the acts or omissions of the CONTRACTOR, any Subcontractor, or anyone whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

12.5.6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 12.4.

CONTRACTOR'S FEE:

12.6. The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profits shall be determined as follows:

12.6.1. A mutually acceptable fixed fee; or if none can be agreed upon,

12.6.2. A fee based on the following percentages of the various portions of the Cost of the Work:

12.6.2.1. The cost allowance for overhead and profit shall not exceed **fifteen percent (15%)** of the new cost. If the Work is done by a Subcontractor, he may add **ten percent (10%)** of his net cost for overhead and profit and the Contractor may add **five percent (5%)** of the net cost for overhead and profit. If all the Work is done by the Contractor, he may add **fifteen percent (15%)** of the net cost for overhead and profit.

12.6.2.2. No fee shall be payable on the basis of costs itemized under paragraphs 12.4.4 and 12.5;

12.6.2.3. The amount of credit to be allowed by CONTRACTOR to the CITY for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to **ten percent (10%)** of the net decrease; and

12.6.2.4. When both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S Fee shall be computed on the basis of the net change in accordance with paragraphs 12.6.2.1 through 11.6.2.3, inclusive.

12.7. Whenever the cost of any Work is to be determined pursuant to paragraph 12.4 or 12.5, CONTRACTOR will submit in form acceptable to CONSULTANT an itemized cost breakdown together with supporting data.

UNDEFINED GENERAL ALLOWANCES:

12.8. It is understood that CONTRACTOR has included in the Contract Price all undefined general allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the undefined general allowances as may be acceptable to the CONSULTANT, CONTRACTOR agrees that:

12.8.1. The undefined general allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the undefined general allowances to be delivered at the site, and all applicable taxes; and

12.8.2. CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the undefined general allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change order will be issued as recommended by CONSULTANT to reflect actual amounts due CONTRACTOR on account of Work covered by undefined general allowances, and the Contract Price shall be correspondingly adjusted.

UNIT PRICE WORK:

12.9.1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by CONSULTANT in accordance with Paragraph 10.10.

12.9.2. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

OMITTED WORK:

12.10. The City may at any time, by written order, without Notice to the Sureties, require omission of such contract work as it may find necessary or desirable. An order for omission of work shall be valid only by an executable change order. All work so ordered must be omitted by the CONTRACTOR. The amount by which the contract price shall be reduced shall be determined as follows:

12.10.1. By such applicable unit prices, or rates for work of a similar nature or character as set forth in the contract; or,

12.10.2. By the appropriate lump sum price set forth in the Contract; or,

12.10.3. By the reasonable and fair estimated cost of such omitted work as determined by the CONTRACTOR and the CONSULTANT, and approved by the CITY.

ARTICLE 13 – TIME AND DELAYS

13.1 All time in the Contract Documents is calculated on a consecutive calendar day basis.

13.2 Time is of the essence in this Contract, and any breach of same shall go to the essence hereof, and CONTRACTOR, in agreeing to complete the Work within the time herein mentioned, has taken - into consideration and made allowances for all reasonable hindrances and delays incident to his work

13.3 CONTRACTOR agrees to commence the Work when directed by Owner and to diligently and continuously perform such Work and to coordinate the Work with other Work being performed on the Project by other trades so that the Owner shall not be delayed by any act or omission of CONTRACTOR in completion of the Project within the time specified above.

13.3.1 Contractor shall perform the Work in strict accordance with the Construction Schedule and the Submittal Schedules submitted to and approved by Consultant and City, in writing.

13.3.2 The Construction Schedule and all subsequently submitted updated Construction Schedules shall be in a detailed, precedence-style, resource loaded, critical path method (CPM) type format satisfactory to the City and Consultant, which shall also: (1) provide a graphic representation of all activities and events that will occur during performance of the Work; (2) identify each phase of construction, Substantial Completion, Temporary Certificate of Occupancy Dates, Certificates of Occupancy and Final Completion; and (3) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates"). Contractor shall provide the City with the original/planned, resource loaded Construction Schedule in P6 native electronic files (.xer format) such that the City may see Contractor’s logic. Upon review and acceptance by the City and the Consultant of the Construction Schedule, the Construction Schedule shall be deemed part of the Contract Documents.

13.3.3 The Contractor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and shall promptly advise the City of any delays or potential delays. The accepted Construction Schedule shall be updated one (1) time each month to reflect actual conditions and Contractor shall provide the City with a copy of the updated, resource loaded schedule, in P6 native electronic files (.xer format), and a list of all changes made to the schedule, at the time Contractor submits its monthly Payment Application. The updated Construction Schedule should include new start dates, new finish dates and the appropriate percent complete. No additional activities, changes to the Construction Schedules logic or changes to the Construction Schedules durations are to be included in the updated Construction Schedule. The Contractor may, at its option, provide fragnets with added activities

and logic changes; however, these changes are to be submitted in a separate document and as a separate electronic file. With all submissions, the .xer electronic file is to be submitted along with PDFs.

13.3.4 In the event any progress report or schedule update indicates any delays or loss of time, the Contractor shall propose an affirmative plan to correct the delay, including resequencing of the Work, overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time or the GMP unless any such adjustment is agreed to by the City and authorized pursuant to properly executed written Change Order. Contractor shall maintain such updated Construction Schedule on a current basis in accordance with the provisions of this Section and shall keep proper records available to inspection by the City to substantiate actual activity, resources, duration and completion dates.

13.3.5 Extraordinary Measures. In the event the City or Consultant determines that the performance of the Work has not progressed or reached the level of completion required by the Contract Documents, the City shall have the right to order the Contractor, in writing, to take corrective measures necessary to expedite the progress of construction, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, and facilities, (3) re-sequencing the Work to avoid the effects of the potential delay; and (4) other similar measures utilizing the most cost effective and reasonable acceleration methods possible to avoid delays and Damages (hereinafter referred to collectively as “Extraordinary Measures”). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents and approved Construction Schedule. The City’s right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor’s compliance with the Construction Schedule. The Contractor shall be responsible for liquidated damages for delays for failure to complete the Work within the Contract Time. All Extraordinary Measures required to keep the Project on schedule and to avoid delays shall not be considered a Cost of the Work and shall not be a basis to increase the GMP. Should Contractor fail to perform the Extraordinary Measures as provided herein, the City shall give the Contractor a five (5) business day notice of default. If the Contractor does not commence and continue to correct the default as provided in this Section, then the City may supplement Contractor’s crews, supply additional manpower, equipment and facilities, and/or other similar measures to avoid delays. Contractor shall be liable to The City for all costs incurred by The City pursuant to this Section. If Contractor does not perform its obligations pursuant to this Section, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost incurred pursuant to this Section. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the City.

13.3.6 The City may exercise the rights furnished the City under or pursuant to this Section 13.3.5 as frequently as the City deems necessary to ensure that the Contractor’s performance of the Work will comply with any critical dates and/or the Substantial Completion Date or TCO dates, as applicable. Alternatively, the City may exercise termination rights as provided for in the Contract Documents.

13.3.7 All Float contained in the Construction Schedule, as shown in the initial Construction Baseline Schedule or as generated thereafter, shall be considered a Project resource belonging in whole to the City for City’s sole use as needed to absorb delays caused by any event. All Float shall be shown as such in the Construction Schedule on each affected schedule path. The City and Consultant shall have the right to examine the identification of (or failure to identify) Float on the schedule in determining whether to approve the Construction Schedule. Once identified, the Contractor shall monitor, account for and maintain Float in accordance with critical path methodology.

13.4 CONTRACTOR shall make payments promptly to its vendors, subcontractors, suppliers and for labor, material and equipment used by it in the performance of his work.

13.5 The CONTRACTOR shall not be entitled to any claim for damages on account of hindrance or delays from any cause whatsoever; but if caused by any act of God or active interference on the part of the Owner, such act, hindrance, or delay may only entitle the CONTRACTOR to receive an extension of time as its sole and exclusive remedy.

13.6 Adverse weather such as rain is not to be considered to be an Act of God unless it exceeds the ten (10) year average as published by the National Weather Service (or equivalent organization acceptable to the Owner at its sole discretion) for that time of year in Palm Beach County.

13.7 An extension of time to complete the Work shall be determined by the Owner provided that the CONTRACTOR provides the Owner with notice in writing of the cause of said act, hindrance or delay within twenty (20) calendar days after its occurrence.

13.8 In the event the request for extension is not made in writing within that twenty (20) day time period, CONTRACTOR acknowledges and agrees it has forever waived any and all rights to such an extension.

13.9 All extensions of time shall be authorized only by a written change order executed by the Owner and Project Consultant.

13.10 This "no damage for delay" clause, also set forth in Article 9 of the Agreement, will encompass any damages for delay or disruption even if the CONTRACTOR completes construction of the Work in a timely fashion in accordance with this Contract.

13.11 Damages as referenced in this "no damage for delay" shall include any type of damages that are or could be awarded by any court or arbitration panel such as, by way of general example, but not limitation, tort, contract, strict liability, consequential damages, liquidated damages and/or punitive damages.

13.12 By way of specific example but not limitation, damages as referenced within this clause includes loss of use, loss of profits, labor inefficiency, loss of bonding capacity, overhead and repair costs, costs of capital replacement, loss of wages, pain and suffering, loss of production costs to replace facilities, equipment and/or product loss, increased and/or extended home office overhead, increased general conditions, costs of mobilization and demobilization, decrease in value, and/or any other damage or loss.

13.13 The CONTRACTOR recognizes and specifically acknowledges the terms and the "no damage for delay" clause upon execution of this Contract.

ARTICLE 14 – WARRANTY AND GUARANTEE: TESTS AND INSPECTIONS, CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.1. CONTRACTOR warrants and guarantees to the CITY and CONSULTANT that all Work will be constructed in accordance with the Contract Documents and that all materials and equipment incorporated into any Work covered by the Contract Documents shall be new and, where not specified, of the most suitable grade of their respective kinds for their intended use, and all workmanship shall be in accordance with construction practices acceptable to the City and Consultant. Prompt notice of all defects shall be given to CONTRACTOR. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in Article 14. The guarantee shall remain in effect for **one (1) year** from the date of final acceptance unless a longer period is specified. The CITY shall give notice of observed defects with reasonable promptness. Un-remedied defects identified for correction during the guarantee period but remaining after its expiration shall be considered as part of the obligations of the guarantee. Defects in material, workmanship or equipment which are remedied as a result of obligations of the guarantee shall subject the remedied portion of the work to an extended guarantee period of one year after the defect has been remedied. The Surety shall be bound with and for the Contractor in the Contractor's faithful observance of the guarantee. However, nothing contained in this Section shall affect or hinder the CITY'S ability to collect on the CONTRACTOR'S Performance Bond within a five (5) year period.

ACCESS TO WORK:

14.2. CONSULTANT'S and CONSULTANT'S representatives, other representatives of the CITY, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

TESTS AND INSPECTIONS:

14.3. CONTRACTOR shall give CONSULTANT timely notice of readiness of the Work for all required inspections, tests or approvals.

14.4. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish CONSULTANT the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the CITY'S or CONSULTANT'S acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR'S purchase thereof for incorporation in the Work.

14.5. All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to the CITY (or by CONSULTANT if so specified).

14.6. If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of CONSULTANT, it must, if requested by CONSULTANT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given CONSULTANT timely notice of CONTRACTOR'S intention to cover the same and CONSULTANT has not acted with reasonable promptness in response to such notice.

14.7. Neither observations by CONSULTANT nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligation's to perform the Work in accordance with the Contract Documents.

UNCOVERING WORK:

14.8. If any Work is covered contrary to the request of CONSULTANT, it must, if requested by CONSULTANT, be uncovered for CONSULTANT'S observation and replaced, at CONTRACTOR'S expense.

14.9. If CONSULTANT considers it necessary or advisable that covered Work be observed by CONSULTANT or inspected or tested by others, CONTRACTOR, at CONSULTANT'S request shall uncover, expose or otherwise make available for observation, inspection or testing as CONSULTANT may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals), and the CITY shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefore as provided in Article 12. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction; and if the parties are unable to agree as to the amount or extent thereof. CONTRACTOR may make a claim therefore as provided in Article 12 and 13.

CITY MAY STOP THE WORK:

14.10. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the CITY may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the CITY to stop the Work shall not give rise to any duty on the part of the CITY to exercise this right for the benefit of CONTRACTOR or any other party.

CORRECTION OR REMOVAL OF DEFECTIVE WORK:

14.11. If required by CONSULTANT, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by CONSULTANT, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect, and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

ONE YEAR CORRECTION PERIOD:

14.12. If within **one (1) year** after the date of final acceptance of the Work by the City or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to the CITY and in accordance with the CITY'S written instructions, either correct such defective Work, or, if it has been rejected by the CITY, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions or in an emergency where delay would cause serious risk of loss or damage, the CITY may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment. Nothing herein shall be deemed a waiver of the statute of limitations as provided in Florida Law.

14.13. If instead of requiring correction or removal and replacement of defective Work, the CITY (and prior to CONSULTANT'S recommendation of final payment) prefers to accept it, the CITY may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to the CITY'S evaluation of and determination to accept such defective Work (such costs to be approved by CONSULTANT as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to CONSULTANT'S recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the CITY shall be entitled to an appropriate decrease in the Contract Price to be determined by the CONSULTANT. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to the CITY.

CITY MAY CORRECT DEFECTIVE WORK:

14.14. If CONTRACTOR fails within thirty days (30) after written notice of CONSULTANT to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by CONSULTANT in accordance with paragraph 14.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, the CITY may, after seven (7) days written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph the CITY shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the CITY may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incomplete in the Work all materials and equipment stored at the site or for which the CITY has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow the CITY, the CITY'S representative, agents and employees such access to the site as may be necessary to enable the CITY to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of the CITY in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by CONSULTANT, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the CITY shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, the CITY may make a claim therefor as provided in Article 12. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and

replacement of work of other destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the CITY of the CITY'S rights and remedies hereunder.

ARTICLE 15 – PAYMENTS TO CONTRACTOR AND COMPLETION

15.1. The schedule of values established as provided in paragraph 3.9 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to CONSULTANT. The schedule of values shall be presented with such detail, and supported with whatever information the CITY or CONSULTANT reasonably requests. The CONTRACTOR shall not imbalance its schedule of values or artificially inflate any element thereof. Progress payments on account of Unit Price Work will be based on the number of units completed.

APPLICATION FOR PROGRESS PAYMENTS:

15.2 Unless otherwise prescribed by law, at the end of each month, the CONTRACTOR shall submit to the Consultant for review, an Application for Progress Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the Application and accomplished by such supporting documentation as is required by the Contract Documents.

The Application for Progress Payment shall identify, as a subtotal, the amount of the CONTRACTOR'S Total Earnings to Date, plus the Value of Materials Stored which have not yet been incorporated in the Work, less a deductive adjustment for materials stored which have been installed which were not previously incorporated in the Work, but for which payment was allowed.

The Net Payment Due to the CONTRACTOR shall be the above- mentioned subtotal from which shall be deducted the amount of retainage specified in the Contract, and the total amount of all previous approved Applications for Progress Payment submitted by the CONTRACTOR. Retainage shall be calculated based upon the above-mentioned subtotal.

The above calculation in tabular form is as follows:

Total Earnings to Date	$ _____
Value of Materials Stored	$ _____
Less Value of Materials Stored for which payment was allowed and which have been installed	($ _____)
SUBTOTAL	$ _____
Less Retainage (based on sub total)	($ _____)
Less total of all previous approved Applications for Progress Payment	($ _____)
NET PAYMENT DUE:	$ _____

The Value of Materials Stored shall be an amount equal to the specified percent of the value of same as set forth in the Agreement or Schedule of Values. Said amount shall be based upon the value of all acceptable materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing; provided, each such individual item has a value of more than $5,000 and will become a permanent part of the Work and is planned for installation within the following thirty (30) days. The Application for Progress Payment shall also be accompanied by a Bill of Sale, paid invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all liens, charges, security interests, and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are

covered by appropriate property insurance and other arrangements to protect the CITY'S interest therein, all of which shall be satisfactory to the CITY. CONTRACTOR warrants and represents that, upon payment of the pay request submitted, title to all work included in such payment shall be vested in the CITY.

CONTRACTOR'S WARRANTY OF TITLE:

15.3. CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to the CITY no later than the time of payment free and clear of Liens.

REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT:

15.4. The CONSULTANT identified within Article 6 of the **payment procedures** must review the payment request or invoice. Payment is due twenty-five (25) business days after the date on which the payment request or invoice is stamped as received. The City may reject the payment request or invoice within twenty (20) business days after the date on which the payment request or invoice is stamped as received. The rejection must be written and must specify the deficiency in the payment request or invoice and the action necessary to make the payment request or invoice proper. If a payment request or an invoice is rejected and the contractor resubmits a corrected payment request or invoice which corrects the deficiency specified in writing by the City, the corrected payment request or invoice must be paid or rejected on the later of:

- Ten (10) business days after the date the corrected payment request or invoice is stamped as received

Or

- The first business day after the next regularly scheduled meeting of the governing body held after the corrected payment request or invoice is stamped as received.

If a dispute between the City and the contractor cannot be resolved, the dispute must be resolved in accordance with the provisions of the Florida Prompt Payment Act Florida Statue 218.70.

When the Contractor receives payment from the City for labor, services, or materials furnished by subcontractors and suppliers hired by the Contractor, the Contractor shall remit payment due to those subcontractors and suppliers within ten (10) days after the Contractor's receipt of payment.

When a subcontractor receives payment from the Contractor for labor, services, or materials furnished by subcontractors and suppliers hired by the subcontractor, the subcontractor shall remit payment due to those subcontractors and suppliers within seven (7) days after the subcontractor's receipt of payment.

Nothing herein shall prohibit the Contractor or subcontractor from disputing, pursuant to the terms of the relevant contract, all or any portion of a payment alleged to be due to another party if the Contractor or subcontractor notifies the party whose payment is disputed, in writing, of the amount in dispute and the actions required to cure the dispute. Any disputes regarding payment shall be raised via a formal Claim pursuant to Article 10. The contractor or subcontractor must pay all undisputed amounts due within the time limits imposed by this section.

CONSULTANT will, within ten (10) days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to the CITY, or return the Application to CONTRACTOR indicating in writing CONSULTANT'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make necessary corrections and resubmit the Application. Twenty (20) business days after receipt of the Application for Payment by the City with CONSULTANT'S recommendation, the amount recommended will (subject to the provisions of section 15.4 and the last sentence of paragraph 15.7) become due and when due will be paid by the CITY to CONTRACTOR.

15.5. CONSULTANT'S recommendation of any payment requested in the application for payment shall not prohibit the City from withholding payment or prohibit the City from paying additionally sums regarding other matters or issues between the parties. In addition, payment precludes contractor from requesting additional compensation for work for which it has been paid.

15.6. CONSULTANT'S recommendation of final payment will constitute an additional representation by CONSULTANT to the CITY that the conditions precedent to CONTRACTOR'S being entitled to final payment as set forth in paragraph 15.13 have been fulfilled.

15.7. CONSULTANT may refuse to recommend the whole or any part of any payment if, in CONSULTANT'S opinion, it would be incorrect to make such representations to the CITY. The CONSULTANT may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in CONSULTANT'S opinion to protect the CITY from loss, including but not limited to:

15.7.1. The Work is defective, or completed Work has been damaged requiring correction or replacement.

15.7.2. The Contract Price has been reduced by Written Amendment or Change Order.

15.7.3. The CITY has been required to correct defective Work or complete Work in accordance with paragraph 14.14, or

15.7.4. Of CONSULTANT'S actual knowledge of the occurrence of any of the events enumerated in paragraphs 16.2.1 through 16.2.9 inclusive.

15.7.5 for liquidated damages that have accrued against the CONTRACTOR;

15.7.6 for claims filed by Subcontractors, suppliers or other third parties;

15.7.7 CONTRACTOR’S failure to carry out any of its obligations under the Contract Documents;

15.7.8 CONTRACTOR’S failure to make proper payments to Subcontractors or other third parties;

15.7.9 Damage to the CITY or another CONTRACTOR;

15.7.10 Punch list items unremedied;

15.7.11 Failure to comply with any and all insurance requirements;

15.7.12 Reasonable evidence that the Work will not be completed on or before the Substantial Completion or Final Completion date.

The CITY may refuse to make payment of the full amount recommended by the CONSULTANT because claims have been made against the CITY on account of CONTRACTOR'S performance or furnishing of the Work, or there are other items entitling the CITY to credit against the amount recommended, but the CITY must give CONTRACTOR written notice (with a copy to CONSULTANT) stating the reasons for such action.

SUBSTANTIAL COMPLETION:

15.8. When the CONTRACTOR considers the entire Work ready for its intended use, the CONTRACTOR shall notify the CITY and the CONSULTANT in writing that the Work is substantially complete and request that the CONSULTANT prepare a Certificate of Substantial Completion. Within a reasonable time thereafter, the CITY, the CONSULTANT and the CONTRACTOR shall make an inspection of the Work to determine the status of completion. If the CONSULTANT does not consider the Work substantially complete, the CONSULTANT shall notify the CONTRACTOR in writing giving the reasons therefor. If the CONSULTANT considers the Work to be substantially complete, the CONSULTANT will prepare and deliver to the CITY for its execution and recordation the Certificate of Substantial Completion signed by the CONSULTANT and CONTRACTOR, which shall fix the Date of Substantial Completion.

Before requesting an inspection for certification of Substantial Completion, the Contractor must have completed the following:

15.8.1 All air conditioning, ventilation, security systems, fire alarms, fire sprinklers and other life safety systems must be completed, tested, approved and demonstrated.

15.8.2 Air Conditioning systems must be completed, tested and approved by the Consultant.

15.8.3 Landscaping must be installed and in the event of ball fields, the grass must have grown to such an extent to be useable. Landscape irrigation systems must be completed, tested, approved and demonstrated.

15.8.4 In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the Work. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

15.8.5 Advise CITY of pending insurance changeover requirements.

15.8.6 Prepare specific warranties, workmanship bonds, maintenance agreements, final certifications and all required closeout submittals.

15.8.7 Obtain and submit releases enabling the CITY unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.

15.8.8 Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys and similar final record information.

15.8.9 Make final changeover of permanent locks and transmit master and grand master keys to the CITY.

15.8.10 Advise the CITY'S personnel of pending changeover in security provisions.

15.8.11 Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups and similar elements.

15.8.12 Complete final cleanup requirements, including touch-up painting.

15.8.13 Touch-up and otherwise repair and restore marred exposed finishes.

PUNCHLIST ITEMS:

15.9.1 The City shall develop a single "punch list" within thirty (30) days of the Contractor reaching substantial completion. The "punch list" shall cover the entire project and shall be released to the contractor within five (5) days of the development of said punch-list. The contractor shall have a minimum of thirty (30) days after the delivery of the list of items to complete the punch list.

Upon completion of the "punch list" items the Contractor may submit a request for all retainage held by the City. If there is a dispute as to the completion of a "punch list" item the City shall be allowed to retain 150% of the cost for the item until such dispute is resolved.

15.9.2 The CITY shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but the CITY shall allow CONTRACTOR reasonable access to complete or correct items on the "punch list". All items of work must be installed and completed per the contract documents. If the City fails to comply with its responsibilities to develop the list required as defined in the contract, within the time limitations provided the contractor may submit a payment request for all remaining retainage withheld by

the City pursuant to this section. The City need not pay or process any payment request for retainage if the contractor has, in whole or in part, failed to cooperate with the City in the development of the list or failed to perform its contractual responsibilities, if any, with regard to the development of the punch list. If the punch list is not provided to the contractor by the agreed upon date for delivery of the list, the contract time for completion must be extended by the number of days the City exceeded the delivery date. Damages may not be assessed against a contractor for failing to complete a project within the time required by the contract, unless the contactor failed to complete the project within the contract period as extended under this paragraph.

The failure to include any corrective work or pending items not yet completed on the punch List does not alter the responsibility of the contractor to complete all the construction services purchased pursuant to the contract. Payment of any remaining undisputed contract amount, less any amount withheld pursuant to the contract for incomplete or uncorrected work, must be paid within twenty (20) business days after receipt of a proper invoice or payment request. If the City has provided written notice to the contractor specifying the failure of the contractor to meet contract requirements in the development of the list of items to be completed, the City need not pay for or process any payment request for retainage if the contractor has, in whole or part, failed to cooperate with the City in the development of the list or to perform its contractual responsibilities, if any, with regards to the punch list.

PARTIAL UTILIZATION:

15.10. Use by the CITY of any finished part of the Work, which has specifically been identified in the Contract Documents, or which the CITY, CONSULTANT and CONTRACTOR agree constitutes a separately functioning and useable part of the Work that can be used by the CITY without significant interference with CONTRACTOR'S performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all Work subject to the following:

15.10.1. The CITY at any time may request CONTRACTOR in writing to permit the CITY to use any such part of the Work which the CITY believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees, CONTRACTOR will certify to the CITY and CONSULTANT that said part of the Work is substantially complete and request CONSULTANT to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify the CITY and CONSULTANT in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request CONSULTANT to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, the CITY, CONTRACTOR and CONSULTANT shall make an inspection of that part of Work to determine its status of completion. If CONSULTANT does not consider that part of the Work to be substantially complete, CONSULTANT will notify the CITY and CONTRACTOR in writing giving the reasons therefor. If CONSULTANT considers that part of the Work to be substantially complete, the provisions of paragraphs 15.8 and 15.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

15.10.2 The CITY may at any time request CONTRACTOR in writing to permit the CITY to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to CONSULTANT and within a reasonable time thereafter the CITY, CONTRACTOR and CONSULTANT shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to the CITY and CONSULTANT that such part of the Work is not ready for separate operation by the CITY, CONSULTANT will finalize the list of items to be completed or corrected and will deliver such list to the CITY and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final judgment between the CITY and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon the CITY and CONTRACTOR at the time when the CITY takes over such operation (unless they shall have otherwise agreed in writing and so informed CONSULTANT). During such operation and prior to Substantial Completion of such part of the Work, the CITY shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

15.10.3 If the CONSULTANT'S inspection discloses any item, whether or not included on the CONTRACTOR'S list, which is not in accordance with the Contract Documents and which would precluded beneficial occupancy and would render the Work not Substantially Complete, the CONTRACTOR shall immediately correct such item at no additional cost to the City.

15.10.4 The CITY, upon notification from the CONSULTANT that the Work, or a portion thereof, may be substantially complete, and all project closeout submittals pertaining to the Work have been approved and forwarded to the CITY, will direct the CITY to schedule and coordinate the CITY'S Substantial Completion Inspection. If the CONSULTANT finds that the work is substantially complete, it shall issue the CONTRACTOR a Certificate of Substantial Completion. Should the CONSULTANT deny substantial completion, CONTRACTOR shall promptly correct all deficiencies noted which caused the denial of substantial completion. Upon the correction of such deficiencies, the CONTRACTOR shall notify the CONSULTANT that such deficiencies are ready for reinspection at which time the CONSULTANT shall re-conduct a substantial completion inspection.

FINAL INSPECTION:

15.11. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, CONSULTANT will make a final inspection with the CITY and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete, defective, or not in accordance with the Contract Documents. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies at no additional cost to the CITY.

FINAL APPLICATION FOR PAYMENT:

15.12. After CONTRACTOR has completed in writing all such corrections to the satisfaction of CONSULTANT and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 7.18) and other documents--all as required by the Contract Documents, and after CONSULTANT has indicated in writing that the Work is acceptable and has been completed in conformance with the drawings and specifications and any approved changes thereto, CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents.

FINAL PAYMENT AND ACCEPTANCE:

15.13. Upon receipt of written notice from the Contractor that the Work has been completed in conformity with the Drawings and Specifications and any approved changes thereto, and receipt of the Final Application for Payment and accompanying documentation, the CITY'S CONSULTANT shall promptly examine the Work and, making such tests as he may deem proper and using all of the care and judgment normally exercised in the examination of completed Work by a properly qualified and experienced Professional CONSULTANT, shall satisfy himself that the CONTRACTOR'S statement appears to be correct and the CONTRACTOR'S other obligations under the Contract Documents have been fulfilled. He shall then inform the CITY in writing that he has examined the Work and that it appears, to the best of his knowledge and belief, to conform to the Contract Drawings, Specifications and any approved Change Orders, that the CONTRACTORS other obligations under the Contract Documents have been fulfilled, and that he therefore recommends acceptance of the Work for ownership and Final Payment to the CONTRACTOR. However, it is agreed by the CITY and the CONTRACTOR that such statement by the CITY'S CONSULTANT does not in any way relieve the CONTRACTOR from his responsibility to deliver a fully completed job in a good and workmanlike condition, and does not render the CONSULTANT or the CITY liable for any faulty Work done or defective materials or equipment used by the CONTRACTOR. In addition, payment to the CONTRACTOR by the CITY does not constitute acceptance of the CONTRACTOR'S defective Work or release the CONTRACTOR from its obligation to repair or replace all defective and deficient work.

The CONSULTANT will then make a final estimate of the value of all Work done and will deduct there from all previous payments which have been made. The CONSULTANT will report such estimate to the CITY

together with his recommendation as to the acceptance of the Work or his findings as to any deficiencies therein. After receipt and acceptance by the CITY of the properly executed Final Warranty of Title and after approval of the CONSULTANT'S estimate and recommendation to the CITY, the CITY will make final payment to the CONTRACTOR of the Amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including, but not limited to, Liquidated Damages, as applicable.

All prior estimates are subject to correction in the final estimate. Thirty (30) days after approval by the CITY of the application for final payment, the amount recommended by CONSULTANT shall become due and will be paid to Contractor.

CONTRACTOR'S CONTINUING OBLIGATION:

15.14. CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by CONSULTANT, nor the issuance of a Certificate of Substantial Completion, nor any payment by the CITY to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by the CITY, nor any act of acceptance by the CITY nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by CONSULTANT pursuant to paragraph 15.13, nor any correction of defective Work by the CITY will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the Work in accordance with the Contract Documents.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

CITY MAY SUSPEND WORK:

16.1. The CITY may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety (90) days by notice in writing to CONTRACTOR and CONSULTANT which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. In the event of a suspension of the Work, CONTRACTOR is expressly limited to seeking an extension of time in accordance with Article 13 of the Contract General Conditions and is expressly precluded from seeking any additional compensation in such circumstance.

CITY MAY TERMINATE FOR CAUSE:

16.2. Upon the occurrence of any one or more of the following events:

16.2.1. If CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such timing relating to the bankruptcy or insolvency;

16.2.2. If a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

16.2.3. If CONTRACTOR makes a general assignment for the benefit of creditors;

16.2.4. If a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR’S creditors;

16.2.5. If CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

16.2.6. If CONTRACTOR fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 3.9 as revised from time to time);

16.2.7. If CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

16.2.8. If CONTRACTOR disregards the authority of CONSULTANT; or

16.2.9. If CONTRACTOR otherwise violates any provisions of the Contract Documents; the CITY may, after giving CONTRACTOR and Surety seven (7) days written notice of any default and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the CITY has paid CONTRACTOR but which are stored elsewhere, and finish the Work as the CITY may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the expense of completing the work including compensation for additional managerial and administrative services, plus the CITY'S direct, indirect and consequential losses, damages and costs because of the CONTRACTOR'S default (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs) such excess will be paid to CONTRACTOR. If such expenses and costs plus the CITY'S losses and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to the CITY promptly on demand. Such costs incurred by the CITY will be approved as to reasonableness by CONSULTANT and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph the CITY shall not be required to obtain the lowest price for the work performed. In addition, failure of the CITY to comply with the seven (7) days' notice provision to the surety does not render the termination improper, render the termination one for convenience or in any way release surety from liability under its performance bond.

16.3. Where CONTRACTOR'S services have been so terminated by the CITY, the termination will not affect any rights or remedies of the CITY against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by the CITY will not release CONTRACTOR from liability.

16.4. The CITY may terminate this Contract without cause and for its convenience by giving seven (7) days prior written notice to the Contractor, and in such event, the CITY will pay the CONTRACTOR for that portion of the Contract Sum, less the aggregate of previous payments, allocable to the Work completed as of the Date of Termination, plus reasonable termination expenses. The CITY also will reimburse the CONTRACTOR for all costs necessarily incurred for organizing and carrying out the stoppage of the Work and paid directly by the CONTRACTOR, not including overhead, general expenses or profit. The CITY will not be responsible to reimburse the CONTRACTOR for any continuing contractual commitments to subcontractors or material men or for penalties or damages for canceling such contractual commitments, (with the exception that the CITY shall reimburse the CONTRACTOR for major materials or equipment purchased before termination if the CONTRACTOR can show proof of said purchases prior to notice of termination) inasmuch as the CONTRACTOR shall make all subcontracts and other commitments subject to this provision. In the event of termination by the CITY, the CITY may require the CONTRACTOR promptly to assign to it all or some subcontracts, construction, plant, materials, tools, equipment, appliances, rental agreements, and other commitments which the CITY, in its sole discretion, chooses to take by assignment, and in such event the CONTRACTOR shall promptly execute and deliver to the CITY written assignments of the same.

CONTRACTOR MAY STOP WORK OR TERMINATE:

16.5. If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety (90) consecutive days by the CITY or under an order of court or other public authority, or CONSULTANT fails to act on any Application for Payment within thirty (30) days after it is submitted, or the CITY fails for ninety (90) days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven (7) days written notice to the CITY and CONSULTANT, terminate the Agreement and the CITY will pay the CONTRACTOR for that portion of the Contract Sum, less the aggregate of previous payments, allocable to the work completed as of the Date of Termination plus reasonable termination expenses. The CITY will not be responsible to reimburse the CONTRACTOR for any continuing contractual commitments for canceling such contractual commitments inasmuch as the CONTRACTOR shall make all subcontracts and other commitments subject to this provision. The CITY may require the CONTRACTOR promptly to assign to it all or some subcontracts, construction, plant, materials, tools, equipment, appliances, rental agreements, and any other commitments which the CITY, in its sole discretion, chooses to take by assignment, and in such event the CONTRACTOR shall promptly execute and deliver to the CITY written assignments of the same. In addition and in lieu of terminating the Agreement, if CONSULTANT has failed to act on an Application for Payment or the CITY has failed to make any payment as aforesaid, CONTRACTOR may upon seven (7) days written notice to the CITY and CONSULTANT stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 7.27 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with the CITY.

ARTICLE 17 – MISCELLANEOUS

GIVING NOTICE:

17.1. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

COMPUTATION OF TIME:

17.2. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

NO LIMITATION OF RIGHTS AND REMEDIES:

17.3. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 7.28, 14.1, 14.12, 14.14, 15.3 and 16.2 and all of the rights and remedies available to the CITY and CONSULTANT thereunder, are in addition to , and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty obligation, right and remedy to which they apply. All representations warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

ACCIDENT AND PREVENTION:

17.4. The safety provisions of applicable laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Local Public Agency involved may determine to be reasonably necessary. Machinery, equipment and all hazards

shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" as published by the Associated General Contractors of America, Inc. to the extent that such provisions are not in conflict with applicable laws. The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on Work under the Contract. The Contractor shall promptly furnish the Local Public Agency with reports concerning these matters.

17.5. In the event the CITY is prevented from proceeding with any or all of this Work as stated in this Contract, due to a declaration of war, or national emergency, by the United States government, whereas the construction of the type contracted for herein is specifically prohibited by statute or governmental edict, or due to the stoppage of construction caused by any governmental agency, State, City, Town, or County regulations, orders, restrictions, or due to circumstances beyond the CITY'S control, then the CITY herein reserves the right to either suspend the Work to be done for an indefinite period of time or to cancel this Agreement outright by giving notice by registered mail of such intention to the CONTRACTOR herein. In the event of any conditions above mentioned occurring after the Work herein has already been commenced, then the CITY herein shall be liable for only the cancellation or suspension without the addition of prospective profits or other changes whatsoever.

FLORIDA PRODUCTS AND LABOR:

17.6. The CONTRACTOR'S attention is called to Section 255.04, Florida Statutes, which requires that on public building contracts, Florida products and labor shall be used wherever price and quality are equal.

EMPLOYEES:

17.7. All labor described in these specifications or indicated on the Drawings and the Work specified or indicated shall be executed in a thoroughly substantial and workmanlike manner by mechanics skilled in the applicable trades.

17.8. Any person employed on the Work who fails, refuses or neglects to obey the instructions of the CONTRACTOR in anything relating to this Work or who appears to the CITY to be disorderly, intoxicated, insubordinate, or incompetent, shall upon the order of the CITY, be at once discharged and not again employed in any part of the Work. Any interference with, or abuse or threatening conduct toward the CITY, CONSULTANT or their inspectors by the CONTRACTOR or his employees or agents, shall be authority for the CITY to annul the Contract and re-let the Work. No intoxicating substance shall be allowed on the Work site.

NON-DISCRIMINATION:

17.9 The CONTRACTOR shall not discriminate against employees or applicants for employment because of race, creed, color, religion, sex, age, handicapped status, disabilities, or national origin. The CONTRACTOR will endeavor to ensure that applicants are employed and that employees are treated during employment, without regard to their race, creed, color, religion, sex, age, handicapped status, or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. These provisions apply to all subcontractors and it is the responsibility of the subcontractor compliance.

DRUG-FREE WORKPLACE:

17.10. The CONTRACTOR shall comply with Florida Statutes Section 287.087 which gives preference to businesses with drug-free workplace programs.

ASSIGNMENT:

17.11. This Agreement, nor any monies due hereunder, or any part thereof, shall not be assigned, or transferred, by CONTRACTOR, nor shall the CITY be liable to any assignee or transferee, without the written consent of the CITY, to the assignment, or transfer. The CITY shall not release or discharge CONTRACTOR from any obligation hereunder. The CITY shall not approve an assignment or transfer unless the Surety on the Contract Performance and Payment Bonds has informed the CITY in writing that it consents to the assignment or transfer.

GOVERNING LAW AND VENUE:

17.12. This Agreement shall be governed by the laws of the State of Florida as now and hereafter in force, without regard to conflicts of law provisions. The venue for actions arising out of this Agreement is fixed in Palm Beach County, Florida.

ASBESTOS:

17.13. If the CONTRACTOR during the course of the Work observes the existence of asbestos in any structure, building or facility, the CONTRACTOR shall promptly notify the CITY and the CONSULTANT. The CITY shall consult with the CONSULTANT regarding removal or encapsulation of the asbestos material and the CONTRACTOR shall not perform any Work pertinent to the asbestos material prior to receipt of special instructions from the CITY through the CONSULTANT.

RIGHT TO AUDIT:

17.14. If the CONTRACTOR submits a claim to the CITY for additional compensation, the CITY shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR'S books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR'S plants, or such parts thereof, as may be or have been engaged in the performance of the Work. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon all subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such representatives as the CITY deems desirable during the CONTRACTOR'S normal business hours at the office of the CONTRACTOR. The accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the CITY.

LITIGATION:

17.15 Litigation of Claims, disputes or other matters in question between the City and Contractor arising out of or relating to this Agreement or breach thereof shall be subject to and decided by litigation exclusively in the Florida state courts of Palm Beach County. Contractor and the City consent to the venue of the Florida state courts Palm Beach County, and specifically recognize and acknowledge the waiver of any right to remove any action to federal court on the basis of diversity jurisdiction or on any other basis.

17.16 It is hereby understood and agreed that in the event any lawsuit in the judicial system, federal or state, is brought to enforce compliance with this contract or interpret same, or if any administrative proceeding is brought for the same purposes, each party shall pay their own attorney's fees and costs, including appellate fees and costs.

CONTRACTOR'S WAIVER OF CONSEQUENTIAL DAMAGES:

17.18 The Contractor waives Claims against the City for consequential damages arising out of or relating to the Contract Documents. This waiver includes damages due to the City's Termination, damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, loss of management or labor productivity, for losses of financing, business and reputation, all or any part of

the profit, except anticipated profit arising directly from the Work performed; and for loss of profit on any Work not performed by Contractor.

END OF SECTION 5

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SECTION 6: SOLICITATION SUMMARY

The City of Delray Beach
100 NW 1st Avenue
Delray Beach, FL 33444

PURCHASING AND CONTRACT ADMINISTRATION DIVISION

IMPORTANT NOTICE
The information you provide on this page will be read aloud at the PUBLIC OPENING for this Solicitation. It is VERY IMPORTANT that the summary information you provide below is exactly the same information contained in your Bid. If subsequent to the opening of Bids, the City determines that the information contained in the electronic version of your Bid is different from the information on this Solicitation Summary, the City reserves the right to deem your Bid NON-RESPONSIVE, and remove your Bid from further evaluation and consideration for contract award.

BID INFORMATION

Bid Number:	ITBC No. 2025-**035**
Title:	Area 5, 10, and 14 Reclaim Water Improvements
Project Number:	24-101U
Due Date and Time:	**April 30, 2025 @ 2:00 PM (LOCAL TIME)**
Name of Bidder:	_____
Address:	_____
Contact Person:	_____
Total Bid Amount:	$_____
Authorized Signature:	_____
Date:	_____

By signing and submitting this Solicitation Summary, the Bidder affirms that the information provided above is an exact and correct summary of the information contained in the electronic version of the Bidder's Bid to the City of Delray Beach.

END OF SECTION 6

EXHIBIT "C"

PRICES AND RATES

The Bidder shall submit the bid form in Bidnet Direct to submit its Fee Proposal. The following pricing is submitted as, all-inclusive in accordance with the requirements identified in this Scope of Work, and as set forth in this ITBC document.

00 41 00.13

BID FORM

ONE ORIGINAL BID SHALL BE SUBMITTED

To: _____

_____

_____

_____

_____

(hereinafter called Owner)

From: _____
Company

_____
Address

_____
City State Zip Code

(____) _____ _____
Telephone E-MAIL

(hereinafter called Bidder)

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to furnish all labor, materials, tools, and services required for the construction of the Area 5, 10, and 14 Reclaim Water Improvements for the City of Delray Beach, Palm Beach County, Florida, Engineers' Job No. 2326038.00, all in accordance with the Bidding Documents prepared by Baxter & Woodman, Inc., Consulting Engineers.

2. Bidder submits the following Schedule of Unit Prices for the Work to be performed in accordance with the Bidding Documents and agrees that items of work not specifically mentioned in the Schedule which are necessary and required to complete the Work intended shall be done incidental to and as part of the items of work for which a unit price is given, and understands that no additional payment will be made for such incidental work.

SCHEDULE OF UNIT PRICES

No.	Pay Item[1]	Approximate Quantity		Unit Price		Amount
General Conditions						
1	Site Mobilization and Demobilization	1 LS	$		$	
2	Bonds and Insurance	1 LS	$		$	
3	Maintenance of Traffic	1 LS	$		$	
4	As-Built Record Drawings	1 LS	$		$	
5	NPDES Permit/Erosion Protection Measures	1 LS	$		$	
6	Dewatering	1 LS	$		$	
7	Indemnification	1 LS	$		$	
Area 5 Reclaim Water Improvements						
8	Milling Existing Asphalt Pavement (1”)	759 SY	$		$	
9	Type S-III Asphalt Pavement Overlay/Overbuild (incl. tack coat)	42 TON	$		$	
10	Concrete Sidewalk	128 SF	$		$	
11a	Concrete Curbs and Gutter – 12” Header Curb	66 LF	$		$	
11b	Concrete Curbs and Gutter – Type F	36 LF	$		$	
11c	Concrete Curbs and Gutter – Type D	26 LF	$		$	
12	Asphalt Walkway	7,400 SF	$		$	
13	Pavement Markings	1 LS	$		$	
14a	DIP (CL350) Reclaimed Water Main (Cement Lined) – 6” Restrained Joint	672 LF	$		$	
14b	DIP (CL350) Reclaimed Water Main (Cement Lined) – 6” Push-On	1,996 LF	$		$	
15	DIP Compact MJ Fittings (Cement Lined)	0.74 TON	$		$	
16	Mechanical Joint Restraint – 6”	101 EA	$		$	
17	Connect to Existing Reclaimed Water Main	1 EA	$		$	
18	6” Gate Valves	11 EA	$		$	
19	4” PVC Irrigation Sleeve	43 LF	$		$	
20	2” Air Release Valve with Manhole	1 EA	$		$	
21a	Restore Grass Area with Sod – St Augustine Floratum	425 SY	$		$	
21b	Restore Grass Area with Sod - Bahia	749 SY	$		$	
Area 10 Reclaim Water Improvements						
22	Milling Existing Asphalt Pavement (1”)	1,646 SY	$		$	
23	Type S-III Asphalt Pavement Overlay/Overbuild (incl. tack coat)	91 TON	$		$	
24	Paver Brick Pavement and Walkways	36 SY	$		$	
25	Concrete Sidewalk	322 SF	$		$	

26a	Concrete Curbs and Gutter – 12" Header Curb	55 LF	$	$
26b	Concrete Curbs and Gutter – Type F	13 LF	$	$
26c	Concrete Curbs and Gutter – Type D	10 LF	$	$
26d	Concrete Curbs and Gutter – Valley Gutter	20 LF	$	$
27	Pavement Markings	1 LS	$	$
28	Remove and Replace Chain Link Fence – 6'	10 LF	$	$
29a	DIP (CL350) Reclaimed Water Main (Cement Lined) – 6" Restrained Joint	308 LF	$	$
29b	DIP (CL350) Reclaimed Water Main (Cement Lined) – 6" Push-On	422 LF	$	$
30	DIP Compact MJ Fittings (Cement Lined)	0.31 TON	$	$
31	Mechanical Joint Restraint – 6"	80 EA	$	$
32a	6"x6" Tapping Sleeve and Valve	1 EA	$	$
32b	12"x6" Tapping Sleeve and Valve	2 EA	$	$
33	6"x6" Cut-In Tee	3 EA	$	$
34	6" Gate Valves	13 EA	$	$
35	Restore Grass Area with Sod – St Augustine Floratum	96 SY	$	$
Area 14 Reclaim Water Improvements				
36	Milling Existing Asphalt Pavement (1")	2,136 SY	$	$
37	Type S-III Asphalt Pavement Overlay/Overbuild (incl. tack coat)	118 TON	$	$
38	Concrete Sidewalk	855 SF	$	$
39	Concrete Curbs and Gutter – Type F	12 LF	$	$
40	Pavement Markings	1 LS	$	$
41	Remove and Replace Chain Link Fence – 6'	20 LF	$	$
42	Remove and Replace Metal Fence – 4'	10 LF	$	$
43a	DIP (CL350) Reclaimed Water Main (Cement Lined) – 6" Restrained Joint	223 LF	$	$
43b	DIP (CL350) Reclaimed Water Main (Cement Lined) – 8" Restrained Joint	280 LF	$	$
43c	DIP (CL350) Reclaimed Water Main (Cement Lined) – 8" Push-On	503 LF	$	$
44	DIP Compact MJ Fittings (Cement Lined)	0.84 TON	$	$
45a	Mechanical Joint Restraint – 6"	41 EA	$	$
45b	Mechanical Joint Restraint – 8"	58 EA	$	$
46	Connect to Existing Reclaimed Water Main	3 EA	$	$
47a	8"x6" Tapping Sleeve and Valve	3 EA	$	$
47b	12"x8" Tapping Sleeve and Valve	2 EA	$	$

48a	Gate Valves – 6”	5 EA	$	$
48b	Gate Valves – 8”	7 EA	$	$
49	2” Air Release Valve with Manhole	1 EA	$	$
50a	Restore Grass Area with Sod – St Augustine Floratum	45 SY	$	$
50b	Restore Grass Area with Sod - Bahia	29 SY	$	$
Allowances				
51	Undefined Contingency Allowance	AL	$63,000	$63,000
52	Pre-Construction Professional Audio/Video of Construction Site	AL	$10,000	$10,000
		TOTAL COST: $		

[1] *It is the Bidder’s responsibility to become familiar with the drawings, technical specifications, and in particular Section 01 22 29 “Measurement and Payment” when entering unit prices for each pay item.*

Respectfully submitted, signed, and sealed this _____ day of _____, 20_____.

_____
Bidder

(SEAL)

By _____

_____
Name - Title

ATTEST:

_____

_____
Name – Title

END OF BID FORM

City of Delray Beach
Area 5, 10, and 14 Reclaim Water Improvements
100% Design Submittal Engineer's Opinion of Probable Construction Costs (March 2025)

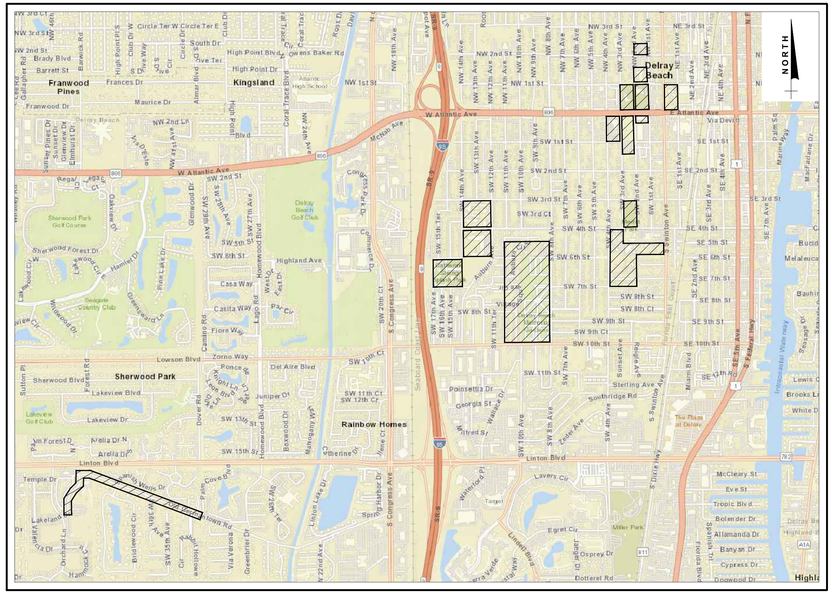
Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Extended Cost
General Conditions					
1	Site Mobilization and Demobilization (5%)	LS	1	$70,000.00	$70,000.00
2	Bonds and Insurance (2%)	LS	1	$28,000.00	$28,000.00
3	Maintenance of Traffic (9.5%)	LS	1	$133,000.00	$133,000.00
4	As-Built Record Drawings	LS	1	$27,000.00	$27,000.00
5	NPDES Permit/Erosion Protection Measures	LS	1	$13,000.00	$13,000.00
6	Dewatering	LS	1	$20,000.00	$20,000.00
7	Indemnification	LS	1	$10.00	$10.00
				Subtotal General:	**$291,010.00**
Area 5 Reclaim Water Improvements					
8	Milling Existing Asphalt Pavement (1")	SY	759	$15.00	$11,385.00
9	Type S-III Asphalt Pavement Overlay/Overbuild (incl. tack coat)	TN	42	$250.00	$10,500.00
10	Concrete Sidewalk	SF	128	$7.50	$960.00
11a	Concrete Curbs and Gutter - 12" Header Curb	LF	66	$32.00	$2,112.00
11b	Concrete Curbs and Gutter - Type F	LF	36	$30.00	$1,080.00
11c	Concrete Curbs and Gutter - Type D	LF	26	$25.00	$650.00
12	Asphalt Walkway	SF	7,400	$5.00	$37,000.00
13	Pavement Markings	LS	1	$5,000.00	$5,000.00
14a	DIP (CL350) Reclaimed Water Main (Cement Lined) - 6" Restrained Joint	LF	672	$125.00	$84,000.00
14b	DIP (CL350) Reclaimed Water Main (Cement Lined) - 6" Push-On	LF	1,996	$120.00	$239,520.00
15	DIP Compact MJ Fittings (Cement lined)	TON	0.74	$22,500.00	$16,650.00
16	Mechanial Joint Restraint - 6"	EA	101	$108.00	$10,908.00
17	Connect to Existing Reclaimed Water Main	EA	1	$1,500.00	$1,500.00
18	6" Gate Valves	EA	11	$3,000.00	$33,000.00
19	4" PVC Irrigation Sleeve	LF	43	$25.00	$1,075.00
20	2" Air Release Valve with Manhole	EA	1	$8,000.00	$8,000.00
21a	Restore Grass Area with Sod - St Augustine Floratum	SY	425	$8.00	$3,400.00
21b	Restore Grass Area with Sod - Bahia	SY	749	$6.00	$4,494.00
				Subtotal Area 5 Reclaimed Water:	**$471,234.00**
Area 10 Reclaim Water Improvements					
22	Milling Existing Asphalt Pavement (1")	SY	1,646	$15.00	$24,690.00
23	Type S-III Asphalt Pavement Overlay/Overbuild (incl. tack coat)	TN	91	$250.00	$22,750.00
24	Paver Brick Pavement and Walkways	SY	36	$11.25	$405.00
25	Concrete Sidewalk	SF	322	$7.50	$2,415.00
26a	Concrete Curbs and Gutter - 12" Header Curb	LF	55	$32.00	$1,760.00
26b	Concrete Curbs and Gutter - Type F	LF	13	$30.00	$390.00
26c	Concrete Curbs and Gutter - Type D	LF	10	$25.00	$250.00
26d	Concrete Curbs and Gutter - Valley Gutter	LF	20	$30.00	$600.00
27	Pavement Markings	LS	1	$5,000.00	$5,000.00
28	Remove and Replace Chain Link Fence - 6'	LF	10	$50.00	$500.00
29a	DIP (CL350) Reclaimed Water Main (Cement Lined) - 6" Restrained Joint	LF	308	$125.00	$38,500.00
29b	DIP (CL350) Reclaimed Water Main (Cement Lined) - 6" Push-On	LF	422	$120.00	$50,640.00
30	DIP Compact MJ Fittings (Cement lined)	TON	0.31	$22,500.00	$6,975.00
31	Mechanical Joint Restraint - 6"	EA	80	$108.00	$8,640.00
32a	6"x6" Tapping Sleeve and Valve	EA	1	$7,650.00	$7,650.00
32b	12"x6" Tapping Sleeve and Valve	EA	2	$9,400.00	$18,800.00
33	6"x6" Cut-In Tee	EA	3	$1,000.00	$3,000.00
34	6" Gate Valves	EA	13	$3,000.00	$39,000.00
35	Restore Grass Area with Sod - St Augustine Floratum	SY	96	$8.00	$768.00
				Subtotal Area 10 Reclaimed Water:	**$232,733.00**
Area 14 Reclaim Water Improvements					
36	Milling Existing Asphalt Pavement (1")	SY	2,136	$15.00	$32,040.00
37	Type S-III Asphalt Pavement Overlay/Overbuild (incl. tack coat)	TN	118	$250.00	$29,500.00
38	Concrete Sidewalk	SF	855	$7.50	$6,412.50
39	Concrete Curbs and Gutter - Type F	LF	12	$30.00	$360.00
40	Pavement Markings	LS	1	$5,000.00	$5,000.00
41	Remove and Replace Chain Link Fence - 6'	LF	20	$50.00	$1,000.00
42	Remove and Replace Metal Fence - 4'	LF	10	$40.00	$400.00
43a	DIP (CL350) Reclaimed Water Main (Cement Lined) - 6" Restrained Joint	LF	223	$125.00	$27,875.00
43b	DIP (CL 350) Reclaimed Water Main (Cement Lined) - 8" Restrained Joint	LF	280	$135.00	$37,800.00
43c	DIP (CL 350) Reclaimed Water Main (Cement Lined) - 8" Push-On	LF	503	$130.00	$65,390.00
44	DIP Compact MJ Fittings (Cement lined)	TON	0.84	$22,500.00	$18,900.00
45a	Mechanical Joint Restraint - 6"	EA	41	$108.00	$4,428.00
45b	Mechanical Joint Restraint - 8"	EA	58	$139.00	$8,062.00
46	Connect to Existing Reclaimed Water Main	EA	3	$1,500.00	$4,500.00
47a	8"x6" Tapping Sleeve and Valve	EA	3	$8,350.00	$25,050.00
47b	12"x8" Tapping Sleeve and Valve	EA	2	$9,700.00	$19,400.00
48a	Gate Valves - 6"	EA	5	$3,000.00	$15,000.00
48b	Gate Valves - 8"	EA	7	$3,500.00	$24,500.00
49	2" Air Release Valve with Manhole	EA	1	$8,000.00	$8,000.00
50a	Restore Grass Area with Sod - St Augustine Floratum	SY	45	$8.00	$360.00
50b	Restore Grass Area with Sod - Bahia	SY	29	$6.00	$174.00
				Subtotal Area 14 Reclaimed Water:	**$334,151.50**
Allowances					
51	Undefined Contingency Allowance	AL	1	$63,000.00	$63,000.00
52	Pre-Construction Professional Audio/Video of Construction Site	AL	1	$10,000.00	$10,000.00
				Subtotal Allowances:	**$73,000.00**
				SUBTOTAL	**$1,402,128.50**
				Contingency (20%)	$280,425.70
				CONSTRUCTION SUBTOTAL	**$1,682,554.20**

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

CITY PROJECT No. 24-101U

CITY OFFICIALS

MAYOR	THOMAS CARNEY
VICE MAYOR	JULI CASALE
DEPUTY VICE MAYOR	ROB LONG
COMMISSIONER	TOM MARKERT
COMMISSIONER	ANGELA BURNS



= LIMITS OF PROJECT AREA

PROJECT LOCATION MAP
N.T.S.

DRAWING LIST

SHEET	DRAWING	TITLE
		GENERAL
1	G-1	TITLE SHEET AND LOCATION MAP
2	G-2	GENERAL NOTES AND CONSTRUCTION NOTES
3	G-3	SURVEY NOTES AND SURVEY LEGENDS
4	G-4	AREA 5 – KEY MAP
5	G-5	AREA 10 – KEY MAP
6	G-6	AREA 14 – KEY MAP
		CIVIL
7	C-1	PARK ACCESS ROAD – AREA 5 – PLAN AND PROFILE – STA. 10+00 TO STA. 15+00
8	C-2	PARK ACCESS ROAD – AREA 5 – PLAN AND PROFILE – STA. 15+00 TO STA. 19+00
9	C-3	OLD GERMANTOWN ROAD – AREA 5 – PLAN AND PROFILE – STA. 19+00 TO STA. 23+00
10	C-4	OLD GERMANTOWN ROAD – AREA 5 – PLAN AND PROFILE – STA. 21+00 TO STA. 25+60
11	C-5	OLD GERMANTOWN ROAD – AREA 5 – PLAN AND PROFILE – STA. 25+60 TO STA. 30+60
12	C-6	OLD GERMANTOWN ROAD – AREA 5 – PLAN AND PROFILE – STA. 30+60 TO STA. 35+60
13	C-7	OLD GERMANTOWN ROAD – AREA 5 – PLAN AND PROFILE – STA. 35+60 TO STA. 40+00
14	C-8	SW 2ND AVENUE – AREA 10 – PLAN AND PROFILE – STA. 1+00 TO STA. 5+00
15	C-9	SW 2ND AVENUE – AREA 10 – PLAN AND PROFILE – STA. 5+00 TO STA. 9+00
16	C-10	NW 2ND AVENUE – AREA 10 – PLAN – STA. 401+00 TO STA. 408+00
17	C-11	NW 2ND STREET – AREA 10 – PLAN – STA. 500+00 TO STA. 504+00
18	C-12	NE 1ST AVENUE – AREA 10 – PLAN – STA. 126+00 TO STA. 134+00
19	C-13	SW 6TH STREET – AREA 14 – PLAN – STA. 100+00 TO STA. 111+00
20	C-14	AUBURN AVENUE & SW 12TH AVENUE – AREA 14 – PLAN – STA. 76+00 TO STA. 81+20
21	C-15	SW 6TH STREET – AREA 14 – PLAN – STA. 1+00 TO STA. 5+60
22	C-16	SW 6TH STREET – AREA 14 – PLAN – STA. 5+60 TO STA. 10+00
23	C-17	SW 6TH STREET – AREA 14 – PLAN – STA. 10+00 TO STA. 14+26
24	C-18	SW 4TH STREET – AREA 14 – PLAN – STA. 42+40 TO STA. 48+00
25	C-19	SW 7TH AVENUE – AREA 14 – PLAN – STA. 163+75 TO STA. 167+00
		DETAILS
26	D-1	STANDARD DETAILS – 1
27	D-2	STANDARD DETAILS – 2
28	D-3	STANDARD DETAILS – 3
29	D-4	STANDARD DETAILS – 4
30	D-5	STANDARD DETAILS – 5

NO.	DATE	ISSUED FOR	APRV'D BY

BID SET
MARCH 2025

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL

ALEXIS R. SHOTTON, P.E.
No. 96786

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

TITLE SHEET AND LOCATION MAP

PROJECT NO. 24-101U
DRAWING NO. G-1
FILE ID. 2326038_G01.dwg

Acad Version : R24.3s (LMS Tech)
User Name : dpham
Date\Time : Wed, 12 Mar 2025 - 8:57am
Path\Name : P:\DELRAY\2326038-Area 5 10 14 Reclaim\CAD\01_Civil 3D\01_Shts-Plans\2326038_G01.dwg
Current Plotstyle : ByColor
Layout Tab: G-1

GENERAL NOTES

DEFINITIONS

1. CITY – THE CITY OF DELRAY BEACH

2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS

3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION

PROCEDURE

1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INITIATION OF ANY RECLAIM WATER, SEWER OR DRAINAGE CONSTRUCTION. THE MEETING SHALL BE ATTENDED BY THE CITY, CONTRACTOR, SUBCONTRACTORS, ENGINEER AND OTHER INTERESTED PARTIES.

2. ANY REVISIONS TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY PRIOR TO THE PRE-CONSTRUCTION MEETING.

3. A MINIMUM OF THREE (3) COPIES OF THE CURRENT APPROVED PRODUCT LIST AND ALL NECESSARY SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING. ALL PIPE MANUFACTURERS SHALL SUBMIT THREE (3) COPIES OF AN AFFIDAVIT THAT THE PIPE AND COATINGS WERE MANUFACTURED IN ACCORDANCE WITH AWWA C151/A21.51-91.

4. ALL APPLICABLE PERMITS MUST BE OBTAINED WITH COPIES PROVIDED TO THE CITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.

5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.

6. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.

7. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES (NOT SHOWN ON THE PLAN) EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE CITY AND NOTIFY THE RESPECTIVE UTILITY OWNER TO RESOLVE THE UTILITY CONFLICTS AND THE UTILITY ADJUSTMENTS AS REQUIRED.

8. PRIOR TO ANY RECLAIMED WATER MAIN TESTING, UNDER EXISTING OR FUTURE PAVEMENT, THE ROCK BASE SHALL BE FINISHED AND PRIMED OR FIRST LIFT OF PAVEMENT PLACED.

9. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY, AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.

11. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY A MINIMUM OF 24 HOURS IN ADVANCE.

12. CONTRACTOR SHALL NOT DISTURB EXISTING CITY MAINS OR STRUCTURES WITHOUT THE PRESENCE OF A CITY INSPECTOR. CITY UTILITY SYSTEM VALVES AND APPURTENANCES MAY ONLY BE OPERATED BY CITY PERSONNEL.

13. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE CITY.

14. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER ADHERENCE TO ALL FACETS OF THE PLANS AND SPECIFICATIONS.

15. PAVING, DRAINAGE AND TRAFFIC CONSTRUCTION SHALL CONFORM TO CITY OF DELRAY BEACH, FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND DESIGN STANDARDS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND PALM BEACH COUNTY TYPICALS (LATEST REVISION) UNLESS SHOWN OTHERWISE.

16. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE CITY. AS THE WORK PROGRESSES, THE ENGINEER OF RECORD (OR THEIR REPRESENTATIVE) SHALL RECORD ON ONE SET OF DRAWINGS THE LOCATION INCLUDING STATION AND OFFSET WITH SUFFICIENT DIMENSIONS AND DISTANCES TO ADEQUATELY DESCRIBE THE LOCATION OF THE IMPROVEMENT FROM THE BASELINE. ELEVATIONS ARE TO BE PROVIDED AT THE TOP OF PIPE AT INCREMENTS OF EVERY 100 FEET ON ALL WATER AND FORCE MAINS. STATIONING IS REQUIRED ON ALL VALVES, FITTINGS, WATER AND SEWER SERVICES AND FIRE HYDRANTS. THE LENGTHS OF THE WATER SERVICES LINES AND SEWER LATERALS MUST BE NOTED ON GRAVITY SEWER LINES, ELEVATIONS AND STATIONING ARE TO BE INDICATED ON ALL MANHOLE RIMS AND INVERTS. THE DISTANCE BETWEEN MANHOLES IS TO BE SHOWN ON BOTH THE PLAN AND PROFILE SHEETS UNLESS PLAN VIEW AND PROFILE VIEW ARE ON THE SAME SHEET. PAVING & DRAINAGE AS-BUILT DRAWINGS SHALL INCLUDE RIM ELEVATIONS, INVERT ELEVATIONS, PIPE SIZES, CONTROL STRUCTURE DIMENSIONS AS WELL AS, AS-BUILT ELEVATIONS AS EVERY LOCATION A PROPOSED ELEVATION IS INDICATED ON THE CONSTRUCTION PLAN. ADEQUATE AS-BUILT ELEVATIONS SHALL BE PROVIDED ON EMBANKMENTS TO DETERMINE COMPLIANCE WITH MAXIMUM SLOPE REQUIREMENTS.

17. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553-851 FOR PROTECTION OF UNDERGROUND GAS PIPE LINES.

18. CONTRACTOR SHALL NOTIFY (811) 48 HOURS IN ADVANCE OF CONSTRUCTION.

19. GRADES SHOWN ON PLANS ARE FINISHED GRADES. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST EXISTING SANITARY SEWER MANHOLE TOPS AND VALVE BOX COVERS TO FINISHED GRADE.

20. CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES DURING CONSTRUCTION AND SHALL BE REQUIRED TO PROVIDE ALL BARRICADES, LIGHTING, SIGNAGE AND FLAGMEN AS NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC IN THE WORK AREA. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC MAINTENANCE PLAN PRIOR TO CONSTRUCTION.

21. EXISTING BASE MATERIAL THAT IS REMOVED DURING CONSTRUCTION SHALL NOT BE USED IN THE CONSTRUCTION OF NEW LIMEROCK BASE.

22. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTORS EXPENSE.

23. CONTRACTOR SHALL UTILIZE CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SILT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.

24. PRIOR TO AND DURING CONSTRUCTION OF ALL SITES, THE PERMITEE SHALL IMPLEMENT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDED IN A POLLUTION PREVENTION PLAN PROVIDED TO THE CITY OF DELRAY BEACH.

25. ALL PAVED SURFACES SHALL BE PROPERLY MARKED PRIOR TO HOURS OF DARKNESS. PERMANENT PAVEMENT MARKINGS STALLS SHALL BE LAID OUT USING MARKING CHALK. LAYOUT TO BE REVIEWED BY THE CITY PRIOR TO PLACEMENT OF FINAL MARKING.

26. EMBANKMENT (FILL) AND EXCESS MATERIAL REQUIRED FOR ROADWAY RECONSTRUCTION AND UTILITY INSTALLATIONS SHALL BE SUPPLIED AND/OR DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH EARTHWORK REQUIREMENTS TO COMPLETE THE ROADWAY RECONSTRUCTION AND UTILITY IMPROVEMENTS SHALL BE INCLUDED IN THE COSTS OF OTHER APPROPRIATE PAY ITEMS.

27. CONTINUITY OF WATER AND SEWER SERVICE TO CITY UTILITY CUSTOMERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT. IF A BREAK IN SERVICE IS UNAVOIDABLE TO ACCOMMODATE CONNECTION OF NEW FACILITIES, IT SHALL BE SCHEDULED FOR OFF PEAK HOURS WITH THE CITY. DETERMINATION OF SERVICE BREAK REQUIREMENT WILL BE MADE BY THE CITY.

28. SITE INFORMATION BASED ON A SURVEY PREPARED BY: DENNIS J. LEAVY & ASSOCIATES, INC.

29. RELOCATION OF ANY UTILITY POLES AND GAS PIPE LINES SHALL BE COORDINATED BY THE CONTRACTOR WITH FLORIDA POWER AND LIGHT, AND FLORIDA PUBLIC UTILITIES, RESPECTIVELY.

30. CONTRACTOR TO LOCATED AND PROTECT EXISTING IRRIGATION SYSTEMS AND RESTORE ANY DAMAGED SYSTEMS TO OPERATIONAL CONDITIONS. EXTEND THE EXISTING IRRIGATION SYSTEMS IN FRONT OF THE PROPOSED SIDEWALK. ALL COST TO BE INCLUDED IN PAY ITEM IRRIGATION ALLOWANCE.

GENERAL INFORMATION

1. AT&T TELEPHONE, FLORIDA POWER AND LIGHT, CABLE TV, GAS, ETC. ARE TAKEN FROM FIELD INSPECTIONS AND SKETCHES PROVIDED BY UTILITIES AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS AND CONFIRM LOCATIONS OF UTILITIES NO LESS THAN TWO FULL BUSINESS DAYS BEFORE DIGGING. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION WHERE CROSSING OR PARALLELING OF EXISTING UTILITIES OCCUR. ANY DAMAGE RESULTING FROM THE CONTRACTORS OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

EROSION CONTROL NOTES:

1. CUT AND FILL SLOPES TO BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SILT FENCES TO BE USED WHERE NECESSARY.

2. CONSTRUCTION VEHICLE ACCESS ROUTES SHALL BE SWEPT CLEAN OF SEDIMENT, CONCRETE AND OTHER CONSTRUCTION MATERIALS AS NEEDED.

3. ALL BERMS, DIKES AND SPOIL PILES SUBJECT TO EROSION MUST BE STABILIZED OR CONTAINED TO PREVENT EROSION AND RUNOFF FROM THE PROJECT.

4. ALL EXISTING STORM SEWER INLET GRATES TO BE COVERED WITH FILTER FABRIC DURING CONSTRUCTION.

EXISTING UTILITY LINETYPE LEGEND

- CATV — EXISTING BURIED CABLE TELEVISION
- CATV FO — EXISTING BURIED CABLE TELEVISION FIBER OPTIC
- COMM — EXISTING BURIED COMMUNICATION
- E — EXISTING BURIED ELECTRIC
- E FO — EXISTING BURIED ELECTRIC FIBER OPTIC
- <E> — EXISTING BURIED ELECTRIC DUCT
- FO — EXISTING BURIED FIBER OPTIC
- G — EXISTING BURIED GAS MAIN (<12")
- GS GS GS — EXISTING BURIED GAS SERVICE
- IRR IRR — EXISTING BURIED IRRIGATION
- FM — EXISTING BURIED SANITARY FORCE MAIN (<12")
- FM (ABD) — EXISTING BURIED ABANDONED SANITARY FORCE MAIN (<12")
- RAW WM — EXISTING BURIED RAW WATER MAIN (<12")
- RCWM — EXISTING BURIED RECLAIMED WATER MAIN (<12")
- RWS — EXISTING BURIED RECLAIMED WATER SERVICE
- SAN — EXISTING BURIED SANITARY SEWER (<12")
- SL SL SL — EXISTING BURIED SANITARY SEWER LATERAL
- STM — EXISTING BURIED STORM DRAINAGE (<12")
- T T — EXISTING BURIED TELEPHONE
- <T> — EXISTING BURIED TELEPHONE DUCT
- T FO — EXISTING BURIED TELEPHONE FIBER OPTIC
- T (RIP) — EXISTING BURIED TELEPHONE (RETIRED IN PLACE)
- TRAF — EXISTING BURIED TRAFFIC SIGNAL
- TRAF FO — EXISTING BURIED TRAFFIC FIBER OPTIC SIGNAL
- UNK — EXISTING BURIED UNKNOWN UTILITY
- W — EXISTING BURIED WATER MAIN (<12")
- WM (ABD) — EXISTING BURIED ABANDONED WATER MAIN (<12")
- WS WS WS — EXISTING BURIED WATER SERVICE
- EXISTING BURIED WATER, SEWER AND STORM (≥12")

UTILITY CONTACTS

CITY OF DELRAY BEACH WATER/SEWER
HASSAN HADJIMIRY, P.E.
UTILITIES DIRECTOR
434 S. SWINTON AVENUE
DELRAY BEACH, FL 33444
TEL. (561) 243-7328

PALM BEACH COUNTY TRAFFIC OPERATIONS SUPERINTENDENT
MARCELINO ALICEA
SUPERINTENDENT
2300 NORTH JOG ROAD
WEST PALM BEACH, FL 33411
TEL. (561) 684-4030

FIBERNET DIRECT FLORIDA, LLC
DANNY HASKETT
OSPE ASSOCIATE PROJECT MANAGER
1601 NW 136th AVENUE, SUITE A-200
SUNRISE, FL 33323
TEL. (786) 610-7073

FLORIDA POWER & LIGHT
ROBERT WEESE
SENIOR CUSTOMER ADVISOR
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (561) 640-2209

GLADYS REYES
REPRESENTATIVE, LED LIGHTING SOLUTIONS
6001 VILLAGE BOULEVARD
WEST PALM BEACH, FL 33407
TEL. (407) 844-8862

FLORIDA PUBLIC UTILITIES CORP.
PETER BONO
ENGINEERING TECHNICIAN
P.O. BOX 3395
WEST PALM BEACH, FL 33402
TEL. (561) 838-1841

AT&T
GARTH BEDWARD
SR. SPECIALIST – OSP DESIGN ENGINEER
120 NORTH K STREET, ROOM 3D-05
LAKE WORTH, FL 33460
TEL. (561) 540-9263

XFINITY
STEVEN ROSA
SENIOR FIELD COORDINATOR
3960 RCA BLVD., SUITE 6002
PALM BEACH GARDEN, FL 33401
TEL. (561) 454-5851

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL REFER TO DETAILS ON DRAWINGS D-1 THROUGH D-5 FOR STANDARD DETAIL CONSTRUCTION INFORMATION.

2. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BEYOND THE LIMITS OF WORK SHALL BE RESTORED IN KIND.

3. IN AREAS OF UNDERGROUND UTILITIES, CONTRACTOR SHALL HAND-DIG AS NECESSARY TO AVOID DAMAGING EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED UTILITIES AS A RESULT OF CONSTRUCTION ACTIVITIES (THIS IS A NON-PAY ITEM).

4. ALL FITTINGS SHALL BE RESTRAINED JOINTS. SEE STANDARD DETAIL SHEET D-2 FOR RESTRAINED PIPE LENGTHS.

5. DRAWINGS ARE BASED ON NAVD OF 1988.

6. CONTRACTOR IS REQUIRED TO PROVIDE ALL SHEETING AND SHORING ACTIVITIES AS REQUIRED DUE TO CONSTRUCTION ACTIVITIES TO PROTECT ALL EXISTING UTILITIES, POWER POLES, ETC.

7. CONTRACTOR SHALL REMOVE & DISPOSE ALL LANDSCAPING, TREES, HEDGES, ETC. (TYP) WITHIN THE RIGHT-OF-WAY THAT CONFLICTS WITH THE PROPOSED IMPROVEMENTS. CONTRACTOR SHALL ROOT PRUNE & SUPPORT ALL LANDSCAPING IN VICINITY OF PIPE INSTALLATION THAT WILL REMAIN.

8. CONTRACTOR SHALL LOCATE ALL EXISTING WATER SERVICE LINES PRIOR TO DIGGING. CONTRACTOR SHALL REPAIR ANY WATER SERVICE LINES DAMAGED DURING CONSTRUCTION IMMEDIATELY (THIS IS A NON-PAY ITEM).

9. CONTRACTOR SHALL LOCATE AND OBTAIN ELEVATIONS OF ALL EXISTING SANITARY SEWER LATERALS THAT CROSS THE PROPOSED UTILITY WORK. IF EXISTING SERVICE SEWER LATERAL IS DAMAGED BY CONTRACTOR, REPAIR USING FERNCO COUPLING AND PVC SDR-18 PIPING (THIS IS A NON-PAY ITEM). CONTRACTOR TO LOCATE ALL ACTIVE SANITARY SERVICE LATERALS DURING CLEANING & TELEVISING OF THE MAIN. COORDINATE LATERAL REPLACEMENT WITH THE CITY STAFF.

10. ALL PAVEMENT MARKINGS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.

11. ANY GRASSED AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED IN KIND. ST. AUGUSTINE FLORATAM SOD SHALL BE PLACED IN AREAS THAT ARE IRRIGATED. BAHIA SOD SHALL BE PLACED IN AREAS NOT IRRIGATED.

12. IF PREVIOUSLY, ABANDONED EXISTING WATER MAINS THAT WERE NOT PROPERLY ABANDONED ARE ENCOUNTERED DURING CONSTRUCTION OF THIS PROJECT, CONTRACTOR SHALL CAP/ABANDON EXISTING WATER MAINS PROPERLY.

13. CONCRETE SIDEWALKS REMOVED FOR THE CONSTRUCTION OF RECLAIMED WATER SHALL BE REPLACED AS A COMPLETE FLAG (FROM JOINT TO JOINT).

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1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

GENERAL NOTES AND CONSTRUCTION NOTES

PROJECT NO. 24-101U

DRAWING NO. G-2

FILE ID. 2326038_G02.dwg

Acad Version : R24.3s (LMS Tech)
User Name : dpturm
Date\Time : Wed, 12 Mar 2025 - 8:57am
Path\Name : P:\DELBCV\2326038-Area 5_10_14 Reclaim\CAD\01_Civil 3D\01_Site-Plans\2326038_G02.dwg
Current Plotstyle : ByColor
Layout Tab: G-2

REPORT OF SURVEY:

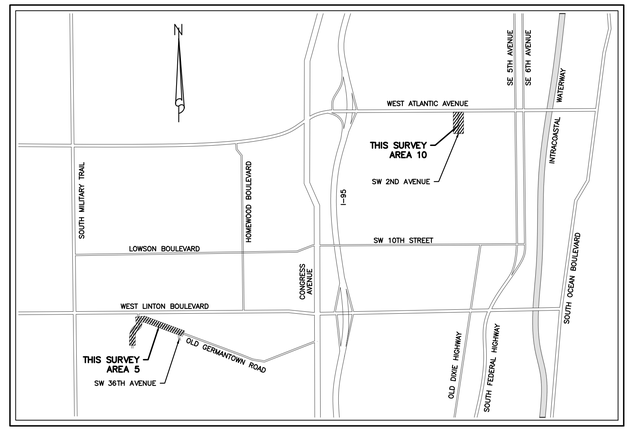
1. The survey depicted hereon has been classified as a Topographic Survey, as defined in Rule 5J–17.050 of the Florida Administrative Code, pursuant to Chapter 472.027, Florida Statutes as amended.
2. This survey has been prepared in the office of Dennis J. Leavy & Associates, Inc. located at: 460 Business Park Way, Suite B, Royal Palm Beach, Florida, whose certificate of authorization number is LB #6599, and the certifying surveyor's (David A. Bower) license number is LS #5888.
3. The survey sketch shown hereon does not necessarily contain all of the information obtained or developed by the undersigned surveyor in his field work, office work, or research.
4. THIS IS NOT A BOUNDARY SURVEY
5. This survey does not address environmental matters, jurisdictional boundaries or hazardous waste concerns should any of the foregoing exist.
6. The elevations shown hereon are for the purpose of indicating the ground elevation only at the position shown and in no way indicate elevations at any other point than shown hereon and do not determine sub surface conditions.
7. The undersigned makes no representations or guarantees as to the information reflected hereon pertaining to easements, rights of way, setback lines, agreements and other matters, and further, this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and confirmed by others through appropriate title verification. Lands shown hereon were not abstracted for rights of way and/or easements of record.
8. This survey does not meet those standards established by the American Land Title Association.
9. Underground apparent use and/or improvements have not been shown unless otherwise noted.
10. This instrument may not be reproduced in part or whole without the written consent of Dennis J. Leavy & Associates Inc.
11. Date of field survey: July 3rd, 2024, as recorded in Field Book 553, Pages 41 through 44, and 46 through 50 & Field Book 554, Pages 25, 26, 28 through 31, 35 through 42, 46, 48 through 50, 62, 73, 78, and 79 & Field Book 555, Pages 21 and 22 & Field Book 556, Page 10.
12. This survey lies in Section 17, Township 46 South, Range 43 East and Section 25, Township 46 South, Range 42 East, City of Delray Beach, Palm Beach County, Florida.
13. By graphic plotting only the subject property lies within Zone X, as shown on the U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, Map Numbers: 12099C0978F 12099C0979F and 12099C0986F, Community: City of Delray Beach, Number: 125102, Panels: 978, 979 and 986, Suffix: F, Effective date: October 5, 2017.
14. In some instances, graphic representations have been exaggerated to more clearly illustrate relationships between physical improvements and/or lot lines. In all cases, dimensions shown shall control the location of the improvements over scaled positions.
15. Measurements shown hereon are expressed in feet and decimal parts thereof unless otherwise noted.
16. All dates shown within the revision block hereon are for interoffice filing use only, and in no way affect the date of the field survey stated herein.
17. Benchmarks of Origin: Palm Beach County Benchmarks "MILOWSON" and "LOW–1" whose published elevations are 17.367' and 13.615' respectfully, based on the North American Vertical Datum of 1988.
18. Elevations referenced hereon are based on the North American Vertical Datum of 1988 (NAVD 88).

SYMBOL LEGEND:

A	AIR RELEASE MANHOLE
ATT	AT&T RISER
	BENCHMARK
BFP	BACKFLOW PREVENTOR
BOL	BOLLARD
	CATCH BASIN
CO	CLEAN OUT
	COMMUNICATIONS HANDHOLE
	CONCRETE POWER POLE
	CONCRETE POWER POLE WITH LIGHT
CP	CUT POWER POLE
	DECORATIVE LIGHT POLE
D	DRAINAGE MANHOLE
	ELECTRIC HANDHOLE
	FIBER OPTIC HANDHOLE
HYD	FIRE HYDRANT
FO	FIBER OPTIC RISER
GAS	GAS RISER
	IRRIGATION HANDHOLE
MP	METAL POST
(	POWER POLE ANCHOR
RWV	RECLAIMED WATER VALVE
RWV	RECLAIMED WATER VALVE WITH CONCRETE APRON
S	SANITARY MANHOLE
	SIGN
W	WATER METER
WV	WATER VALVE
WV	WATER VALVE WITH CONCRETE APRON
	WOOD POWER POLE
	WOOD POWER POLE WITH LIGHT
	YARD LIGHT

LEGEND:

AL:	ARC LENGTH
ARV	AIR RELEASE VALVE
℄	CENTERLINE
(C)	CALCULATED
CA:	CENTRAL ANGLE
CONC	CONCRETE
DC	DROP CURB
DE	DRAINAGE EASEMENT
DIP	DUCTILE IRON PIPE
E	EAST
EL	ELEVATION
G.U.E.	GENERAL UTILITY EASEMENT
HDPE	HIGH DENSITY POLYETHYLENE
L.A.A.	LIMITED ACCESS AREA
LB	LICENSED BUSINESS
LS	LICENSED SURVEYOR
LSA	LANDSCAPED AREA
MISC	MISCELLANEOUS
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NO.	NUMBER
OHW	OVERHEAD WIRES
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PC	POINT OF CURVATURE
PNC:	PARCEL CONTROL NUMBER
PG.	PAGE
PT	POINT OF TERMINATION
R:	RADIUS
RCP	CONCRETE PIPE
S	SOUTH
TON	TOP OF NUT
TP	TEXTURED PAD
UE	UTILITY EASEMENT
W	WEST



LOCATION MAP
NOT TO SCALE

NORTH

SCALE: 1'=100'

PLAT LEGEND:

(P1)	PLAT OF PALM BEACH COUNTY SOUTH COUNTY JUDICIAL CENTER (P.B. 60, PG. 124, P.B.C.R.)
(P2)	CODA REPLAT NO. 1 (P.B. 119, PG. 9, P.B.C.R.)
(P3)	SOUTH COUNTY COURTHOUSE COMPLEX EXPANSION (P.B. 117, PG. 11, P.B.C.R.)
(P4)	MAP OF THE TOWN OF LINTON, FLORIDA (P.B. 1, PG. 3, P.B.C.R.)
(P5)	HAMMOCK RESERVE (P.B. 80, PG. 166, P.B.C.R.)
(P6)	MIDTOWN DELRAY (P.B. 111, PG. 87, P.B.C.R.)
(P7)	FOXE CHASE (P.B. 38, PG. 1, P.B.C.R.)
(P8)	AMENDED PLAT OF FAIRCREST HEIGHTS (P.B. 42, PG. 68, P.B.C.R.)

PAINT MARK LEGEND:

–BPM–	BLUE PAINT MARK
–OPM–	ORANGE PAINT MARK
–PPM–	PURPLE PAINT MARK
–YPM–	YELLOW PAINT MARK

TREE SYMBOL LEGEND:

X" OAK TREE
X" PALM TREE
X" MISC. TREE
X" DENOTES TRUNK DIAMETER AT CHEST HEIGHT

SURVEY PREPARED BY:

DENNIS J. LEAVY & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FL 33411
PHONE: (561) 753-0650 EMAIL: SURVEY@DJLASURVEY.NET

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TOPOGRAPHIC SURVEY CERTIFICATION:

This is to certify that this survey is classified as a Topographic Survey as defined in Rule 5J–17.050 of the Florida Administrative Code, pursuant to Chapter 472.027, Florida Statutes as amended. The fieldwork was completed on July 3rd, 2024.

Dated: July 3rd, 2024

DAVID A. BOWER
LICENSE NUMBER
5888
STATE OF FLORIDA
PROFESSIONAL SURVEYOR AND MAPPER

DAVID A. BOWER
STATE OF FLORIDA
PROFESSIONAL SURVEYOR & MAPPER No. LS 5888

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1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

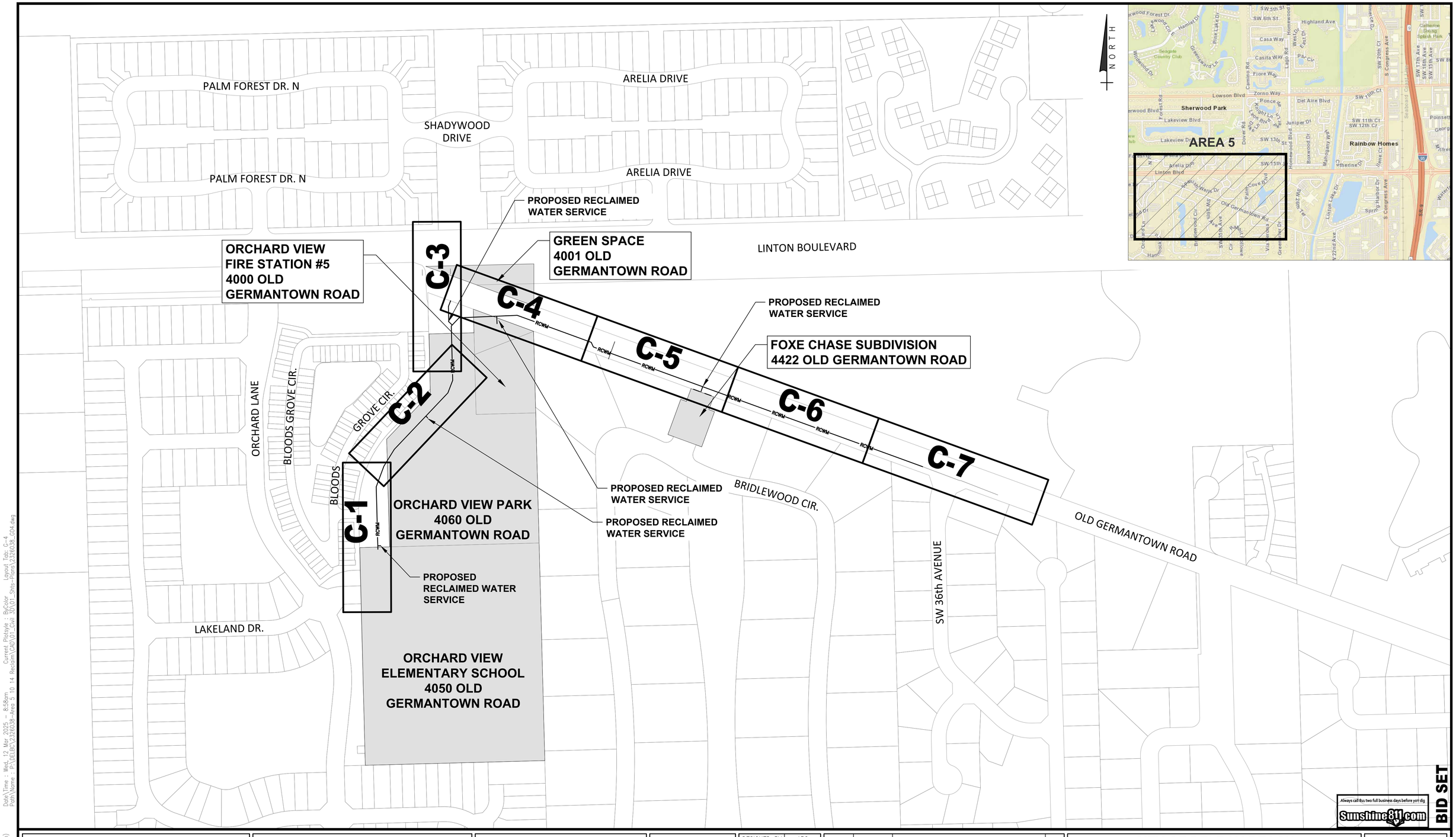
REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

SURVEY NOTES AND SURVEY LEGENDS

PROJECT NO. 24–101U
DRAWING NO. G–3
FILE ID. 2326038_G03.dwg

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Current Plotstyle : ByColor
Layout Tab: G–3



Date\Time : Wed, 12 Mar 2025 – 8:58am Current Plotstyle : ByColor Layout Tab: C-4
Path\Name : P:\DELBC\2326038-Area 5_10_14 Reclaim\CAD\01_Civil 30\01_ Shts-Plans\2326038_G04.dwg
Acad Version : R24.3s (LMS Tech)
User Name : dshamm

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

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1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

AREA 5 - KEY MAP

PROJECT NO. 24-101U

DRAWING NO. G-4

FILE ID. 2326038_G04.dwg

CITY ATTORNEY'S OFFICE
200 NW 1ST AVENUE

CITY HALL
100 NW 1ST AVENUE

PROPOSED RECLAIMED WATER SERVICE

C-11

C-10

PROPOSED RECLAIMED WATER SERVICE

DELRAY BEACH PARKS COMPLEX AND TENNIS COURT
201 W ATLANTIC AVENUE

PROPOSED RECLAIMED WATER SERVICE

PROPOSED RECLAIMED WATER SERVICE

C-12

OLD SCHOOL SQUARE
51 N SWINTON AVENUE

C-9

C-8

DELRAY BEACH COMMUNITY CENTER
50 NW 1ST AVENUE

POLICE DEPARTMENT
300 W ATLANTIC AVENUE

COURT HOUSE
200 W ATLANTIC AVENUE

LIBRARY
100 W ATLANTIC AVENUE

NW 4TH AVENUE
NW 2ND STREET
NW 5TH AVENUE
NW 4TH AVENUE
NW 3RD AVENUE
NW 2ND AVENUE
NW 1ST AVENUE
NW 1ST STREET
N SWINTON AVENUE
NE 1ST AVENUE
NE 2ND AVENUE
NE 3RD AVENUE
NE 2ND STREET
NE 1ST STREET
F.E.C. R.R.
NE 4TH AVENUE
W ATLANTIC AVENUE
NW 5TH AVENUE
NW 4TH AVENUE
SW 2ND AVENUE
SW 1ST AVENUE
SE 1ST AVENUE
NE 2ND AVENUE
SW 1ST ST
SE 1ST STREET
SW 3RD AVENUE
S SWINTON AVENUE

RCWM

NORTH

AREA 10

Delray Beach

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BID SET

Data\Time: Wed, 12 Mar 2025 – 8:58am Current Pltstyle: ByColor Layout Tab: G-5
Path\Name: P:\DELRAY\2326038-Area 5 10 14 Reclaim\C4D\01 Civil 3D\01 Shts-Plans\2326038_G04.dwg
Acad Version: R24.3s (LMS Tech)
User Name: ddhorn

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
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BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL

ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

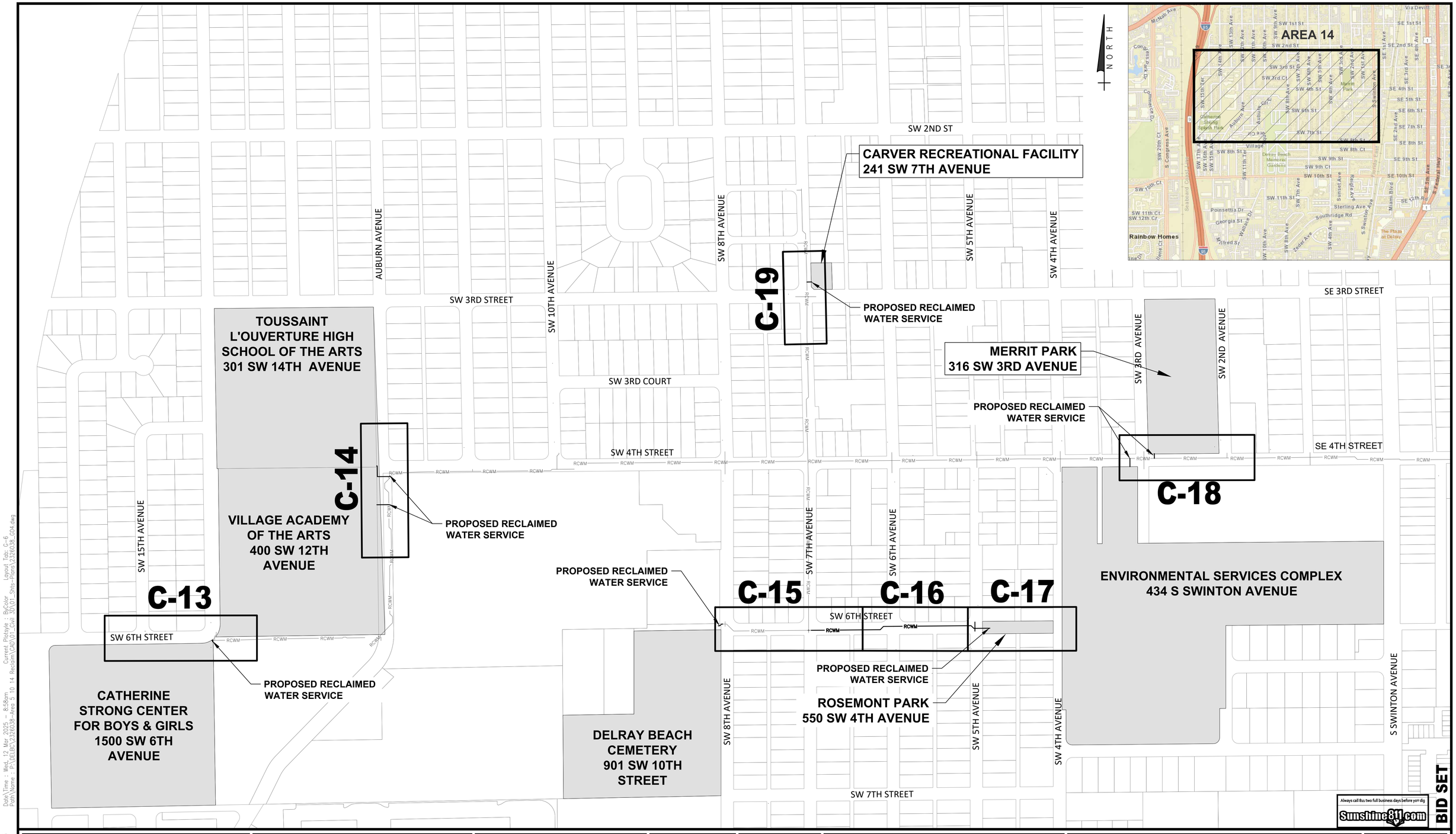
CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

AREA 10 - KEY MAP

PROJECT NO. 24-101U

DRAWING NO. G-5

FILE ID. 2326038_G04.dwg



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ENGINEER'S SEAL

ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

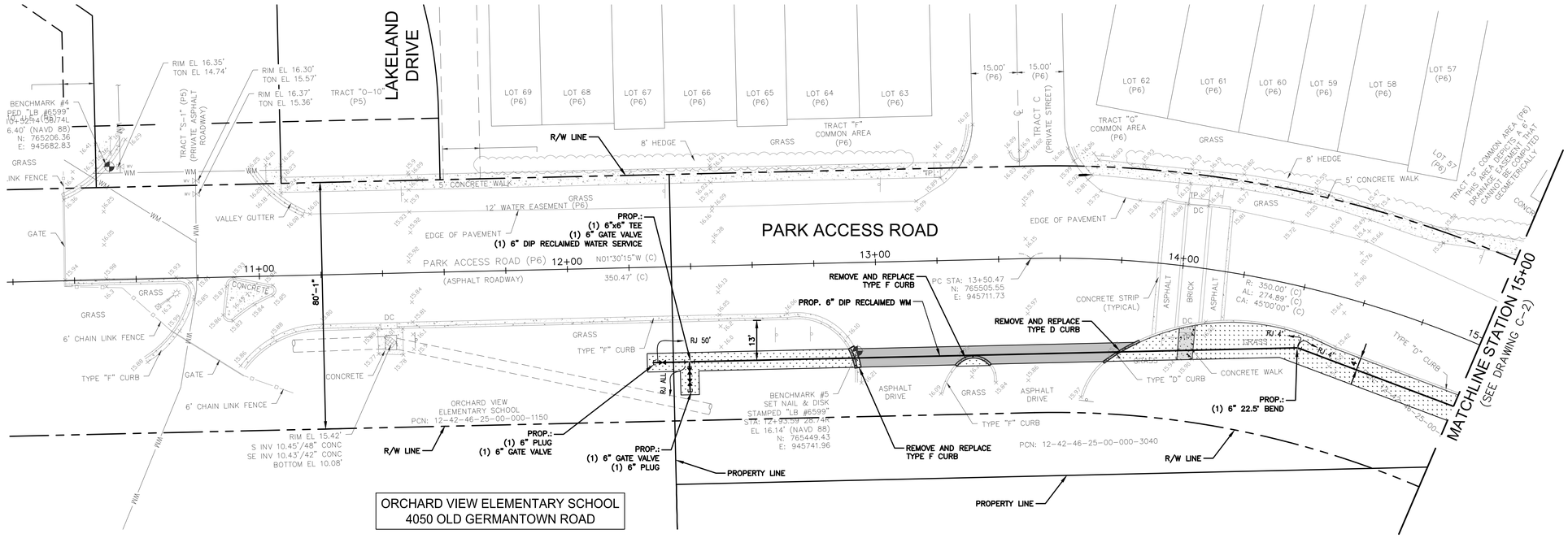
AREA 14 - KEY MAP

PROJECT NO. 24-101U

DRAWING NO. G-6

FILE ID. 2326038_G04.dwg

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Acad Version : R24.3s (LMS Tech)
User Name : dshamm



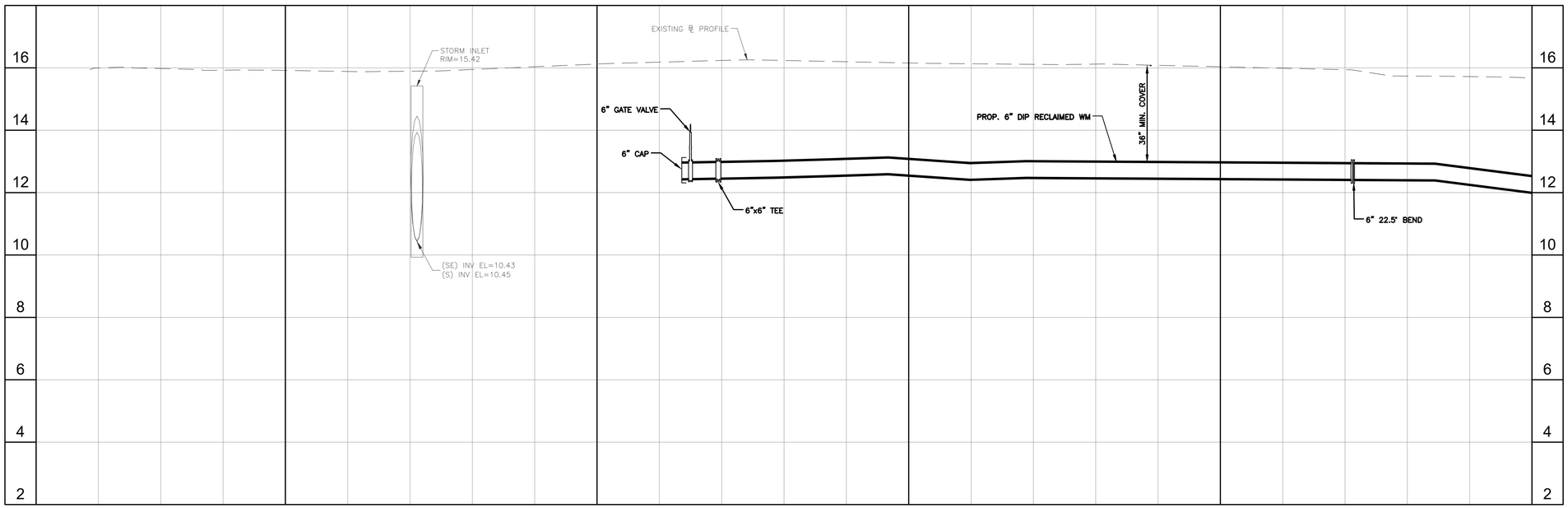
NORTH

HORIZ SCALE 1"=20'

VERT SCALE 1"=2'

LEGEND

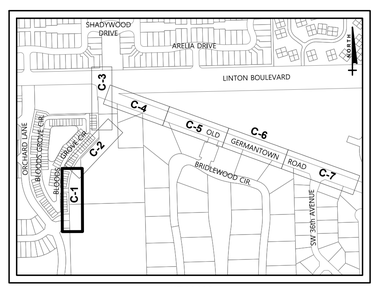
- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION
- PROPOSED ASPHALT PAVEMENT SIDEWALK RESTORATION
- REMOVE AND REPLACE EXISTING PAVEMENT



NOTE:
CONTRACTOR SHALL FIELD VERIFY DEPTH & LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING.

*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
THE MINIMUM CLEARANCE FOR RECLAIMED WATER MAINS IS 18 INCHES (18") OVER SEWER LATERALS. ANY INSTALLATION WHICH CANNOT COMPLY WITH THIS MINIMUM CLEARANCE REQUIRES BOTH THE USE OF DUCTILE IRON RECLAIMED WATER PIPE AND C-900 SDR-18 SANITARY LATERAL OR BETTER.



KEY MAP

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Sunshine811.com

BID SET

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ENGINEER'S SEAL

ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

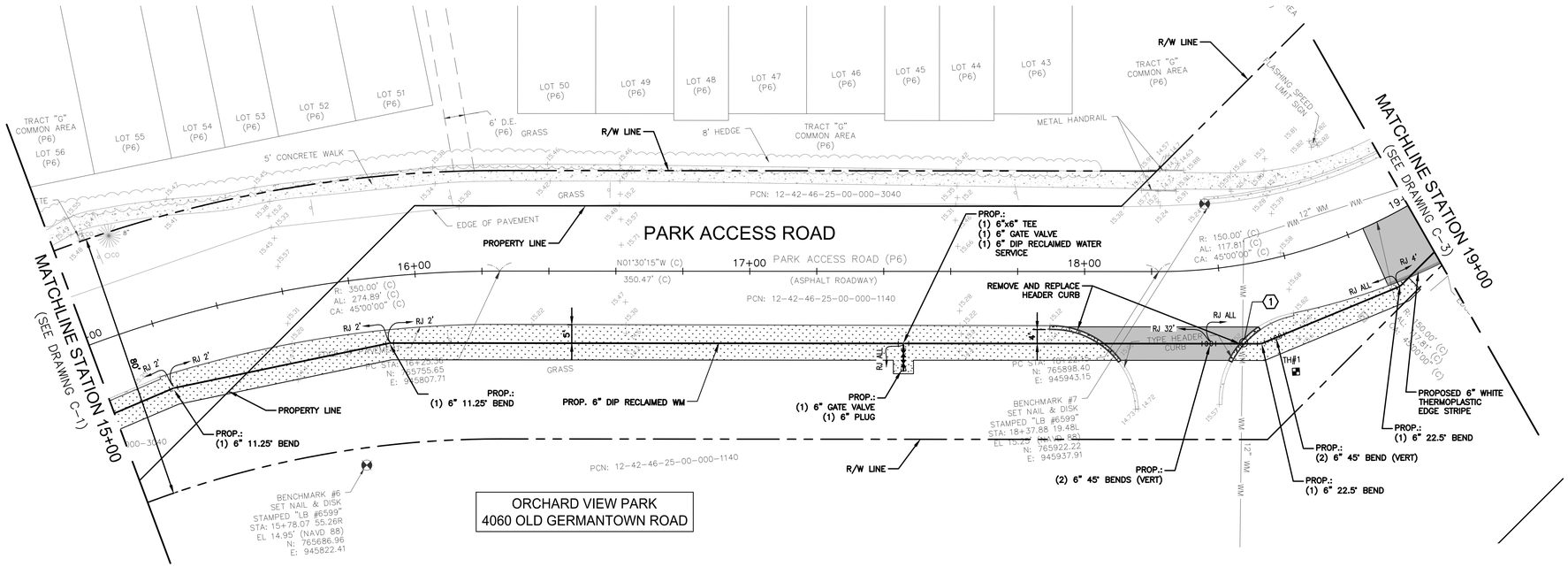
PARK ACCESS ROAD
AREA 5 - PLAN AND PROFILE
STA. 10+00 TO STA. 15+00

PROJECT NO. 24-101U

DRAWING NO. C-1

FILE ID. 2326038_PP_Area 5.dwg

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Acad Version = R24.3s (LMS Tech) User Name = dphorn



NORTH

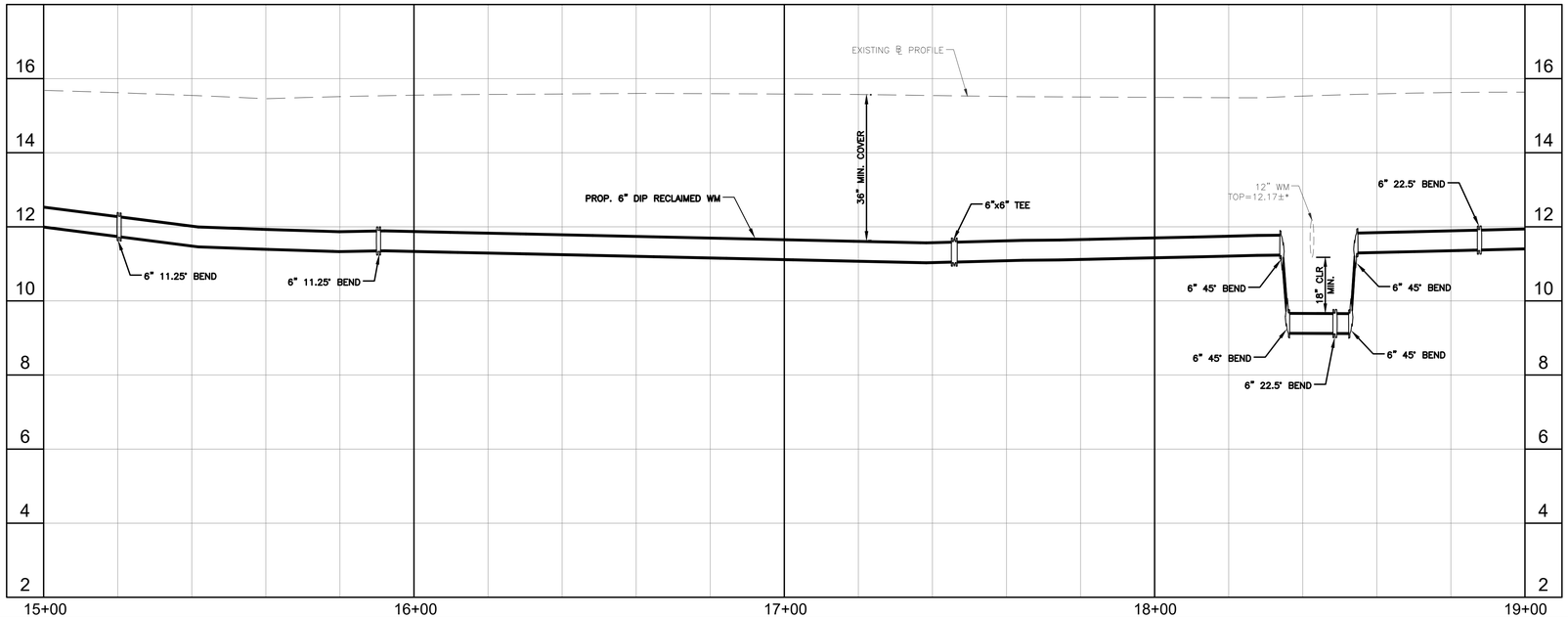
HORIZ SCALE 1"=20'

VERT SCALE 1"=2'

LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION
- PROPOSED ASPHALT PAVEMENT SIDEWALK RESTORATION
- REMOVE AND REPLACE EXISTING PAVEMENT

TH #1
UNKNOWN
COVER=4.43'±
T.O.P.=11.17±

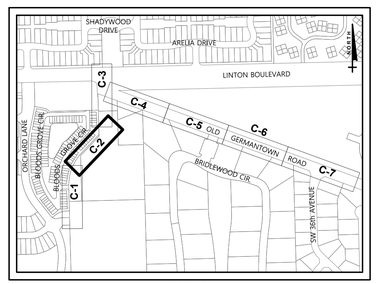


① **CONFLICT**
EXISTING 12" WM CROSSES OVER PROPOSED 6" RCWM
12" WM BOP EL = 11.02±
6" RCWM TOP EL = 9.52±
CLEARANCE = 1.50 FEET

NOTE:
CONTRACTOR SHALL FIELD VERIFY DEPTH & LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING.

*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
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KEY MAP

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CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

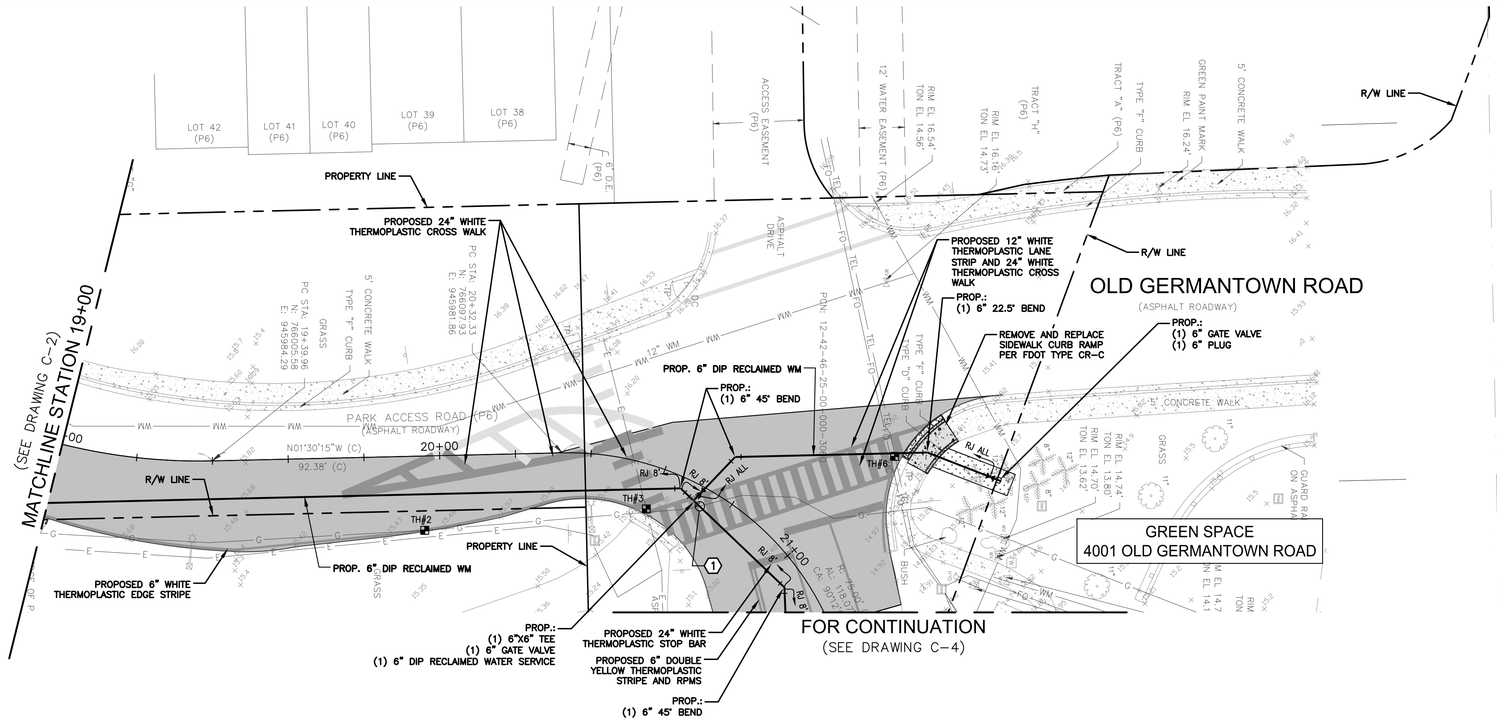
PARK ACCESS ROAD
AREA 5 - PLAN AND PROFILE
STA. 15+00 TO STA. 19+00

PROJECT NO.
24-101U

DRAWING NO.
C-2

FILE ID. 2326038_PP_Area 5.dwg

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Acad Version : R24.3s (LMS Tech) User Name: : dshomo



NORTH

HORIZ SCALE 1"=20'

VERT SCALE 1"=2'

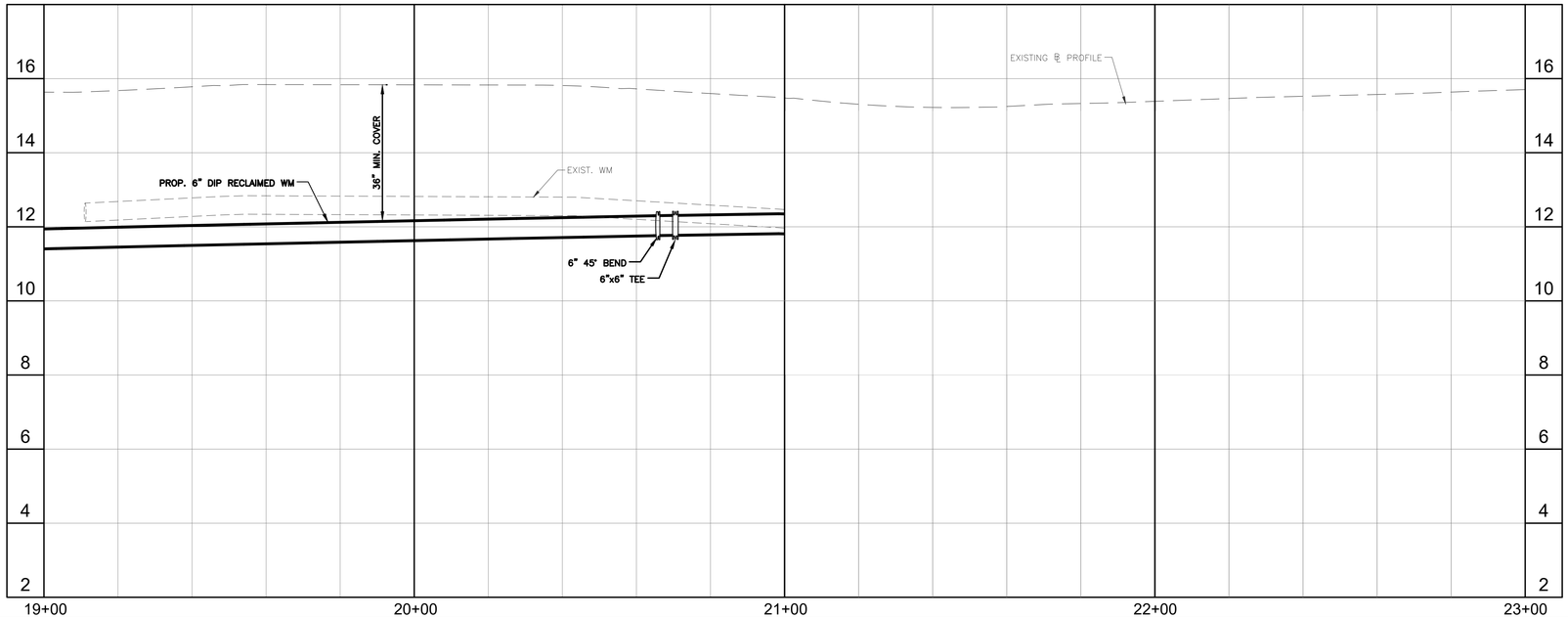
LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION
- PROPOSED ASPHALT PAVEMENT SIDEWALK RESTORATION
- REMOVE AND REPLACE EXISTING PAVEMENT

TH #2
1.5" (PLASTIC) GAS
COVER=2.16'±
T.O.P.=13.32±

TH #3
ELECTRIC
COVER=8.14'±
T.O.P.=7.29±

TH #6
(2) 4" (PVC) TEL
COVER=5.95'±
T.O.P.=9.38±

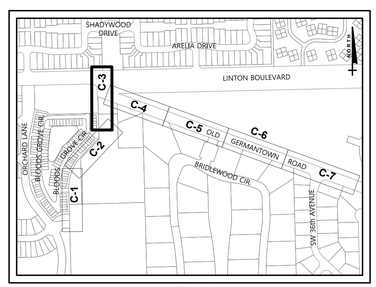


NOTE:
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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
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1 CONFLICT
EXISTING 1.5" GAS CROSSES OVER PROPOSED 6" RCWM
1.5" GAS BOP EL = 13.53±
6" RCWM TOP EL = 12.53±
CLEARANCE = 1.00 FEET



KEY MAP

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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

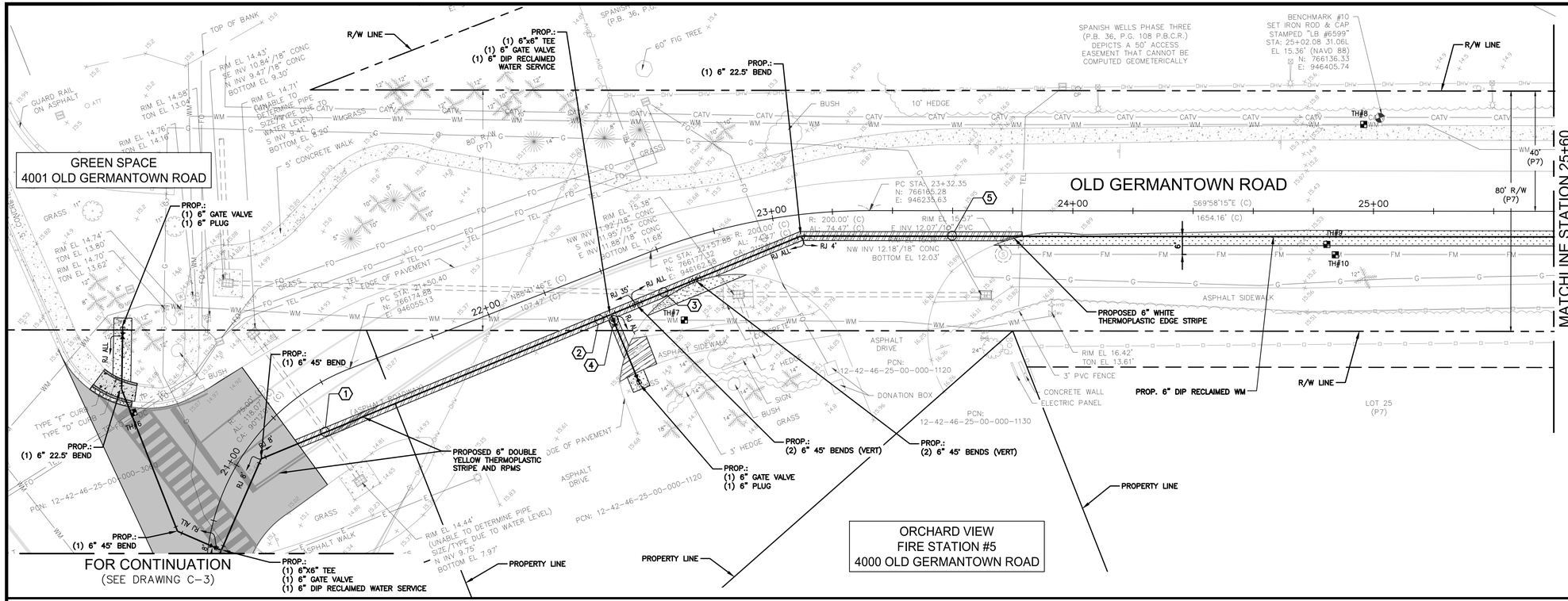
OLD GERMANTOWN ROAD
AREA 5 - PLAN AND PROFILE
STA. 19+00 TO STA. 23+00

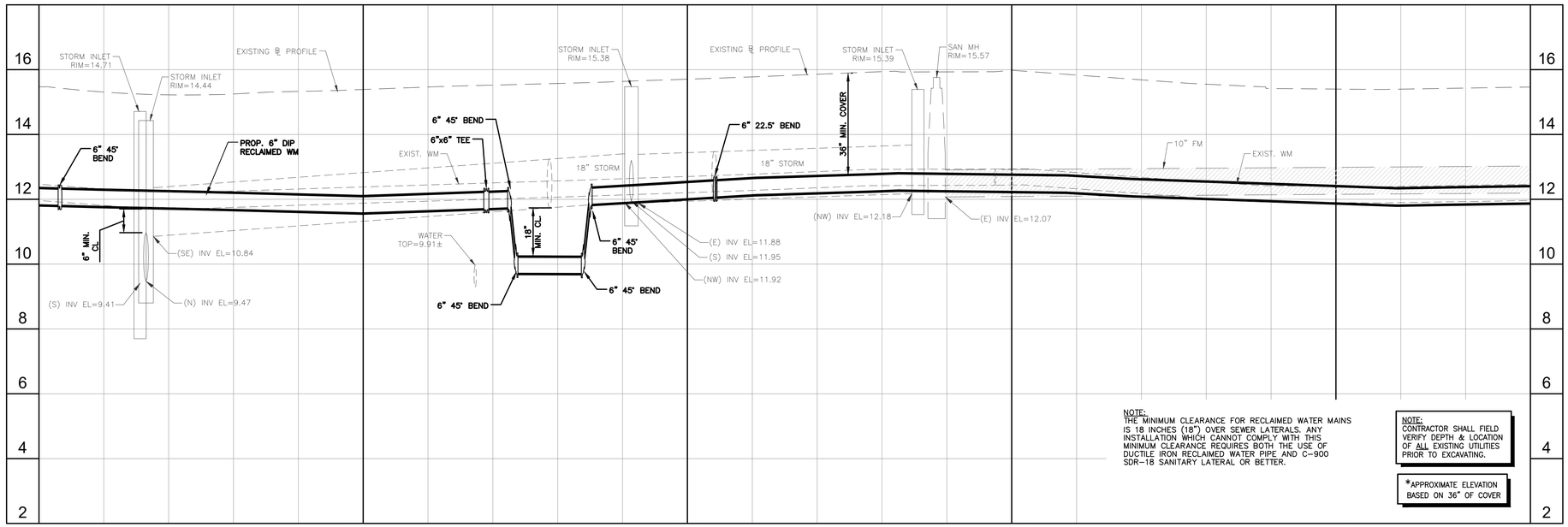
PROJECT NO. 24-101U

DRAWING NO. C-3

FILE ID. 2326038_PP_Area 5.dwg

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Acad Version - R24.3s (LMS Tech)
User Name - dphorn





NOTE:
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NOTE:
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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

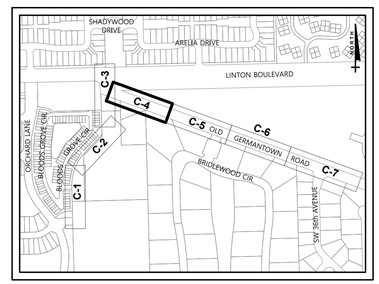
1 CONFLICT
PROPOSED 6" RCWM CROSSES OVER EXISTING STORM
6" RCWM BOP EL = 11.70±
STORM TOP EL = 11.14±
CLEARANCE = 0.56 FEET

2 CONFLICT
PROPOSED 6" RCWM CROSSES OVER EXISTING WM
6" RCWM BOP EL = 12.07±
WM TOP EL = 9.99±
CLEARANCE = 2.07 FEET

3 CONFLICT
EXISTING 18" STORM CROSSES OVER PROPOSED 6" RCWM
18" STORM BOP EL = 11.75±
6" RCWM TOP EL = 10.25±
CLEARANCE = 1.50 FEET

4 CONFLICT
PROPOSED 6" RCWM CROSSES OVER EXISTING WM
18" STORM BOP EL = 12.07±
6" RCWM TOP EL = 9.99±
CLEARANCE = 2.07 FEET

5 CONFLICT
EXISTING 1.5" GAS CROSSES OVER PROPOSED 6" RCWM
1.5" GAS BOP EL = 13.69±
6" RCWM TOP EL = 12.19±
CLEARANCE = 1.50 FEET



KEY MAP

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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

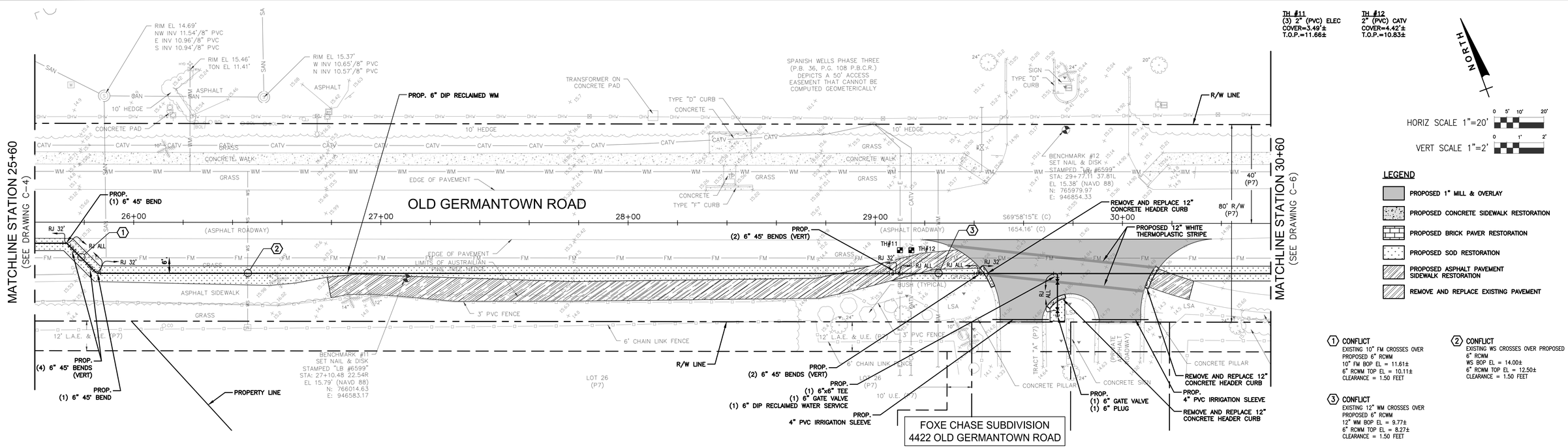
REVISION	DATE	DESCRIPTION	BY

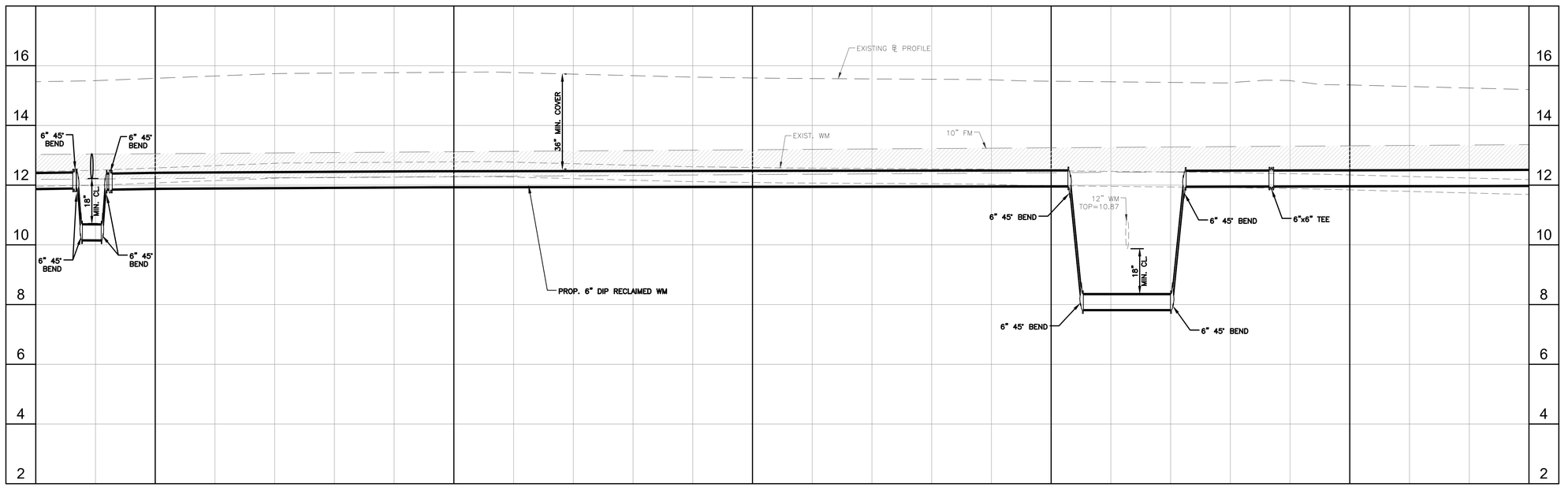
CITY OF DELRAY BEACH AREA 5, 10, AND 14 RECLAIM WATER IMPROVEMENTS

OLD GERMANTOWN ROAD
AREA 5 - PLAN AND PROFILE
STA. 21+00 TO STA. 25+60

PROJECT NO. 24-101U
DRAWING NO. C-4
FILE ID. 2326038_PP_Area 5.dwg

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User Name = dshorm

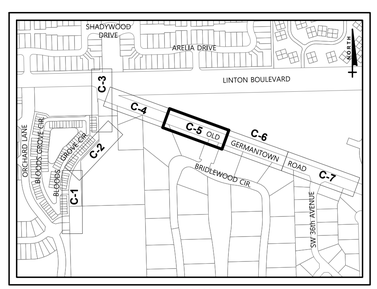




NOTE:
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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
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KEY MAP

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BID SET

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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

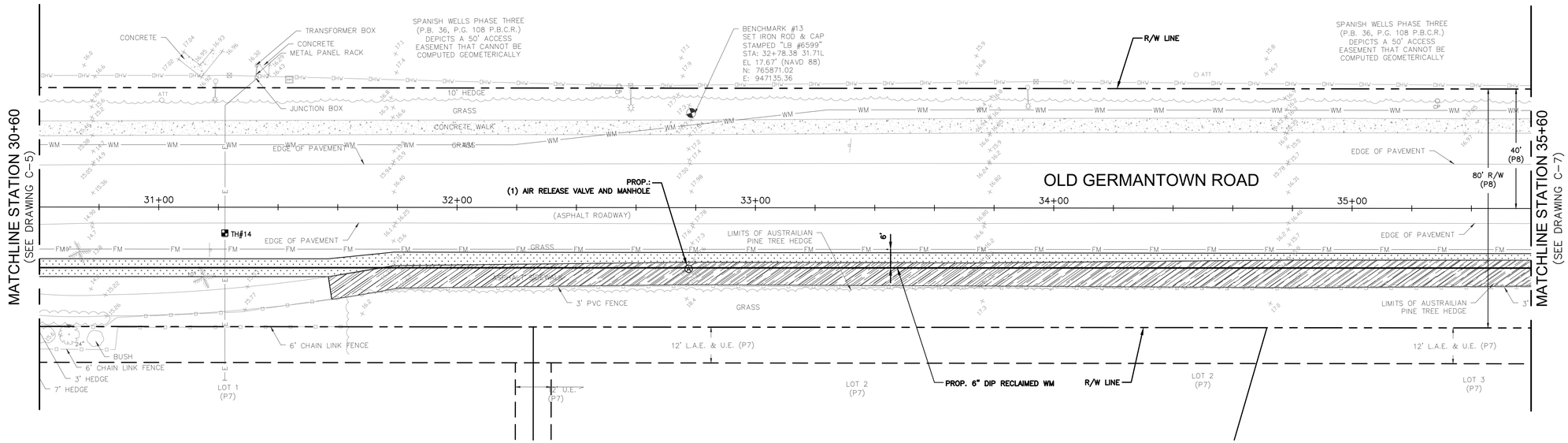
REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

OLD GERMANTOWN ROAD
AREA 5 - PLAN AND PROFILE
STA. 25+60 TO STA. 30+60

PROJECT NO. 24-101U
DRAWING NO. C-5
FILE ID. 2326038_PP_Area 5.dwg

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Current Plotstyle: - ByColor
Layout Tab: C-5
Acad Version: - R24.3s (LMS Tech)
User Name: - dshorm



NORTH

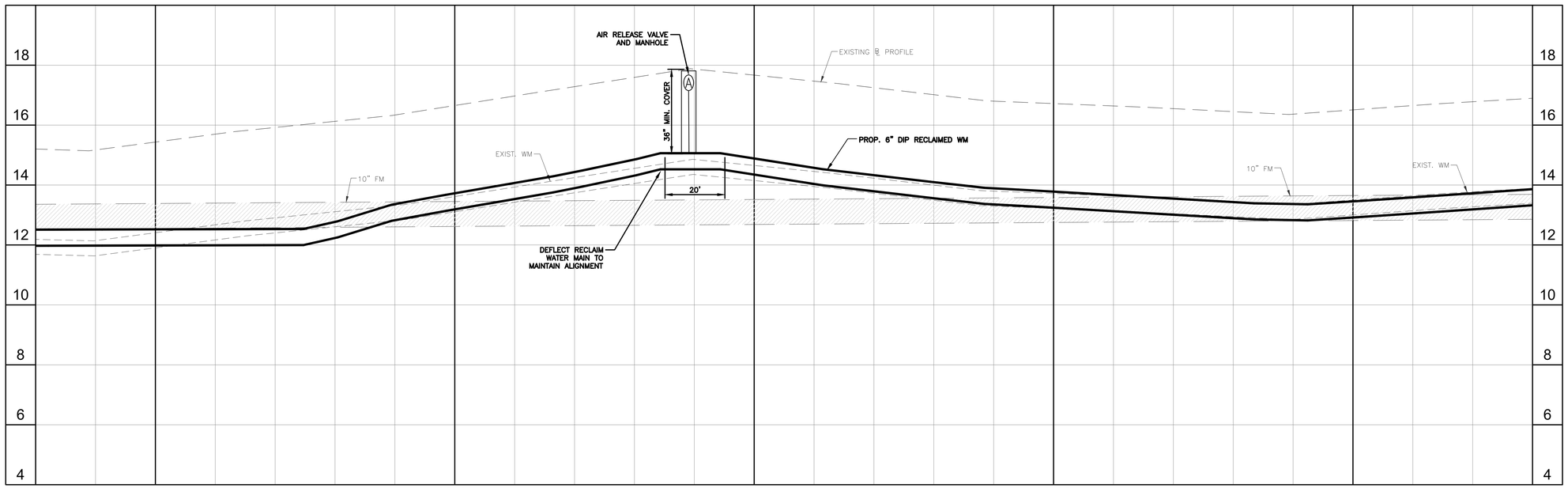
HORIZ SCALE 1"=20'

VERT SCALE 1"=2'

LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION
- PROPOSED ASPHALT PAVEMENT SIDEWALK RESTORATION
- REMOVE AND REPLACE EXISTING PAVEMENT

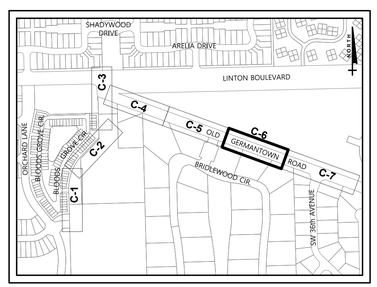
TH #14
(2) 2" (PVC) ELEC
COVER=4.15'±
T.O.P.=11.32±



NOTE:
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No. 96786

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DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

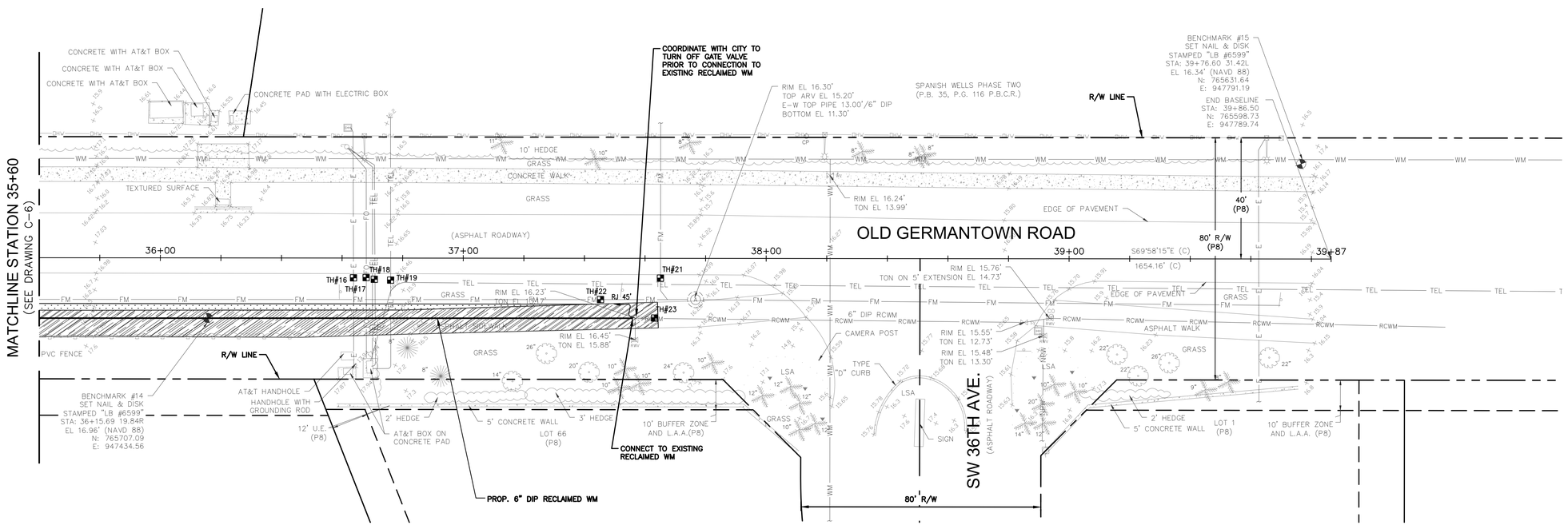
OLD GERMANTOWN ROAD
AREA 5 - PLAN AND PROFILE
STA. 30+60 TO STA. 35+60

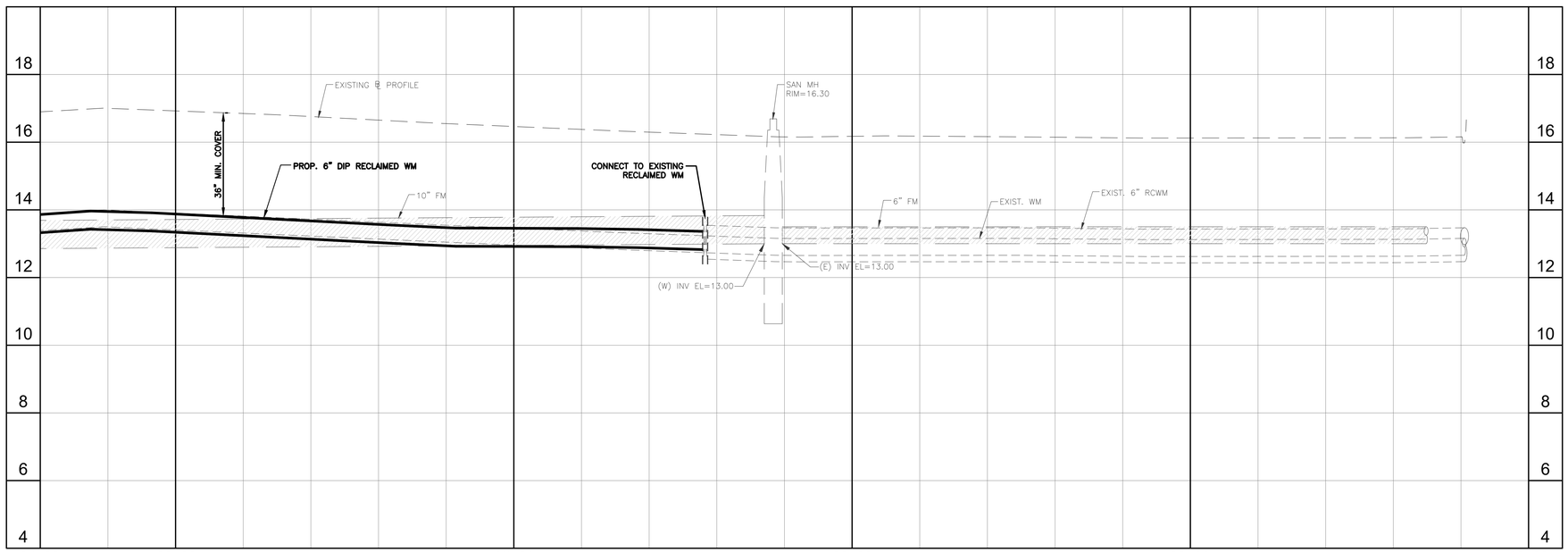
PROJECT NO.
24-101U

DRAWING NO.
C-6

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Current Plotstyle - ByColor
Layout Tab: C-6





NORTH

HORIZ SCALE 1"=20'
0 5' 10' 20'

VERT SCALE 1"=2'
0 1' 2'

LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION
- PROPOSED ASPHALT PAVEMENT SIDEWALK RESTORATION
- REMOVE AND REPLACE EXISTING PAVEMENT

TH #16
2" (PVC) ELEC
COVER=2.00'±
T.O.P.=14.35±

TH #17
1.5" (PVC) FO
COVER=3.12'±
T.O.P.=13.23±

TH #18
(2) 4" (PVC) TEL
COVER=2.35'±
T.O.P.=13.93±

TH #19
1" (D.B.C.) TEL
COVER=3.24'±
T.O.P.=13.01±

TH #21
6" (PVC) FM
COVER=3.70'±
T.O.P.=12.40±

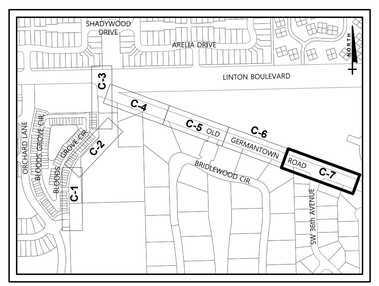
TH #22
FM
NO UTILITY FOUND

TH #23
6" (PLASTIC) WATER (RAW)
COVER=3.11'±
T.O.P.=13.25±

NOTE:
CONTRACTOR SHALL FIELD VERIFY DEPTH & LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING.

*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
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KEY MAP

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BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

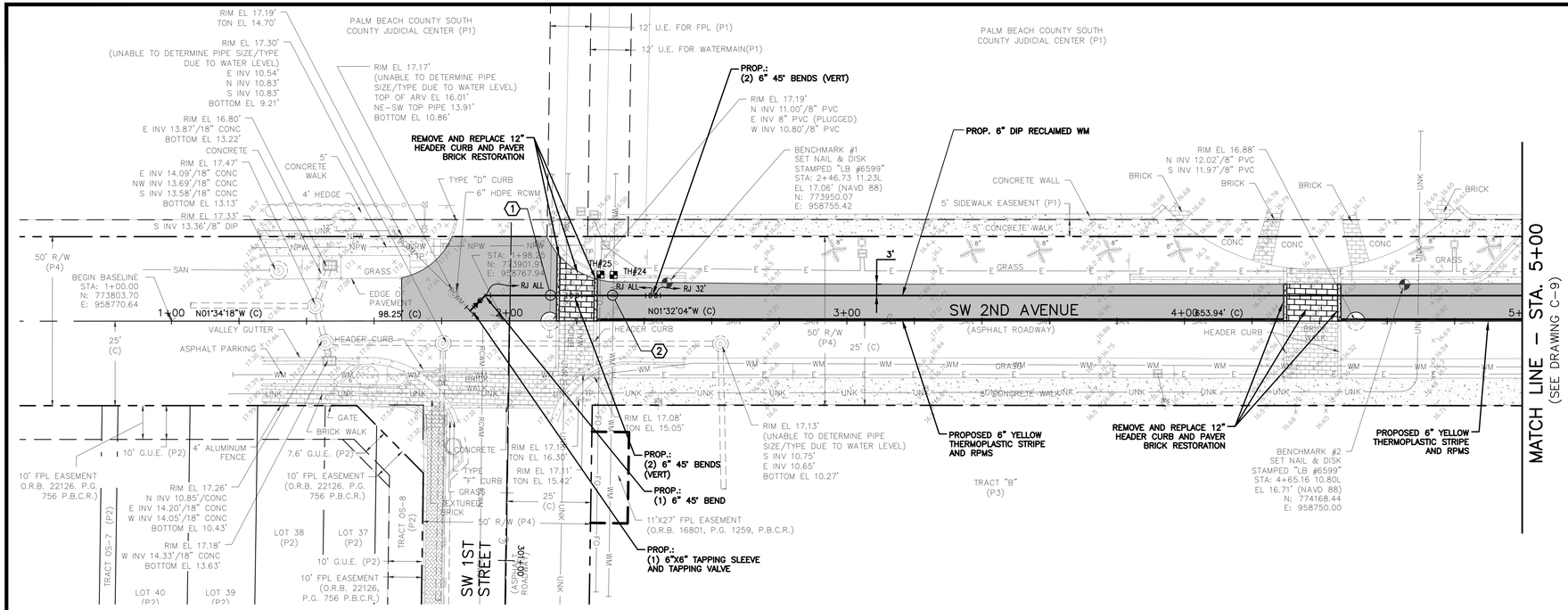
OLD GERMANTOWN ROAD
AREA 5 - PLAN AND PROFILE
STA. 35+60 TO STA. 40+00

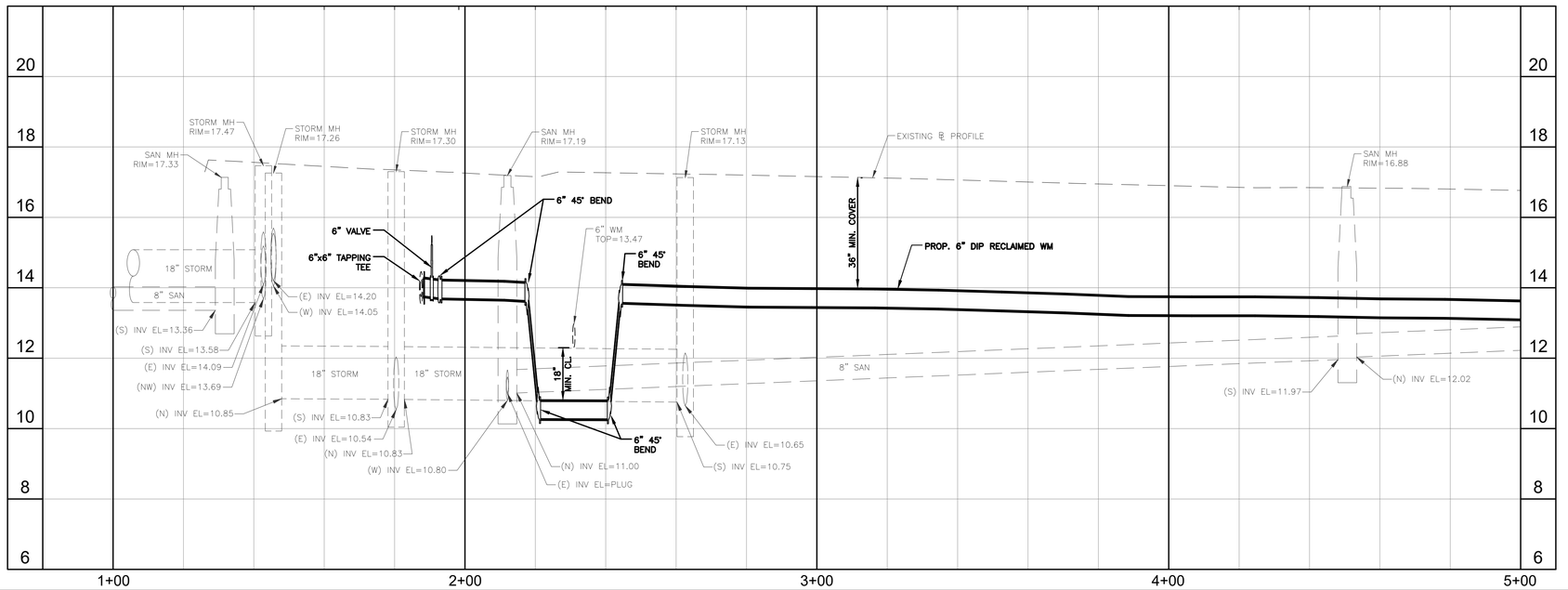
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24-101U

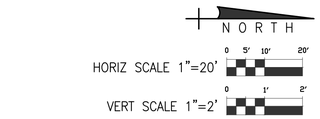
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C-7

FILE ID. 2326038_PP_Area 5.dwg

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Path Name - P:\DELBCH\2326038-Area 5_10_14 Reclaim\CAD\01 Civil 30\01 Shts-Plans\2326038_PP_Area 5.dwg







LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION

TH #24	TH #25
6" WATER	(2) 1.5" (PLASTIC) FO
COVER=3.44'±	COVER=5.73'±
T.O.P.=13.54±	T.O.P.=11.29±

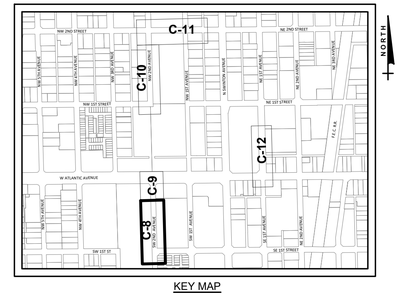
NOTE:
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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
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① CONFLICT
PROPOSED 6" RCWM CROSSES OVER EXISTING 8" SAN
6" RCWM BOP EL = 13.62±
8" SAN TOP EL = 11.55±
CLEARANCE = 2.06 FEET

② CONFLICT
EXISTING 6" WM CROSSES OVER PROPOSED 6" RCWM
6" WM BOP EL = 12.97±
6" RCWM TOP EL = 11.47±
CLEARANCE = 1.50 FEET



KEY MAP

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BID SET

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www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH AREA 5, 10, AND 14 RECLAIM WATER IMPROVEMENTS

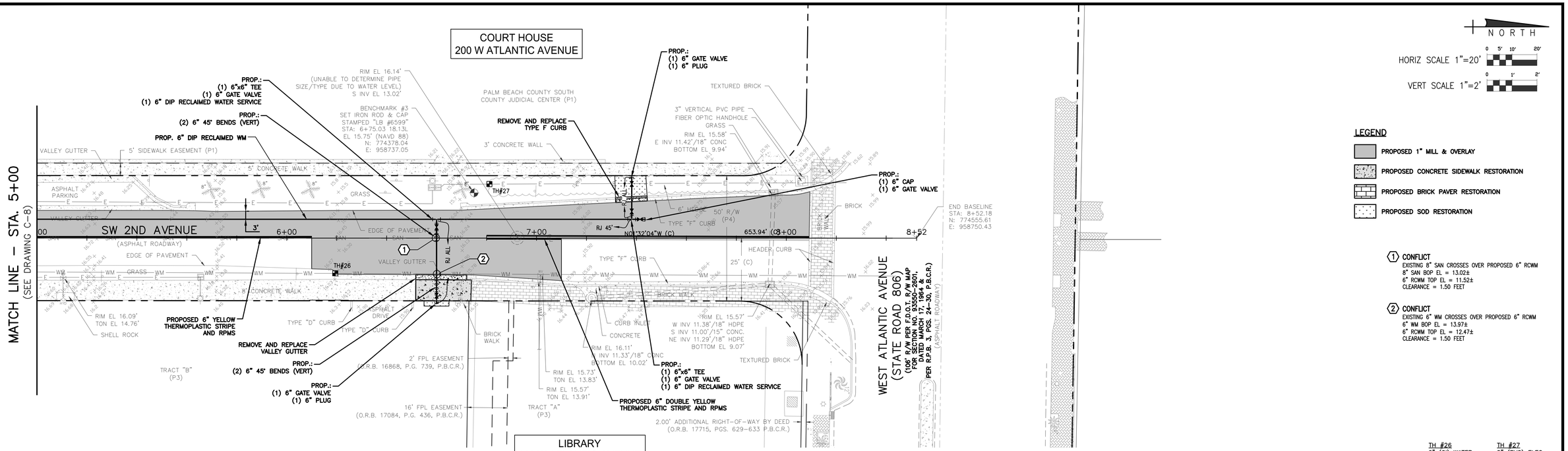
SW 2ND AVENUE
AREA 10 - PLAN AND PROFILE
STA. 1+00 TO STA. 5+00

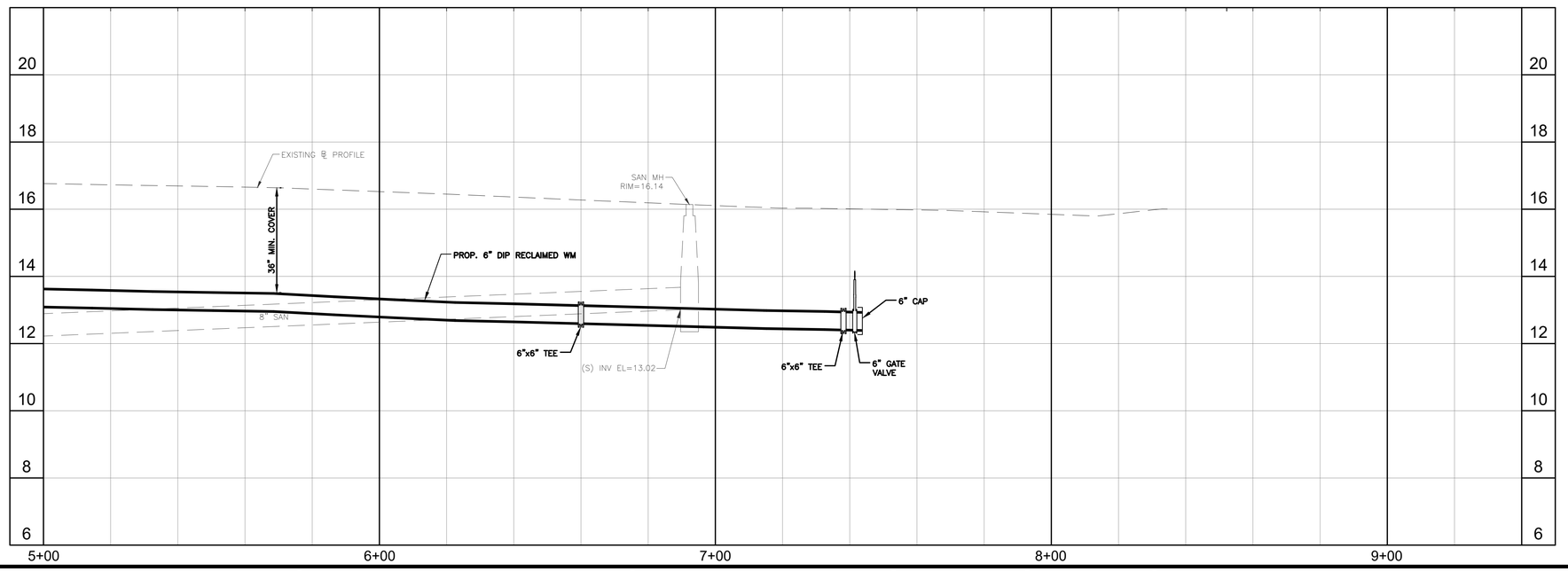
PROJECT NO. 24-101U

DRAWING NO. C-8

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Layout Tab: C-8

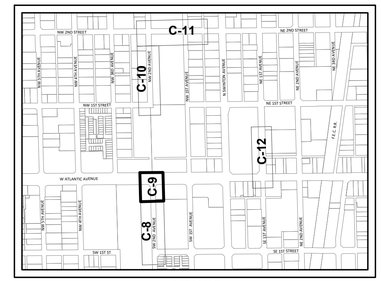




NOTE:
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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

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KEY MAP

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ALEXIS R. SHOTTON, P.E.
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DESIGNED BY	ARS
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DATE	03/2025

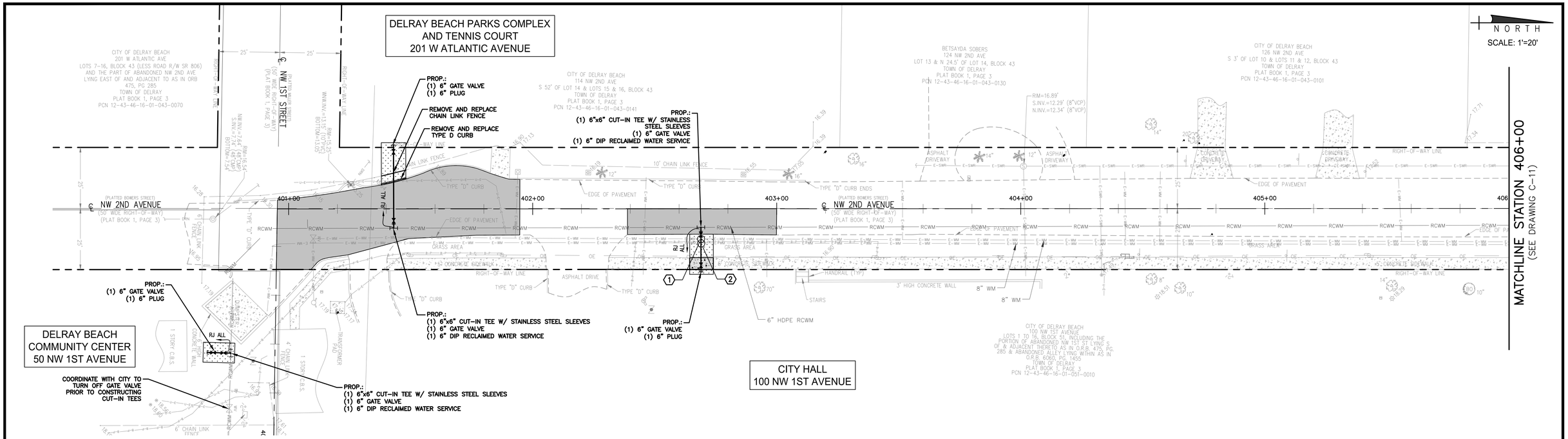
REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

SW 2ND AVENUE
AREA 10 - PLAN AND PROFILE
STA. 5+00 TO STA. 9+00

PROJECT NO. 24-101U
DRAWING NO. C-9
FILE ID. 2326038_PP_Area 10.dwg

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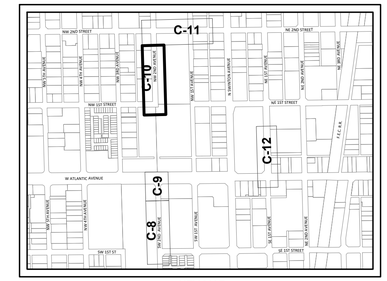


1 **CONFLICT**
EXISTING 8" WM CROSSES OVER PROPOSED 6" RCWM
8" WM BOP EL = 13.00±
6" RCWM TOP EL = 11.50±
CLEARANCE = 1.50 FEET

2 **CONFLICT**
EXISTING 8" WM CROSSES OVER PROPOSED 6" RCWM
8" WM BOP EL = 13.00±
6" RCWM TOP EL = 11.50±
CLEARANCE = 1.50 FEET

LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION



KEY MAP

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ENGINEER'S SEAL

ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

NW 2ND AVENUE
AREA 10 - PLAN
STA. 401+00 TO STA. 408+00

PROJECT NO.
24-101U

DRAWING NO.
C-10

FILE ID. 2326038_PP_Area 10.dwg

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Layout Tab: C-10

LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION

NORTH

SCALE: 1'=20'

CITY ATTORNEY'S OFFICE
200 NW 1ST AVENUE

PROP.:
(1) 6" GATE VALVE
(1) 6" PLUG

PROP.:
(1) 12"x6" TAPPING SLEEVE AND VALVE
(1) 6" DIP RECLAIMED WATER SERVICE

COORDINATE WITH CITY TO TURN OFF GATE VALVE PRIOR TO CONSTRUCTING CUT-IN TEES

NADINE JONES HART
205 NW 2ND STREET
LOTS 11 & 12
BLOCK 42 N LOTS 11 & 12
TOGETHER WITH S 20' OF VACATED ALLEY ON N
PLAT BOOK 21, PAGE 2
PCN 12-43-46-17-09-000-0010

CITY OF DELRAY BEACH
200 NW 1ST AVENUE
LOTS 1 TO 24, BLOCK 50
METCALF'S SUBDIVISION
PLAT BOOK 1, PAGE 3
PCN 12-43-46-17-49-050-0010

CITY OF DELRAY BEACH
100 NW 1ST AVENUE
LOTS 1 TO 16, BLOCK 51, INCLUDING THE PORTION OF ABANDONED NW 1ST ST LYING S OF & ADJACENT THERETO AS IN O.R.B. 475, PG. 285 & ABANDONED ALLEY LYING WITHIN AS IN O.R.B. 6060, PG. 1455
TOWN OF DELRAY
PLAT BOOK 1, PAGE 3
PCN 12-43-46-16-01-051-0010

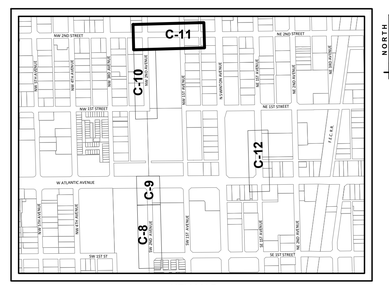
OLTREMARE LLC
21 NW 2ND STREET
LOTS 1 & 2
SOUTHWERK AT THE TABARD PLAT
PLAT BOOK 68, PAGE 54
PCN 12-43-46-17-49-050-0010

2 WOLVES PROPERTIES LLC
151 NW 1ST AVENUE
LOT 1 (LESS S 1.5'), BLOCK 59
TOWN OF DELRAY
PLAT BOOK 1, PAGE 3
PCN 12-43-46-16-01-059-0011

MARK TOMEI
200 NW 2ND STREET
LOT 9 & N 7.5' OF LOT 10, BLOCK 43
TOWN OF DELRAY
PLAT BOOK 1, PAGE 3
PCN 12-43-46-16-01-043-0090

MATCHLINE STATION 406+00
(SEE DRAWING C-10)

KEY MAP



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CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

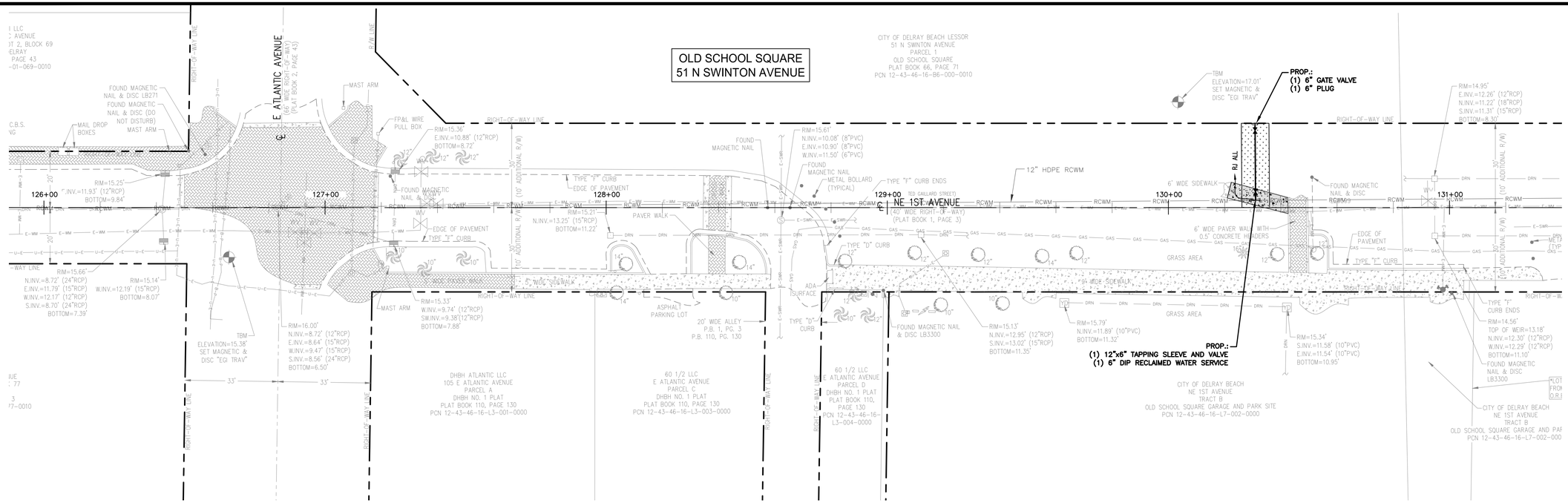
NW 2ND STREET
AREA 10 - PLAN
STA. 500+00 TO STA. 504+00

PROJECT NO. 24-101U

DRAWING NO. C-11

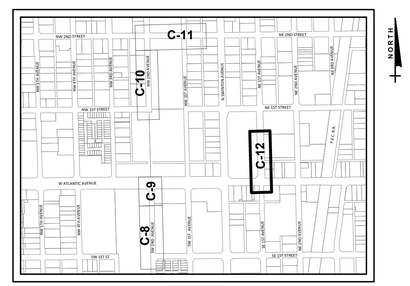
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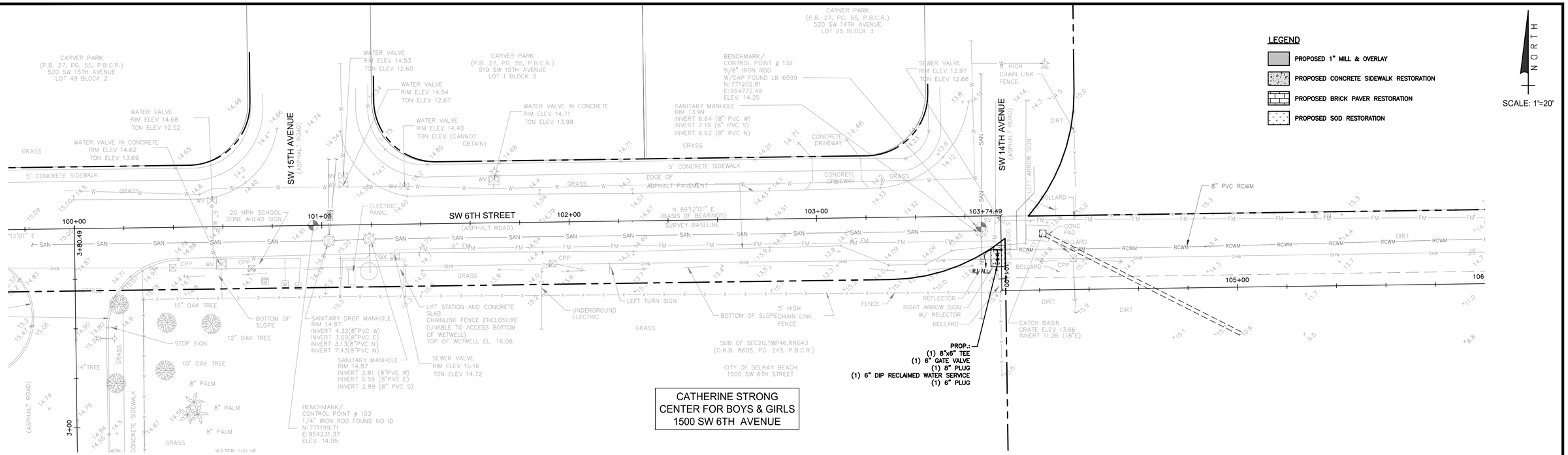
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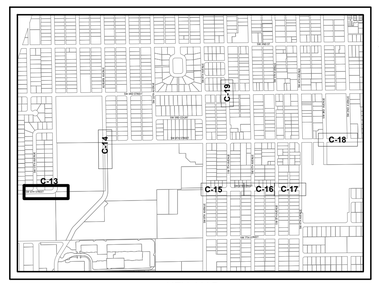


LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION


C-11
C-10
C-9
C-8
C-12
NW 2ND STREET
NE 2ND STREET
W ATLANTIC AVENUE
NW 1ST AVENUE
NE 1ST AVENUE
NW 1ST STREET
NE 1ST STREET
NW 2ND AVENUE
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KEY MAP

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434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
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1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL

ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

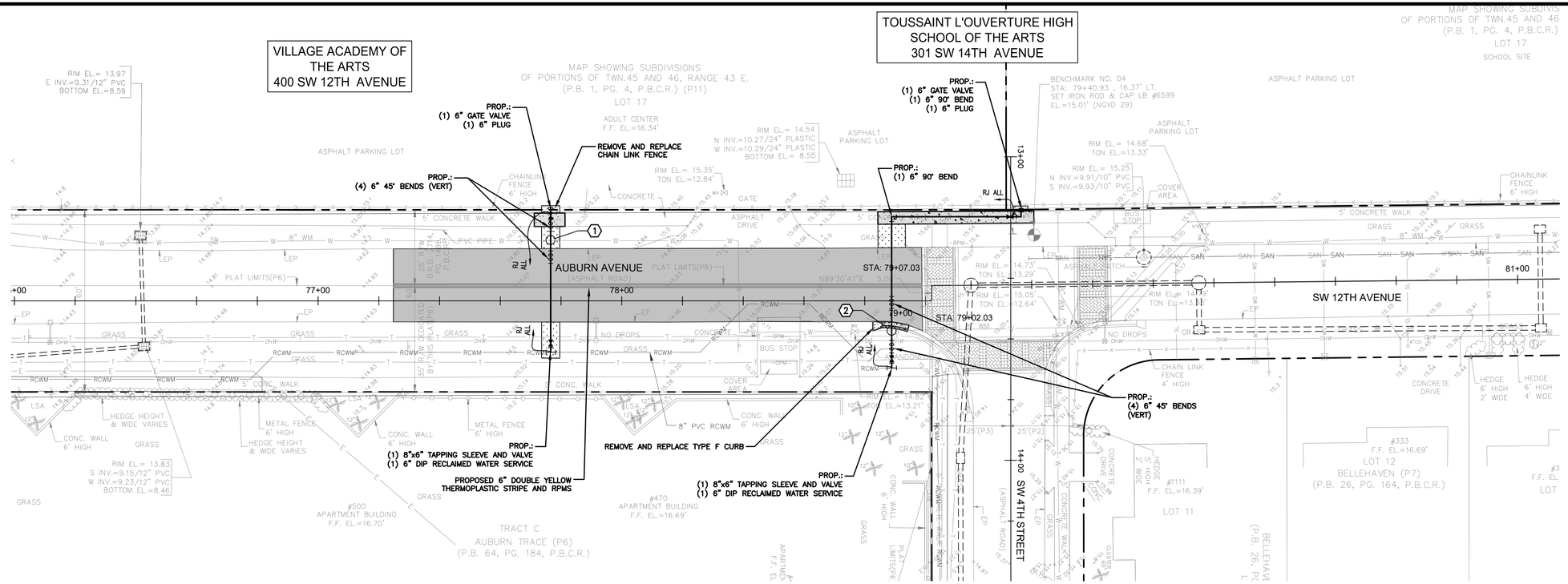
SW 6TH STREET
AREA 14 - PLAN
STA. 100+00 TO STA. 111+00

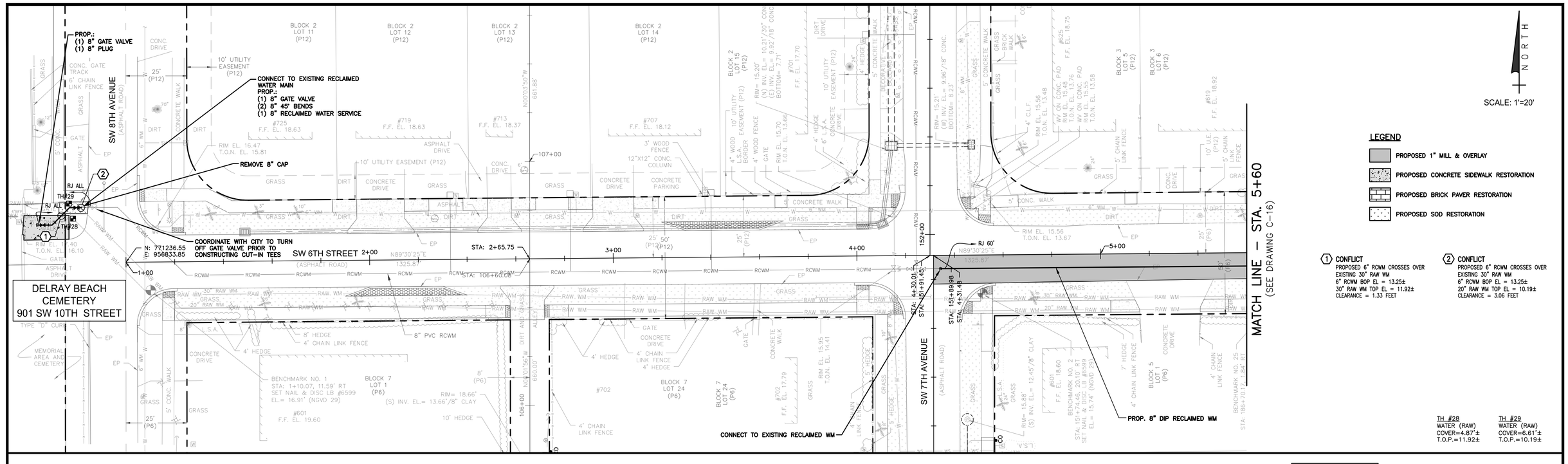
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24-101U

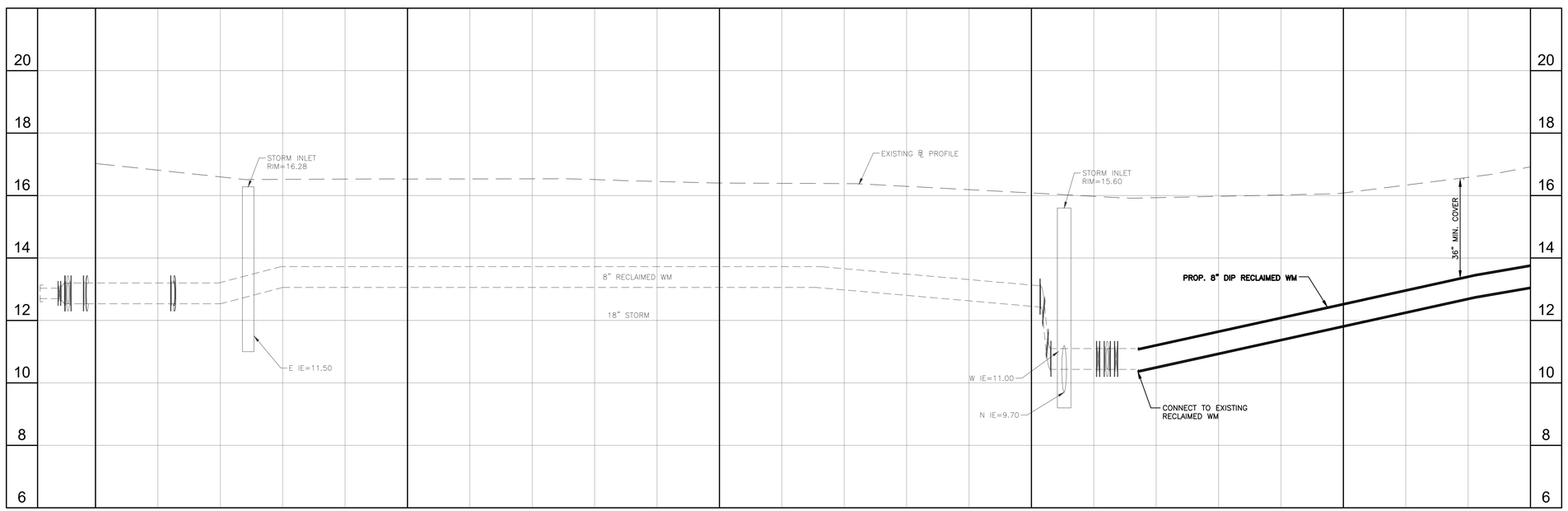
DRAWING NO.
C-13

FILE ID. 2326038_PP_Area 14.dwg

Acad Version : R24.3s (LMS Tech)
User Name : dpturm
Date\Time : Wed, 12 Mar 2025 - 9:04am
Path\Name : P:\DELRAY\2326038-Area 5_10_14 Reclaim\CAD\01_Civil 3D\01_Site-Plans\2326038_PP_Area 14.dwg
Current Plotstyle : ByColor
Layout Tab: C-13


VILLAGE ACADEMY OF THE ARTS
400 SW 12TH AVENUE
TOUSSAINT L'OUVERTURE HIGH SCHOOL OF THE ARTS
301 SW 14TH AVENUE
NORTH
SCALE: 1"=20'
AUBURN AVENUE
(ASPHALT ROAD)
SW 12TH AVENUE
SW 4TH STREET
PROP.: (1) 6" GATE VALVE (1) 6" PLUG
PROP.: (4) 6" 45° BENDS (VERT)
REMOVE AND REPLACE CHAIN LINK FENCE
PROP.: (1) 6" GATE VALVE (1) 6" 90° BEND (1) 6" PLUG
PROP.: (1) 6" 90° BEND
PROP.: (4) 6" 45° BENDS (VERT)
REMOVE AND REPLACE TYPE F CURB
PROP.: (1) 8"x6" TAPPING SLEEVE AND VALVE (1) 6" DIP RECLAIMED WATER SERVICE
PROPOSED 6" DOUBLE YELLOW THERMOPLASTIC STRIPE AND RPMS
PROP.: (1) 8"x6" TAPPING SLEEVE AND VALVE (1) 6" DIP RECLAIMED WATER SERVICE
STA: 79+07.03
STA: 79+02.03
BENCHMARK NO. 04
STA: 79+40.93 , 16.37' LT.
SET IRON ROD & CAP LB #6599
EL.=15.01' (NGVD 29)
MAP SHOWING SUBDIVISIONS OF PORTIONS OF TWN.45 AND 46, RANGE 43 E. (P.B. 1, PG. 4, P.B.C.R.) (P11)
LOT 17
MAP SHOWING SUBDIVIS OF PORTIONS OF TWN.45 AND 46 (P.B. 1, PG. 4, P.B.C.R.)
LOT 17
SCHOOL SITE
ASPHALT PARKING LOT
ADULT CENTER F.F. EL.=16.34'
#500 APARTMENT BUILDING F.F. EL.=16.70'
#470 APARTMENT BUILDING F.F. EL.=16.69'
TRACT C AUBURN TRACE (P6) (P.B. 64, PG. 184, P.B.C.R.)
#333 F.F. EL.=16.69'
LOT 12 BELLEHAVEN (P7) (P.B. 26, PG. 164, P.B.C.R.)
#1111 F.F. EL.=16.39'
LOT 11
BELLEHAVEN (P.B. 26, PG.
LOT
#3
F.F. EL.
RJ ALL
BUS STOP
CONCRETE DRIVE
HEDGE 6' HIGH 2' WIDE
HEDGE 6' HIGH 4' WIDE
CHAIN LINK FENCE 4' HIGH
CHAINLINK FENCE 6' HIGH
CONC. WALL 6' HIGH
METAL FENCE 6' HIGH
HEDGE HEIGHT & WIDE VARIES
8" PVC RCWM
5' CONCRETE WALK
5' CONC. WALK
NO DROPS
COVER AREA
RIM EL.= 13.97
E INV.=9.31/12" PVC
BOTTOM EL.=8.59
RIM EL.= 13.83
S INV.=9.15/12" PVC
W INV.=9.23/12" PVC
BOTTOM EL.=8.46
RIM EL.= 15.35'
TON EL.=12.84'
RIM EL.= 14.54
N INV.=10.27/24" PLASTIC
W INV.=10.29/24" PLASTIC
BOTTOM EL.= 8.55
RIM EL.= 14.68'
TON EL.=13.33'
RIM EL.= 15.25
N INV.=9.91/10" PVC
S INV.=9.93/10" PVC
RIM EL.= 14.73'
TON EL.=13.29'
RIM EL.= 15.05'
TON EL.=12.64'
RIM EL.= 14.82'
EL.=13.21'
RIM EL.= 14.8
TON EL.=13.1
PLAT LIMITS(P6)
N89°30'47"E 5.0'
+00
77+00
78+00
79+00
81+00
13+00
14+00
RCWM
GRASS
LSA
CONC. WALK
8" WM
SAN
SAN SAN
SAN SAN
SAN

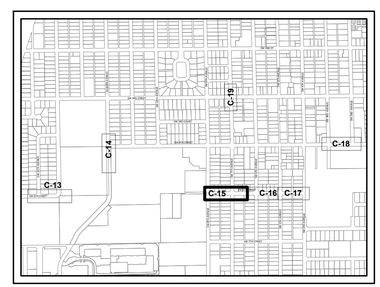




NOTE:
CONTRACTOR SHALL FIELD VERIFY DEPTH & LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING.

*APPROXIMATE ELEVATION BASED ON 36" OF COVER

NOTE:
THE MINIMUM CLEARANCE FOR RECLAIMED WATER MAINS IS 18 INCHES (18") OVER SEWER LATERALS. ANY INSTALLATION WHICH CANNOT COMPLY WITH THIS MINIMUM CLEARANCE REQUIRES BOTH THE USE OF DUCTILE IRON RECLAIMED WATER PIPE AND C-900 SDR-18 SANITARY LATERAL OR BETTER.



KEY MAP

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BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
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Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

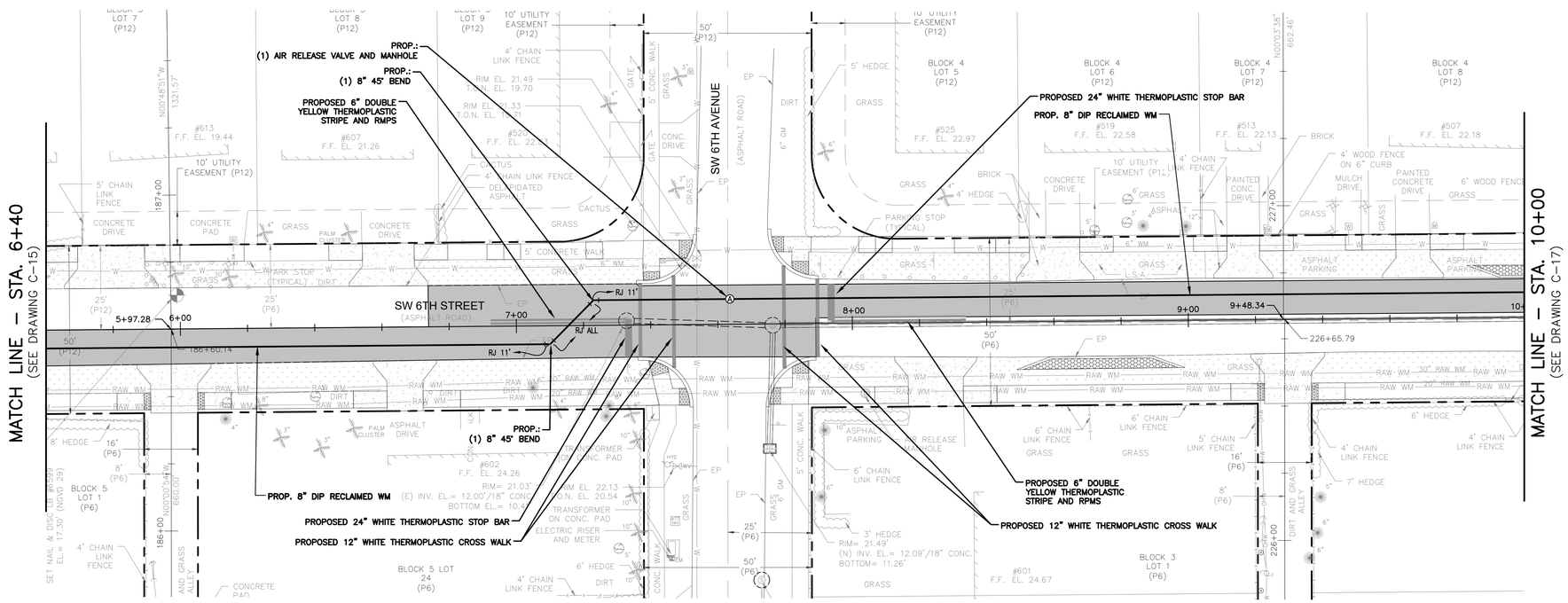
SW 6TH STREET
AREA 14 - PLAN AND PROFILE
STA. 1+00 TO STA. 5+60

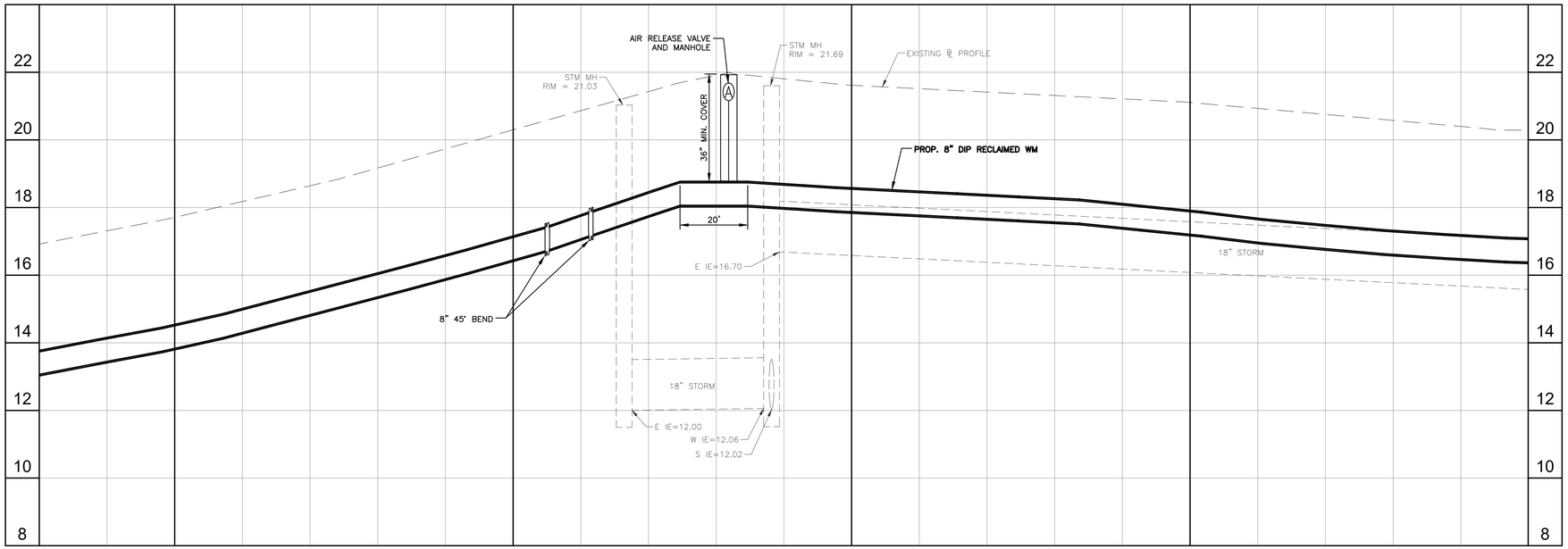
PROJECT NO.
24-101U

DRAWING NO.
C-15

FILE ID. 2326038_PP_Area 14.dwg

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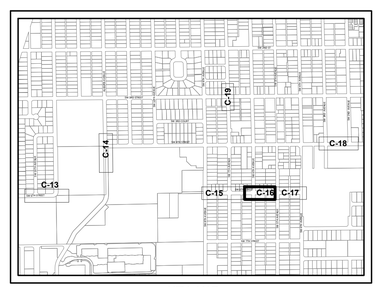




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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

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KEY MAP

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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

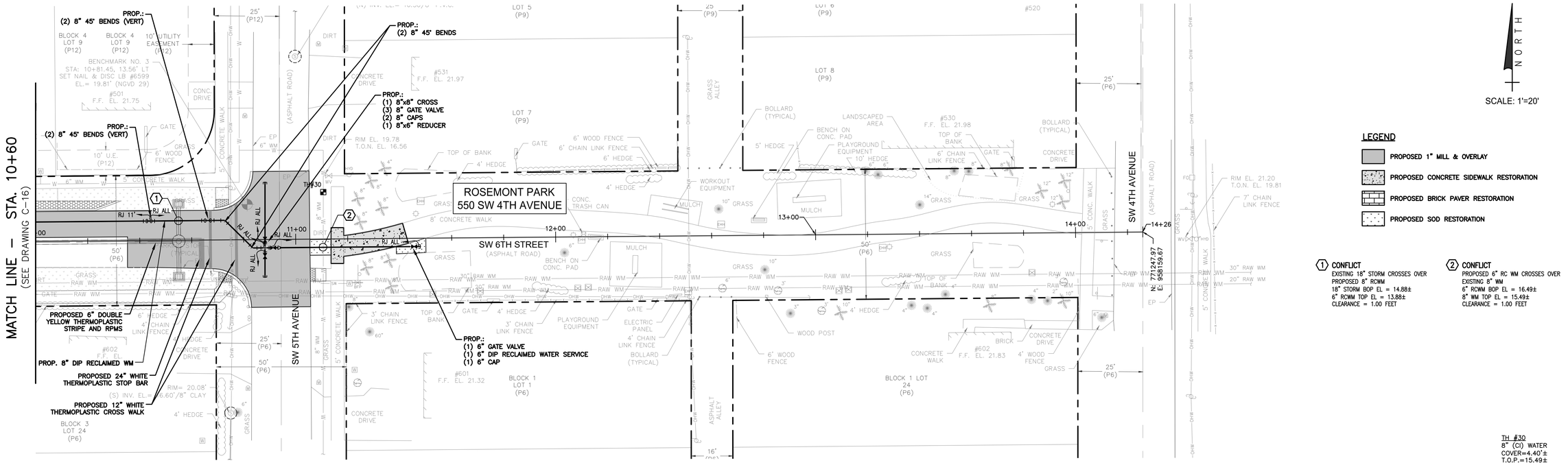
SW 6TH STREET
AREA 14 - PLAN AND PROFILE
STA. 5+60 TO STA. 10+00

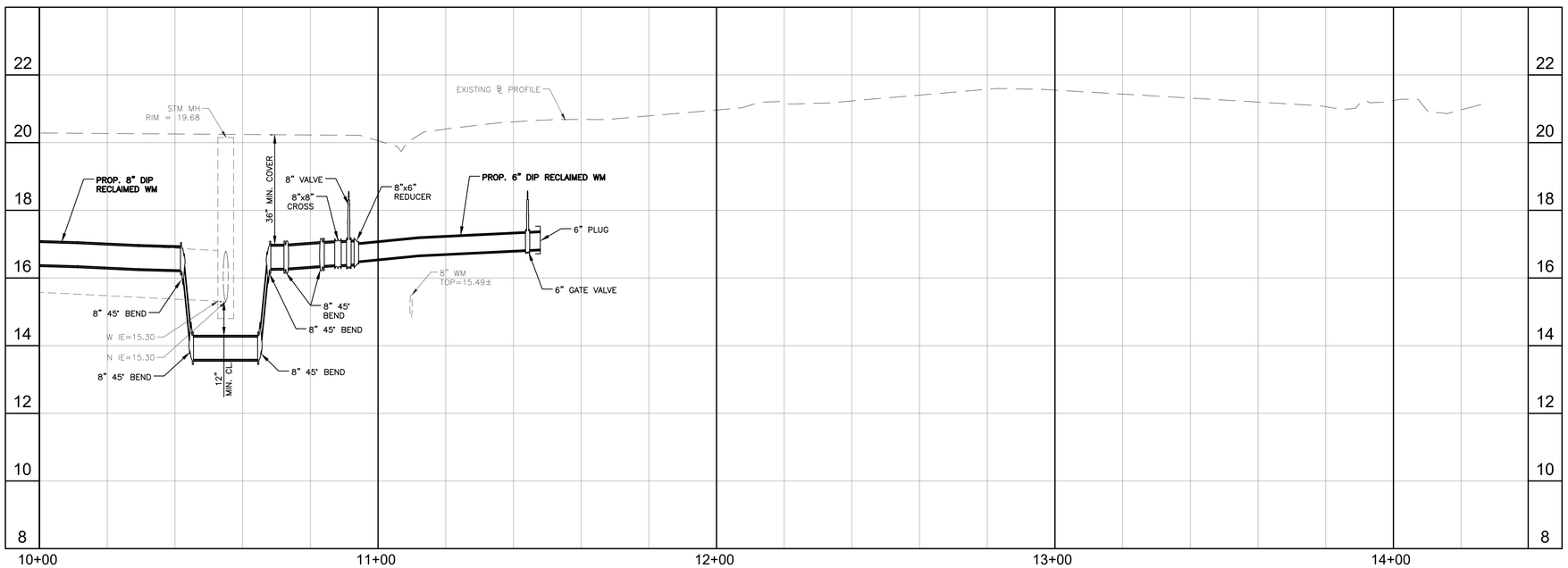
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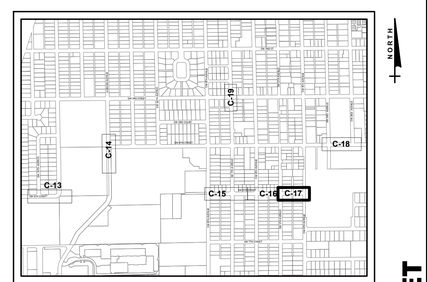




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*APPROXIMATE ELEVATION BASED ON 36" OF COVER

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KEY MAP

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ENGINEER'S SEAL
ALEXIS R. SHOTTON, P.E.
No. 96786

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

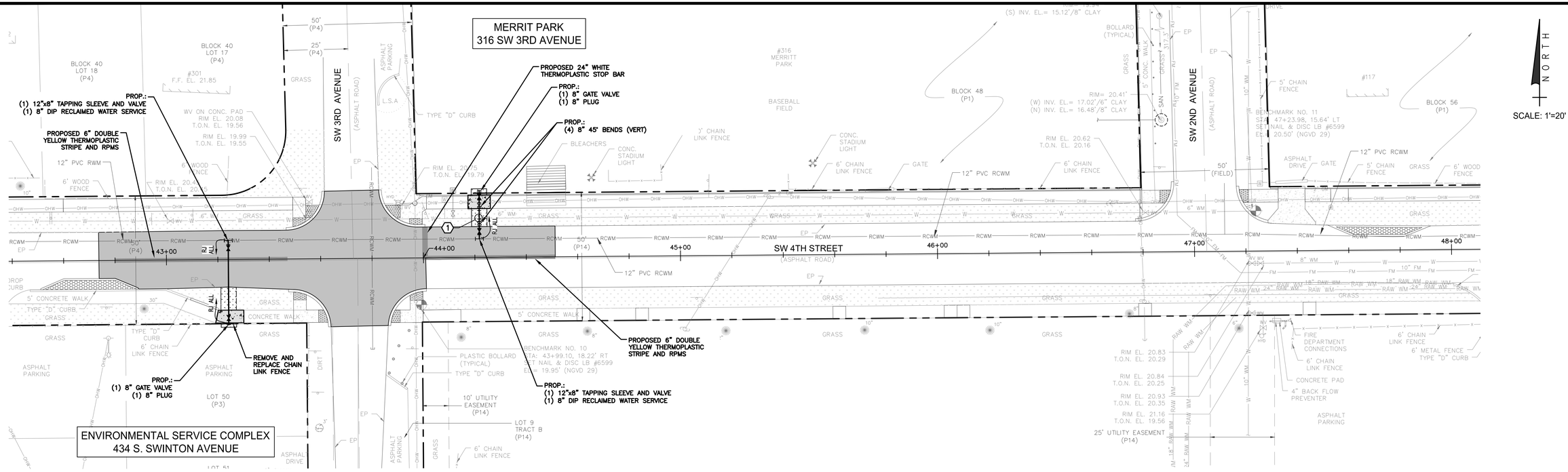
REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

SW 6TH STREET
AREA 14 - PLAN AND PROFILE
STA. 10+00 TO STA. 14+26

PROJECT NO. 24-101U
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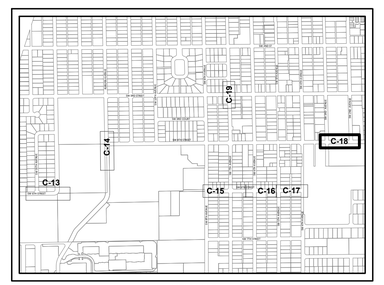
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Current Plotstyle - ByColor
Layout Tab: C-17



① **CONFLICT**
EXISTING 6" WM CROSSES OVER
PROPOSED 6" RCWM
6" WM BOP EL = 17.94±
6" RCWM TOP EL = 16.44±
CLEARANCE = 1.50 FEET

LEGEND

- PROPOSED 1" MILL & OVERLAY
- PROPOSED CONCRETE SIDEWALK RESTORATION
- PROPOSED BRICK PAVER RESTORATION
- PROPOSED SOD RESTORATION



KEY MAP

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DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

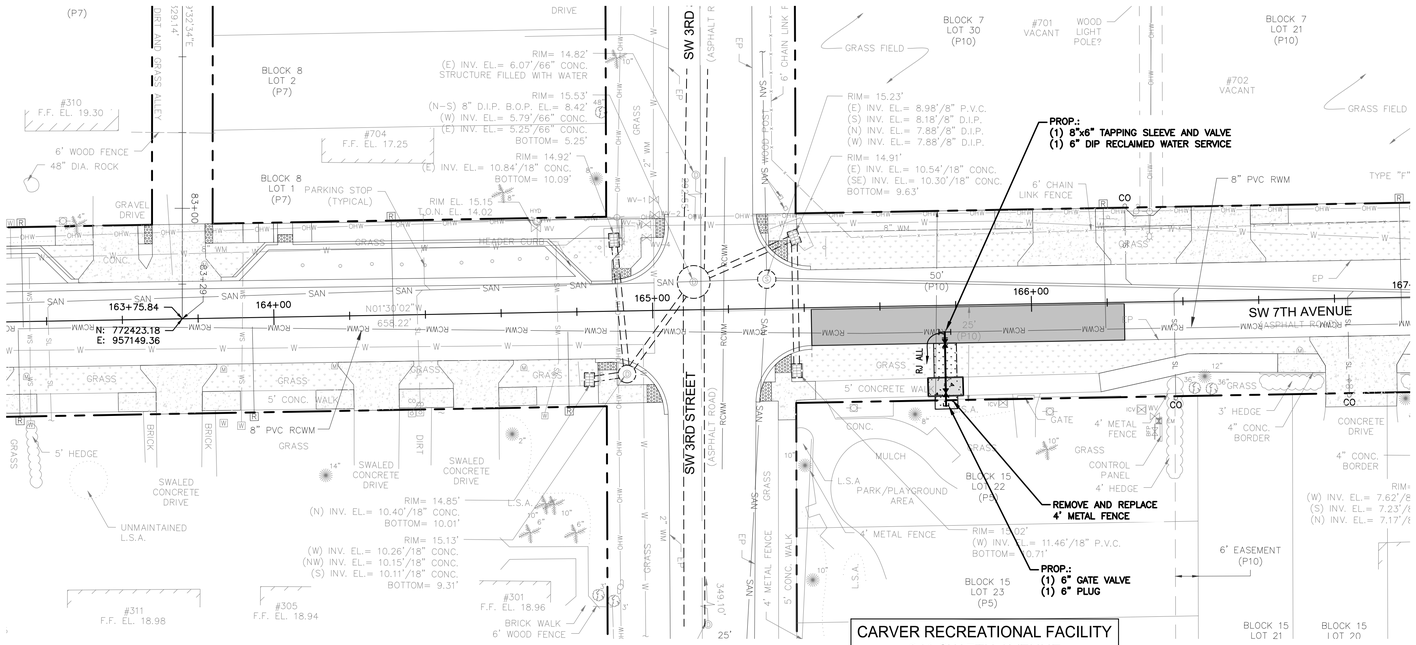
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AREA 14 - PLAN
STA. 42+40 TO STA. 48+00

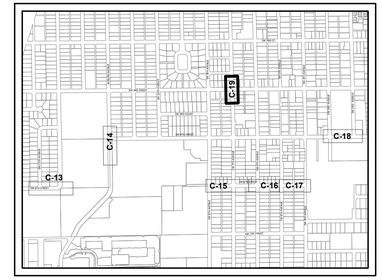
PROJECT NO.
24-101U

DRAWING NO.
C-18

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Current Plotstyle : ByColor
Layout Tab: C-18





KEY MAP

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CHECKED BY	SP
DATE	03/2025

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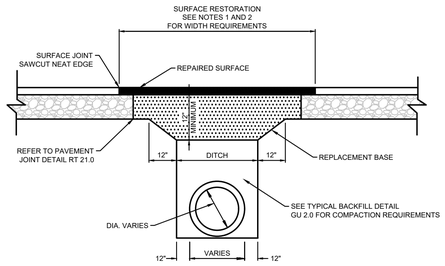
CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS
SW 7TH AVENUE
AREA 14 - PLAN
STA. 163+75 TO STA. 167+00

PROJECT NO.
24-101U

DRAWING NO.
C-19

FILE ID. 2326038_PP_Area 14.dwg

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Layout Tab: C-19



SECTION - WHERE APPLICABLE

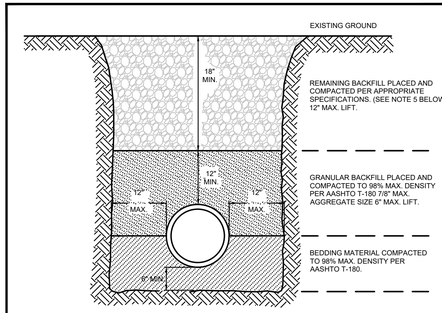
NOTES:

1. FOR COMMERCIAL PROJECTS THAT DAMAGE THE ROADWAY SURFACE THE ROADWAY SHALL BE MILLED AND RESURFACED 50' IN EACH DIRECTION FROM THE DAMAGED AREA. MILLING AND RESURFACING SHALL BE FOR THE FULL LANE WIDTH OF ANY DAMAGED LANE.
2. FOR RESIDENTIAL PROJECTS THAT DAMAGE THE ROADWAY SURFACE THE ROADWAY SHALL BE MILLED AND RESURFACED FOR THE WIDTH OF THE RESIDENTIAL PROPERTY (MIN. 50' REPAIR LENGTH). MILLING AND RESURFACING SHALL BE FOR THE FULL LANE WIDTH OF ANY DAMAGED LANE.
3. MILLING DEPTH SHALL BE 1" AND RESURFACING SHALL BE 1" TYPE S-III ASPHALTIC CONCRETE.
4. BASE MATERIAL SHALL BE PLACED IN TWO LIFTS AND EACH LIFT COMPACTED TO 98% MAXIMUM DENSITY PER AASHTO T-180. MAX LIFT THICKNESS SHALL BE 6".
5. 24" EXCAVATEABLE FLOWABLE FILL MIN. 100 P.S.I. MAY BE USED IN LIEU OF 12" BASE.
6. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
7. ALL DISTURBED PAVEMENT MARKINGS SHALL BE RESTORED IN ACCORDANCE WITH CITY STANDARDS.
8. SURFACE MATERIAL SHALL BE S-III ASPHALTIC CONCRETE (FOR TRENCH REPAIR, THICKNESS SHOULD BE TWICE THE THICKNESS OF THE ADJACENT EXISTING ASPHALT).
9. ANY PAVEMENT CUTS SHALL BE COLD PATCHED AT THE END OF EACH WORKING DAY TO FACILITATE UNHINDERED TRAFFIC FLOW.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
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PAVEMENT REPAIR DETAIL

DATE:10-04-2024
GU 1.0



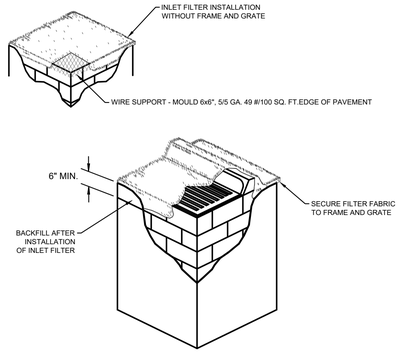
NOTES:

1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED OFF SITE AND DISPOSED IN A PROPER LANDFILL. BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH
3. APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
4. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
5. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
6. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE PER (AASHTO T-180)
7. COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS, CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
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TYPICAL BACKFILL DETAIL

DATE:10-04-2024
GU 2.0



NOT TO SCALE

NOTES:

1. CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
2. CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.

A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

STORM WATER WILL REACH THE SEDIMENT TRAP VIA CURB CUTS ADJACENT TO EACH SIDE OF THE INLET STRUCTURE. THESE OPENINGS SHALL BE AT LEAST 12 INCHES IN LENGTH. STORM WATER MAY ALSO REACH THE BASIN VIA OVERLAND FLOW LAND AREA BEHIND THE CURB. THE CURB CUTS SHALL BE REPAIRED WHEN THE SEDIMENT TRAP IS REMOVED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

INLET FILTER DETAIL

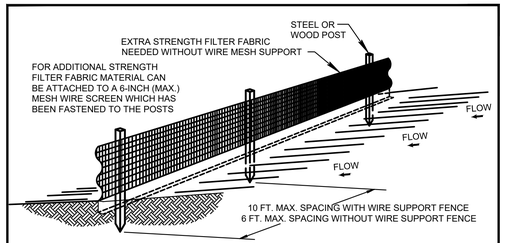
DATE:10-04-2024
D10.0

1. THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENT SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION.
2. APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
3. INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY, OR AFTER EACH RAINFALL EVENT. REPAIR, AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
4. KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
6. FAILURE TO PROPERLY INSTALL AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
7. DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
8. ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
9. EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
10. WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
11. ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE CITY OF DELRAY BEACH.
12. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

EROSION CONTROL NOTES DETAIL

DATE:10-04-2024
D 11.0



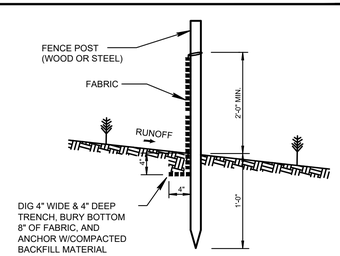
NOTES:

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES.
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES. WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
7. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.
8. ALL PROJECTS REQUIRE SUBMITTAL OF POLLUTION PREVENTION PLAN (PPP).
9. ALL PROJECTS 1 AC. OR MORE MUST SUBMIT NOTICE OF INTENT (NOI) TO FDEP.

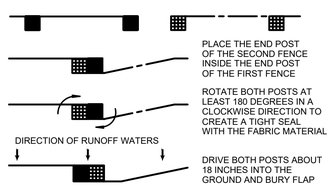
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SILT FENCE INSTALLATION DETAIL
(SHEET 1 of 2)

DATE:10-04-2024
D12.0



SILT FENCE SECTION
NOT TO SCALE

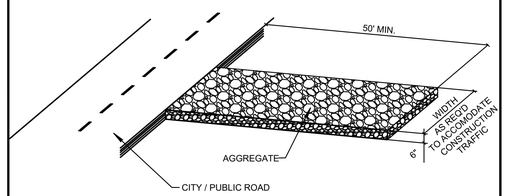


ATTACHING TWO SILT FENCES
NOT TO SCALE

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SILT FENCE INSTALLATION DETAIL
(SHEET 2 OF 2)

DATE:10-04-2024
D 12.1

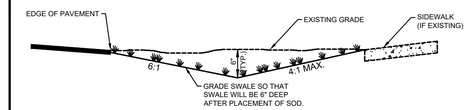


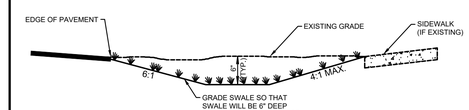
NOTE:
A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AND CONTAIN AN AGGREGATE LAYER (FDOT AGGREGATE NO.1), AT LEAST 6-INCHES THINK. IT MUST EXTEND TO THE WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

STABILIZED CONSTRUCTION ENTRANCE
DETAIL

DATE:10-04-2024
D 13.0





NOTE:

1. CONTRACTOR TO REPLACE ALL IRRIGATION, TREES & SHRUBBERY IN SWALES DAMAGED DURING CONSTRUCTION.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SWALE REPLACEMENT DETAIL

DATE:10-04-2024
D 14.0

BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXANDER S. HORTON, P.E.
No. 96988

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

STANDARD DETAILS - 1

PROJECT NO.
24-101U

DRAWING NO.
D–1

FILE ID. 2326038_Details.dwg

Acad Version: - R24.3s (LMS Tech)
User Name: - rbhorn
Date\Time: - Wed, 12 Mar, 2025 – 9:07am
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Current Pltstyle: - ByColor
Layout Tab: D–1

PRESSURE PIPE NOTES:

1. FOR PIPE SIZES 4"-8" THERE SHALL BE 30" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE. FOR PIPE SIZE 10" AND LARGER THERE SHALL BE 36" MINIMUM COVER.

2.a. DUCTILE IRON PIPE (DIP) FOR FORCE MAINS SHALL BE CLASS 350 WITH 401 EPOXY LINED IN ACCORDANCE WITH AWWA C550.

2.b. DUCTILE IRON PIPE (DIP) FOR WATER MAINS SHALL BE CLASS 350 IN ACCORDANCE WITH AWWA C151 (ANSI A21.51), AND SHALL HAVE AN INTERNAL LINING OF CEMENT MORTAR IN ACCORDANCE WITH AWWA C104/ A21.4.

3. C-900 PVC PRESSURE PIPE MAY BE USED IN LIEU OF DIP WATER MAIN WITH METAL TAPE AND WIRE ABOVE THE PIPE.

4. ALL FITTINGS FOR FORCE MAIN SHALL BE CLASS 350 DUCTILE IRON WITH MECHANICAL JOINTS AND 401 EPOXY LINING.

5. WATER MAIN VALVES 12 INCHES AND SMALLER SHALL BE RESILIENT-SEAL WEDGE GATE VALVES IN ACCORDANCE WITH AWWA C509. WATER MAIN VALVES LARGER THAN 12 INCHES SHALL BE BUTTERFLY VALVES IN ACCORDANCE WITH AWWA C504. SEWAGE FORCE MAIN VALVES SHALL BE RESILIENT-SEAL PLUG VALVES IN ACCORDANCE WITH AWWA C517.

6. ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH CITY AND LOCAL GOVERNMENTAL REGULATIONS AND STANDARDS.

7. WATER AND FORCE MAINS SHALL BE PIGGED A MINIMUM OF TWO TIMES, AND ADDITIONALLY, IF REQUIRED BY ENGINEER OF RECORD, AS WELL AS, PRESSURE TESTED FOR A PERIOD OF NOT LESS THAN TWO HOURS AT 150 PSI IN ACCORDANCE WITH ANSI/AWWA C600 LATEST STANDARDS. ALLOWABLE LEAKAGE SHALL BE DETERMINED AS FOLLOWS:

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

WHERE:

L = ALLOWABLE LEAKAGE (GALLONS PER HOUR)
S = PIPE LENGTH (FEET)
D = NOMINAL DIAMETER OF PIPE (INCHES)
P = AVERAGE TEST PRESSURE (PSI)

8. RESTRAINTS SHALL BE PROVIDED AT ALL FITTINGS AS SHOWN ON PP 2.0 AND 2.1

9. PRIOR TO ANY TESTING UNDER FUTURE PAVEMENT, ROCK SHALL BE FINISHED & PRIMED OR 1ST LIFT OF ASPHALT PLACED.

10. PIG SIZE SHALL BE PIPE DIAMETER PLUS 2" OR NEXT LARGER DIAMETER.

11. NO PROPOSED STRUCTURES SHALL BE INSTALLED WITHIN A HORIZONTAL DISTANCE OF 10-FEET FROM ANY EXISTING OR PROPOSED WATER OR FORCE MAINS.

12. LINE STOPS SHALL BE INSTALLED A MINIMUM OF 3 PIPE LENGTHS FROM LOCATION OF PIPE REMOVED AND PROVIDE NECESSARY JOINT RESTRAINTS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PRESSURE PIPE NOTES

DATE: 10-04-2024
PP 1.0

MINIMUM LENGTHS OF PIPE (FT) TO BE RESTRAINED

FITTING TYPE		PIPE SIZE 4"	6"	8"	10"	12"	16"	20"	24"
90° HORIZ. BEND		14	20	25	30	35	45	54	62
45° HORIZ. BEND		6	8	11	13	15	19	22	26
22.5° HORIZ. BEND		3	4	5	6	7	9	11	12
11.25° HORIZ. BEND		1	2	3	3	4	4	5	6
90° VERT. OFFSET	UPPER BEND	55	79	103	125	147	189	228	266
	LOWER BEND	22	38	49	59	69	88	106	123
45° VERT. OFFSET	UPPER BEND	22	32	42	51	60	77	93	109
	LOWER BEND	10	14	19	23	28	35	43	50
22.5° VERT. OFFSET	UPPER BEND	7	12	17	21	26	34	42	49
	LOWER BEND	2	4	6	8	10	14	17	21
11.25° VERT. OFFSET	UPPER BEND	3	4	6	9	11	15	19	22
	LOWER BEND	1	1	1	2	3	5	7	8
PLUG (DEAD END)		32	45	59	70	83	107	129	151
INLINE VALVE		32	45	59	70	83	107	129	151
TEE (BRANCH RESTRAINT)	4" X ø"	23							
	6" X ø"	21	35						
	8" X ø"	18	34	47					
	10" X ø"	16	32	46	58				
	12" X ø"	13	30	44	57	69			
	16" X ø"	7	26	41	55	67	90		
	20" X ø"	1	21	38	52	65	88	109	
	24" X ø"	1	16	34	49	62	86	108	129
REDUCER (LARGER PIPE RESTRAINT)	6" X ø"	23							
	8" X ø"	38	25						
	10" X ø"	57	43	24					
	12" X ø"	72	60	44	41				
	16" X ø"	99	90	78	75	45			
	20" X ø"	123	116	107	105	81	45		
	24" X ø"	146	140	132	131	111	82	45	

RESTRAIN PIPE ONE BELL PAST MINIMUM DISTANCE

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PIPE RESTRAINT TABLE
PRESSURE PIPE
(SHEET 1 OF 2)

DATE: 10-04-2024
PP 2.0

NOTES:

1. THE DATA IN THE PREVIOUS TABLE IS BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:

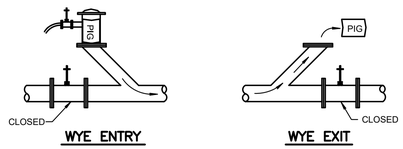
SOIL TYPE .....SAND
TEST PRESSURE .....150 PSI, 200 PSI FOR PIPES LARGER THAN 24"
DEPTH OF BURY .....3'
TRENCH TYPE 3
SAFETY FACTOR 1.5
VERTICAL OFF-SET .....3'
MINIMUM PIPE LENGTHS
ALONG TEE RUN .....5'

2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON PIPE AND PVC PIPE.
3. ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
4. RESTRAINED PIPE LENGTHS FOR VALVES APPLY TO PIPE ON BOTH SIDES OF VALVES
5. THE PREVIOUS TABLE SHALL SERVE AS A GENERAL DESIGN GUIDE ONLY. IT IS THE ENGINEER OF RECORD'S RESPONSIBILITY TO JUSTIFY AND DOCUMENT ANY DEVIATIONS FROM THE PIPE LENGTHS SPECIFIED IN THE PREVIOUS TABLE.
6. SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1 (LATEST EDITION) AND DIPRA RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2 (LATEST EDITION).
7. RESTRAINED JOINTS SHALL EXTEND ONE JOINT BEYOND MINIMUM LENGTH REQUIRED.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PIPE RESTRAINT TABLE
PRESSURE PIPE
(SHEET 2 OF 2)

DATE: 10-04-2024
PP 2.1



HINGED CLOSURE

NOTE:
ALL NEWLY INSTALLED PRESSURE PIPE SHALL BE "PIGGED" UNTIL CLEAN AND APPROVED BY ENGINEER DURING THE FILLING AND FLUSHING OPERATION. PIG SIZE SHALL BE PIPE DIAMETER PLUS 2" OR NEXT LARGER DIAMETER.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PIG LAUNCHER DETAIL

DATE: 10-04-2024
PP 6.0

BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
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ENGINEER'S SEAL
ALEXANDER C. HOTARU, P.E.
No. 86988

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

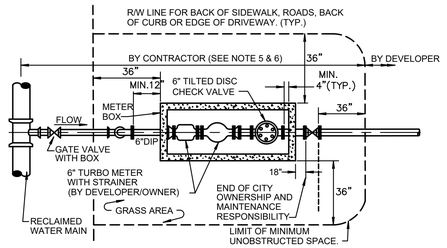
REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

STANDARD DETAILS - 2

PROJECT NO. 24-101U
DRAWING NO. D–2
FILE ID. 226038_Details.dwg

Acad Version: - R24.3s (LMS Tech)
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Path\Name: - P:\DELRAY\226038-Area 5_10_14 Reclaim\CAD\01_Civil 3D\01_Site-Plans\226038_Details.dwg
Current Plotstyle: - ByColor
Layout Tab: D-2



NOTES:

1. ALL SERVICE PIPING SHALL BE DUCTILE IRON PRESSURE CLASS 350.
2. APPROVED METER BOX TO BE PERMANENTLY INFUSED PURPLE COLOR WITH LID MARKED "RECLAIMED WATER - DO NOT DRINK" AND PAINTED PURPLE, TO BE PROVIDED AND INSTALLED BY CONTRACTOR
3. ALL FITTINGS SHALL BE MECHANICAL JOINT OR FLANGED JOINT WITH RESTRAINED JOINTS.
4. PIPING & VALVE TO BE IDENTIFIED AS "RECLAIMED WATER SYSTEM" COMPONENTS.
5. METER AND STRAINER TO BE PROVIDED AND INSTALLED BY THE DEVELOPER/CONTRACTOR.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

6" METER SERVICE DETAIL (SHEET 1 OF 2)

DATE:10-04-2024
RW 5.0

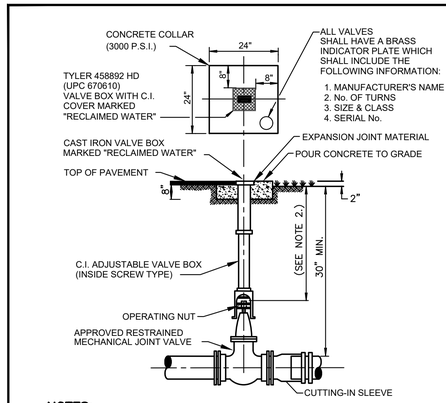
NOTES:

6. THE DEVELOPER/PROPERTY OWNER OR ASSIGNEE SHALL BE RESPONSIBLE FOR INSTALLATION OF SERVICES BEYOND PRESSURE TEST LIMITS AS SPECIFIED BY THE CITY.
7. CONTRACTOR SHALL CONSTRUCT SERVICE COMPONENTS FOR THE METER TO BE INSTALLED "TRUE" AND "PLUMB".
8. METER SHALL NOT BE PLACED IN SIDEWALK OR DRIVEWAY AREAS.
9. ALL HARDWARE FOR FLANGED CONNECTIONS (BOLTS etc.) TO BE 316 STAINLESS STEEL.
10. CHECK VALVE TO BE FREE OF OBSTRUCTION FOR PROPER OPERATION.
11. A GATE VALVE WITH BOX TO BE LOCATED WITHIN 5' OF METER BOX.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

6" METER SERVICE DETAIL (SHEET 2 OF 2)

DATE: 09-06-20081
RW 5.1



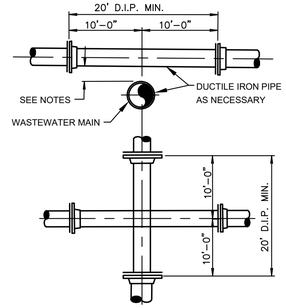
NOTES:

1. WHEN OPERATING NUT IS DEEPER THAN 30" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT 24"-30" BELOW FINISHED GRADE. EXTENSION BOLTS & NUTS ARE TO BE 304 STAINLESS STEEL. A HIGH STRENGTH STEEL CENTERING PLATE, WELDED TO THE EXTENSION, IS ALSO REQUIRED.
2. VALVE BOXES SHALL HAVE COVERS MARKED "RECLAIMED WATER".
3. EXTENSION VALVE BOX TO BE D.I.P. (COLOR: PURPLE)
4. A CUT-IN INSTALLATION SHALL REQUIRE RESTRAINED JOINTS THROUGHOUT ASSEMBLY.
5. AT DEAD END OR WHERE MAIN LINES CHANGE DIRECTION, VALVES SHALL BE RESTRAINED USING AN APPROVED RESTRAINT METHOD.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL GATE VALVE SETTING AND MAIN CUT-IN DETAIL

DATE:10-04-2024
RW 6.0



NOTES:

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

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

RECLAIMED WATER PIPE SEPARATION (SHEET 1 OF 2)

DATE:10-04-2024
RW 8.0

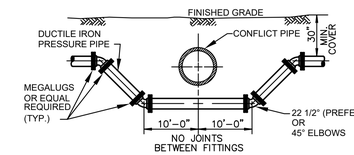
NOTES:

4. FORCE MAIN CROSSING POTABLE WATER MAIN OR RECLAIMED WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN WITH THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN CROSSING OVER THE FORCE MAIN.
5. DO NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION FOR DUCTILE IRON PIPE. PVC PIPE CURVATURE MAY ONLY BE ACCOMPLISHED BY INSTALLING APPROPRIATE BENDS.
6. POTABLE WATER SERVICE LINES SHALL CROSS OVER WASTEWATER MAINS WITH MINIMUM 12" VERTICAL SEPARATION. WHERE THIS MINIMUM SEPARATION CAN NOT BE MAINTAINED, THE WATER SERVICE SHALL BE ENCASED IN A MINIMUM 10' LONG CASING CENTERED OVER THE CROSSING WITH MINIMUM 6" VERTICAL SEPARATION.

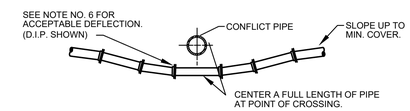
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

RECLAIMED WATER PIPE SEPARATION (SHEET 2 OF 2)

DATE:10-04-2024
RW 8.1



FITTING TYPE



DEFLECTION TYPE

NOTES:

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

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PRESSURE PIPE CONFLICT DETAIL (SHEET 1 OF 2)

DATE:10-04-2024
RW 9.0

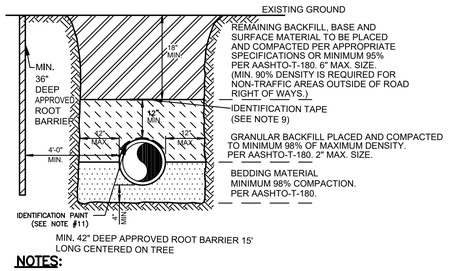
NOTES:

3. FORCE MAIN CROSSING POTABLE WATER MAIN OR RECLAIMED WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWELVE (12) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN WITH THE POTABLE WATER MAIN OR RECLAIMED WATER MAIN CROSSING OVER THE FORCE MAIN.
4. FITTINGS SHALL BE RESTRAINED WITH AN APPROVED RESTRAINT METHOD.
5. THE DEFLECTION TYPE CROSSING IS PREFERRED.
6. DO NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION FOR DUCTILE IRON PIPE. PVC PIPE CURVATURE MAY ONLY BE ACCOMPLISHED BY INSTALLING APPROPRIATE BENDS.
7. ALL EXPOSED TIE STEEL SHALL BE COATED WITH COAL-TAR EPOXY
8. POTABLE WATER SERVICE LINES SHALL CROSS OVER WASTEWATER MAINS WITH MINIMUM 12" VERTICAL SEPARATION. WHERE THIS MINIMUM SEPARATION CAN NOT BE MAINTAINED, THE WATER SERVICE SHALL BE ENCASED IN A MINIMUM 10' LONG CASING CENTERED OVER THE CROSSING WITH MINIMUM 6" VERTICAL SEPARATION.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PRESSURE PIPE CONFLICT DETAIL (SHEET 2 OF 2)

DATE:10-04-2024
RW 9.1



NOTES:

1. BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8"- 7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK AND DEBRIS.
5. DENSITY TESTS ARE REQUIRED IN 1 FOOT LIFTS ABOVE THE PIPE AT INTERVALS OF 400' MAXIMUM, MINIMUM 1 SET OF TESTS FOR EACH WASTEWATER GRAVITY MAIN RUN, OR AS DIRECTED BY THE INSPECTOR AND PAID FOR BY THE CONTRACTOR.
6. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL TRENCH SAFETY LAWS AND REGULATIONS.
7. SEE SEPARATE DETAIL FOR "PIPE INSTALLATION UNDER EXISTING PAVEMENT - OPEN CUT."
8. THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION OR AS SPECIFIED IN PERMIT/CONTRACT DOCUMENTS.
9. APPROVED MAGNETIC TAPE IS REQUIRED FOR: PVC RECLAIMED WATER MAINS. THE TAPE SHALL BE INSTALLED MAXIMUM 24" BELOW FINISHED GRADE.
10. ROOT BARRIER IS REQUIRED FOR APPROVED TREE INSTALLATION CLOSER THAN 10 FEET FROM UTILITY FACILITIES.
11. CONTINUOUS 4" WIDE PAINT STRIPING IS REQUIRED FOR RECLAIMED WATER MAINS (PURPLE).

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

TYPICAL TRENCH/ ROOT BARRIER INSTALLATION DETAIL

DATE:10-04-2024
RW 11.0

BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXIS R. SHOTKINS, P.E.
No. 90988

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

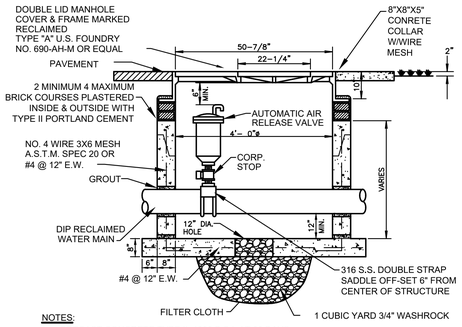
STANDARD DETAILS - 3

PROJECT NO. 24-101U

DRAWING NO. D-3

FILE ID. 2326038_Details.dwg

Acad Version: - R24.3s (LMS Tech) User Name: - rbhomm
Date\Time: - Wed, 12 Mar, 2025 – 9:07am Path\Name: - P:\DELRAY\2326038-Area 5, 10, 14 Reclaim\CAD\01 Civil 3D\01 Shts-Plans\2326038_Details.dwg Current Plotstyle: - ByColor Layout Tab: D-3



NOTES:

1. PRECAST CONCRETE TYPE II, 4000 P.S.I. AT 28 DAYS.
2. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
3. LIFT HOLES ARE PERMITTED AND SHALL BE FILLED AFTER INSTALLATION.
4. ALL PIPE HOLES SHALL BE PRECAST OR CORE-DRILLED.
5. MANHOLE FABRICATION SHALL BE IN ACCORDANCE WITH A.S.T.M. C-478 LATEST STANDARD.
6. CONCRETE COLLAR REQUIRED WHEN MANHOLE IS OUTSIDE PAVEMENT, SEE DETAIL.
7. AIR RELEASE VALVE SHALL BE TYPE AND SIZE APPROPRIATE FOR SERVICE INTENDED.
8. AIR RELEASE VALVE AND PIPING TO BE IDENTIFIED AS RECLAIMED.
9. TWO PIECE MANHOLE WITH JOINT AT BASE IS PERMITTED. NO PIPE JOINTS INSIDE MANHOLE.
10. DUCTILE IRON PIPE IS REQUIRED THROUGH THE VAULT.
11. THREADED AREAS OF CORPORATION STOP SHALL BE COMPLETELY SPIRAL WRAPPED WITH TWO WRAPS OF TEFLON TAPE.
12. CORPORATION STOP TO BE SELECTED FROM THE STANDARD PRODUCT LIST.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

AIR RELEASE VALVE AND MANHOLE IN PAVED AREA AND ROAD RIGHT-OF-WAY

DATE:10-04-2024
RW 15.0

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

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

AVG. TEST PRESSURE	PIPE DIAMETER (INCHES)																
PSI	2	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48
150	0.10	0.14	0.18	0.27	0.37	0.46	0.55	0.64	0.73	0.83	0.92	1.10	1.38	1.65	1.93	2.20
200	0.10	0.15	0.21	0.31	0.42	0.53	0.64	0.74	0.84	0.95	1.06	1.27	1.59	1.91	2.22	2.54

NOTES:

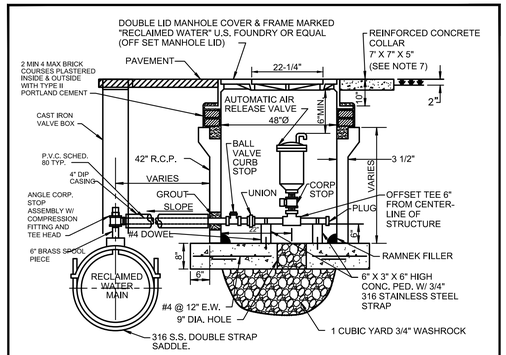
1. TO OBTAIN THE MAXIMUM QUANTITY OF WATER FOR PIPE WITH 20 FT. NOMINAL LENGTHS, MULTIPLY THE QUANTITY CALCULATED FROM THE TABLE BY 0.9
2. THE MAXIMUM QUANTITY OF ADDED WATER FOR A PIPELINE IS CALCULATED BY MULTIPLYING THE QUANTITY PER HOUR AS OBTAINED FROM THE ABOVE TABLE, BY THE DURATION OF THE TEST IN HOURS,AND BY THE TOTAL LENGTH OF THE LINE BEING TESTED DIVIDED BY 1,000. IF THE LINE UNDER TEST CONTAINS SECTIONS OF VARIOUS DIAMETERS, THE MAXIMUM QUANTITY ADDED WILL BE THE SUM OF THE COMPUTED QUANTITIES FOR EACH SIZE.
3. MAXIMUM TEST LENGTH = 2,500 FEET PER SECTION.
4. THIS STANDARD SHALL REFLECT ANY REVISION OF A.W.W.A. C-600. HOWEVER, THE MAXIMUM QUANTITY OF WATER ADDED SHALL NOT EXCEED 50% OF THE RECOMMENDED LIMIT PER APPLICABLE AWWA C-600 STANDARD.
5. STANDARD TEST PRESSURE = 150 P.S.I.
6. FORMULA BASIS: $L = \frac{(S) X (D) X (P)}{133,200}$ 1/2 X 1/2

   L = MAXIMUM QUANTITY OF WATER TO BE ADDED (GALLONS PER HOUR)
   S = LENGTH OF PIPE TESTED (FEET)
   D = DIAMETER OF PIPE (INCHES)
   P = TEST PRESSURE (P.S.I.)
7. PRESSURE TEST DURATION TO BE MINIMUM 2 HOURS.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PRESSURE TEST CRITERIA

DATE:10-04-2024
RW 16.0



NOTES:

1. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF NON-SHRINKING GROUT.
2. ALL PIPE HOLES SHALL BE PRECAST.
3. PAINT OUTSIDE WITH 2 COATS OF APPROVED PROTECTIVE COATING (MIN. 10 MIL PER COAT D.F.T.)
4. ARV, TAP AND PIPING TO BE TYPE AND SIZE APPROPRIATE FOR SERVICE INTENDED.
5. CONCRETE COLLAR REQUIRED.
6. PIPING AND STRUCTURE TO BE IDENTIFIED AS "RECLAIMED WATER SYSTEM" COMPONENTS.
7. THREADED AREAS OF CORPORATION STOP AND OTHER FITTINGS SHALL BE SPIRAL WRAPPED WITH TWO WRAPS OF TEFLON TAPE.
8. CORPORATION STOP TO BE SELECTED FROM THE STANDARD PRODUCT LIST.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

OFF-SET UNDERGOUND AIR RELEASE VALVE

DATE:10-04-2024
RW 17.0

DENSITY PROCEDURES:

THE BACKFILL FOR THE FIRST AND SECOND STAGES SHALL BE PLACED IN 6" LAYERS (COMPACTED THICK- NESS) AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.

THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING REQUIRED.

THE CONTRACTOR SHALL OBTAIN A WELL COMPACTED BED AND FILL ALONG THE SIDES OF THE PIPE AND TO A POINT INDICATING THE TOP OF SUB-GRADE MATERIAL.

GENERAL NOTES:

1. SEE NOTES FOR TYPICAL TRENCH DETAIL FOR BACKFILL AND BEDDING MATERIAL SPECIFICATIONS.
2. BASE MATERIAL SHALL BE PLACED IN 6" LAYERS AND EACH LAYER COMPACTED TO 98% OF MAXIMUM DENSITY PER AASHTO T-180.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED (BUTT JOINTS ONLY).
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE. THE AFFECTED AREA SHALL BE RESTORED TO EQUAL OR BETTER CONDITION.
5. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE REGARDING ANY ADDITIONAL SPECIFICATIONS AS REQUIRED BY THE PROPERTY OWNER. (FDOT, COUNTY, CITY, ETC.)
6. EXCAVATABLE "FLOWABLE FILL" WITH ULTIMATE COMPRESSIVE STRENGTH BETWEEN 50 AND 150 PSI MAY BE USED TO SUBSTITUTE FOR THE BACKFILL AND BASE MATERIALS.
7. PAVEMENT OVERLAY ON BOTH SIDES OF THE CUT MAY BE REQUIRED PER OWNER SPECIFICATION.
8. MAGNETIC TAPE IS REQUIRED FOR ALL PVC/HDPE RECLAIMED WATER MAINS. (SEE TRENCHING DETAIL FOR INSTALLATION INSTRUCTIONS).
9. THE CONTRACTOR SHALL BE COMPLIANT WITH APPLICABLE TRENCH SAFETY REGULATIONS (OSHA, ETC.)

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PIPE INSTALLATION UNDER EXISTING PAVEMENT - OPEN CUT

DATE:10-04-2024
RW 18.0

Irrigated With Reclaimed Water

Water Utilities Department
Water Reclamation Program
DO NOT DRINK
NO TOMAR
CALL 243-7312 FOR INFORMATION

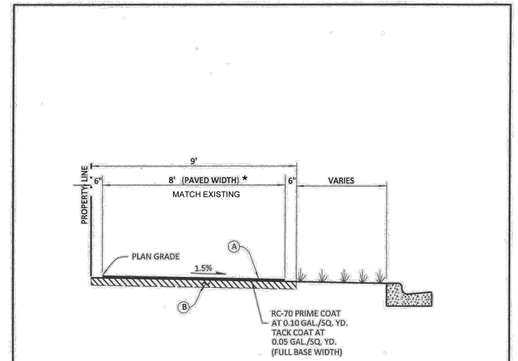
NOTE:

1. SIGNS SHALL BE 12" X 18", WITH PURPLE BACKGROUND AND WHITE LETTERING IMPRINTS ON WHITE ALUMINUM (.063 GA.), ROUNDED CORNERS (1.25" RAD.), 2 HOLES (13/32" DIAM.) 12" O.C.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

RECLAIMED WATER STANDARD SIGN

DATE:10-04-2024
RW 19.0



NOTE:
MAXIMUM LONGITUDINAL SLOPE IS 1.0%

(A) WEARING SURFACE: 1 INCH TYPE S-3, OR 1½ INCH TYPE S-1 OR TYPE II A.C. CONCRETE.

(B) BASE: 4 INCHES COMPACTED SHELLROCK.

FILEPATH: P:/DGN/ENG SER/LAND DEVELOPMENT STANDARDS/DWF FORMAT/400.2A

PALM BEACH COUNTY DEPARTMENT OF ENGINEERING & PUBLIC WORKS				PATHWAY: ASPHALT SIDEWALK	DRAWING NO.
DRAWN BY:	DATE:	REVISED BY:	DATE:	APPROVED: EFFECTIVE:	400.3
K.L.	05/23/90	J.M.K.	02/01/2018	COUNTY ENGINEER OR DESIGNEE 2/9/18	

BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXIS R. SCHRAGIS, P.E.
No. 90788

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH AREA 5, 10, AND 14 RECLAIM WATER IMPROVEMENTS

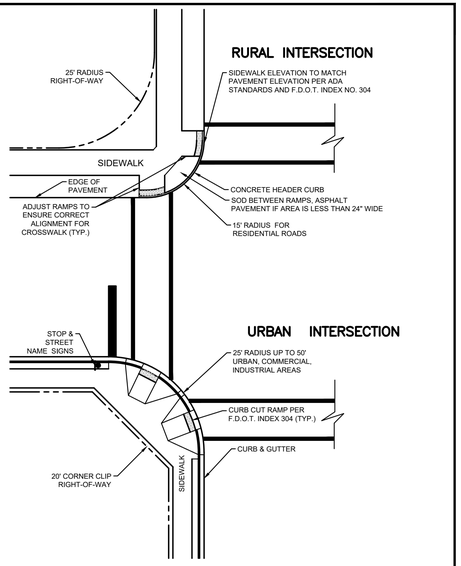
STANDARD DETAILS - 4

PROJECT NO. 24-101U

DRAWING NO. D-4

FILE ID. 2326038_Details.dwg

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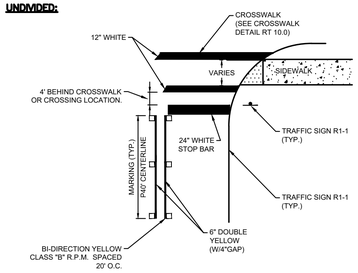
NOTES
1. DRIVEWAY DESIGN TO BE PER CITY LAND DEVELOPMENT REGULATIONS, FDOT STANDARD SPECIFICATIONS. ALL DESIGNS SUBJECT TO CITY APPROVAL.
2. ALL WALKS CROSSING A VEHICULAR AREA SHALL HAVE A DETECTABLE WARNING SURFACE (TRUNCATED DOME) IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, CHAPTER II, FL. ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

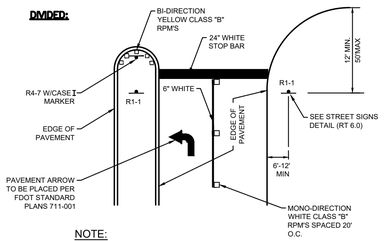
INTERSECTION DETAIL

DATE:10-04-2024
RT 8.0

UNDIVIDED:



DIVIDED:



NOTE:

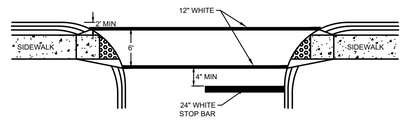
ALL STRIPING AND DELINEATION TO CONFORM TO THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) LATEST EDITION.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

INTERSECTION TRAFFIC
CONTROL STOP CONDITION

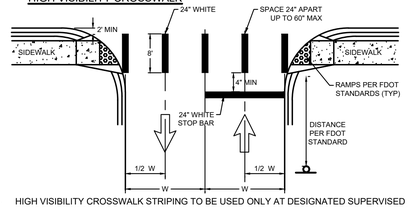
DATE:10-04-2024
RT 9.0

STANDARD CROSSWALK



STANDARD CROSSWALK STRIPING TO BE INSTALLED IN THE FOLLOWING LOCATIONS:
- ALONG COLLECTORS OR ARTERIALS
- BIKE PATH CROSSINGS
- CROSS WALKS WITH HIGH EXPECTED PEDESTRIAN VOLUME
- SCHOOL ACCESS ROUTES
- SIGNING REQUIRED AS PER FDOT STANDARD PLAN 711-001

HIGH VISIBILITY CROSSWALK

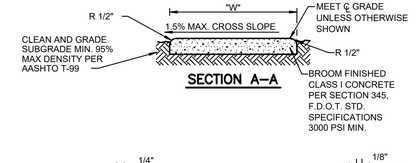


- HIGH VISIBILITY CROSSWALK STRIPING TO BE USED ONLY AT DESIGNATED SUPERVISED SCHOOL CROSSING OR AT LOCATIONS WHERE IT IS DEEMED APPROPRIATE BY THE CITY.
- SIGNS AND ADVANCED PAVEMENT MESSAGES TO BE DESIGNED AND INSTALLED PER FDOT STANDARD PLAN 711-001
- CROSSWALKS LOCATED MIDBLOCK MINIMUM WIDTH 10' AND ALL CROSSWALK MARKINGS SHALL BE WHITE.
- LONGITUDINAL LINES IN SPECIAL EMPHASIS CROSSWALK SHALL BE 24" WIDE AND SPACED TO AVOID THE WHEEL PATH OF VEHICLES AS SHOWN IN DETAIL. THE SPACE BETWEEN MARKINGS SHALL NOT EXCEED 60". A LONGITUDINAL MARKING SHALL BE CENTERED AT EACH LANE LINE. ADDITIONAL LONGITUDINAL MAKINGS SHALL BE PLACED AT THE CENTER OF EACH LINE.
- WHERE THE CROSSWALK IS SKEWED TO THE LANE LINES, THE SPECIAL EMPHASIS LONGITUDINAL LINES SHOULD BE PARALLEL TO THE LANE LINE.

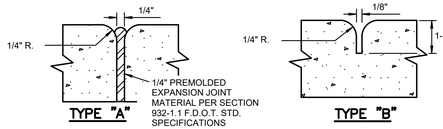
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

CROSSWALK DETAILS

DATE:10-04-2024
RT 10.0



SECTION A–A



TYPE "A" TYPE "B"

SIDEWALK JOINTS

NOTE:
1. ALL SIDEWALKS SHALL BE CONSTRUCTED THRU DRIVEWAYS.
2. ALL SIDEWALKS SHALL INCLUDE ADA COMPLIANT RAMPS @ INTERSECTIONS.
3. ALL SIDEWALKS SHALL INCLUDE CROSS SLOPE AND RUNNING SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.
4. CURB RAMP DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE RAMP AND 24" DEEP.
5. SIDEWALK SHALL BE 9" THICK FOR 2' AT THE CONNECTION TO ROADWAYS WITH A 6" TRANSITION TO 6" FOR THE REMAINDER OF THE REQUIRED 10'.

TABLE OF SIDEWALK THICKNESS – "T"	
GENERAL AREAS	4"
WITHIN 10' OF CROSS-STREETS, AT DRIVEWAYS & OTHER AREAS	6"

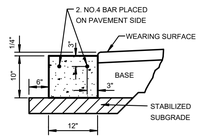
TABLE OF SIDEWALK WIDTHS – "W"	
SINGLE-FAMILY AREAS	5'
MULTI-FAMILY AREAS	5'
OTHER AREAS AS SPECIFIED BY THE CITY.	

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
"A"	P.C. AND P.T. OF CURVES JUNCTION OF EXISTING & NEW SIDEWALKS & EVERY 30'
"B"	5'-0" CENTER TO CENTER ON SIDEWALKS SCORED DURING PLACEMENT OR SAWCUT WITHIN 24 HOURS OF PLACEMENT.
"A"	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS, AND SIMILAR STRUCTURES.

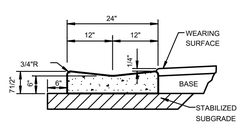
CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

SIDEWALK CONSTRUCTION DETAIL
(SHEET 2 OF 2)

DATE:10-04-2024
RT 18.1

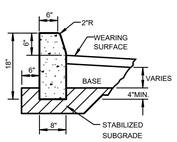


CONCRETE HEADER CURB
NOT TO SCALE

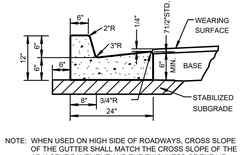


VALLEY GUTTER
NOT TO SCALE

NOTE: SAWCUTS REQUIRED
AT 10' ON CENTER.



F.D.O.T. TYPE "D"
CONCRETE CURB
NOT TO SCALE



NOTE: WHEN USED ON HIGH SIDE OF ROADWAYS, CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6" MIN.

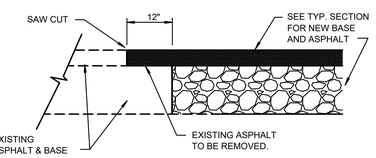
F.D.O.T. TYPE "F" CONCRETE
CURB AND GUTTER
NOT TO SCALE

NOTES: 1. ROADWAY SUBGRADE SHALL IN ALL CASES EXTEND BELOW CURBING.
2. SAWCUTS AT 10' ON CENTER SHALL BE MADE WITHIN 24 HOURS OF CONCRETE PLACEMENT.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

CURB AND GUTTER SECTIONS

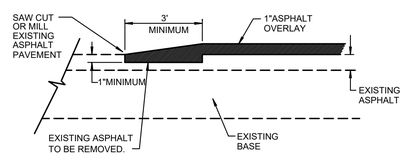
DATE:10-04-2024
RT 19.0



NEW CONSTRUCTION PAVEMENT JOINT

NOTE:

THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING PAVEMENT AND BASE.



NEW OVERLAY PAVEMENT JOINT

NOTE:

THIS METHOD OF PAVEMENT JOINT SHALL BE USED FOR ANY APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT WILL BE CONNECTED TO EXISTING PAVEMENT.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT JOINT DETAIL

DATE:10-04-2024
RT 21.0

PAVEMENT MARKING SPECIFICATIONS

All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City and shall conform to the requirements of F.D.O.T. and the manual on uniform traffic control devices, (MUTCD).

PERMANENT MARKINGS

Installation:
- All markings shall be installed by the extruded method.
- Markings shall be free of weaves, bows, drips, drags, and other degrading items.
- Chalk shall be used for all layout markings

Materials:
- All materials shall be alkyd or hydrocarbon thermoplastic meeting all FDOT specifications.

Thickness:
- All markings shall be installed to yield 90 mils of material measured above the pavement surface.

Spheres:
- Reflective glass sheres are to be applied to all stripes and markings per FDOT specifications.

Alternate Material:
- STAYMARK marking tape, or equivalent may be used, as approved or directed by the City.

Layout:
- Layout shall be made using marking chalk.
- It is recommended that marking layout be inspected by the City prior to the placement of final markings.

TEMPORARY MARKINGS

Temporary markings may be used only as specified in this section, or as approved or directed by the City.

Final Pavement Surface:
- Only foil backed marking tape is allowed.
- All tape shall be totally removed concurrent with permanent marking placement.

Other Pavement Surfaces:
- Intermediate pavement surfaces may be marked with FDOT approved materials, designs, and specifications.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT MARKING SPECIFICATIONS
(SHEET 1 OF 2)

DATE:10-04-2024
RT 22.0

ALL PAVEMENT MARKINGS

All paved surfaces shall be properly marked prior to the hours of darkness.

RAISED PAVEMENT MARKERS

- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.
- R.P.M.s shall be a 4 x 4 type class "B" marker meeting F.D.O.T. specifications and shall be approved by the City prior to use.
- R.P.M.'s shall be installed using alkyd thermoplastic on asphalt and epoxy on concrete.

OTHER NOTES

- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public right-of-way.

CITY of DELRAY BEACH
PUBLIC WORKS DEPARTMENT
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444

PAVEMENT MARKING SPECIFICATIONS
(SHEET 2 OF 2)

DATE:10-04-2024
RT 22.1

BID SET

CITY of DELRAY BEACH
434 SOUTH SWINTON AVENUE, DELRAY BEACH, FLORIDA 33444
Phone: (561) 243-7312 Fax: (561) 243-7314

BAXTER & WOODMAN Consulting Engineers
1601 Forum Place, Suite 400, West Palm Beach, Florida 33401
Phone: 561-655-6175 ● Fax: 561-655-6179
www.baxterwoodman.com EB-31795

ENGINEER'S SEAL
ALEXEI C. SHTAMS, P.E.
No. 90988

DESIGNED BY	ARS
DRAWN BY	DP
CHECKED BY	SP
DATE	03/2025

REVISION	DATE	DESCRIPTION	BY

CITY OF DELRAY BEACH
AREA 5, 10, AND 14
RECLAIM WATER IMPROVEMENTS

STANDARD DETAILS - 5

PROJECT NO.
24-101U

DRAWING NO.
D–5

FILE ID. 2326038_Details.dwg

Acad Version: - R24.3s (LMS Tech)
User Name: - ddhomm
Date\Time: - Wed, 12 Mar 2025 – 9:07am Current Pltstyle: - ByColor Layout Tab: D–5
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CONTRACT SPECIFICATIONS

FOR

AREA 5, 10, AND 14 RECLAIM WATER IMPROVEMENTS
CITY PROJECT #24-101U

Bid Set

CITY OF DELRAY BEACH

March 2025

CITY OF DELRAY BEACH
AREA 5, 10, AND 14 RECLAIM WATER IMPROVEMENTS
PROJECT MANUAL

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DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. Construct Work as described in the Contract Documents.
   1. Provide the materials, equipment, and incidentals required to make the Project completely and fully operable.
   2. Provide the labor, equipment, tools, and consumable supplies required for a complete Project.
   3. Test and place the completed Project in operation.
   4. Provide the special tools, spare parts, lubricants, supplies, or other materials as indicated in Contract Documents for the operation and maintenance of the Project.
   5. The Work shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the Work in good faith shall be provided by the Contractor and coordinated with the Engineer as though originally so indicated, at no increase in cost to the Owner.
   6. Contractor shall comply with all applicable federal, state and local safety regulations, laws and standards, as well as any specific City of Delray Beach requirements while completing the work.
   7. Except as specifically noted, the Contractor shall provide and pay for:
      a. Labor, materials, and equipment.
      b. Tools, equipment, and machinery.
      c. Water, electricity, and other utilities required to complete project.
      d. Other facilities and services necessary for proper execution and completion of the work.
      e. Permits, surveys, and testing.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to the General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 DESCRIPTION OF WORK

A. The Area 5, 10, and 14 Reclaim Water Improvements consists of the furnishing of all labor, equipment, materials, and performing all operations to construct a 6-inch reclaim water main at the west end of Germantown Road and reclaim water services to 5 properties in Area 5; construct a 6-inch reclaim water main on SW

2nd Avenue and reclaim water services to 2 properties in Area 10, and construct reclaim water services to connect 6 properties to existing reclaim water mains in Area 10; and construct reclaim water services to connect 8 properties to existing reclaim water mains in Area 14 as described and specified further in the Technical Specifications and as shown on the Contract Drawings.

B. Area 5 Properties:
   1. 4000 Old Germantown Road – Orchard View Fire Station #5
   2. 4001 Old Germantown Road – Green Space
   3. 4050 Old Germantown Road – Orchard View Elementary School
   4. 4060 Old Germantown Road – Orchard View Park
   5. 4422 Old Germantown Road – Foxe Chase Subdivision

C. Area 10 Properties:
   1. 50 NW 1st Avenue – Delray Beach Community Center
   2. 100 NW 1st Avenue – City Hall
   3. 100 W Atlantic Avenue – Library
   4. 200 NW 1st Avenue – City Attorney's Office
   5. 200 W Atlantic Avenue – Court House
   6. 201 W Atlantic Avenue – Delray Beach Parks Complex & Tennis Court
   7. 300 W Atlantic Avenue – Police Department
   8. 51 N Swinton Avenue – Old School Square

D. Area 14 Properties:
   1. 550 SW 4th Avenue – Rosemont Park
   2. 241 SW 7th Avenue – Carver Recreation Facility
   3. 400 SW 12th Avenue – Village Academy of the Arts
   4. 301 SW 14th Avenue – Toussaint L'ouverture High School of the Arts
   5. 1500 SW 6th Street – Catherine Strong Center for Boys & Girls
   6. 901 SW 10th Street – Delray Beach Cemetery
   7. 316 SW 3rd Avenue – Merrit Park
   8. 434 S Swinton Avenue – Environmental Service Complex

1.3 WORK BY OTHERS OR UNDER OTHER CONTRACTS

A. Other work by the Owner and/or property owners may be occurring during the contract period of this Project. Contractor is responsible to coordinate schedules with the Owner and/or property owners as to avoid delays in the Contractor's schedule to complete the Project.

B. Where 2 or more contracts are being performed at one time on the same Site or adjacent land in such manner that work under one contract may interfere with work under another, the Owner will determine the sequence and order of the Work in either or both contracts. When the Site of one contract is the necessary or convenient means of access for performance of work under another, the Owner may grant privilege of access or other reasonable privilege to the Contractor so desiring, to the extent, amount, and in manner and at time that the Owner may determine. No Owner determination of method or time or sequence or order of the

work or access privilege shall be the basis for a claim for delay or damage except under provisions of the General Conditions for temporary suspensions of the work. The Contractor shall conduct its operations so as to cause a minimum of interference with the work of such other Contractor's and shall cooperate fully with such Contractor's to allow continued safe access to their respective portions of the Site, as required to perform work under their respective contracts.

C. Interference With Work On Utilities: The Contractor shall cooperate fully with all utility forces of the Owner or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the Work, and shall schedule the Work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.4 CONTRACTOR USE OF SITE

A. The CONTRACTOR's use of the Site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities, and field offices.

1.5 OWNER USE OF THE SITE AND OCCUPANCY

A. The CONTRACTOR shall cooperate and coordinate with the OWNER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall be allowed access to the Site during the period of construction.

B. Testing of equipment and appurtenances including specified test periods, training, and startup does not constitute acceptance for operation.

C. OWNER may accept the facility for continued use after startup and testing at the option of the OWNER. If acceptance is delayed at the option of the OWNER, shut down facilities per approved Operation and Maintenance procedures.

D. The execution of bonds indicates the consent of the surety to these provisions for occupancy of the structures and use of equipment.

E. Provide an endorsement from the insurance carrier permitting occupancy of the structures and use of equipment during the remaining period of construction.

F. Conduct operations to ensure the least inconvenience to the OWNER and general public.

1.6 CONSTRUCTION OF UTILITIES

A. CONTRACTOR shall coordinate with existing Utility companies when performing work onsite.

1.7 REQUIREMENTS OF OTHER AGENCIES

A. When performing WORK on facilities owned by agencies other than OWNER, comply with all requirements of such agencies which are more restrictive than those specified herein.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 14 11

CONTRACTOR USE OF PREMISES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section applies to all situations in which the Contractor or his representatives including, but not necessarily limited to, suppliers, subcontractors, employees, and field engineers, enter upon the Owner's property.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

F. Provide a list of names and identification of all persons to be entering the Owner’s property in connection with the Work of this Contract, and submit a copy of the list to the Owner at the preconstruction conference.
   1. Advise the Owner of personnel changes at project meetings.

1.3 QUALITY ASSURANCE

A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.

B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Do not store construction equipment, tools or materials on any area of the Owner's property except where shown on the Drawings as the "Contractor's Storage Area," or where otherwise directed by the Engineer.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 USE AND RESTORATION OF THE SITE

A. Construct and maintain temporary roadways from the existing public roadway to the site and within the entire site for material and equipment transport necessary to complete the work.
   1. Include necessary culverts for proper drainage.
   2. Obtain necessary permits for the construction of access temporary roadways.
   3. Obtain Engineer's approval for the location of the temporary roadways.

B. Upon completion of the Work, restore areas used for temporary roadways to fully graded condition totally free of stones or crushed rock.

C. Before submitting Final Application for Payment, restore all areas within the work site boundaries disturbed by the Work to a fully regraded condition, provided with at least four (4) inches of hand raked topsoil and seeded and/or sodded as specified under Section 32 92 00.13.

D. Clean all permanent roadways used for construction activities by using motorized street sweeper that utilizes vacuum and water to pick up debris, when directed by Engineer.

1.8 CONTRACTOR'S INGRESS AND EGRESS

A. Truck and Equipment access:
   1. To avoid traffic conflict with vehicles of the Owner's employees and customers, and to avoid overloading of streets and driveways elsewhere on the Owner's property and within the right-of-ways, limit the access of trucks and equipment to an Access Route to be proposed by Contractor and approved by the Engineer/Owner.
   2. Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the work site.

B. Contractor's vehicles:
1. Require Contractor's vehicles, vehicles belonging to employees of the Contractor, and all other vehicles entering upon the Owner's property in performance of the Work, to use only the approved Access Route.
2. Do not permit such vehicles to park on any street, right-of-way, or other area of the Owner's property except in the area proposed by Contractor

and approved by the Engineer/Owner to be designated as the "Contractor's Parking Area".

C. Restoration: Clean and restore to at least the preconstruction condition all roadways, streets, sidewalks, driveways, and parking areas used during construction.

1.9 ACCESS TO OWNER'S FACILITIES

B. Restricted areas and structures:
1. Do not enter any designated restricted area or any existing structure, except as required to do specific work.
2. Obtain Owner's permission to enter restricted areas or existing structures to do specific work.
3. Remove all construction debris and clean work areas daily when working in restricted areas or existing structures.

C. Equipment:
1. Do not use Owner's equipment or tools.

1.10 PROTECTION OF EXISTING PROPERTY AND EQUIPMENT

A. Property:
1. Take all necessary precautions to protect existing structures, piping, trees and all other facilities from damage during construction.
2. Repair or replace all property damaged during construction.
3. Prevent entry of all foreign materials including excavated earth and/or backfill into open tanks. Notify Engineer twenty-four (24) hours in advance of beginning work in the vicinity of any open tank. Immediately stop work and notify both Owner and Engineer in the event any tool, earth, rock, sand or other foreign materials enter into any tank. Before resuming work, empty the tank under the Owner's supervision, and, in accordance with the requirements of 0 herein, remove all foreign material.

B. Equipment:
1. Take all necessary precautions to protect all equipment from sand, dust, water, and other debris which is produced during construction.
2. Wherever possible, cut concrete or masonry from outside the structure to prevent production of dust in areas containing equipment.
3. During dust-producing activities inside of structures, isolate work area from equipment using temporary impervious partitions or individual equipment encasement.
4. Under excessive dust conditions, ventilate isolated working areas as directed by Engineer.
5. Remove all temporary equipment protection facilities upon completion of construction activity requiring such protective measures.

1.11 DISPOSAL OF SPOIL

A. Remove all spoil, unsuitable soils (muck, organics, etc.), excess excavated material, or other construction activity residual materials from the work site. Do not deposit this material on private or public property without written permission from property owner or authorized representative of the appropriate public agency.

1.12 SECURITY

A. Restrict the access of all persons entering upon the Owner's property and rights-of-way in connection with the Work to the Access Route and to the actual site of the Work.

END OF SECTION

SECTION 01 21 13

CASH ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

A. To provide adequate budget to cover items not precisely determined prior to bidding, allow within the proposed Contract Price amounts described in this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE– (Reserved).

1.7 CONTINGENT CASH ALLOWANCE

A. From time to time it will be necessary to add unforeseen additional work to the Project. The intent of the Contingent Cash Allowance is to provide a means to fund reasonable charges and additions to the Project. The value of any work covered by the Contingent Cash Allowance(s) will be determined in accordance with the General Conditions and Supplementary Conditions.

B. Do not include any overhead and profit amount in the Project base bid for the Contingent Cash Allowance. Include the appropriate overhead and profit in each item funded from the Contingent Cash Allowance.

1. Include in the Lump Sum price a Contingent Cash Allowance of Sixty-Three Thousand Dollars ($63,000.00) for unforeseen conditions.
2. Include in the Lump Sum price a Contingent Cash Allowance of Ten Thousand Dollars ($10,000.00) for pre-construction professional audio/video of construction site.

END OF SECTION

SECTION 01 22 29

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Payment will be made for the Pay Items listed herein and at the Contract Unit Prices unless otherwise indicated.

B. Work for which a Pay Item is not listed will be considered incidental to the Contract and no additional compensation will be allowed.

C. The Owner reserves the right to alter the Drawings, modify incidental work as may be necessary, and increase or decrease quantities of work to be performed including deduction or cancellation of any one or more of the Pay Items.

D. Quantities necessary to complete the work as shown on the Drawings or as specified herein govern over those shown in the Bid Form. The Engineer will make corrections and interpretations as may be deemed necessary for fulfillment of the intent of the Contract Documents.

E. The Engineer will make measurements and determinations as necessary to classify the work within Pay Items and determine the quantities for payment.

F. If the Contractor's Application for Payment is not in accordance with the Engineer's determination of quantities for payment, the Application will be returned for correction and resubmittal.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION

GENERAL CONDITIONS

3.1 SITE MOBILIZATION/DEMOBILIZATION – Bid Item No. 1

A. Payment for this item will be made at the Contract Lump Sum (LS) unit price bid basis for this item. The percent completion of the project shall be based

on the percent of the total project actually constructed and not on the percent of the Contract price completed.

B. Full compensation for preparatory work and operations in mobilizing and demobilizing for the project including but not limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to and from the project site, for establishment of temporary offices/field trailer, buildings, safety equipment, sanitary and other facilities, securing temporary layout spaces for stockpiling of materials and earth, and compliance with permit conditions for permits secured by either the Owner or Contractor. This pay item shall include all General Requirements not listed as separate items.

C. Payment item for mobilization shall not exceed five percent (5%) of the Base Bid contract price.

3.2 BONDS AND INSURANCE – Bid Item No. 2

A. Payment for this item will be made at the Contract Lump Sum (LS) unit price bid basis for the item.

B. Payment item for bonds and insurance shall not exceed two percent (2%) of Base Bid contract price.

3.3 MAINTENANCE OF TRAFFIC – Bid Item No. 3

A. Payment for this item will be made at the Contract Lump Sum (LS) unit price bid basis for this item. The percent completion of the project shall be based on the percent of the total project constructed and not on the percent of the Contract price completed.

B. The quantity of traffic control to be considered for payment shall be equivalent to the percentage of the project determined by the Engineer to be complete as of the date of the pay request submitted. The percent completion of the project shall be based on the percent of the total project constructed and not on the percent of the Contract price completed.

C. The Contract Unit Price shall include compensation for required labor, materials, and equipment necessary to keep roadways and property accesses in service during construction activities in accordance with the Contract Documents and FDOT Permit Conditions.

D. This item includes development and implementation of the maintenance of traffic plan, traffic control, flagman, portable changeable (variable) message

signs, detour signs, barricades, advance warning arrow panels, etc. in order to provide safety and traffic access in accordance with local and state requirements.

3.4 AS-BUILT RECORD DRAWINGS – Bid Item No. 4

A. Payment for this item will be made at the Contract Lump Sum (LS) unit price bid basis for this item. The percent completion of the project shall be based on the percent of the total project actually constructed and not on the percent of the Contract price completed.

B. One set of full-size design drawings on reproducible material and an electronic file of the design drawings on portable thumb drive will be furnished to the Contractor by the Engineer. The Contractor shall maintain full size (24" x 36") field drawings to reflect the "as-built" items of work as the work progresses. Upon completion of the work, the Contractor shall prepare a record set of "as-built" drawings on full size, reproducible material and an electronic file in AutoCAD 2018 or latest version. No payment will be made for "as-built" drawings until both the reproducible and electronic files are received and accepted by the Owner.

C. This item does not include surveying work required for layout and alignment of utility improvements.

D. The signed and sealed As-Built drawings prepared by professional surveyor are required to be submitted with each pay request.

3.5 NPDES PERMIT/EROSION PROTECTION MEASURES – Bid Item No. 5

A. Payment for this item shall be made on a Contract Lump Sum (LS) unit price bid basis for this item and shall be based on the percentage of work completed. The percent completion of the project shall be based on the percent of the total project actually constructed and not on the percent of the Contract price completed.

B. Payment for Contractor required NPDES Permit application (Notice of Intent and Notice of Termination), reporting and associated erosion protection measures including turbidity abatement for dewatering procedures.

C. The Contract Unit Price shall include compensation for required labor, materials, and equipment necessary for obtaining and complying with the NPDES Permit and providing Erosion Protection Measures during

construction activities in accordance with the Contract Documents.

D. This item includes NPDES inspections and reporting per the permit conditions and all erosion protection including protection of existing drainage inlets.

3.6 DEWATERING – Bid Item No. 6

A. Payment for this item will be made at a Contract Lump Sum (LS) unit price bid basis for this item. The percent completion of the project shall be based on the percent of the total project constructed and not on the percent of the Contract price completed.

B. The Contract Unit Price shall include full compensation for labor, material, equipment, and cleanup necessary for providing dewatering and disposal operation for the construction of the proposed improvements. This item includes, well points, settling basin, piping, Silent Knight Pumps or equivalent, pump noise mitigation and all other required dewatering appurtenances. Dewatering pumps shall have mitigation measures to reduce the noise level to less than 60 dBa measured at the base of residential structures.

C. Discharge water exiting the Contractor's dewatering system shall not exceed background turbidity of the receiving water body. Discharge shall comply, at a minimum, with SFWMD permit conditions and FDEP requirements for a Generic Permit for the discharge of Produced Groundwater from a non-contaminated site activity (62-621.300(2) FAC) and any other applicable regulations governing discharge of dewatering water. Water discharge activities shall be adjusted accordingly and corrective actions taken if the water exiting the dewatering system exceeds these requirements to be compliant with all applicable regulations. Contractor shall implement best management practices (BMPs) and install pollution control devices including but not limited to settling tanks, silt barriers, and hay bales as needed to comply with discharge water quality requirements.

D. If the Contractor uses any existing drainage system for dewatering activities then the Contractor will be required to receive permits to do so and follow all permit conditions as well as to desilt the existing drainage system prior to project completion. Include this desilting work under this bid item.

3.7 INDEMNIFICATION – Bid Item No. 7

A. Payment for this item will be made at the Contract Lump Sum (LS) unit price

bid basis for this item.

B. Consideration for Indemnification shall be in accordance with the Front-End Contract Documents.

AREA 5 RECLAIM WATER IMPROVEMENTS

3.8 MILLING EXISTING ASPHALT PAVEMENT (1") – Bid Item No. 8

A. Payment for this item will be made at the Contract Square Yard (SY) unit price basis for this item.

B. The Contractor's unit price shall include full compensation for milling existing asphalt pavement, where indicated on the plans to 1-inch (average). The unit price shall include compensation for labor, materials, and equipment required to mill existing asphalt pavement as shown on the drawings, and haul to an offsite location for disposal at no additional cost to the Owner.

C. Existing asphalt concrete that is damaged incidental to the construction shall be replaced by the Contractor at no additional cost to the Owner.

D. The unit price shall also include all necessary labor, materials, and equipment to adjust the valve boxes, manholes, rims, inlets or other fixtures to final grade, transitions to existing pavement, and any other work required to complete the paving, unless paid for under separate pay item.

3.9 TYPE S-III ASPHALT PAVEMENT (INCL. TACK COAT) – Bid Item No. 9

A. Payment for this item will be made on a Contract Ton (TN) unit price basis for this item.

B. The Contract Unit Price bid for asphalt shall include all labor, material, and equipment required to construct the asphaltic concrete pavement as shown on the drawings. The unit price shall include tack coating, fine grading, compaction, rolling, brooming, and other miscellaneous work required to complete the work in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition, and City of Delray Beach Standard Details, 2024 Edition. The unit price shall also include any supervision and coordination of sub-contractors if used on this project. This includes multiple mobilizations as required to complete the

work.

C. The unit price shall also include all necessary labor, materials, and equipment to adjust the valve boxes, manholes, rims, inlets or other fixtures to final grade, transitions to existing pavement, and any other work required to complete paving, unless paid for under separate pay item.

D. Asphalt concrete that is damaged incidental to the construction or asphalt that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.10 CONCRETE SIDEWALK – Bid Item No. 10

A. Payment for this item will be made on a Contract Square Foot (SF) unit price basis for this item.

B. The Contract Unit Price shall include full compensation for all labor, materials, equipment, and testing required to construct the concrete sidewalk in accordance with FDOT standards and with the plans and specifications.

C. Concrete sidewalk thickness shall be 6”.

D. Payment shall be made for concrete sidewalk as indicated on the drawings and as required to meet ADA compliance.

E. Concrete that is damaged incidental to the construction or concrete that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.11 CONCRETE CURBS AND GUTTER – Bid Item No. 11

A. Payment for this item will be made on a Contract Linear Foot (LF) unit price basis for this item.

B. The Contract Unit Price for each type of concrete curb and/or gutter, including flared ends and transitions, drop curbs, formwork, rebar (as applicable) installed and accepted shall include all labor, materials, equipment and testing necessary to prepare the sub-base and install the concrete curbs and/or gutter in accordance with the plans, specifications and per FDOT and City of Delray Beach Standard Details, 2024 Edition.

C. Payment shall be made for concrete curb and gutter as indicated on the

drawings. Concrete that is damaged incidental to the construction or concrete that is defective shall be replaced by the Contractor at no additional cost to the Owner.

D. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 11a – 12” Header Curb

2. Bid Item 11b – Type F

3. Bid Item 11c – Type D

3.12 ASPHALT WALKWAY – Bid Item No. 12

A. Payment for this item will be made on a Contract Square Foot (SF) unit price basis for this item.

B. The Contract Unit Price shall include full compensation for all labor, materials, equipment, and testing required to construct the asphalt walkway in accordance with FDOT standards and with the plans and specifications.

C. Asphalt that is damaged incidental to the construction or asphalt that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.13 PAVEMENT MARKINGS – Bid Item No. 13

A. Payment for this item will be made on a Contract Lump Sum (LS) unit price bid basis. The percent completion of the bid item shall be based on the percent of the total bid item constructed and not on the percent of the Contract price completed.

B. The Contract Unit Price shall include compensation for all labor and equipment required to furnish and install temporary and permanent traffic paint pavement markings, complete and accepted.

C. Pavement markings shall be in conformance with City Standards, MUTCD, and the material listed on the FDOT Approved Products List.

D. Pavement markings that are damaged incidental to the construction or markings that are defective shall be replaced by the Contractor at no

additional cost to the Owner.

3.14 DIP (CL350) RECLAIMED WATER MAIN (CEMENT LINED) – Bid Item No. 14

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price basis for this item.

B. The Contractor's unit price shall include full compensation for DIP (CL350) reclaimed water main (cement lined), push-on or restrained joint as indicated, shall be determined by the number of Linear Feet (LF) of each pipe installed, in place, completed and approved. The footage shall be the horizontal distance measured along the surface of the trench between the centerlines of connecting or branch mains. The length of all fittings, sleeves, bends and valves in the main shall be included in the footage as typical sections of the pipeline being measured.

C. The unit price bid per foot (regardless of width of excavation) under this item shall be full compensation for the following: unloading, stringing, clearing and preparing pipe corridor, all excavation of any type including rock and limestone, hand trimming, complying with the State of Florida Trench Safety Act, sheeting, shoring, de-watering, backfilling, mechanical bell restraining devices (gasket or bell harness type), sleeves, supporting power poles, trench and pavement restoration (subgrade, base, and temporary asphalt), temporary asphalt to provide a level pavement surface temporarily until milling and installation of final asphalt pavement, existing utility protection, temporary plugs, flushing, testing, water for testing, and all restoration and other appurtenances required to complete construction of the pipeline within green space, pavement, or sidewalks, and not included in other bid items.

D. This item does not include milling and final asphalt pavement.

E. The unit price bid per foot shall also include painting a purple stripe on top of the ductile iron pipe.

F. Mechanical joint restraints at pipe connections to fittings and gate valves is not included.

G. The unit price bid per foot shall also include the cost for soft digs to verify location (horizontal and vertical) of all utility crossings, including paralleling

of utilities, prior to construction of the proposed reclaimed water main.

H. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 14a – 6” Restrained Joint

2. Bid Item 14b – 6” Push-On

3.15 DIP COMPACT MJ FITTINGS (CEMENT LINED) – Bid Item No. 15

A. Payment for this item will be made on a Contract Tons (TONS) unit price basis for this item.

B. The Contractor’s unit price bid for this item shall be full compensation for furnishing, installing, and testing compact mechanical joint fittings (cement lined). The fittings must be domestic cast fittings. Only fittings actually installed will be measured for payment, based on certified shipping weight slips supplied by the Contractor.

C. This item does not include mechanical joint restraints.

3.16 MECHANICAL JOINT RESTRAINT – Bid Item No. 16

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contractor’s unit price bid for this item shall be full compensation for furnishing and installing mechanical joint restraints, glands, bolts, gaskets, etc. for all fittings and valves, unless otherwise specified in separate bid items.

3.17 CONNECT TO EXISTING RECLAIMED WATER MAIN – Bid Item No. 17

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The unit price bid for this item shall include full compensation for the furnishing and installation of reclaimed water main connections (sizes vary) as shown on the Drawings including all adapter fittings, glands, bolts, gaskets and restraining devices, removing existing plug, all restoration work

and all appurtenances and miscellaneous items of work required.

C. Bid Item includes advance notification of shut down to all affected residents, coordination and scheduling of the operation of valves by City personnel to effect shut down, restraining existing mains, dewatering of existing mains, cutting and plugging of existing mains, pipe, fittings, valves, saddles, flushing, installation of sleeves and other connecting pipe and fittings (with joint restraints), pressure testing, and any other operations and restoration required to make the connection complete.

D. Payment shall also include full compensation for providing all excavation, backfilling, fittings, thrust blocking, isolation of piping, and restraint or other appurtenances necessary on the existing reclaimed water mains in accordance with the plans and specifications

3.18 6” GATE VALVES – Bid Item No. 18

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contractor’s unit price per gate valve and shall include all necessary labor and materials for furnishing and installing the gate valves and appurtenances as called for in the plans. This includes furnishing and installing concrete pads for the valve boxes (box lids will be painted Pantone 522 C for reclaim water) complete with identification disc. No separate payment shall be made under this item for valves required for wet taps.

C. The number of valves to be paid will be determined by the actual number of units installed and accepted. Payment shall include the cost of painting the valve box.

3.19 4” PVC IRRIGATION SLEEVE – Bid Item No. 19

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price basis for this item.

B. The Contract Unit Price will include compensation for labor, material, and equipment required to install the irrigation sleeve in accordance with the plans and specifications. Payment will also include full compensation for installation with trenchless technologies and other appurtenances necessary to install the irrigation sleeve.

3.20 2” AIR RELEASE VALVE WITH MANHOLE – Bid Item No. 20

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contract Unit Price per each 2” compact body air release valve and manhole shall include all necessary labor, equipment, and materials including air release valve, strap saddle, precast concrete manhole structure, frame and cover as shown on the plans and details. This includes all restoration with respect to installing the 2” air release valve and manhole.

3.21 RESTORE GRASS AREA WITH SOD – Bid Item No. 21

A. Payment for this item will be made on a Contract Square Yard (SY) basis.

B. The Contract Unit Price shall include full compensation for furnishing and installing the sod along alleyways and roadways including site preparation, grading, installation, watering, maintenance, etc. as indicated on the plans and details.

C. Sod that is diseased or in poor condition or is damaged incidental to the construction shall be replaced by the Contractor at no additional cost to the Owner.

D. St. Augustine sod shall be installed in areas as shown on the plan with irrigation and Bahia sod installed in areas without irrigation.

E. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 21a – St. Augustine

2. Bid Item 21b - Bahia

AREA 10 RECLAIM WATER IMPROVEMENTS

3.22 MILLING EXISTING ASPHALT PAVEMENT (1”) – Bid Item No. 22

A. Payment for this item will be made at the Contract Square Yard (SY) unit price basis for this item.

B. The Contractor’s unit price shall include full compensation for milling existing asphalt pavement, where indicated on the plans to 1-inch (average). The unit price shall include compensation for labor, materials,

and equipment required to mill existing asphalt pavement as shown on the drawings, and haul to an offsite location for disposal at no additional cost to the Owner.

C. Existing asphalt concrete that is damaged incidental to the construction shall be replaced by the Contractor at no additional cost to the Owner.

D. The unit price shall also include all necessary labor, materials, and equipment to adjust the valve boxes, manholes, rims, inlets or other fixtures to final grade, transitions to existing pavement, and any other work required to complete the paving, unless paid for under separate pay item.

3.23 TYPE S-III ASPHALT PAVEMENT (INCL. TACK COAT) – Bid Item No. 23

A. Payment for this item will be made on a Contract Ton (TN) unit price basis for this item.

B. The Contract Unit Price bid for asphalt shall include all labor, material, and equipment required to construct the asphaltic concrete pavement as shown on the drawings. The unit price shall include tack coating, fine grading, compaction, rolling, brooming, and other miscellaneous work required to complete the work in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition, and City of Delray Beach details. The unit price shall also include any supervision and coordination of sub-contractors if used on this project. This includes multiple mobilizations as required to complete the work.

C. The unit price shall also include all necessary labor, materials, and equipment to adjust the valve boxes, manholes, rims, inlets or other fixtures to final grade, transitions to existing pavement, and any other work required to complete paving, unless paid for under separate pay item.

D. Asphalt concrete that is damaged incidental to the construction or asphalt that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.24 PAVER BRICK PAVEMENT AND WALKWAYS – Bid Item No. 24

A. Payment for this item will be made on a Contract Square Yard (SY) unit price basis for this item.

B. The quantity of brick paver pavement and walkway restoration shall be determined by the measurement of the units removed, re-installed, and

accepted.

C. The Contract Unit Price shall include full compensation for all labor, materials, and equipment necessary to restore the existing brick paver driveways in accordance with the plans and specifications. This includes replacement of joints, bedding sand and/or base cement mortar where it is existing.

D. Brick pavement and walkway replacement beyond the limits established by the project construction drawings will not be considered for payment.

3.25 CONCRETE SIDEWALK – Bid Item No. 25

A. Payment for this item will be made on a Contract Square Foot (SF) unit price basis for this item.

B. The Contract Unit Price shall include full compensation for all labor, materials, equipment, and testing required to construct the concrete sidewalk in accordance with FDOT standards and with the plans and specifications.

C. Concrete sidewalk thickness shall be 6”.

D. Payment shall be made for concrete sidewalk as indicated on the drawings and as required to meet ADA compliance.

E. Concrete that is damaged incidental to the construction or concrete that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.26 CONCRETE CURBS AND GUTTER – Bid Item No. 26

A. Payment for this item will be made on a Contract Linear Foot (LF) unit price basis for this item.

B. The Contract Unit Price for each type of concrete curb and/or gutter, including flared ends and transitions, drop curbs, formwork, rebar (as applicable) installed and accepted shall include all labor, materials, equipment and testing necessary to prepare the sub-base and install the concrete curbs and/or gutter in accordance with the plans, specifications and per FDOT and City of Delray Beach Standard Details.

C. Payment shall be made for concrete curb and gutter as indicated on the

drawings. Concrete that is damaged incidental to the construction or concrete that is defective shall be replaced by the Contractor at no additional cost to the Owner.

D. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 26a – 12” Header Curb

2. Bid Item 26b – Type F

3. Bid Item 26c – Type D

4. Bid Item 26d – Valley Gutter

3.27 PAVEMENT MARKINGS – Bid Item No. 27

A. Payment for this item will be made on a Contract Lump Sum (LS) unit price bid basis. The percent completion of the bid item shall be based on the percent of the total bid item constructed and not on the percent of the Contract price completed.

B. The Contract Unit Price shall include compensation for all labor and equipment required to furnish and install temporary and permanent traffic paint pavement markings, complete and accepted.

C. Pavement markings shall be in conformance with City Standards, MUTCD, and the material listed on the FDOT Approved Products List.

D. Pavement markings that are damaged incidental to the construction or markings that are defective shall be replaced by the Contractor at no additional cost to the Owner.

3.28 REMOVE AND REPLACE CHAIN LINK FENCE - 6’ – Bid Item No. 28

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price basis for this item.

B. The Contractor’s unit price shall include full compensation for all labor and equipment required to remove and replace chain link fencing.

3.29 DIP (CL350) RECLAIMED WATER MAIN (CEMENT LINED) – Bid Item No. 29

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price

basis for this item.

B. The Contractor's unit price shall include full compensation for DIP (CL350) reclaimed water main (cement lined), push-on or restrained joint as indicated, shall be determined by the number of Linear Feet (LF) of each pipe installed, in place, completed and approved. The footage shall be the horizontal distance measured along the surface of the trench between the centerlines of connecting or branch mains. The length of all fittings, sleeves, bends and valves in the main shall be included in the footage as typical sections of the pipeline being measured.

C. The unit price bid per foot (regardless of width of excavation) under this item shall be full compensation for the following: unloading, stringing, clearing and preparing pipe corridor, all excavation of any type including rock and limestone, hand trimming, complying with the State of Florida Trench Safety Act, sheeting, shoring, de-watering, backfilling, mechanical bell restraining devices (gasket or bell harness type), sleeves, supporting power poles, trench and pavement restoration (subgrade, base, and temporary asphalt), temporary asphalt to provide a level pavement surface temporarily until milling and installation of final asphalt pavement, existing utility protection, temporary plugs, flushing, testing, water for testing, and all restoration and other appurtenances required to complete construction of the pipeline within green space, pavement, or sidewalks, and not included in other bid items.

D. This item does not include milling and final asphalt pavement.

E. The unit price bid per foot shall also include painting a purple stripe on top of the ductile iron pipe.

F. Mechanical joint restraints at pipe connections to fittings and gate valves is not included.

G. The unit price bid per foot shall also include the cost for soft digs to verify location (horizontal and vertical) of all utility crossings, including paralleling

of utilities, prior to construction of the proposed reclaimed water main

H. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 28a – 6” Restrained Joint

2. Bid Item 28b – 6” Push-On

3.30 DIP COMPACT MJ FITTINGS (CEMENT LINED) – Bid Item No. 30

A. Payment for this item will be made on a Contract Tons (TONS) unit price basis for this item.

B. The Contractor’s unit price bid for this item shall be full compensation for furnishing, installing, and testing compact mechanical joint fittings (cement lined). The fittings must be domestic cast fittings. Only fittings actually installed will be measured for payment, based on certified shipping weight slips supplied by the Contractor.

C. This item does not include mechanical joint restraints.

3.31 MECHANICAL JOINT RESTRAINT – Bid Item No. 31

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contractor’s unit price bid for this item shall be full compensation for furnishing and installing mechanical joint restraints, glands, bolts, gaskets, etc. for all fittings and valves, unless otherwise specified in separate bid items.

3.32 TAPPING SLEEVE AND VALVE – Bid Item No 32

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contract Unit Price for each type and size tap shall include all necessary labor and materials for a pressure tested and approved tap, including tapping sleeve, gate valve and valve box. This includes all restoration with respect to installing tapping tee and/or cross and gate valve(s).

C. This includes furnishing and installing concrete pads for reclaimed water

main valve boxes (as required) complete with identification disc.

D. Contractor shall field verify existing reclaimed water main diameter and material prior to submitting shop drawing for tapping sleeve and gate valve.

E. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 32a – 6”x6” Tapping Sleeve and Valve

2. Bid Item 32b – 12”x6” Tapping Sleeve and Valve

3.33 6”X6” CUT-IN TEE – Bid Item No. 33

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contract Unit Price for each type and size cut-in tee shall include all necessary labor and materials for furnishing and installing the cut-in tee to the existing reclaimed water main, including a ductile iron cut-in sleeve and associated restraints. Stainless steel insert sleeves must be used when installing tees on HDPE pipe.

3.34 6” GATE VALVES – Bid Item No. 34

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contractor’s unit price per gate valve and shall include all necessary labor and materials for furnishing and installing the gate valves and appurtenances as called for in the plans. This includes furnishing and installing concrete pads for the valve boxes (box lids will be painted Pantone 522 C for reclaim water) complete with identification disc. Tapping valves are not included under this bid item.

C. The number of valves to be paid will be determined by the actual number of units installed and accepted. Payment shall include the cost of painting the valve box.

3.35 RESTORE GRASS AREA WITH SOD – Bid Item No. 35

A. Payment for this item will be made on a Contract Square Yard (SY) basis.

B. The Contract Unit Price shall include full compensation for furnishing and

installing the sod along alleyways and roadways including site preparation, grading, installation, watering, maintenance, etc. as indicated on the plans and details.

C. Sod that is diseased or in poor condition or is damaged incidental to the construction shall be replaced by the Contractor at no additional cost to the Owner.

D. St. Augustine sod shall be installed in areas as shown on the plan with irrigation and Bahia sod installed in areas without irrigation.

AREA 14 RECLAIM WATER IMPROVEMENTS

3.36 MILLING EXISTING ASPHALT PAVEMENT (1") – Bid Item No. 36

A. Payment for this item will be made at the Contract Square Yard (SY) unit price basis for this item.

B. The Contractor's unit price shall include full compensation for milling existing asphalt pavement, where indicated on the plans to 1-inch (average). The unit price shall include compensation for labor, materials, and equipment required to mill existing asphalt pavement as shown on the drawings, and haul to an offsite location for disposal at no additional cost to the Owner.

C. Existing asphalt concrete that is damaged incidental to the construction shall be replaced by the Contractor at no additional cost to the Owner.

D. The unit price shall also include all necessary labor, materials, and equipment to adjust the valve boxes, manholes, rims, inlets or other fixtures to final grade, transitions to existing pavement, and any other work required to complete the paving, unless paid for under separate pay item.

3.37 TYPE S-III ASPHALT PAVEMENT (INCL. TACK COAT) – Bid Item No. 37

A. Payment for this item will be made on a Contract Ton (TN) unit price basis for this item.

B. The Contract Unit Price bid for asphalt shall include all labor, material, and equipment required to construct the asphaltic concrete pavement as shown on the drawings. The unit price shall include tack coating, fine grading, compaction, rolling, brooming, and other miscellaneous work required to

complete the work in accordance with Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition, and City of Delray Beach Standard Details, 2024 Edition. The unit price shall also include any supervision and coordination of sub-contractors if used on this project. This includes multiple mobilizations as required to complete the work.

C. The unit price shall also include all necessary labor, materials, and equipment to adjust the valve boxes, manholes, rims, inlets or other fixtures to final grade, transitions to existing pavement, and any other work required to complete paving, unless paid for under separate pay item.

D. Asphalt concrete that is damaged incidental to the construction or asphalt that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.38 CONCRETE SIDEWALK – Bid Item No. 38

A. Payment for this item will be made on a Contract Square Foot (SF) unit price basis for this item.

B. The Contract Unit Price shall include full compensation for all labor, materials, equipment, and testing required to construct the concrete sidewalk in accordance with FDOT standards and with the plans and specifications.

C. Concrete sidewalk thickness shall be 6”.

D. Payment shall be made for concrete sidewalk as indicated on the drawings and as required to meet ADA compliance.

E. Concrete that is damaged incidental to the construction or concrete that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.39 CONCRETE CURBS AND GUTTER – TYPE F – Bid Item No. 39

A. Payment for this item will be made on a Contract Linear Foot (LF) unit price basis for this item.

B. The Contract Unit Price for each type of concrete curb and/or gutter, including flared ends and transitions, drop curbs, formwork, rebar (as applicable) installed and accepted shall include all labor, materials,

equipment and testing necessary to prepare the sub-base and install the concrete curbs and/or gutter in accordance with the plans, specifications and per FDOT and City of Delray Beach Standard Details, 2024 Edition.

C. Payment shall be made for concrete curb and gutter as indicated on the drawings. Concrete that is damaged incidental to the construction or concrete that is defective shall be replaced by the Contractor at no additional cost to the Owner.

3.40 PAVEMENT MARKINGS – Bid Item No. 40

A. Payment for this item will be made on a Contract Lump Sum (LS) unit price bid basis. The percent completion of the bid item shall be based on the percent of the total bid item constructed and not on the percent of the Contract price completed.

B. The Contract Unit Price shall include compensation for all labor and equipment required to furnish and install temporary and permanent traffic paint pavement markings, complete and accepted.

C. Pavement markings shall be in conformance with City Standards, MUTCD, and the material listed on the FDOT Approved Products List.

D. Pavement markings that are damaged incidental to the construction or markings that are defective shall be replaced by the Contractor at no additional cost to the Owner.

3.41 REMOVE AND REPLACE CHAIN LINK FENCE - 6’ – Bid Item No. 41

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price basis for this item.

B. The Contractor’s unit price shall include full compensation for all labor and equipment required to remove and replace chain link fencing.

3.42 REMOVE AND REPLACE METAL FENCE – 4’ – Bid Item No. 42

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price basis for this item.

B. The Contractor’s unit price shall include full compensation for all labor and equipment required to remove and replace 4’ metal fencing..

3.43 DIP (CL350) RECLAIMED WATER MAIN (CEMENT LINED) – Bid Item No. 43

A. Payment for this item will be made on a Contract Linear Feet (LF) unit price basis for this item.

B. The Contractor's unit price shall include full compensation for DIP (CL350) reclaimed water main (cement lined), push-on or restrained joint as indicated, shall be determined by the number of Linear Feet (LF) of each pipe installed, in place, completed and approved. The footage shall be the horizontal distance measured along the surface of the trench between the centerlines of connecting or branch mains. The length of all fittings, sleeves, bends and valves in the main shall be included in the footage as typical sections of the pipeline being measured.

C. The unit price bid per foot (regardless of width of excavation) under this item shall be full compensation for the following: unloading, stringing, clearing and preparing pipe corridor, all excavation of any type including rock and limestone, hand trimming, complying with the State of Florida Trench Safety Act, sheeting, shoring, de-watering, backfilling, mechanical bell restraining devices (gasket or bell harness type), sleeves, supporting power poles, trench and pavement restoration (subgrade, base, and temporary asphalt), temporary asphalt to provide a level pavement surface temporarily until milling and installation of final asphalt pavement, existing utility protection, temporary plugs, flushing, testing, water for testing, and all restoration and other appurtenances required to complete construction of the pipeline within green space, pavement, or sidewalks, and not included in other bid items.

D. This item does not include milling and final asphalt pavement.

E. The unit price bid per foot shall also include painting a purple stripe on top of the ductile iron pipe.

F. Mechanical joint restraints at pipe connections to fittings and gate valves is not included.

G. The unit price bid per foot shall also include the cost for soft digs to verify location (horizontal and vertical) of all utility crossings, including paralleling

of utilities, prior to construction of the proposed reclaimed water main.

H. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 43a – 6” Restrained Joint

2. Bid Item 43b – 8” Restrained Joint

3. Bid Item 43c – 8” Push-On

3.44 DIP COMPACT MJ FITTINGS (CEMENT LINED) – Bid Item No. 44

A. Payment for this item will be made on a Contract Tons (TONS) unit price basis for this item.

B. The Contractor’s unit price bid for this item shall be full compensation for furnishing, installing, and testing compact mechanical joint fittings (cement lined). The fittings must be domestic cast fittings. Only fittings actually installed will be measured for payment, based on certified shipping weight slips supplied by the Contractor.

C. This item does not include mechanical joint restraints.

3.45 MECHANICAL JOINT RESTRAINT – Bid Item No. 45

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contractor’s unit price bid for this item shall be full compensation for furnishing and installing mechanical joint restraints, glands, bolts, gaskets, etc. for all fittings and valves, unless otherwise specified in separate bid items.

C. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 45a – 6” Mechanical Joint Restraint

2. Bid Item 45b – 8” Mechanical Joint Restraint

3.46 CONNECT TO EXISTING RECLAIMED WATER MAIN – Bid Item No. 46

A. Payment for this item will be made on a Contract Each (EA) unit price basis

for this item.

B. The unit price bid for this item shall include full compensation for the furnishing and installation of reclaimed water main connections (sizes vary) as shown on the Drawings including all adapter fittings, glands, bolts, gaskets and restraining devices, removing existing plug, all restoration work and all appurtenances and miscellaneous items of work required.

C. Bid Item includes advance notification of shut down to all affected residents, coordination and scheduling of the operation of valves by City personnel to effect shut down, restraining existing mains, dewatering of existing mains, cutting and plugging of existing mains, pipe, fittings, valves, saddles, flushing, installation of sleeves and other connecting pipe and fittings (with joint restraints), pressure testing, and any other operations and restoration required to make the connection complete.

D. Payment shall also include full compensation for providing all excavation, backfilling, fittings, thrust blocking, isolation of piping, and restraint or other appurtenances necessary on the existing reclaimed water mains in accordance with the plans and specifications

3.47 TAPPING SLEEVE AND VALVE – Bid Item No. 47

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contract Unit Price for each type and size tap shall include all necessary labor and materials for a pressure tested and approved tap, including tapping sleeve, gate valve and valve box. This includes all restoration with respect to installing tapping tee and/or cross and gate valve(s).

C. This includes furnishing and installing concrete pads for reclaimed water main valve boxes (as required) complete with identification disc.

D. Contractor shall field verify existing reclaimed water main diameter and

material prior to submitting shop drawing for tapping sleeve and gate valve.

E. Payment shall be made at the unit price per the corresponding bid item:

1. Bid Item 47a – 8”x6”

2. Bid Item 47b – 12”x8”

3.48 GATE VALVES – Bid Item No. 48

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contractor’s unit price per gate valve and shall include all necessary labor and materials for furnishing and installing the gate valves and appurtenances as called for in the plans. This includes furnishing and installing concrete pads for the valve boxes (box lids will be painted Panton 522 C for reclaim water) complete with identification disc. Tapping valves are not included under this bid item.

C. The number of valves to be paid will be determined by the actual number of units installed and accepted. Payment shall include the cost of painting the valve box.

D. Payment shall be made at the unit price per the corresponding bid item:

1. Bid Item 48a – 6” Gate Valves

2. Bid Item 48b – 8” Gate Valves

3.49 2” AIR RELEASE VALVE WITH MANHOLE – Bid Item No. 49

A. Payment for this item will be made on a Contract Each (EA) unit price basis for this item.

B. The Contract Unit Price per each 2” compact body air release valve and manhole shall include all necessary labor, equipment, and materials including air release valve, strap saddle, precast concrete manhole structure, frame and cover as shown on the plans and details. This includes

all restoration with respect to installing the 2” air release valve and manhole.

3.50 RESTORE GRASS AREA WITH SOD – Bid Item No. 50

A. Payment for this item will be made on a Contract Square Yard (SY) basis.

B. The Contract Unit Price shall include full compensation for furnishing and installing the sod along alleyways and roadways including site preparation, grading, installation, watering, maintenance, etc. as indicated on the plans and details.

C. Sod that is diseased or in poor condition or is damaged incidental to the construction shall be replaced by the Contractor at no additional cost to the Owner.

D. St. Augustine sod shall be installed in areas as shown on the plan with irrigation and Bahia sod installed in areas without irrigation.

E. Payment shall be at the unit price per the corresponding bid item:

1. Bid Item 50a – St. Augustine

2. Bid Item 50b - Bahia

ALLOWANCES

3.51 UNDEFINED CONTINGENCY ALLOWANCE – Bid Item No. 51

A. Payment under this item shall be made as stipulated in Specifications Section 01 21 13 – Cash Allowance.

3.52 PRE-CONSTRUCTION PROFESSIONAL AUDIO/VIDEO OF CONSTRUCTION SITE ALLOWANCE – Bid Item No. 52

A. Payment under this item shall be made as stipulated in Specifications Section 01 21 13 – Cash Allowance.

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SECTION 01 26 13

REQUESTS FOR INTERPRETATION

PART 1 - GENERAL

1.1 SUMMARY: REQUESTS FOR INTERPRETATION (RFI)

A. The Contractor may submit Requests For Interpretation (RFI) to the Engineer to expedite the Contractor's performance on the Project. RFIs will be submitted following the requirements, all as described in this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 01 of these Specifications.
   2. Individual requirements for submittals will be described in pertinent Sections of these Specifications.

C. Work not included:
   1. Incomplete submittals will not be reviewed by the Engineer.
   2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer unless specifically called for within the Contract Documents.

D. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Make submittals of RFIs in accordance with the provisions of this Section.

F. Prior to submitting each RFI, the Contractor shall first carefully study and compare the Contract Documents, field conditions, other Owner provided information, Contractor prepared Coordination Drawings, and prior Project correspondence and documentation to determine that the information requested is not reasonably obtainable from such sources.

G. The Contractor shall submit each RFI sufficiently in advance of the date by which such information is required to allow the Engineer sufficient time, in the Engineer's professional judgement, to permit adequate review and response and to permit Contractor compliance with the latest construction schedule.

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 This Subsection intentionally left blank.

PART 3 - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. Each RFI shall be submitted to the Engineer, in writing, on such form and with such accompanying information as the Engineer may require for such purpose. Each RFI shall identify the specific sources which were reviewed by the Contractor in its efforts to determine the information requested, and a statement to the effect that the information being requested could not be determined from such sources.

B. Consecutively number all submittals.
   1. When material is submitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
   2. On re-submittals, cite the original submittal number for reference.

C. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
   1. Use Request for Interpretation (RFI) Form, Section 01 26 13.13.

D. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.

E. RFI Submittal log:
   1. Maintain an accurate RFI submittal log for the duration of the Work, showing current status of all submittals at all times, the date of the request, to whom the request was made, by whom the request was made, the nature of the request, and the Engineer's resolution thereof.

2. Make the RFI submittal log available to the Engineer for the Engineer's review upon request.
3. Review this log at each Project Meeting and make the resolution of RFIs a part of the minutes of such meetings.

END OF SECTION

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01 26 13.13

REQUEST FOR INTERPRETATION (RFI) FORM

RFI NO._____

Contractor requests for interpretation will be considered upon receipt of this completed RFI Form. By submission of this form the Contractor attests to the fact that having carefully reviewed the Contract Documents and coordinated the Work with the appropriate trades and reviewed field conditions, that the information requested cannot be determined from such efforts as called for in the General Conditions of the Contract.

Date:_____ Project: _____

To:_____

Description of Requested Interpretation:_____

_____

_____

Specification References:_____

Drawing References:_____

Proposed method of resolving issue. Sketches and/or Pages Attached:_____ Yes ____ No

_____

_____

Potential impact on project cost:_____

Response Date:_____ List date by which response by Engineer is requested to maintain project schedule. (Allow sufficient time for response).

Signed:_____, Project Superintendent Signature signifies acceptance of responsibility for accuracy and completeness of information.

ENGINEER'S RESPONSE

Notations listed below indicate the Engineer's action on method proposed by the Contractor to resolve issues or remarks in response to RFI when no Contractor recommendation has been provided. Changes to Contract Amount and/or project time shall be processed using standard Change Order Forms. Sketches and/or Pages Attached_____Yes____No

_____

_____

Signed:_____ Date:_____

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SECTION 01 29 73

SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section defines the process whereby the Schedule of Values (lump sum price breakdown) shall be developed and incorporated into the cost loading function of the CPM Schedule in accordance with the requirements of Section 01 32 16 – Construction Progress Schedule.

B. Upon request of the Engineer, the Contractor shall support the Schedule of Values with data that shall substantiate their correctness.

C. The Schedule of Values, unless objected to by the Engineer, may be used for the lump sum portions of the Work as the basis for Payment Applications.

D. Monthly progress payment amounts will be determined from the monthly progress updates of the CPM Schedule activities.

E. Develop the Schedule of Values independent of but simultaneous with the development of the CPM Schedule activities and logic.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Section 01 11 00 – Summary of Work

B. Section 01 32 16 – Construction Progress Schedule

1.3 FORM AND CONTENT OF SCHEDULE OF VALUES

A. The Contractor shall type Schedule of Values on 8 ½" x 11" or 11” x 17" white paper. The Contractor 's standard forms and automated printout shall be considered for approval by the Engineer upon the Contractor 's request. The Contractor shall identify the Schedule of Values with:

1. Title of Project and Location.

2. Engineer and Owner's Project numbers.

3. Date of Submission.

B. The Schedule of Values shall list the installed value of the components of the Work in sufficient detail to serve as a basis for computing values for partial payments during construction.

C. The Contractor shall identify each line with the numbers and title of the respective major section of the Specifications.

D. For each major line item, the Contractor shall list sub-values of major products or operations under the item.

E. For the various portions of the Work:

1. Each item shall include a directly proportional amount of the Contractor 's overhead profit.

2. For items on which partial payments will be requested for stored materials, the Schedule of Values shall conform to the requirements of the General Conditions of these Contract Documents.

F. The sum of each item of the lump sum breakdown shall equal the lump sum in the Proposal. All lump sum values listed in the Schedule of Values plus the sum of the unit price shall equal the Total Contract Price.

1.4 PRELIMINARY SCHEDULE OF VALUES

A. Submit a preliminary Schedule of Values for the major components of the Work at the Preconstruction Conference in accordance with the requirements of Section 01 11 00 – Summary of Work.

B. At a minimum, submit proposed values for the following major Work components:

1. Mobilization: 5% percent of Contract Price;

2. the total value of instrumentation and control Work;

3. the total value of protective coatings Work;

4. the total value of yard mechanical Work inclusive of excavation, pipe installation, testing and backfill of pipe, and all incidental Work associated with underground pipe installations;

5. the total value of mechanical Work:

a. exclusive of yard mechanical Work included in Item 4 above, but including piping, valves, equipment, tanks, and appurtenances at new and existing structures;

b. break down this total value into separate values for each new and existing structure constructed or modified as a part of the Work;

6. the total value of structural reinforced concrete Work:

a. inclusive of excavation, dewatering, subgrade preparation, backfill, and incidental Work for new structures;

b. break down this total value shall be broken down into separate values for each new structure constructed as a part of the Work;

c. miscellaneous and minor concrete Work may be listed as one item in this breakdown;

7. the total value of site civil Work, inclusive of clearing and grubbing, paving, grading and drainage Work, and;

8. the total value of other Work not specifically included in the above items.

C. Review and Revisions

1. The Contractor and Engineer shall meet and jointly review the preliminary Schedule of Values and make any adjustments in value allocations if, in the opinion of the Engineer, these are necessary to establish fair and reasonable allocation of values for the major Work components.

2. Front-end loading will not be accepted.

3. The Engineer may require reallocation of major Work components from items in the above listing if in the opinion of the Engineer such reallocation is necessary.

4. This review of the preliminary Schedule of Values and discussion of any necessary revisions shall be completed within 15 Days from the date of Notice to Proceed.

1.5 DETAILED SCHEDULE OF VALUES

A. Prepare and submit a detailed Schedule of Values to the Engineer within 25 Days from the date of Notice to Proceed.

B. Base the detailed Schedule of Values on the accepted preliminary Schedule of Values for major Work components.

C. Because the ultimate requirement is to develop a detailed Schedule of Values sufficient to determine appropriate monthly progress payment amounts through cost loading of the CPM Schedule activities, furnish a sufficiently detailed breakdown in order to meet this requirement.

D. The Engineer will be the sole judge of acceptable numbers, details and description of values established.

E. If, in the opinion of the Engineer, a greater number of Schedule of Values items than proposed is necessary, add the additional items so identified by the Engineer.

F. Submit the minimum detail of breakdown of the major Work components as follows; furnish greater detail if requested by the Engineer:

1. Mobilization: no breakdown required;

2. Section 01 32 16 – Construction Progress Schedule: break down by submittal;

3. Break down the electrical Work by structure and yard facilities, as follows:

   a. Break down structures electrical Work into conduit and raceway installation, cable and wire installation, electrical equipment installation, terminations, and lighting; and,

   b. Break down yard facilities electrical Work by duct bank designation and substations;

4. Break down instrumentation and control Work by structure;

5. Protective Coating Work:

   a. Break down protective coating Work by structure and yard area;

   b. Where specific coating Work at structures or yard areas may be critical to performing the Work in order to meet milestone and Contract Times, such Work shall be included as individual pay and Schedule activity items;

6. Yard Piping Work:

   a. Break down into individual pipelines running from and to Contract termination points.

   b. Each pipeline shall be an individual pay item unless otherwise allowed by the Engineer.

7. Break down mechanical Work within each structure in order to identify individual piping systems, equipment installation by equipment name and number, and equipment testing and checkout.

8. Break down concrete structures into excavation, subgrade preparation, and appurtenant pre-foundation Work, concrete foundation construction, slabs on grade, walls/columns, suspended slabs, stairs, and the like (provide sufficiently detailed breakdown in order to accommodate necessary Schedule detail), hydrostatic structure testing, where required, and backfill.

9. Break down the sludge lagoons into excavation, earthwork subgrade protection and preparation, concrete base, sloped concrete, access

ramps/roadways, and other items determined to be necessary for the establishment of pay and schedule activity items.

10. Break down civil site Work into individual drainage piping, drainage structures, site concrete, paving, excavation cut and fill, removal of existing pipe, clearing and grubbing, and other items determined to be necessary for the establishment of pay and schedule activity items.

11. Break down pre-commissioning and commissioning based on completion milestones for each.

12. Break down other Work not specifically included in the above items, as necessary for the establishment of pay and schedule activity items.

G. Adjustments and Acceptance

1. The Contractor and Engineer shall meet and jointly review the detailed Schedule of Values within 14 Days from the date of Notice to Proceed, at which time the value allocations and extent of detail shall be reviewed in order to determine if necessary adjustments to the values are required, and to determine if sufficient detail has been proposed in order to allow acceptable cost loading of the CPM Schedule activities.

2. Make necessary adjustments to the value allocation or level of detail, and submit a revised detailed Schedule of Values within 30 Days from the date of Notice to Proceed.

3. Following acceptance of the detailed Schedule of Values, incorporate the values into the cost loading portion of the CPM Schedule.

4. Concurrently develop the CPM activities and logic with the development of the detailed Schedule of Values; however, it shall be necessary to adjust the detailed Schedule of Values to correlate to individual Schedule activities.

5. It is anticipated that instances will occur, due to the independent but simultaneous development of the Schedule of Values and the CPM Schedule activities, where interfacing these 2 documents will require changes to each document.

6. Schedule activities may need to be added to accommodate the detail of the Schedule of Values, and Schedule of Value items may need to be added to accommodate the detail of the CPM Schedule activities.

7. Where such instances arise, propose changes to the Schedule of Values and to the CPM Schedule activities in order to satisfy the CPM Schedule cost loading requirements.

1.6 CROSS-REFERENCE LISTING

A. To assist in the correlation of the Schedule of Values and the CPM Schedule, provide a cross-reference listing to be furnished in 2 parts:

1. In the first part, list each scheduled activity with the breakdown of the respective valued items making up the total cost of the activity; and,

2. In the second part, list the valued item with the respective schedule activity or activities that make up the total indicated cost.

B. In the case where a number of schedule items make up the total cost for a valued item (shown in the Schedule of Values), indicate the total cost for each Schedule of Value item.

C. Update and submit these listings in conjunction with the CPM monthly submittals as indicated in Section 01 32 16 – Construction Progress Schedule.

D. Incorporate approved Change Orders reflected in the CPM Schedule into the Schedule of Values as a single unit identified by the Change Order number.

1.7 CHANGES TO SCHEDULE OF VALUES

A. Changes to the CPM Schedule which additional activities not included in the original schedule but included in the original Work (schedule omissions) shall have values assigned as approved by the Engineer.

B. Reduce other activity values in order to provide equal value adjustment increases for added activities, as approved by the Engineer.

C. In the event that the Contractor and Engineer agree to make adjustments to the original Schedule of Values because of inequities discovered in the original accepted detailed Schedule of Values, increases and equal decreases to values for activities may be made.

PART 2 - MATERIALS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Work included: To enable orderly review during progress of the Work, and to provide for systematic discussion of issues, the Engineer will conduct project meetings throughout the construction period.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and normally are not part of project meetings content.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Agenda items: To the maximum extent practicable, advise the Engineer at least 24 hours in advance of project meetings regarding items to be added to the agenda.

F. Minutes:
   1. The Engineer will compile minutes of each project meeting and will furnish the meeting minutes electronically to the Contractor and Owner.
   2. Recipients of the meeting minutes may distribute as they wish.

1.3 QUALITY ASSURANCE

A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 No products are required in this Section.

PART 3 - EXECUTION

3.1 MEETING SCHEDULE

A. Project meetings will be scheduled at the Preconstruction Meeting.

B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 MEETING LOCATION

A. The Engineer will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

3.3 PRECONSTRUCTION MEETING

A. Preconstruction Meeting will be scheduled to be held within 20 working days after the effective date of the Agreement.
   1. Provide attendance by authorized representatives of the Contractor and major subcontractors.
   2. The Engineer will advise other interested parties, including the Owner, and request their attendance.

B. Minimum agenda: Data will be distributed and discussed on at least the following items:
   1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and Engineer.
   2. Channels and procedures for communications.
   3. Construction schedule, including sequence of critical work.
   4. Contract Documents, including distribution of required copies of original Documents and revisions.
   5. Processing of Shop Drawings and other data submitted to the Engineer for review.
   6. Processing of Bulletins, field decisions, and Change Orders.
   7. Rules and regulations governing performance of the Work; and

8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.

3.4 PROJECT MEETINGS

A. Progress meetings will be held throughout progress of the Work at intervals agreed to by Owner, Engineer, and Contractor. Interval will generally be monthly. Additional meetings may be added between the monthly meeting if deemed necessary by Owner or Engineer.

B. Contractor's project manager, job superintendent, major subcontractors and suppliers shall attend, as appropriate, to address agenda topics for each meeting. Contractor's representatives shall have authority to bind Contractor to decisions at the meetings.

C. The project schedule shall be updated monthly and shall be reviewed at each progress meeting. Contractor shall provide the following information in written form at each meeting.
   1. Construction progress, including:
      a. Activities completed this reporting period.
      b. Activities in progress this reporting period.
      c. Activities scheduled to commence this reporting period.
   2. Description of problem areas.
   3. Current and anticipated delays.
      a. Cause of the delay.
      b. Corrective action and schedule adjustments to correct the delay.
      c. Impact of the delay on other activities, on milestones, and on completion dates.
   4. Changes in construction sequence.

END OF SECTION

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SECTION 01 32 16

CONSTRUCTION PROGRESS SCHEDULES

PART 1 - GENERAL

1.1 SUMMARY

A. Prepare and maintain the schedules and reports described in this Section to assure adequate planning and execution of the Work so that the Work is completed within the Contract Times, and to assist the Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Requirements for progress schedule: General Conditions.
   3. Construction period: Form of Agreement.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Comply with pertinent provisions of Section 01 33 01.

F. Construction schedule: Prior to submission of the first Application for Payment, but no later than 30 calendar days after Contract Times commence, submit to the Engineer one reproducible copy and four prints of a construction schedule prepared in accordance with Part 3 of this Section.

G. Periodic reports: Update the construction progress monthly and submit it to the Engineer prior to submittal of each Application for Payment for completed work.
   1. Submit four prints of the construction schedule updated as described in Part 3 of this Section.

1.3 QUALITY ASSURANCE

A. Perform data preparation, analysis, charting, and updating in accordance with standards approved by the Engineer.

B. Reliance upon the approved schedule:
   1. The construction schedule as approved by the Engineer will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.
   2. Processing of the first Application for Payment will not be completed by the Engineer until the construction schedule has been submitted in accordance with 1.2 F. above.
   3. Processing of the 50 percent and 80 percent progress payment applications will not be completed by the Engineer until the periodic reports have been submitted in accordance with 1.2 G. above.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 CONSTRUCTION ANALYSIS

A. Graphically show by Critical-Path (CPM), Program Evaluation and Review Technique (PERT), Precedence Methods, bar-chart, or other means acceptable to the Engineer, the order and interdependence of all activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram.

B. Include, but do not necessarily limit indicated activities to:
   1. Project mobilization.
   2. Work elements.
   3. Special material and equipment installation and testing.
   4. Final cleanup.
   5. Final inspecting and testing.
   6. All activities by the Engineer that affect progress, required dates for completion, or both, for all and each part of the work.
   7. Contractor's anticipated working dates.

PART 3 - EXECUTION

3.1 CONSTRUCTION SCHEDULE

A. As soon as practicable after receipt of Notice to Proceed, complete the construction schedule in preliminary form, meet with the Engineer, review contents of the proposed construction schedule, and make all revisions agreed upon.

B. Submit in accordance with Paragraph 1.2 F. above.

3.2 PERIODIC REPORTS

A. As required under Paragraph 1.2 G. above, update the approved construction schedule.
   1. Indicate "actual" progress in percent completion for each activity;
   2. Provide written narrative summary of revisions causing delay in the program, and an explanation of corrective actions taken or proposed.

3.3 REVISIONS

A. Make only those revisions to approved construction schedule as are approved in advance by the Engineer.

END OF SECTION

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SECTION 01 32 33

PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

A. Provide photographs taken at the specified stages during construction, and in accordance with provisions of this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Comply with pertinent provisions of Section 01 33 01.

F. Except as otherwise directed and paid for, submit to the Engineer once each month digital image electronic files of each photograph taken the previous month.

G. Submit to the Engineer a complete set of digital image electronic files of all construction photographs.

1.3 QUALITY ASSURANCE

A. Contractor’s superintendent or foreman may act as the Contractor’s photographer and must be skilled and experienced in construction photography and whose work samples are acceptable to the Owner.

B. The Contractor’s photographer shall be identified. Do not replace the photographer without the Owner's written approval.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 CONSTRUCTION PHOTOGRAPHS

A. Provide a complete set of digital image electronic files of all construction photographs.
   1. Store on portable USB flash drive
   2. Images in uncompressed TIFF or JPG format.
      a. Image resolution of not less than 2048 x 1536 pixels.
      b. Include date and time in filename for each image.

B. Contractor shall retain the digital image electronic files for at least one year following Date of Substantial Completion.

C. Do not permit prints to be issued for any other purpose without specific written approval from the Owner.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

A. Except as otherwise specifically approved by the Engineer, make the photographs within three calendar days of the date of the Contractor's application for progress payment.
   1. To the maximum extent practicable, make photographs at approximately the same time of day throughout progress of the Work.
   2. When inclement weather is anticipated, consult with the Engineer and determine acceptable alternative arrangements.

B. Except as otherwise specifically approved by the Engineer, make the photographs from four separate locations around the Work.
   1. Select the locations to provide diversified overall views of the Work, from positions which are expected to remain accessible throughout progress of the Work.
   2. Identify each location by word description, by marked drawing, or by such other means as acceptable to the Engineer, to enable future photographs to be taken from the same position.
   3. When so directed by the Engineer because of the stage of construction, change one or more of the locations to new locations as the Engineer directs.

C. Make each photograph clear, in focus, with high resolution and sharpness, and with minimum distortion.

END OF SECTION

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SECTION 01 32 36

PRECONSTRUCTION VIDEO RECORDING

PART 1 - GENERAL

1.1 SUMMARY

A. Provide color audio-video documentation of construction areas prior to start of construction, as specified herein.
   1. Provide documentation on USB Flash drives.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Secure the services of a professional videographer skilled and experienced in preconstruction video recording and whose work samples are acceptable to the Owner.

B. Do not replace the videographer without the Owner’s written approval.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 REQUIREMENTS

A. Include coverage of at least 100 feet in each direction along the street and/or pipeline when documenting areas of work that are of minimal length or are isolated locations.

B. Upon acceptance of the USB Flash drives, the USB Flash drives become the property of the Owner. The Contractor may duplicate the video for his own use at his expense.

1.8 SCHEDULING

A. Schedule video so that no area is recorded more than 2 months prior to the actual beginning of construction in that area.

PART 2 - EQUIPMENT

2.1 GENERAL

A. Furnish all equipment, accessories, and materials to perform this service, except the specific plans of the proposed area to be televised, which will be furnished by the Owner.

2.2 TECHNICAL REQUIREMENTS

A. Provide the total audio-video recording system and procedures as required to produce a finished product that will fulfill the technical requirements of the project and the more subjective requirements of high quality video and audio production. Produce the video portion of the recording with bright, sharp, clear pictures with accurate colors and free from distortion, tearing, rolls, or other forms of picture imperfection. Produce the audio portion of the recording with proper volume, clarity, and free from distortion.

B. Make recordings with a digital video recorder.

C. Provide the documentation on USB Flash drives.

PART 3 - EXECUTION

3.1 GENERAL

A. Audio-video coverage will be required in areas not accessible by conventional wheeled vehicles. Obtain such coverage by walking or special conveyance approved by the Engineer.

3.2 TIME AND POSITION RECORDS

A. Audio:
   1. Begin each recording with the current date, project name, and Owner; followed by the general location, e.g., station along the route, name of the street, viewing side, and direction of progress.

3.3 RECORDING IDENTIFICATION

A. Properly identify all USB Flash drives with number, location, and project name and municipality in a manner acceptable to the Owner.

3.4 CONSTRUCTION AREA

A. Include coverage of all surface features located within the zone of influence of construction, supported by appropriate audio description. Make audio description simultaneously with video coverage. Include coverage, but not be limited to, all existing driveways, sidewalks, curbs, ditches, roadways, landscaping, trees, culverts, headwalls, bridges, and retaining walls or buildings located within such zone of influence.

B. Identify houses and buildings visually by house or business number, when visible, in such a manner that structures of the proposed system, e.g., valve vaults, can be located by reference.

C. Record at a rate of speed not exceeding 48 feet per minute in the general direction of travel. Control panning rates and zoom-in and zoom-out rates to provide clarity of the viewed object during playback.

D. Perform all recording during times of good visibility. Perform no documentation during periods of visible precipitation, or when more than 10 percent of the ground area is covered with snow or fallen leaves, unless otherwise authorized by the Engineer.

E. The Owner has the authority to designate what areas may be omitted or added for audio-video coverage.

3.5 CONTRACTOR'S RESPONSIBILITIES

A. Coordinate with the Owner a minimum of 1 week in advance prior to performing video recording for access to private areas affected by the proposed construction.

B. Use no electrical circuits within private property building structure at any time. Perform all documentation during regular business hours, unless otherwise specified by the private property owner or Engineer. Enter and leave private property in a professional and orderly, workmanship like manner.

C. Provide for an audio-visual presentation for review.

1. The Owner has the authority to reject all or any portion of the video recording not conforming to Specifications.
2. Re-record any coverage not acceptable to the Owner at no cost to the Owner.
3. Reschedule recording of unacceptable coverage as soon as possible after being notified of non-acceptance of previous recordings.
4. Submit completed audio-visual USB Flash drives to the Owner and Engineer before commencement of construction.
   a. Provide at least two (2) copies of each USB Flash drive.

D. All acceptable recordings are the property of the Owner.

END OF SECTION

SECTION 01 33 01

SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

A. Provide submittals required by the Contract Documents and revise and resubmit as necessary to establish compliance with the specified requirements, all as described in this Section.

B. Related work:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
2. Individual requirements for submittals will be described in pertinent Sections of these Specifications.
   a. The process for securing approval of proposed substitutions is described in Section 01 62 01, "Product Options and Substitutions".

C. Work not included:
1. Submittals not required by the various Specification Sections of the Contract Documents will not be reviewed by the Engineer.
2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer unless specifically called for within the Contract Documents.

D. References – (Reserved).

1.2 SUBMITTALS

A. Provide submittals of Shop Drawings, Samples, Substitution Requests, progress schedules and other items required in the Contract Documents through Submittal Exchange in accordance with the provisions of this Section.

B. On this Project, Submittal Exchange will be utilized as a project document organization, submission, review, and processing tool. Provide other necessary correspondence, communication, documents, etc. required in the Contract Documents through Submittal Exchange, as defined by the Engineer. This may include operation and maintenance manuals, American Iron and Steel documentation, certificates, guarantees, warrantees, spare part records, testing data and reports, requests for information, requests for proposals, contract modification requests, change orders, meeting minutes, closeout documents, etc. Provisions in other specification sections may apply.

1.3 QUALITY ASSURANCE

A. Coordination of submittals:
1. Review and coordinate all aspects of each item being submitted.
2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
3. Certify that this coordination has been performed by affixing the Contractor's signature to each Contractor's Submittal Transmittal Form Attachment 01 33 01.

B. Resubmittals and reimbursement of Engineer's costs.
1. The Engineer will record all time used by the Engineer in the review of any third and subsequent submittals.
2. The Owner will reimburse the Engineer at the Engineer's standard hourly rate for all time spent in such third and subsequent reviews and deduct such costs from payments due the Contractor.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 SHOP DRAWINGS

A. Provide Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
1. Shop Drawings are not required for manholes, valve vaults, catch basins, pipe, and appurtenances needed for infrastructure systems (storm sewers, sanitary sewers, and water distribution) so long as the items are the materials and manufacturers specified in the project manual.

B. Submit Shop Drawings electronically to the Engineer as a single .pdf file set.
1. Attach, as the first page of each Shop Drawing, a completely executed Contractor's Submittal Transmittal Form as provided through Submittal Exchange.
2. Collate the electronic .pdf file to include all data pertaining to the Shop Drawing Submittal in one .pdf set.
a. Separate .pdf files submitted will be cause for rejection and the Shop Drawing will be returned to the Contractor.
3. In cases where Electronic Shop Drawing files exceed a size that may not be practical for electronic transmission via the standard Submittal Exchange process, utilize "Manage My Library" in the Contractor Representative's Account to upload files up to 300MB.

C. Submit all required shop drawings for a specification section at the same time under one Contractor's Submittal Transmittal Form Attachment 01 33 01.

D. Do not submit partial submittals of an item within a specification section or use a separate Contractor's Submittal Transmittal Form for separate items within a particular section.

E. Identify exceptions or items that do not comply with the specifications and provide explanation for exception or non-compliance.

F. For Shop Drawings required to be resubmitted for review, include the following:
   1. A completely executed cover sheet Contractor's Submittal Transmittal Form Attachment 01 33 01 as provided through Submittal Exchange.
   2. A cover letter responding to each of the review comments returned to the Contractor by the Engineer with the previous review and specifically stating:
      a. If the equipment and resubmitted data provided complies with the review comment(s) then provide:
         (1) How the equipment complies.
         (2) Specifically indicate where support documentation can be located in the shop drawing.
      b. If the equipment and resubmitted data provided cannot or does not comply with the review comment(s) then provide:
         (1) What is being provided to comply instead.
         (2) Justify why the Contractor feels the Engineer should consider it is acceptable to allow the Contractor to not comply with the specification.
   3. Resubmission of a complete and fully-inclusive shop drawing with all data pertinent to the item(s) being submitted.
      a. Partial submission of data that only addresses the Engineer's specific review comments, or a portion thereof, and does not include all data for a complete resubmittal, will be cause for immediate rejection.

G. Upon completion of the Engineers review of the Shop Drawings, one electronic .pdf file will be returned to the Contractor for their distribution.
   1. Upon the request of the Engineer or Owner at any time, the Contractor shall provide up to four (4) color, hard copy, shop drawing submittals.
   2. Upon the request of the Engineer or Owner at any time, the Contractor shall provide up to four (4) .pdf file shop drawing submittals on separate compact discs or removable USB storage.

2.2 MANUFACTURERS' LITERATURE

A. Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, clearly indicate which portion of the contents is being

submitted for review by highlighting, circling, or other means, or by crossing out contents that do not pertain to the submittal and are not to be considered.

1. This also applies to specifically indicating, when applicable, which optional items will or will not be provided with items specified.

2.3 SAMPLES

A. Provide Sample or Samples identical to the precise article proposed to be provided.
   1. Identify as described under "Identification of Submittals" below.

B. Number of Samples required:
   1. Unless otherwise specified, submit Samples in the quantity which is required to be returned, plus one which will be retained by the Engineer.
   2. By prearrangement in specific cases, a single Sample may be submitted for review and, when approved, be installed in the Work at a location agreed upon by the Engineer.
   3. Because submittals shall be submitted to the Engineer in an electronic format as described herein, the Contractor shall specifically indicate on the Contractor's Submittal Transmittal Form Attachment 01 33 01 included with each submittal (when samples are required) when and where the physical samples will or have been transmitted for physical observation.
   4. Include as part of the electronic submittal a .pdf copy of any and all transmittals, shipping information, signatures of receipt, etc. identifying the transmission and receipt of the said sample(s).

2.4 COLORS AND PATTERNS

A. Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available in the specified products, make a submittal through Submittal Exchange that includes the Contractor's Submittal Transmittal Form Attachment 01 33 01 as provided through Submittal Exchange, with an accurate scanned color copy .pdf of the color or pattern literature. Then, deliver directly to the Owner and Engineer through standard mail, UPS, FedEx, etc. three (3) hard copies each, color charts, patterns, samples, etc. for the Owner's and Engineer's final selection. The submittal review returned in Submittal Exchange will serve as the record of the selection made by the Owner and/or Engineer.

2.5 MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES

A. Maintain in a safe place at the site one copy of manufacturers' recommended installation procedures for all equipment and materials.
   1. Make these installation procedures readily available to the Engineer for reference.

B. When the manufacturers' recommended installation procedures are submitted as part of the shop drawings required by the Contract Documents, approval of such installation procedures by the Engineer will not be required.

PART 3 - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. Consecutively number all submittals, beginning with identifying number “001” for the first submittal delivered by the Contractor.
   1. When items are submitted for any reason, transmit under a new Contractor’s Submittal Transmittal Form Attachment 01 33 01 and with a new transmittal number.
   2. When material is resubmitted for any reason, cite the original identifying submittal number followed by insertion of a letter “A” for the first resubmittal, “B” for the second resubmittal, and so on.

B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
   1. Use Contractor's Submittal Transmittal Form Attachment 01 33 01.

C. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.

3.2 GROUPING OF SUBMITTALS

A. Shop Drawings may be submitted for different specification sections under one Contractor’s Submittal Transmittal Form Attachment 01 33 01, provided the items are specifically and directly related to each other such that review of the items from different specification sections is pertinent for a complete review.
   1. Identify any and all items and their specific specification section(s) if included with and submitted under a differing main specification section submittal.
   2. Partial submittals may be rejected as not complying with the provisions of the Contract.
   3. The Contractor may be held liable for delays so occasioned.
   4. Do not submit unrelated items in group submittals.
   5. If the Contractor submits various items from various specification sections under one division (Ex. various sections in the Division 40 - Instrumentation and Control specifications), the Contractor is responsible to link each items from a different Specification to the main shop drawing under which the various sections were submitted

3.3 ELECTRONIC SUBMITTAL PROCEDURES

A. Summary:

1. Transmit submittals to Engineer in electronic (PDF) format using Submittal Exchange, a website service designed specifically for transmitting submittals between construction team members.
2. No exceptions.

B. Setup:
1. Obtain and pay for the Submittal Exchange subscription for this Project.
   a. Contact Russell Bell at Submittal Exchange at 515.631.6543 or Russell.bell@oracle.com to verify cost prior to bid.
   b. The minimum time frame to maintain the Submittal Exchange account for this project shall be the number of days for Final Completion, or up to and including the Date for Final Completion, plus additional three (3) months. The time frame, if required, will be extended due to approved contract time extensions, at no additional cost to the Owner.
   c. Setup shall be finalized and the website service fully operational within seven (7) days after the Preconstruction Conference, but in no case, later than the date of the Notice to Proceed.
2. Coordinate directly with Submittal Exchange to transmit the Project Manual to allow them to setup the website service.
3. Coordinate directly with Submittal Exchange to transmit the required Owner, Engineer, Contractor, and Project information to properly populate the various template forms created in Submittal Exchange.
4. The Engineer, or B&W Project Manager, will set up and define the requirements of the Project to be submitted, transmitted, and maintained through Submittal Exchange, as well as formats, numbering conventions, sections, categories, tabs, etc.
5. At Contractor's option, training is available from Submittal Exchange regarding use of website and .pdf submittals.
   a. Contact Submittal Exchange at 515.631.6543.
6. Internet Service and Equipment Requirements:
   a. Email address and Internet access at Contractor's main office.
   b. Adobe Acrobat (www.adobe.com), Bluebeam .pdf Revu (www.bluebeam.com), or other similar .pdf review software for applying electronic stamps and comments.

C. Procedures:
1. Submittal Preparation - Contractor may use any or all of the following options:
   a. Subcontractors and Suppliers provide electronic (.pdf) submittals to Contractor via the Submittal Exchange website.
   b. Subcontractors and Suppliers provide paper submittals to General Contractor who electronically scans and converts to .pdf format.
   c. Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to .pdf format.
2. Review and certify by signature that the submittal complies with the requirements of the Contract Documents including verification of

manufacturer/product, dimensions and coordination of information with other parts of the work.

3. Transmit each submittal to Engineer using the Submittal Exchange website, www.submittalexchange.com. The Contractor shall utilize the transmittal form template provided for in the Submittal Exchange website service, specifically tailored to the Project, as noted above in Setup.
4. Engineer review comments will be made available on the Submittal Exchange website for downloading.
5. Contractor will receive automatic email notice from Submittal Exchange of completed review.
6. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.
7. All resubmittals shall be a complete submittal with all pages of the previous submission(s) with a new transmittal form affixed. Partial submittals will be returned marked rejected.

D. Project Close-out:

1. Upon Project Completion and verification all Submittal Exchange entries have been provided to the satisfaction of the Engineer, the Engineer will request the Project be archived.
    a. Within 24 hours of submission of the request to archive, Submittal Exchange will provide an email confirmation, with a web location for selected team members to access the archive.
        (1) Due to file size, it is the responsibility Owner, Engineer, and Contractor to download the archive to a location of their choosing.
        (2) The archive will be available for download thirty (30) days after notification, after which time, it will be discarded by Submittal Exchange and future access will no longer be provided.

3.4 TIMING OF SUBMITTALS

A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.

B. In scheduling, allow at least ten working days for review by the Engineer following the Engineer's receipt of the submittal.

END OF SECTION

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SECTION 01 41 26

PERMITS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes permit requirements for building, work in highway rights-of-way, work in railroad rights-of way and for stormwater discharges permits.

B. All permits acquired by the Owner are provided in the Appendices.

C. Related Sections:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
2. Other permits requirements may also be described in other Sections of these Specifications.

D. References:
1. (Reserved).

1.2 SUBMITTALS

A. Contractor shall provide to Engineer a copy of all Contractor acquired permits prior to commencing work subject to said permit.

B. Submit copy of permits acquired by Contractor in compliance with pertinent provisions of Section 01 33 01.

C. Within 14 days of commencement as stated in the Notice to Proceed, submit a list of permits and licenses the Contractor shall obtain, indicating the agency required to grant the permit and the expected date of submittal for the permit and required date for receipt of the permit.

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 BUILDING PERMITS – (Reserved).

1.10 PERMITS

A. Contractor is responsible to acquire all necessary permits to complete the construction of the work as shown on the Drawings whether those permits are listed within this specification section or not.

END OF SECTION

SECTION 01 42 13

ABBREVIATIONS AND ACRONYMS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes abbreviations referenced in the Contract Documents.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.

B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 ABBREVIATIONS

A. Referenced Standards:
   1. Where the Contract Documents reference any published specifications or standards of any organization or association, comply with the requirements

of the specification or standards which are current on the date of Advertisement for Bids. In case of a conflict between the referenced specifications or standards, the one having the more stringent requirements shall govern.

2. In case of conflict between the referenced specifications or standards and the Contract Documents, the Contract Documents shall govern.

B. Abbreviations:

1. The following are definitions of abbreviations that may be used within the Project Manual:

AA - Aluminum Association
AASHTO - American Association of State Highway and Transportation Officials
ACI - American Concrete Institute
AISC - American Institute of Steel Construction
ANSI - American National Standard Institute
ASTM - American Society for Testing and Materials
AWG - American Wire Gauge
AWS - American Welding Society
AWWA - American Water Works Association
CBM - Certified Ballast Manufacturers Association
CRSI - Concrete Reinforcing Steel Institute
ICEA - Insulated Cable Engineers Association
IEEE - Institute of Electrical and Electronics Engineers, Inc.
ISA - Instrument Society of America
FS - Federal Specifications
NAPF – National Association of Pipe Fabricators
NEC - National Electrical Code (NFPA 70)
NECA - National Electrical Contractors' Association
NEMA - National Electrical Manufacturer's Association
NFPA - National Fire Protection Association or National Forest Products Association
NSF - National Sanitation Foundation
OSHA - U.S. Department of Labor, Occupational Safety and Health Department
PS - United States Products Standards
FDOT "STANDARD SPECIFICATIONS" - Florida Department of Transportation "Standard Specifications for Road and Bridge Construction" including Recurring Special Provisions and Interim Special Provisions.
SSPC – Society for Protective Coatings
UL - Underwriter's Laboratories, Inc.

END OF SECTION

SECTION 01 45 29

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes testing to be provided by an independent testing laboratory service.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Requirements for specific tests will be described in various Sections of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Provide the services of a testing laboratory approved by the Engineer and Owner.

B. Upon completion of each test and/or inspection, promptly distribute copies of test or inspection reports to the Engineer, to governmental agencies requiring submission of such reports, and to such other persons as directed by the Engineer.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 TESTING AGENCY DUTIES AND LIMITS OF AUTHORITY

A. Cooperate with the Engineer and the Contractor; provide qualified personnel and equipment to perform the scope of testing work outlined.

B. Acquaint the Engineer and the Contractor with testing procedures for special conditions encountered at the site.

C. Perform specified monitoring, sampling, and testing of the materials and construction.
   1. Comply with specified standards, ASTM, other authorities, and as specified.
   2. Ascertain compliance with the Contract Documents.
   3. Obtain written acknowledgment of sampling or testing.

D. Give prompt written notice to the Engineer and the Contractor of irregularities or deficiencies of work which are observed during performance of service.

E. The Laboratory is not authorized to release, revoke, alter or enlarge the Contract requirements, nor to approve or accept any portion of the work, nor to perform the duties of the Contractor.

PART 2 - PRODUCTS

2.1 PAYMENT FOR TESTING

A. Include within the Contract Price an amount sufficient to cover all testing required of the Contractor under pertinent Sections of these Specifications, and to cover all testing and inspecting required by governmental agencies having jurisdiction.

B. The Owner will pay for all testing and inspecting specifically requested by the Engineer over and above those described in Paragraph 2.1 A. above with prior Owner approval.

C. When tests indicate noncompliance with the Contract Documents, all testing and subsequent retesting occasioned by the noncompliance shall be performed by the same testing laboratory and the costs thereof shall be paid by the Contractor.

PART 3 - EXECUTION

3.1 TAKING SPECIMENS

A. Except as may be specifically otherwise approved by the Engineer, have the testing laboratory secure and handle all samples and specimens for testing.

3.2 COOPERATION WITH TESTING LABORATORY

A. Provide access to the Work at all times and at all locations where the Work is in progress. Provide facilities for such access to enable the laboratory to perform its functions properly.

B. Furnish casual labor and facilities:
   1. To obtain and handle samples at the site or at the source of the product to be tested.
   2. To facilitate testing operations.
   3. For laboratory's exclusive use for storage and curing of test samples on site.

C. Notify the testing agency sufficiently in advance of operations to allow for assignment of personnel and scheduling of its operations.

D. Provide the testing laboratory with copies of approved relevant shop drawings.

END OF SECTION

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SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes construction facilities and temporary controls required for the Work.

B. Related work:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
2. Comply with pertinent safety requirements and regulations for temporary facilities and controls.
3. Equipment normally furnished by the individual trades in execution of their own portions of the Work is not part of this Section.
4. Permanent installation and hookup of the various utility lines are described in other Sections.

C. References:
1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.

B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 REQUIREMENTS

A. Provide construction facilities and temporary controls needed for the Work including, but not necessarily limited to:
   1. Temporary utilities and services such as heat, water, electricity, telephone, and internet access.
   2. Field office for the Contractor's personnel.
   3. Sanitary facilities.
   4. Enclosures such as fencing, tarpaulins, barricades, and canopies.
   5. Temporary fencing of the construction site.
   6. Fire extinguishers.
   7. Dust and mud control.
   8. Traffic control.
   9. Security.
   10. Right-of-way and property line control.
   11. Temporary work boundary fence.
   12. Construction layout and staking.

PART 2 - PRODUCTS

2.1 UTILITIES AND SERVICES DURING CONSTRUCTION

A. Water:
   1. Provide necessary temporary piping and water supply and, upon completion of the work, remove such temporary facilities.
   2. Contractor shall pay for all potable water used from the Owner’s potable water system for the purpose of construction and testing.

B. Electricity:
   1. Provide necessary temporary wiring and, upon completion of the Work, remove such temporary facility.
   2. Provide area distribution boxes so located that the individual trades may furnish and use 100 feet maximum length extension cords to obtain power and lighting at points where needed for work, inspection, and safety.
   3. Provide and pay for electricity used in construction.

C. Heating: Provide and maintain heat necessary for proper conduct of operations needed in the Work.

D. Telephone:
   1. Make necessary arrangements and pay costs for installation and operation of telephone service to the Contractor's offices at the site.

E. Internet:
1. Make necessary arrangements and pay costs for installation and operation of high speed or broadband internet service to the Contractor’s offices at the site.

2.2 FIELD OFFICES AND SHEDS

A. Contractor's facilities:
1. Provide a field office and sheds adequate in size and accommodation for Contractor's offices, supply, and storage.
2. Within the Contractor's facilities, provide an enclosed space of not less than 200 square feet adequate for holding project meetings. Furnish with table, chairs, and utilities.

2.3 SANITARY FACILITIES

A. Provide temporary sanitary facilities meeting federal, state, and local health department requirements.
1. Maintain in a sanitary condition at all times.

2.4 ENCLOSURES

A. Provide and maintain for the duration of construction all scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

2.5 TEMPORARY FENCING

A. Provide and maintain for the duration of construction a temporary fence of design and type needed to prevent entry onto the Contractor’s Storage Areas whether as provided by the Owner or on private property that the Contractor has received legally binding agreement from the property owner.

B. Temporary work boundary fence (standard).
1. Provide fence 36-inch to 48-inch in height.
a. Material: Polyethylene, PVC, or wood lath.
2. Provide steel or wood posts.
a. Height: To support fence for total height after being driven.

C. Temporary work and staging area boundary fence (special).
1. Provide 6-foot tall chain link fence where indicated on the Drawings or in these Specifications.

2.6 FIRE EXTINGUISHERS

A. Provide and maintain not less than two fire extinguishers, multi-purpose dry chemical type with UL rating of 4A-60 B:C, 10-pound capacity, Amerex Model ABC, or equal, enclosed in suitable protecting cabinets and conveniently located for proper protection.

2.7 CONSTRUCTION LAYOUT

A. The Contractor shall furnish construction stakes required for layout and staking of the project.

B. The Contractor shall provide personnel, equipment, and material to perform layout and staking and to establish supplementary benchmarks.

C. Survey stakes shall be removed after a maximum of 1 month from installation of the stake. It is expected that the Contractor will construct the improvements for which the stakes have been installed in a timely manner. Exceptions can be made for “pig pens” utilized to protect survey benchmarks.

PART 3 - EXECUTION

3.1 MAINTENANCE AND REMOVAL

A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.

B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Engineer.

3.2 DUST AND MUD CONTROL

A. Take necessary precautions to control dust and mud associated with the Work, subject to the approval of the Engineer.
   1. In dry weather, spray dusty areas daily with water in order to control dust.
   2. Apply calcium chloride having a minimum chemical content of 77 percent calcium chloride at an application rate of 3 pounds per square yard of surface covered at locations as directed by the Engineer.

B. Take necessary steps to prevent the tracking of mud onto adjacent streets and highways.
   1. Wash mud resulting from the construction traffic off the adjacent streets and highways.
   2. Clean all permanent roadways used for construction activities by using motorized street sweeper that utilizes vacuum and water to pick up debris, when directed by Engineer.

3.3 TRAFFIC CONTROL

A. Protect and maintain traffic by the proper use of barricades, warning lights, flares, and necessary traffic control and safety devices, conforming to federal, state, and local regulations regarding their use.

B. Use forms of traffic control on public roadways required by the construction operations in accordance with the FDOT "Standard Plans for Road Construction".

C. Unless the Contractor has obtained written permission from the Engineer to temporarily close any street, alley, or other traveled way, keep such traveled way open to traffic on the existing pavement.

D. Maintain alternating one-way traffic from opposing directions during working hours. At all other times, provide sufficient width within existing shoulders or curbs to permit one lane of traffic in each direction.

E. Ensure that all barricades, warning signs, lights, and other devices are operational 24 hours each day, including Sundays and holidays, during the time the contract is in force.
   1. In the event of severe weather conditions, provide any additional personnel necessary to properly maintain all traffic control devices.

F. At the preconstruction meeting, furnish the name of the individual in the Contractor's direct employ who is to be responsible for the installation and maintenance of the traffic control for this project.
   1. If the actual installation and maintenance are to be accomplished by a Subcontractor, obtain the Engineer's consent at the time of the preconstruction meeting.
   2. The Owner will provide the Contractor with the name of its representative who will be responsible for the administration of the traffic control plan.

G. Provide access to private driveways at all times except during pipeline installation across a driveway.
   1. Keep driveway closure times to an absolute minimum.
   2. Warn homeowners 48 hours in advance of a driveway closure, and again just prior to closing to allow homeowners to move their vehicles.
   3. Coordinate alternate parking locations as necessary.
   4. Maintain access for emergency vehicles at all times.

H. Provide access to commercial or industrial driveways at all times except during pipeline installation across a driveway.
   1. Keep driveway closure times to an absolute minimum.
   2. If two driveway entrances exist, keep one driveway open at all times.
   3. Establish schedule for driveway closures with commercial or industrial establishments that will not obstruct passage of employees or customers during heavy use period.
   4. Maintain access for emergency vehicles at all times.

I. The costs for traffic control will be considered incidental to the Contract and no additional compensation will be allowed.

3.4 SECURITY

A. Take whatever measures are necessary to protect the safety of the public, workmen, and materials.
   1. Provide inspection of work area daily.
   2. Provide the security of the site, both day and night.

3.5 RIGHT-OF-WAY AND PROPERTY LINE CONTROL

A. Protect all right-of-way markers, property line iron pins, and easement iron pins during construction.
   1. Flag such control points prior to construction, and protect the points during the course of construction.

B. Establish tie-down control for any right-of-way markers or iron pins that may be lost or damaged during the work.

C. Re-establish any right-of-way markers or iron pins that are lost or damaged during construction, after completion of restoration work.

D. Provide the services of a Registered Land Surveyor for replacement of lost markers and pins.
   1. The cost for this work will be considered incidental to the Contract, and no additional compensation will be allowed.

3.6 WORK BOUNDARY FENCE

A. Provide fence along edges of all easement limits, shaft work zones, and access roads to delineate limit of Contractor's Work area, or where indicated on the Drawings.

B. Maintain fences until removal is approved by Engineer.
   1. Provide 6-foot tall chain link fence in place of standard work boundary fence if indicated on the Drawings.

3.7 CONSTRUCTION LAYOUT AND STAKING

A. The Contractor shall place construction layout stakes for this project. The Owner will provide adequate reference points and benchmarks. Any additional control points set by the Owner will be identified in the field to the Contractor and all field notes will be maintained by the Owner.

B. The Contractor shall establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary benchmarks necessary to secure a correct layout of the Work.

1. Stakes shall be set at sufficient intervals to assure construction in conformance with the Drawings.
2. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a Pay Item in the contract or to determine property lines between private properties.

C. The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions shown on the Drawings.
   1. Any inspection or checking of the Contractor's layout by the Engineer and the acceptance of all or any part of the layout shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the Work.
   2. The Contractor shall exercise care in the preservation of stakes and benchmarks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.

D. Responsibility of the Contractor:
   1. The Contractor shall establish control points necessary to construct the individual project elements.
   2. The Contractor shall locate right-of-way and easement points. The Contractor shall set all line stakes for the construction of fences by the Contractor.
   3. All work shall be according to normally accepted self-checking surveying practices.
      a. Field notes shall be kept in standard survey field notebooks and those books shall become the property of the Owner at the completion of the project.
      b. All notes shall be neat, orderly, and in accepted form.

END OF SECTION

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SECTION 01 55 26

TRAFFIC CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. The work specified in this Section consists of maintaining traffic within the limits of the project for the duration of the construction period, including any temporary suspensions of the work.

B. This shall include the construction and maintenance of:
   1. Any necessary detour facilities;
   2. The provision of necessary facilities for access to residences, businesses, etc., along the project;
   3. The furnishing, installation and maintenance of traffic control and safety devices during construction;
   4. The control of dust; and,
   5. Any other specific requirements to provide the safe and expeditious movement of traffic throughout the project.

C. The term “Maintenance of Traffic” shall include all of such facilities, devices and operations as are required for the safety and convenience of the public as well as for minimizing public nuisance.

D. Maintain local traffic and provide local access at all times.

E. A Maintenance of Traffic Plan must be submitted to the FDOT and Owner for review.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Florida Department of Transportation “Standard Specifications for Road and Bridge Construction.”

B. Federal Highway Administration “Manual on Uniform Traffic Control Devices for Streets and Highways.” (MUTCD)

C. Florida Department of Transportation “Design Standards.”

D. Florida Department of Transportation “Traffic Engineering Manual.”

E. Florida Department of Transportation “Manual of Uniform Minimum Standards for Design, Construction and Maintenance of Streets and Highways” (a.k.a. “Florida Greenbook).

1.3 CONTRACTOR SUBMITTALS

A. Maintenance of Traffic (M.O.T.) plans are required whenever traffic is deviated from its present use (changeover) for a period longer than a daylight operation.

B. M.O.T. plans shall be submitted to FDOT and Owner.

C. Plans shall have a north arrow, drawn by, date on which changeover is to occur, lane usage, type and location of all signs, lights, barricades, striping, barriers, traffic signals, all streets within the changeover area, Contractor's name and twenty-four (24) hour phone number.

D. The plan shall be approved no later than seven (7) days in advance and when a signal is involved no later than ten (10) days in advance of the desired changeover date. Owner will handle all news releases, notifying police, fire rescue, etc.

E. No changeover shall be allowed on Friday, day before a City holiday, nor during A.M. or P.M. peak.

F. Changeovers are discouraged in signalized intersections.

G. All M.O.T. plans shall be submitted through the FDOT.

H. In no case may the Contractor begin work until the M.O.T. plan has been approved in writing by FDOT and Owner.

I. Field modifications may be made with a representative of the Owner or FDOT present.

J. Failure to comply with the above may result in a partial and/or permanent reduction in payment to the Contractor.

1.4 PERFORMANCE REQUIREMENTS

A. TRAFFIC SIGNING

1. All signing shall be fabricated with high intensity sheeting.
2. All signs, thirty six inches (36") by thirty six inches (36") or eight square feet (8 sq. ft.) or larger shall be mounted on two (2) posts unless used in conjunction with a temporary condition.
3. The first two (2) advance warning signs shall have flashing amber Type "B" lighting and an eighteen inches (18") by eighteen inches (18") orange flag.
4. All existing signs are the property of either Owner or the State of Florida. The Contractor shall stockpile the above mentioned signs and contact Owner for pick-up.

B. TEMPORARY PAVEMENT MARKINGS

1. All temporary pavement markings shall be done in a professional manner without weaves or bows.
2. Raised pavement markers shall be placed along the center lines and edge lines of the detour at twenty foot (20') centers in the transition area where the alignment shift is ten feet (10') or greater.
3. Temporary pavement markings shall be applied to the intermediate asphalt course, and shall consist of foil-backed tape, paper tape or paint meeting both State and County specifications.
4. Temporary pavement markings shall also be applied to the final asphalt course unless otherwise directed by the Owner. All final course pavement markings shall consist of foil-backed tape.
5. All temporary tape skip-line pavement markings shall be at least four feet (4') in length with a maximum gap of thirty-six feet (36'). A two foot (2') stripe with a maximum gap of eighteen feet (18') may be used for roadways with severe curvature, or as directed by the Owner.
6. All painted lines size and color shall conform to MUTCD Part III. The thickness shall not be less than 15 mil, with 6 to 6-1/4 lbs. of beads per gallon of paint. Both shall be applied uniformly. All painted lines shall be refurbished if at any time the reflectivity falls below 150 minicandles.

C. FLAG MEN AND VESTS
1. Flag men shall be trained in the proper manner as set forth in the MUTCD and certified as per Section 102-3.2.3 of the FDOT Standard Specifications for Road and Bridge Construction.
2. All construction personnel shall wear a high visibility orange vest when working within fifteen feet (15') of the edge of the traffic way.

PART 2 - PRODUCTS

2.1 GENERAL EQUIPMENT REQUIREMENTS

A. BARRICADES, LIGHTS AND CONES
1. All barricades shall utilize high intensity sheeting.
2. When cones are used they shall be a minimum twenty-eight inches (28") high with a six inch (6") wide white band placed a minimum of three inches (3") but not more than four inches (4") from the top of the cone. An additional four inch (4") band should be placed a minimum of two inches (2") below the six inch (6") band.
3. Barricades and lights shall be serviced daily.

B. FLASHING ARROW BOARDS
1. Flashing arrow boards shall be used on any three (3) lane or larger roadway where traffic is being channelized or diverted, or as directed by the Florida Department of Transportation, or Florida Turnpike Authority.
2. Flashing arrow boards shall conform to Section 6E-9 of the MUTCD.
3. Solar arrow boards may be requested by the Owner or FDOT at any time.

PART 3 - EXECUTION

3.1 GENERAL

A. The Contractor shall keep sufficient cold patch asphalt on the job site to fill pot-holes and to perform other minor pavement maintenance as needed.

B. All highway equipment shall have a “Slow Moving Vehicle” sign with either a flasher or a beacon operating when the equipment is operating.

END OF SECTION

SECTION 01 62 01

PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes product options available to bidders and the Contractor, plus procedures for securing approval of proposed substitutions.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Make submittals after Effective Date of the Agreement in accordance with pertinent provisions of Section 01 33 01.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.

B. Require that all personnel who will enter upon the Owner's property certify their awareness of and familiarity with the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 PRODUCT OPTIONS

A. The Contract is based on standards of quality established in the Contract Documents.
   1. In agreeing to the terms and conditions of the Contract, the Contractor has accepted a responsibility to verify that the specified products will be available and to place orders for all required materials in such a timely manner as is needed to meet his agreed construction schedule.
   2. Neither the Owner nor the Engineer has agreed to the substitution of materials or methods called for in the Contract Documents, except as they may specifically otherwise state in writing.

B. Materials and/or equipment specified by name:
   1. Where materials and/or equipment are specified by naming one single manufacturer and/or model number, followed by words that indicate no substitution is permitted, only the material and/or equipment named is approved for incorporation into the Work.
   2. Should the Contractor demonstrate to the approval of the Engineer that a specified material or method was ordered in a timely manner and will not be available in time for incorporation into this Work, the Contractor shall submit to the Engineer such data on proposed substitute materials and/or equipment as are needed to help the Engineer determine suitability of the proposed substitution.

C. Where materials and/or equipment are specified by name and/or model number, followed by the words "or equal":
   1. The material and/or equipment specified by name establishes the required standard of quality.
   2. Materials and/or equipment proposed by the Contractor to be used in lieu of materials and/or equipment so specified by name shall in all ways equal or exceed the qualities of the named materials and/or equipment.
   3. The Engineer will record all time used by the Engineer to evaluate proposed substitute items. Owner will reimburse the Engineer at the Engineer's standard hourly rate for all time spent evaluating proposed substitute items and charge such costs from payments due the Contractor. Costs associated with review of proposed "or equal" items will not be charged to the Contractor.

D. Products specified by reference to standard specifications such as ASTM and similar standards do not require submittal except for interface within the Work.

1.8 DELAYS

A. Delays in construction arising by virtue of the non-availability of a specified material and/or method will not be considered by the Engineer as justifying an extension of the agreed Contract Time.

END OF SECTION

SECTION 01 66 11

STORAGE AND PROTECTION OF MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Additional procedures also may be prescribed in other Sections of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with Section 01 14 11 for Contractor's storage area.

B. Comply with the requirements of this Section for off-site storage.
   1. The Engineer reserves the right to visit and observe the off-site storage areas.

C. Store equipment and materials in accordance with the manufacturer's instructions.

D. Provide temporary weathertight enclosures to protect products from damage by the elements.

E. Protect finished surfaces through which equipment and materials are handled.

F. Provide protection for finished floor surfaces in traffic areas prior to allowing equipment or materials to be moved over such surfaces.

G. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

H. Do not store plant maintenance equipment, furniture, and laboratory equipment on site until they are needed by the Owner or for progress of work.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 MANUFACTURERS' RECOMMENDATIONS

A. Except as otherwise approved by the Engineer, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

1.8 PACKAGING

A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
   1. Maintain packaged materials with seals unbroken and labels intact until time of use.
   2. Promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.

B. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to manufacturer, grade, quality, and other pertinent information.

1.9 REPAIRS AND REPLACEMENTS

A. In event of damage, promptly make replacements and repairs to the approval of the Engineer and at no additional cost to the Owner.

B. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the Contract Time of Completion.

END OF SECTION

SECTION 01 71 13

MOBILIZATION

PART 1 - GENERAL

1.2 THE SUMMARY

A. This section covers the Work necessary to move in and move out personnel and equipment, set up and remove testing equipment, locate temporary facilitates, and clean site completely. Contractor shall mobilize as required for the proper performance and completion of the Work and in accordance with the Contract Documents.

B. Related Sections:

1. Section 01 50 00 – Temporary Facilities and Controls

2. Section 31 25 00 – Erosion and Sediment Controls

C. REFERENCE SPECIFICATIONS, CODES AND STANDARDS

1. Section 01 14 11 – Contractor Use of Premises

D. Mobilization shall include at least the following items:

1. Moving onto the Site of Contractor's plant and equipment necessary for the first month of operations.

2. Installing temporary construction power, wiring, and lighting facilities.

3. Establishing fire protection system.

4. Developing construction water supply.

5. Providing on-Site sanitary facilities and potable water facilities.

6. Arranging for and erection of Contractor 's Work and storage yards.

7. Constructing and implementing security features and requirements complying with Section 01 14 11 – Contractor Use of Premises.

8. Obtaining required permits.

9. Having OSHA required notices and establishing safety programs.

10. Having the Contractor 's superintendent at the Site full time.

11. Submitting initial submittals.

12. Submitting a site utilization plan which shows the location of, at minimum, site safety fencing, equipment and materials storage area, site access location, security measures such as locks, and connections to power and water as required.

1.3 PAYMENT FOR MOBILIZATION

A. The Contractor's attention is directed to the condition that no payment for mobilization, or any part thereof, will be recommended for payment under the Contract until mobilization items listed above have been completed.

PART 2 - PRODUCTS

2.1 GENERAL EQUIPMENT REQUIREMENTS

A. Provide all materials and equipment required to accomplish the Work as specified.

2.2 GENERAL EQUIPMENT REQUIREMENTS

A. Provide all materials and equipment required to accomplish the Work as specified.

PART 3 - EXECUTION

3.1 GENERAL

A. Set up equipment within the area designated on the Drawings. Accomplish all required Work in accordance with applicable portions, of these Specifications.

3.2 CONTAMINATION PRECAUTIONS

A. Avoid contamination of the project area. Do not dump waste oil, rubbish, or other similar materials on the ground.

3.3 CLEANING

A. Upon completion and acceptance of Work, remove from the site all equipment, debris, unused materials, temporary construction buildings, and other miscellaneous items resulting from or used in the operations. Replace or repair any facility which has been damaged during the construction Work. Restore the site as nearly as possible to its original condition.

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 - GENERAL

1.1 THE SUMMARY

A. Provide and pay for all field engineering services required for the project, including but not limited to:

1. Surveying work required in execution of the project.

2. Civil, structural, geotechnical or other professional engineering services specified or required to execute the Contractor's construction methods.

B. The Owner will identify existing control points on the Contract Drawings, as required or will provide copies of roadway plans indicating the control points.

C. The Contractor’s Surveyor shall complete a survey within the first 30 calendar days to confirm all bearing angles, stations and distances between control points so that a continuous pipeline without gaps is fabricated and installed without project delays.

D. Construction staking shall include all the surveying work required to lay out the Work and to control the location of the finished Project as shown on the Plans and as specified in these Specifications. The Contractor shall have the full responsibility for constructing the Project to the correct horizontal and vertical alignment, as shown on the Plans, as specified in these Specifications, or as directed by the Engineer. The Contractor shall assume all costs associated with rectifying Work constructed in the wrong location.

E. The Contractor shall be responsible for setting reference points and/or offsets, establishing baselines and all other layouts, staking, and all other surveying required for the construction of the Project.

F. The Contractor shall be responsible for all damage done to reference points, stakes, grade marks, horizontal and vertical control points, baselines, center lines, and temporary benchmarks, and shall bear the cost of re-establishing same if disturbed as a result of the Contractor's operations. Baselines shall be defined as the line to which the location of the Work is referenced, i.e., edge of pavement, road centerline, property line, right-of-way, or survey line.

G. The Contractor shall be responsible for staking out the permanent and temporary easements or the limits of construction to ensure that the Work is not deviating from the limits indicated on the Plans.

H. Related sections:

1. Section 01 11 00 – Summary of Work

2. Section 01 77 01 – Contract Closeout

1.2 CONTRACTOR SUBMITTALS

A. Submit name and address of Surveyor and if required, Professional Engineer.

B. On request of the Owner, submit documentation to verify accuracy of field engineering work.

1.3 QUALITY ASSURANCE

A. Qualifications: Qualified Professional Engineer and/or Registered Land Surveyor, acceptable to the Owner

B. Field Logs: Maintain a complete and accurate log of all control and survey work as it progresses.

C. The Contractor shall furnish to the Engineer documentation, prepared by a surveyor currently registered in the State of Florida indicating that staking is being done to the horizontal and vertical alignment shown in the Plans. This requires that the Contractor hire, at the Contractor's own expense, a currently registered surveyor, acceptable to the Owner, to provide ongoing construction staking or confirmation of such.

D. Any deviations to the Plans and these Specifications shall be confirmed by the Engineer prior to construction of that portion of the Project.

1.4 PROJECT SITE/CONDITIONS

A. The Plans provide the locations and/or coordinates of principal components of the Project. The alignment of some components of the Project may be indicated in these Specifications. The Engineer may direct changes to the locations of some of the components of the Project or provide clarification to questions regarding the correct alignment.

B. The survey points, control points, and baseline to be provided to the Contractor shall be limited to only that information which can be found on the Site of the Work by the Contractor.

1.5 PERFORMANCE REQUIREMENTS

A. Project Survey Requirements:

1. Establish lines and levels. Locate and layout by instrumentation and similar appropriate means:

a. Site improvements:

(1) Stakes for grading, fill and topsoil replacement.

(2) Utility slopes and invert elevations.

b. Batter boards for structures.

c. Building foundation, column locations and floor levels.

d. Controlling lines and levels required for mechanical and electrical trades.

2. From time to time verify layouts by same methods.

3. Locate and mark all known underground utilities prior to entrance of any equipment on the site. All such utilities shall be protected from heavy traffic. Establish and maintain barricades around all manholes, drains and similar underground items. Immediately notify the Owner of any conflicts between operations and any in ground items to remain.

4. Establish a minimum of two (2) permanent benchmarks referenced to data established by survey control points and record locations with horizontal and vertical data on record documents.

B. Site Work

1. Staking Precision: The precision of construction staking shall match the precision of a component's location as indicated on the Plans. Staking of utilities shall be done in accordance with generally accepted practices for the type of utility.

2. Paved Surfaces: The Contractor shall establish a reference point for establishing and verifying the paving subgrade and finished grade elevations. Any variance with the grades shown on the Plans shall be identified by the Contractor and approved by the Engineer prior to constructing the base.

C. Sewers and Accessories

1. Staking Precision: The precision of construction staking shall be no less than 1: 10,000. Horizontal distances shall be measured with a precision no less than 0.01 feet, and horizontal angles measured with a precision of no less than ten (10) seconds.

2. Reference Points:

a. The Contractor shall obtain the coordinates on each manhole and provide this information to the Engineer.

b. Reference points shall be placed, at or no more than three (3) feet, from the outside of the construction easement or right-of-way. The locations of the reference points shall be recorded in a log with a copy provided to the Engineer for use prior to his verifying reference point locations. Distances between reference points and the manhole centerlines shall be accurately measured to the nearest 0.01 foot.

c. The Contractor shall give the Engineer reasonable notice that reference points are set. The reference point locations must be verified by the Engineer prior to commencing clearing and grubbing operations.

PRODUCTS (NOT USED)

PART 2 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section establishes general requirements pertaining to cutting (including excavating), fitting, and patching of the Work required to:
   1. Make the several parts fit properly.
   2. Uncover work to provide for installing, inspecting, or both, of ill-timed work.
   3. Remove and replace work not conforming to requirements of the Contract Documents.
   4. Remove and replace defective work.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. In addition to other requirements specified, upon the Engineer's request uncover work to provide for inspection by the Engineer of covered work, and remove samples of installed materials for testing.
   3. Do not cut or alter work performed under separate contracts without the Engineer's written permission.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Request for Engineer's consent:
   1. Prior to cutting which affects structural safety, submit written request to the Engineer for permission to proceed with cutting.
   2. Should conditions of the Work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Engineer and secure his written permission and the required Change Order prior to proceeding.

F. Notices to the Engineer:
   1. Prior to cutting and patching performed pursuant to the Engineer's instructions, submit cost estimate to the Engineer. Secure the Engineer's approval of cost estimates and type of reimbursement before proceeding with cutting and patching.
   2. Submit written notice to the Engineer designating the time the Work will be uncovered, to provide for the Engineer's observation.

1.2 QUALITY ASSURANCE – (Reserved).

1.3 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.4 SITE CONDITIONS – (Reserved).

1.5 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 MATERIALS

A. For replacement of items removed, use materials complying with pertinent Sections of these Specifications.

2.2 PAYMENT FOR COSTS

A. The Owner will reimburse the Contractor for cutting and patching performed pursuant to a written Change Order, after claim for such reimbursement is submitted by the Contractor. Perform other cutting and patching needed to comply with the Contract Documents at no additional cost to the Owner.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection:
   1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching, and backfilling.
   2. After uncovering the work, inspect conditions affecting installation of new work.

B. Discrepancies:
   1. If uncovered conditions are not as anticipated, immediately notify the Engineer and secure needed directions.
   2. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION PRIOR TO CUTTING

A. Provide required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of the Work.

3.3 PERFORMANCE

A. Perform required excavating and backfilling as required under pertinent other Sections of these Specifications.

B. Perform cutting and demolition by methods which will prevent damage to other portions of the Work and provide proper surfaces to receive installation of repair and new work.

C. Perform fitting and adjusting of products to provide finished installation complying with the manufacturer's recommendations for specified equipment, products, tolerances, and finishes.

D. Perform slight alterations needed to make adjustable parts fit to fixed parts to provide a complete installation.

E. Refinish surfaces as necessary to match adjacent finishes.

END OF SECTION

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SECTION 01 74 23

FINAL CLEANING

PART 1 - GENERAL

1.1 SUMMARY

A. Throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. In addition to standards described in this Section, comply with requirements for cleaning as described in other pertinent Sections of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.

B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

A. Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 - EXECUTION

3.1 PROGRESS CLEANING

A. General:
1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
3. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the environment.

B. Site:
1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Restack, tidy, or otherwise service arrangements to meet the requirements of Paragraph 3.1 A. 1. above.
3. Maintain the site in a neat and orderly condition at all times.

C. Structures:
1. Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
2. Weekly, and more often if necessary, sweep interior spaces clean.
   a. "Clean," for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.
3. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness

recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

4. Following the installation of finish floor materials, clean the finish floor daily (and more often if necessary) at all times while work is being performed in the space in which finish materials are installed.
    a. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Engineer, may be injurious to the finish floor material.

3.2 FINAL CLEANING

A. "Clean", for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.

B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Paragraph 3.1 above.

C. Site:
1. Unless otherwise specifically directed by the Engineer, broom clean paved areas on the site and public paved areas adjacent to the site.
2. Completely remove resultant debris.

D. Structures:
1. Exterior:
    a. Visually inspect exterior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter.
    b. Remove all traces of splashed materials from adjacent surfaces.
    c. If necessary to achieve a uniform degree of cleanliness, hose down the exterior of the structure.
    d. In the event of stubborn stains not removable with water, the Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.
2. Interior:
    a. Visually inspect interior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter.
    b. Remove all traces of splashed material from adjacent surfaces.
    c. Remove paint droppings, spots, stains, and dirt from finished surfaces.
3. Glass: Clean inside and outside.
4. Polished surfaces: To surfaces requiring routine application of buffed polish, apply the polish recommended by the manufacturer of the material being polished.

E. Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean Work.

3.3 CLEANING DURING OWNER'S OCCUPANCY

A. Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning shall be as determined by the Engineer in accordance with the General Conditions of the Contract.

END OF SECTION

SECTION 01 77 01

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes an orderly and efficient transfer of the completed Work to the Owner.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Activities relative to Substantial Completion and Contract closeout are described in the General Conditions.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Prior to requesting that the Engineer issue a certificate of Substantial Completion, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for a joint inspection by Owner, Contractor, and Engineer.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 PROCEDURES

A. Substantial Completion:

1. Prepare a list of items considered incomplete and submit it along with a written request that Engineer issue a certificate of Substantial Completion.
2. Within a reasonable time after receipt of the list, Owner, Contractor and Engineer will jointly inspect the Work to determine status of completion.
3. Should the Engineer determine that the Work is not substantially complete:
   a. The Engineer will so notify the Contractor, in writing, giving the reasons therefore.
   b. Remedy the deficiencies and notify the Engineer when ready for reinspection.
   c. Owner, Contractor and Engineer will reinspect the Work.
4. When the Engineer concurs that the Work is substantially complete:
   a. The Engineer will prepare a tentative "Certificate of Substantial Completion," accompanied by the Contractor's list of items to be completed or corrected, as verified by the Engineer.
   b. The Engineer will submit the tentative Certificate to the Contractor for acceptance.
   c. After Contractor signs and returns the tentative Certificate to Engineer, Engineer will submit the tentative Certificate to Owner accompanied by a tentative list of items to be completed or corrected before final payment.
   d. Owner will have seven days after receipt of the tentative Certificate during which to make objection to Engineer as to any provisions of the Certificate on attached list.
      (1) If Owner objects, Engineer will consider Owner’s objections. If, after considering Owner’s objections, Engineer concludes that the Work is not substantially complete, Engineer will, within fourteen days after submission of the tentative Certificate to Owner, notify Contractor in writing, stating reasons therefore. If, after considering Owner’s objections, Engineer considers the Work substantially complete, Engineer will within said fourteen days execute and deliver to Owner and Contractor, a definitive Certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative Certificate as Engineer believes justified after consideration of any objections of Owner.
      (2) If Owner has no objections, Engineer will within fourteen days after submission of the tentative Certificate to Owner and Contractor issue a definitive Certificate of Substantial Completion.
   e. At the time of delivery of the tentative Certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, heat, utilities, insurance, warranties, and guarantees. Unless Owner or Contractor advise the Engineer in writing of any objections within seven days after

delivery of the tentative Certificate of Substantial Completion, the Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

B. Final Completion:
   1. Contractor shall prepare and submit a written notice of Final Completion that the entire Work or an agreed portion thereof is complete.
   2. Certify that:
      a. Contract Documents have been reviewed.
      b. Work has been inspected for compliance with the Contract Documents.
      c. Work has been completed in accordance with the Contract Documents.
      d. Equipment and systems have been tested as required and are operational.
      e. Work is completed and ready for final inspection.
   3. Owner, Contractor, and Engineer will make a joint inspection to verify status of completion.
   4. Should the Engineer determine that the Work is incomplete or defective:
      a. The Engineer will so notify the Contractor, in writing, listing the incomplete or defective work.
      b. The Contractor will remedy the deficiencies promptly, and notify the Engineer when ready for reinspection.
   5. When the Engineer determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals.

C. Closeout submittals include, but are not necessarily limited to:
   1. Project Record Documents described in Section 01 78 39.
   2. Warranties and bonds.
   3. Section 01 77 01.06 Warranty Form.
   4. Section 01 77 01.03 Contractor's Affidavit Letter.
   5. Spare parts and materials extra stock.
   6. Evidence of compliance with requirements of governmental agencies having jurisdiction including but not necessarily limited to:
      a. Certificates of Inspection.
      b. Certificates of Occupancy.
   7. Certificates of Insurance for products and completed operations.
   8. Evidence of payment and release of liens.
   9. List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

D. Final adjustment of accounts:
   1. Submit a final statement of accounting to the Engineer, showing all adjustments to the Contract Price.
   2. If so required, the Engineer will prepare a final Change Order showing adjustments to the Contract Price which have not been made by previous Change Orders.

END OF SECTION

TO BE TRANSFERRED TO THE CONTRACTOR'S LETTERHEAD

Owner (see Bid Form)_____ _____
_____
_____
_____
_____

Subject: _____ – _____

Dear _____:

We, _____ (Contractor) do hereby certify that so far as we have knowledge, the waivers of lien furnished herewith represent releases for all the labor and material for which a lien could be filed.

Should any liens remain unsatisfied after all payments are made by the _____ (Owner), we the _____ shall refund to the _____ (Owner) all monies the Owner may be obligated to pay in discharging such liens, including all costs and reasonable Attorney's fees.

Very truly yours,

A B C, INC.

_____

_____:_____

C: _____
_____
_____

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TO BE TRANSFERRED TO THE CONTRACTOR'S LETTERHEAD

Owner (see Bid Form)_____ _____
_____
_____
_____
_____

Subject: _____ – _____

Dear _____:

We, the _____, Contractor on the subject Project, hereby guarantee for a period of _____, commencing _____ and ending _____, that should any defect due to improper materials or workmanship develop during the period of the guarantee, the same shall be made good by us without expense to the _____.

This guarantee is for all work except that equipment separately guaranteed as called for under Section 01 61 01 of the Specifications.

Very truly yours,

A B C, INC.

_____

_____:_____

C: _____
_____

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SECTION 01 78 39

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Paragraph 3.1 below and, upon completion of the Work, submit the recorded changes as described in Paragraph 3.2 below.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Comply with pertinent provisions of Section 01 33 01.

F. The Engineer's approval of the current status of Project Record Documents may be a prerequisite to the Engineer's approval of requests for progress payment and request for final payment under the Contract.

G. Prior to submitting each request for progress payment, secure the Engineer's approval of the current status of the Project Record Documents.

H. Prior to submitting request for final payment, submit the final Project Record Documents to the Engineer and secure his approval.

1.3 QUALITY ASSURANCE

A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved by the Engineer.

B. Accuracy of records:
   1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
   2. Accuracy of records shall be such that future search for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.

C. Make entries within 24 hours after receipt of information that the change has occurred.

D. Do not conceal any work until the required information is recorded.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.

B. In the event of loss of recorded data, use means necessary to again secure the data to the Engineer's approval.
   1. Such means shall include, if necessary in the opinion of the Engineer, removal and replacement of concealing materials.
   2. In such case, provide replacements to the standards originally required by the Contract Documents.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 RECORD DOCUMENTS

A. Job set: Promptly following receipt of the Owner's Notice to Proceed, secure from the Engineer at no charge to the Contractor one complete set of all Documents comprising the Contract.

2.2 RECORD DRAWINGS

A. The as-built data on submitted plan sheets (line work, numerical data) must be computer generated in AutoCAD (2020 minimum), easily legible, and accurate.

Increase the font size and/or use different font style to improve legibility and to discern between proposed and as-built data.

B. The Contract Drawings shall be used for as-built presentation.

C. Existing utility easements shall be identified on record drawings with ORB/Page, Plat Book/Page.

D. Complete title block with current file name (including f/k/a, a/k/a, plat name, etc.). Label drawings “Record Drawings” or “as-builts” and show appropriate entries in the revision block.

E. Horizontal as-built data (stations, offsets, distances between fittings, manholes, inlets, pull boxes) are to be rounded off to the nearest foot. Elevation data shall be shown to the hundredth of a foot (i.e., top of manhole, inverts, grades, top of nuts), or to the tenth of foot for top of pipe elevations. Slopes shall be rounded off to the nearest one-ten thousandth.

F. All identified conflicts on the Contract Drawings shall be collected and included in the as-built data.

G. As-built data must include stations and offsets and top of pipe elevations for all fittings, valves, hydrants, pipe conflicts, and pipe at 100-foot intervals. Horizontal pipe separation at 100-foot intervals is required for parallel piping systems. Show limits of restrained pipe joints for pressure pipes.

H. As-built data must include stations and offsets, rim elevation, invert elevation, and pipe sizes for all inlets, catch basins, and manholes. Show location of all couplings joining dissimilar pipe materials.

I. All proposed grades shall be as-built and proposed grade line slopes calculated and shown on the record drawings.

J. Record drawings shall be signed and sealed by a Florida Registered Professional Land Surveyor working directly for the Contractor.

K. Contractor is responsible for the cost of Engineer’s review of the Contractor’s record drawings beyond two (2) reviews (initial submittal review and re-submittal review) submitted as Final Record Drawings.

PART 3 - EXECUTION

3.1 MAINTENANCE OF JOB SET

A. Immediately upon receipt of the job set described in Paragraph 2.1 A. above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET".

B. Preservation:
   1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set.
   2. Do not use the job set for any purpose except entry of new data and for review by the Engineer.
   3. Maintain the job set at the site of Work where designated by the Engineer.

C. Making entries on Drawings:
   1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
   2. Date all entries.
   3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
   4. In the event of overlapping changes, use different colors for the overlapping changes.

D. Make entries in the pertinent other Documents as approved by the Engineer.

E. Conversion of schematic layouts:
   1. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items, is shown schematically and is not intended to portray precise physical layout.
      a. Final physical arrangement is determined by the Contractor, subject to the Engineer's approval.
      b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items which are shown only schematically on the Drawings.
   2. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as are described in Paragraph 3.1 E. 1. above.

3.2 REVIEW AND SUBMITTAL

A. Submit the completed set of Project Record Documents to the Engineer as described in Paragraph 1.2 H. above.

B. Participate in review meetings as required.

C. Make required changes and promptly deliver the final Project Record Documents to the Engineer.

3.3 CHANGES SUBSEQUENT TO ACCEPTANCE

A. The Contractor has no responsibility for recording changes in the Work subsequent to Final Completion, except for changes resulting from work performed under Warranty.

END OF SECTION

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DIVISION 02

EXISTING CONDITIONS

SECTION 02 41 53

DEMOLITION, REMOVAL AND ABANDONMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes demolition and removal of structures and parts of structures, removal of above grade and underground improvements, and abandonment of underground structures and pipelines as shown on the Drawings and specified in this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:

American National Standards Institute (ANSI)

American Society for Testing and Materials (ASTM)

Code of Federal Regulations (CFR)

29 CFR Safety and Health Regulations for the Construction Industry, Part 1926

40 CFR	Environmental Protection Agency Part 61
49 CFR	Department of Transportation

National Institute for Occupational Safety and Health NIOSH)

State Requirements

Chapter 62-257	Florida Asbestos Program
Chapter 469	Florida Asbestos Abatement

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

1.7 DEFINITIONS

A. Demolish – Raze and dispose of above grade structures; including, but not limited to walls, roofs, ceilings, and ground floor slabs and floors. Raze and dispose of all equipment, piping and plumbing, electrical and communications conduit, wires and cables, furniture, furnishings, windows, and doors in above grade and below grade structures.

B. Remove – Excavate structure foundations, tanks, underground pipes, etc. in their entirety.

C. Dispose – Transport or haul materials and equipment of any and all types to off-site location(s) that can legally accept disposed materials

D. Abandon – Remove structure foundations, tanks, and underground pipes, etc. within the following limits
   1. 5 feet horizontally from any proposed structure or pipe, and
   2. 3 feet vertically below the proposed finished grade or the outside edges of any proposed structure or pipe.

E. This work includes breaking up of below grade foundation slabs and sealing of underground pipes with mechanical plugs and/or concrete plugs.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide materials, not specifically described but required for proper completion of the work of this Section, as selected by the Contractor subject to the approval of the Engineer.

B. Grout for filling of abandoned pipes and structures:
   1. Cellular grout:
      a. Low density cellular concrete capable of being mixed on site and pumped into place through a 2-inch hose.
      b. Foaming agent complying with ASTM C869.
      c. Portland Cement: ASTM C150, Type I or Type II.
      d. Contents: Cement, fly ash, water and foaming agent.
      e. Minimum net density: 70 pcf.
      f. Acceptable manufacturer:
         (1) Mearl Geofoam Liquid Concentrate.
         (2) Geofill-Lite by “MixOnSite”.
         (3) Or equal.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PROTECTION

A. Protect existing utilities indicated or made known.

B. Protect trees and shrubs, where indicated to remain, by plank wrappers securely wired in place or by providing a fence around the tree or shrub of sufficient distance away and of sufficient height so trees and shrubs will not be damaged in any way as part of this Work.
   1. Do not permit any equipment to operate within 5 feet of any trees or shrubs that are to remain or in a manner as to harm overhanging branches.

C. Protection of persons and property:
   1. Barricade open depressions and holes occurring as part of this Work, and post warning lights on property adjacent to or with public access.
   2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
   3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by operations under this Section.

D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

E. Maintain access to the site at all times.

3.3 DEMOLITION

A. General:
   1. By careful study of the Contract Documents and visiting the site, determine the location and extent of demolition to be performed.
   2. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

B. Demolition of existing structures:
   1. Demolish and remove existing structures, piping and equipment or parts thereof in a manner such as not to damage corresponding items which are to remain.
   2. In those areas in which structures or piping to be demolished and removed now occupy space to be used for proposed structures, remove the existing structure or piping in total unless other instructions are included on the Drawings.

C. Existing equipment:
   1. Existing mechanical or electrical equipment, miscellaneous metals, pipe, fittings, valves, furniture, cabinets, and other materials of whatever nature are, and shall remain, the property of the Owner.
      a. Dispose of items as directed in writing by the Owner's representative.

3.4 DISPOSAL

A. General:
   1. Dispose of all debris from demolition work.
   2. Dispose away from the site in a legal manner.
   3. Do not store or accumulate debris at the job site.

B. Do not burn debris at the site.

C. Prepare documentation identifying the hauler, generator, place of origin of debris or soil, the weight or volume of debris or soil, and the location, owner, and operator of the facility where debris or soil was transferred, disposed, recycled, or treated. Maintain documentation for three years.

3.5 UTILITIES

A. Coordinate with utility companies and agencies as required.

B. Where utility cutting, capping, or plugging is required, pay utility company to do the work, or perform such work in accordance with requirements of the utility company or governmental agency having jurisdiction.

END OF SECTION

DIVISION 03

CONCRETE

SECTION 03 30 00

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Provide cast-in-place concrete, including formwork and reinforcement, as shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals:
   1. Prior to placing concrete on the project, submit the following to the Engineer for approval:
      a. Testing laboratory reports for each proposed concrete mix, design proportions and sieve analysis, and soundness tests for fine and coarse aggregates.
      b. Test results for strength, slump, and entrained air content in accordance with the latest requirements of ASTM C39 and ASTM C192 on trial mix or field-testing records completed within previous 24 months. Perform strength tests on two test cylinders after 7 days curing and on two cylinders after 28 days curing.
      c. Evidence of compliance with ASTM specifications for materials proposed to be used in the concrete mix.
      d. Detailed reinforcing bar fabrication drawings prepared in accordance with ACI 315 including location of bar splices proposed by the Contractor in addition to those shown on the Drawings.
      e. Casting plan indicating the location of construction joints which are proposed by the Contractor in addition to those shown on the Drawings.
   2. Submit, within 10 days of testing, duplicate copies of each laboratory report for concrete tests on samples taken at the jobsite, including the following information in each test report:
      a. Project name.
      b. Description of concrete work.
      c. Quantity of concrete placed.

d. Dates of samples and testing.
e. Slump.
f. Total air content.
g. Compressive strength.
h. Air temperature at time of sampling.

3. Submit manufacturer's data to prove compliance with the specifications for the following products:
a. Non-shrink grout.
b. Waterstops.
c. Rubber waterstops.
d. Anchoring adhesive.

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

E. Comply with pertinent provisions of Section 01 33 01.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Comply with "Specifications for Structural Concrete for Buildings," ACI 301, except as may be modified herein.

C. Provide access for, and cooperate with, the inspector and testing laboratory described in Section 01 45 29 of these Specifications.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

B. Provide proper storage for reinforcing steel at the project site, including protective covering and blocking to keep steel off the ground.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 FORMS

A. Use smooth, clean plywood or metal lined panels in good condition for forming exposed concrete surfaces including interior and exterior walls, beams, columns, and slabs. Coat the forms with a non-staining, non-reactive mineral oil.

B. Use form liners for exposed ceilings.

C. Provide 3/4-inch chamfers on exposed corners.

D. When reusing lumber for formwork, remove nails, thoroughly clean, and fill and finish holes to produce smooth concrete surfaces free of defects.

E. Provide temporary openings at the base of column and wall forms and elsewhere as required to facilitate cleaning and final inspection prior to concrete placement.

F. Form Ties: Factory-fabricated steel snap-off or coil tie assemblies designed to resist the lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
   1. Furnish tie assemblies that will leave no metal or other material except concrete within 1½ inches of the formed surface when forms, inserts and tie ends are removed.
   2. Furnish tie assemblies that provide cone-shaped depressions in the forms at the surface, at least 1-inch in diameter and 1½ inches deep, to allow filling and patching.
   3. Provide ties with integral steel or neoprene waterstop at midpoint for liquid containment structures, sludge storage structures, spill containment areas and below grade structures with accessible spaces.
   4. Do not use common wire for form ties.

2.2 REINFORCEMENT

A. Comply with the following:
   1. Bars: Deformed billet steel conforming to ASTM A615, grade 60, unless otherwise shown on the Drawings.
   2. Welded wire reinforcement: Sheets of longitudinal and transverse cold drawn smooth steel wires electrically welded together at intersections, conforming to ASTM A185.
   3. Tie wire: 16 gauge annealed steel wire.

B. Fabricate reinforcement in accordance with the latest provisions of ACI 318 "Building Code Requirements for Structural Concrete".

C. Shop fabricate bars by cold bending to the dimensions and shapes shown on the detail shop drawings unless otherwise shown on the Drawings or approved by the Engineer.

D. Use bars that are free from paint, oil, dirt, scale, or excessive rust which will destroy or reduce the bond when embedded in concrete.

2.3 CONCRETE

A. Comply with the following:
   1. Portland cement: ASTM C150, Type I or II.
   2. Aggregate, general:
      a. ASTM C33, uniformly graded and clean;
      b. 35 to 50 percent ratio of fine aggregate to total aggregate by weight of surface dry materials.
   3. Aggregate, coarse: Pass a 1.500-inch sieve.
   4. Aggregate, fine: Pass a 0.375-inch sieve.
   5. Water: Fresh, clean, and free of oils, acids, alkalies, organic matter and deleterious substances.

B. Provide concrete with the following properties:
   1. Minimum 28-day compressive strength: 4,000 psi.
   2. Maximum water-cement ratio: 0.45 by weight.
   3. Minimum cement content: 520 pounds per cubic yard.
   4. Minimum slump: 1-inch.
   5. Maximum slump:
      a. 3 inches for footings.
      b. 4 inches for slabs, walls, beams, girders, and columns.

C. Use air-entrained concrete except for interior slabs not exposed to freezing and thawing or deicing chemicals. Provide a total air content of 4 to 7 percent by volume.

2.4 GROUT

A. Grout for non-structural fillets: One part Portland Cement, three parts fine aggregate, and sufficient water to obtain a consistency for easy placing and finishing.

B. Non-shrink grout:
   1. Furnish pre-mixed, non-metallic, non-staining, non-corrosive, non-gas liberating, cement-based grout specifically recommended by the manufacturer for interior and exterior applications and complying with U.S. Corps of Engineers' Specification CRD C-621 and ASTM C1107.
   2. Acceptable products:
      a. Multipurpose Grout, Dayton Superior Corporation.
      b. Or equal.

2.5 CONCRETE ADMIXTURES

A. Air-entraining admixtures: Conform to the latest requirements of ASTM C260.

B. Water reducing admixtures:
   1. Conform to the latest requirements of ASTM C494.

2. Type A (normal setting type) for all concrete.
3. Type D (retarding setting type) or Type E (accelerating setting type) when approved by the Engineer.

C. Fly ash admixtures (when approved by the Engineer):
1. Maximum sulfur trioxide content: 5 percent.
2. Maximum loss of ignition: 5 percent.

D. Do not add calcium chloride, salts, or chemical antifreeze compounds to concrete.

2.6 ANCHORING ADHESIVE

A. Provide a cartridge type, two-component, high solids acrylic-based adhesive system dispensed and mixed through a static mixing nozzle supplied by the manufacturer.

B. Furnish material suitable for anchorage of reinforcing bars and threaded rods in cracked and uncracked concrete to resist long-term sustained loading, tested and qualified in accordance with the International Code Council Acceptance Criteria for Post-installed Adhesive Anchors in Concrete Elements (AC308).

C. Acceptable products:
1. Hilti Inc., HIT-HY 200.
2. Simpson Strong-Tie, AT-XP.
3. No substitution permitted.

2.7 OTHER MATERIALS

A. Cement mortar: One part Portland Cement, 2½ parts fine aggregate, and sufficient water to obtain a maximum slump of 6 inches.

B. Bonding grout: One part cement, one part fine aggregate, and sufficient water to obtain the consistency of thick cream.

C. Patching mortar: One part cement, 2½ parts fine aggregate, and sufficient water to obtain a maximum slump of 1-inch.

D. Waterstop: Polyvinyl chloride (PVC) waterstop extruded from an elastomeric plastic material of which the basic resin is prime virgin polyvinyl chloride not containing scrapped or reclaimed material.
1. Type: 4-inch by 3/16-inch flat serrated with center bulb.
2. Comply with U. S. Corps of Engineers Specification CRD C-572 and the following performance requirements:
   a. Tensile Strength (ASTM D638): 2000 psi minimum.
   b. Ultimate Elongation (ASTM D638): 350 percent minimum.
   c. Tear Resistance (ASTM D624): 300 lb/in.
   d. Hardness, Shore A (ASTM D 2240): 79 +3.

3. Furnish factory made waterstop fabrications for all changes of direction, intersections, and transitions leaving only straight butt joint splices for the field.
4. Provide hog rings or grommets spaced at 12 inches on center along length of waterstop.
5. Acceptable products:
    a. Sika Corporation, Sike Greenstreak PVC Waterstop Profile Style Number 702.
    b. Or equal.

E. Rubber Waterstops: Chloroprene rubber and modified chloroprene (hydrophilic) rubber waterstop with delay coating to inhibit initial expansion due to moisture present in fresh concrete.
1. Chloroprene rubber performance requirements:
    a. Tensile strength (ASTM D412): 1300 psi minimum.
    b. Ultimate elongation (ASTM D412): 400 percent minimum.
    c. Tear resistance (ASTM D624): 100 lb./inch minimum.
    d. Hardness, shore A (ASTM D2240): 50 ± 5.
2. Modified chloroprene (hydrophilic) rubber performance requirements:
    a. Tensile strength (ASTM D412): 350 psi minimum.
    b. Ultimate elongation (ASTM D412): 600 percent minimum.
    c. Tear resistance (ASTM D624): 50 lb./inch minimum.
    d. Hardness, shore A (ASTM D2240): 52 ± 5.
3. Accessory materials: Adhesives, epoxy gel and sealant supplied by the waterstop manufacturer for securing and splicing of rubber waterstop.
4. Acceptable product:
    a. Sike Corporation, Sika Hydrotite CJ-0725-3k and Accessories.
    b. No substitution permitted.

F. Joint sealants: Comply with Section 07 92 00.

G. Expansion joint filler material: Asphalt type conforming to the latest requirements of ASTM D994.

H. Curing and sealing compound: Clear, non-yellowing, water-based, acrylic liquid membrane-forming curing and sealing compound complying with ASTM C1315, Type 1, Class A.
1. Maximum VOC content: 50g/L.
2. Acceptable products:
    a. W. R. Meadows, VOCOMP-30.
    b. Or equal.

I. Dissipating curing compound: Water based, hydrocarbon resin liquid membrane-forming dissipating curing compound complying with ASTM C309, Type 1, Class B.
1. Maximum VOC content: 100 g/L.
2. Acceptable products:
    a. W. R. Meadows, 1100-CLEAR.

b. Or equal.

J. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 FORMS

A. Design, erect, support, brace, and maintain formwork to safely support vertical and lateral loads until such loads can be supported safely by the concrete structure.

B. Assemble forms with tight flush joints securely clamped to prevent leakage of mortar. Brace forms to safely support concrete without deformation under load.

C. Construct forms within the tolerance limits of permissible variations from lines, grades, and dimensions shown on the Drawings, in accordance with ACI 347 "Recommended Practice for Concrete Formwork".

D. Construct forms to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure.

E. Support forms for slabs supported on steel or precast concrete beams from the same beams or framing so that deflection of structural supports will occur with the placing of the concrete.

F. Notify the Engineer when formwork is complete so that a proper check may be made at least 24 hours prior to concrete placement.

G. Carefully remove forms, ensuring complete protection of the structure.

H. Remove forms for vertical sides of walls, beams, girders, columns, and other similar structural members 24 hours minimum after placement of concrete, provided the concrete has hardened sufficiently and will not be damaged.

I. Do not remove forms and bracing for slabs, beams, girders, and similar structural members until the concrete structural members have attained sufficient strength to safely support their own weight and any construction or storage load.

3.3 REINFORCING

A. Comply with the following, as well as the specified standards, for details and methods of reinforcing placement and supports.
   1. Clean reinforcement and remove loose dust and mill scale, earth, and other materials that reduce bond or destroy bond with concrete.
   2. Accurately place and secure reinforcing steel within the tolerances required by ACI 318 using tie bars, chairs, bolsters, wire, clips or other devices approved by the Engineer.
   3. Provide plastic protected bar supports for slab reinforcing.
   4. Place bar supports for grade beams and slabs on bearing plates or blocks to prevent displacement into the earth subgrade.
   5. Place reinforcement to obtain the following clear concrete coverage for protection, within tolerance limits specified in ACI 318 "Building Code Requirements for Structural Concrete":
      a. Concrete cast against and permanently exposed to earth: 3 inches.
      b. Concrete exposed to earth, liquid, weather, or bearing on work mat or slabs supporting earth.
         (1) Slabs and joists: 2 inches.
         (2) Beams and columns:
            i. Stirrups, spirals, and ties: 2 inches.
            ii. Primary reinforcement: 2½ inches.
         (3) Walls: 2 inches.
         (4) Footings and base slabs:
            i. Formed surfaces: 2 inches.
            ii. Top of footings and base slabs: 2 inches.
         (5) Shells, folded plate members: 1½ inches
      c. Other conditions:
         (1) Slabs and joists:
            i. No. 11 bars and smaller: ¾-inch.
            ii. No. 14 and No. 18 bars: 1½ inches.
         (2) Beams and columns:
            i. Stirrups, spirals, and ties: 1½ inches.
            ii. Primary reinforcement: 2 inches.
         (3) Walls:
            i. No. 11 bars and smaller: ¾-inch.
            ii. No. 14 and No. 18 bars: 1½ inches.
   6. Provide the following minimum clear distances between parallel reinforcing bars, between adjacent contact splices, and between a contact splice and an adjacent bar:
      a. Columns: 1½ inches, 1.5 times the bar diameter, or 1.5 times the maximum size of the coarse aggregate, whichever is larger.
      b. Other elements: 1-inch, one bar diameter, or 1.33 times the maximum size of coarse aggregate, whichever is larger.
   7. Reinforcing bar splices:
      a. Use contact lap splices securely tied to adjacent bars and installed with lap lengths shown on the Drawings.

b. Stagger splices in adjacent reinforcing bars unless otherwise shown on the drawings or specified:
   (1) Beams and slabs: Splice bottom bars over supports and top bars at midspan.
   (2) Nonprestressed circular and oblong circular tanks:
      i. Stagger splices in horizontal and ring reinforcement bars (center of lap below to center of lap above) by not less than one lap length or 3 feet, minimum.
      ii. Stagger splices such that vertical arrays do not coincide in more frequently than every third bar.

c. Welded only where shown on the Drawings, conforming to the requirements of AWS D12.1.

8. Install welded wire reinforcement in lengths as long as practicable, lapping adjoining pieces two full mesh panels minimum.

3.4 WATERSTOPS

A. Install waterstop embedded in concrete and spanning construction, control and expansion joints to create a continuous diaphragm to prevent fluid migration for liquid containment structures, sludge storage structures, spill containment areas and below grade structures with accessible spaces.

B. Waterstop:
1. Install and splice waterstop in accordance with manufacturer's instructions.
2. Install centered in joint unless otherwise shown on the Drawings.
3. Secure waterstop in place with hog rings or grommets spaced at 12 inches on center along the length of the waterstop and wire tie to adjacent reinforcing steel.
4. Install factory made waterstop fabrications at all intersections, transitions and changes of direction and limit field splicing to straight butt joints.
5. Heat fuse weld straight butt joint field splices with thermostatically controlled waterstop splicing iron.

C. Rubber waterstop:
1. Install and splice rubber waterstop in accordance with manufacturer's instructions.
2. Provide a minimum of 2 inches of concrete cover over rubber waterstop.
3. Install centered in joint unless otherwise shown on the Drawings.
4. Prepare concrete surfaces and use manufacturer's recommended accessory materials to install and splice waterstops.

3.5 EMBEDDED ITEMS

A. Provide for the proper placement and support of fittings, inserts, fixtures, and sleeves to be built into the concrete work under other sections of the Specifications.

B. Shop paint non-ferrous metal surfaces of embedded items as described in Section 05 50 00 of these Specifications.

3.6 MIXING CONCRETE

A. Project site batched-mixed concrete:
   1. Mix in accordance with ACI 318, Chapter 5.8.1 and 5.8.3.

B. Ready-mixed concrete:
   1. Pre-mix and transport to project site in accordance with ASTM C94.
   2. Record time of departure from the mixing plant and batch weights of cement and water on the delivery tickets.
   3. Water may be added to the ready-mixed concrete once after delivery, only if the maximum water cement ratio and slump will not be exceeded.
   4. Reject concrete not in place within 60 minutes after introducing water to the mix when transported in agitator trucks or within 30 minutes after introducing water to the mix when transported in nonagitator trucks.

3.7 PLACING CONCRETE

A. Preparation:
   1. Remove hardened concrete and foreign material from conveying equipment.
   2. Remove foreign matter and excess water accumulated in forms.
   3. Rigidly close temporary openings left in formwork.
   4. Thoroughly sprinkle earth subgrades for structural slabs without vapor barrier protection to eliminate moisture absorption.
   5. Before depositing new concrete on or against concrete which has hardened:
      a. Thoroughly clean hardened concrete and saturate with water.
      b. Thoroughly cover hardened concrete surface with a 1/8-inch thick coating of neat cement mortar and place new concrete before the mortar has attained its initial set.
   6. Use only clean tools.

B. Conveying:
   1. Convey concrete from the mixer to place of final deposit as rapidly as practical by methods which will prevent separation or loss of ingredients and assure the required quality of concrete.
   2. Deposit concrete as nearly as practicable to its final location to avoid separation due to rehandling and flowing.
   3. Do not allow free fall of concrete to exceed 5 feet.

4. Do not use concrete which becomes non-plastic and unworkable, or does not meet required quality control limits, or has been contaminated by foreign materials.
5. Remove rejected concrete from job site.

C. Placing concrete in forms:
1. Deposit concrete continuously or in layers so that no concrete will be placed on concrete which has hardened sufficiently to cause cold joints in the work.
2. If necessary, add construction joints, approved by the Engineer.
3. Remove temporary spreaders, screeds, etc. as they become unnecessary.

D. Placing concrete slabs:
1. Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until placing of a panel or section is completed.
2. Bring slab surfaces to correct level with a straightedge, and then strike off.
3. Use bullfloats or darbies to smooth the surface, leaving it free of bumps and hollows.
4. Do not sprinkle water on plastic surface. Do not disturb slab surface prior to start of finishing operations.
5. Place beams, girders, brackets, column capitals, haunches, and drop panels integrally with slabs.

E. Do not begin placement of concrete in supported structural members until concrete previously placed in columns and walls is no longer plastic.

3.8 CONSOLIDATION

A. General:
1. Consolidate each layer of concrete immediately after placing, by use of mechanical vibrators supplemented by hand spading, rodding, or tamping so that the concrete is thoroughly worked around reinforcement, embedded items, and into corners of the forms, eliminating all air or stone pockets which may cause honeycomb, pitting, or planes of weakness.
2. Use mechanical vibrators with a minimum frequency of 7,000 revolutions per minute.
3. Insert vibrator at points approximately 18 inches apart for approximately 5 to 15 seconds at each point, sufficient to consolidate concrete, but not to cause segregation.
4. Do not overvibrate or use vibrators to transport concrete inside forms.
5. Provide a spare vibrator and auxiliary power source at the site during placement operations.

3.9 JOINTS

A. Construction joints:
1. Do not relocate construction joints shown on the Drawings or add construction joints, unless approved by the Engineer. Where additional

construction joints are approved by the Engineer, provide waterstops consistent with design.

2. Form construction joints perpendicular to main reinforcement and near quarter points of slabs, beams, and girders.
3. Limit spacing of vertical construction joints to 40 feet in any one direction.
4. Locate horizontal wall and column construction joints at the top of footings and grade slabs and the underside of slabs, beams, and girders.
5. Continue reinforcing steel across construction joints as shown on the Drawings or as required by the Engineer.
6. Form keyways in construction joints a minimum of 1½ inches deep and 3½ inches wide unless otherwise shown on the Drawings.
7. Provide the following minimum bearing lengths on concrete walls and columns unless otherwise shown on the Drawings:
   a. 2 inches for slabs.
   b. 6 inches for beams and girders.

B. Expansion joints:
1. Form expansion joints ½-inch wide with chamfered edges.
2. Fill expansion joints full depth with expansion joint material.
3. Do not permit reinforcement or other embedded metal items that are being bonded with concrete (except dowels in floors bonded on only one side of the joints) to extend continuously through any expansion joint.

C. Contraction joints:
1. Sawcut joints: Cut ⅛-inch wide joints to a minimum depth of ¼ the thickness of the slab, but not less than 1-inch. Perform saw cutting within 12 hours of placement when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
2. Formed joints: Insert preformed plastic or hard board joint strips into the concrete to form ⅛-inch wide joints to a minimum depth of 1-inch.
3. Fully caulk joints with sealant.

3.10 CONCRETE FINISHING

A. Finish concrete work to smooth, clean surfaces of uniform color with no roughness or imperfections.

B. Remove roughness, projections, honeycomb, and other defects in formed concrete surfaces to sound concrete.

C. Patch depressions and tie holes immediately after form removal.
1. Thoroughly wet areas to be patched to prevent absorption of water from patching mortar.
2. Thoroughly brush bonding grout on areas to be patched.
3. Consolidate patching mortar into place and strike off to leave a patch slightly higher than surrounding concrete surface to allow for initial shrinkage.

4. Leave patch area undisturbed for at least one hour before final finishing.
5. Prepared proprietary compounds for bonding grout and patching mortar may be used in lieu of or in addition to the above patching procedure, if approved by the Engineer.

D. Unless otherwise shown on the Drawings, provide the following finishes at the indicated locations:
   1. Scratch finish:
      a. Monolithic slab surfaces that are to receive concrete floor topping or mortar setting bed.
   2. Float finish:
      a. Monolithic slab surfaces that are to receive trowel finish and other slab finishes specified herein.
      b. Slab surfaces which are to receive a separate concrete topping, terrazzo, quarry tile, waterproofing membranes, and roofing.
   3. Trowel finish:
      a. Monolithic slab surfaces that are to be exposed to view, unless otherwise shown.
      b. Slab surfaces that are to be covered with resilient flooring, carpeting, paint, or asphalt.
      c. Slab surfaces of channels, tanks, reservoirs, basins, and chambers.
   4. Non-slip broom finish:
      a. Walks, stairs, drives, ramps, and similar pedestrian and vehicular areas.
      b. Apply by dragging coarse bristle broom or burlap belt across concrete with uniform parallel overlapping strokes.
   5. As-formed finish:
      a. Surfaces adjacent to earth and more than 12 inches below finished grade level.
      b. Other surfaces not exposed to view.
   6. Smooth rubbed grout finish:
      a. Exposed concrete surfaces including walls, beams, columns, and other vertical and inclined surfaces.
      b. Undersides of walkways and slabs.
      c. Tops and vertical or inclined surfaces of walls, inside tanks, reservoirs, basins, and chambers.
      d. Surfaces adjacent to earth, stone, sand, or other special media to a depth of 12 inches below the required material grade line or low water level.
      e. Apply finish to freshly hardened concrete as soon as possible after removal of forms.
      f. Apply grout slurry, consisting of one part cement to 1½ parts fine aggregate mixed with water, uniformly over a predampened surface with clean burlap pads or with sponge-rubber or cork floats.
      g. Rub grout surface with carborundum stone or similar abrasive to produce a uniform color and texture.
      h. Remove excess grout with a dry burlap pad or a brush.

3.11 CONCRETE CURING

A. Protect fresh concrete and grout surfaces from premature drying and excessively hot or cold temperatures.

B. Cure fresh concrete and grout surfaces in a moist condition at a relatively constant temperature for at least 7 days after placement of Type I Portland Cement concrete, or longer if necessary for hydration and proper hardening of the concrete.

C. Perform curing by one of the following methods:
   1. Ponding or continuous water spraying on concrete surface.
   2. Covering concrete surfaces with continuously wetted burlap, cotton, or other absorptive mats or fabric.
   3. Covering concrete surfaces with impervious waterproof paper or polyethylene film having 4-inch tape-sealed laps at common edges and taped-sealed and weighted perimeter.
   4. Applying curing compound on concrete surfaces to which additional concrete will not be bonded in strict accordance with manufacturer's instructions:
      a. For interior exposed horizontal floors, stairway landings and tread surfaces which will not receive floor covering or other coatings, apply two uniform coats of curing and sealing compound:
         (1) Apply first coat when the surface water disappears and the concrete surface will not be marred by walking workers.
         (2) Apply second coat at right angles to the first coat after the first coat has thoroughly dried.
      b. For all other horizontal surfaces, apply uniform coat of dissipating curing compound when the surface water disappears and the concrete surface will not be marred by walking workers.
      c. For vertical surfaces, apply uniform coat of dissipating curing compound promptly after removal of forms.

D. Maintain temperature of fresh concrete between 50 degrees and 70 degrees F for the required curing period.

E. Provide and erect necessary facilities for heating, covering, insulating, or housing the concrete work for cold weather protection.

3.12 CONCRETE TESTING

A. Provide equipment and services required for sampling and testing concrete.

B. Include the cost of testing in the total amount of the contract price for concrete work.

C. Sample concrete in accordance with ASTM C172.

D. Slump testing:
   1. Perform in accordance with ASTM C143.
   2. Perform one test minimum for each 50 cubic yards of concrete placed in one operation to check and maintain the required consistency of concrete.
   3. Perform whenever required by the Engineer.

E. Air content testing:
   1. Perform concurrently with the taking of the concrete compression test cylinder specimens.
   2. Perform in accordance with one of the following methods:
      a. ASTM C231 pressure method.
      b. ASTM C173 volumetric method.
      c. ASTM C138 gravimetric method.

F. Compression testing:
   1. Make and cure compression test cylinder specimens in accordance with ASTM C31.
   2. Take one set of four (4) 6-inch x 12-inch cylinders or six (6) 4-inch x 8-inch cylinders for every concrete pour for structural slabs, walls, beams, girders, footings, and columns, and additional sets for each 100 cubic yards of concrete placed in one operation.
   3. Take test cylinder specimens as directed by the Engineer to obtain representative samples of the concrete materials.
   4. Cure the specimens on the job site under the same field conditions as the concrete work they represent for a minimum of 72 hours after sampling.
   5. Test half of each set of concrete test cylinder specimens for compressive strength at 7 days and at 28 days in accordance with ASTM C39 (testing to be performed by an independent testing laboratory approved by the Engineer).
   6. In any case where test results of concrete cylinder specimens fail to meet minimum compressive strength requirements, make additional tests in accordance with ASTM C42 or perform load tests in accordance with ACI 318, as required by the Engineer.
   7. If these alternate strength tests show that concrete work does not meet minimum strength requirements, remove unsatisfactory concrete and reconstruct the work.

3.13 CUTTING AND PATCHING OF EXISTING CONCRETE

A. Provide neat and smooth finished exposed surfaces.

B. Provide 1-inch deep (minimum) saw cuts.

C. Cut off exposed reinforcing bars a minimum of 1½-inch back of finished surface and fill remaining cavity with patching mortar.

D. Provide straight and square lines at finished openings and ¾-inch chamfers at exposed corners.

E. Core drill openings for new pipes and conduits and patch with non-shrink grout.

F. Grind exposed finished surfaces flush to meet and match existing surfaces.

3.14 ANCHORING WITH ADHESIVE

A. Drill holes, prepare surface, dispense and mix adhesive through a static mixing nozzle supplied by the manufacturer, and set reinforcement bars and threaded rod anchors in accordance with the manufacturer's recommendations where shown on the Drawings.
   1. Identify position of reinforcing steel and other embedded items prior to drilling holes. Do not cut or damage reinforcing steel, prestressed steel tendons, piping, conduits or other embedded items. Notify the Engineer if reinforcing steel or other embedded items are encountered during drilling.
   2. Use rotary impact hammer drills with carbide-tipped bits of diameters as specified by the adhesive manufacturer.
   3. Drill holes perpendicular to surface of concrete after has achieved full design strength.
   4. Clean holes to remove loose material and drilling dust prior to installation of adhesive.
   5. Follow manufacturer's recommendations to ensure proper mixing of adhesive components.
   6. Inject adhesive into holes proceeding from the bottom of the hole and progressing toward the surface in such a manner as to avoid introduction of air pockets in the adhesive.
   7. Inject sufficient adhesive in the hole to ensure that the annular gap is filled to the surface. Remove excess adhesive from the surface. Shim anchors with suitable device to center the anchor in the hole. Do not disturb or load anchors before manufacturer specified cure time has elapsed.
   8. Observe manufacturer's recommendations with respect to installation temperatures.

3.15 REMEDIAL WORK

A. Repair or replace deficient work as directed by the Engineer and at no additional cost to the Owner.

END OF SECTION

DIVISION 31

EARTHWORK

SECTION 31 16 00

SITE PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes clearing and grubbing the site as shown on the Drawings and specified in this Section.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide materials, not specifically described but required for proper completion of the work of this Section, as selected by the Contractor subject to the approval of the Engineer.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PROTECTION

A. Protect existing utilities indicated or made known.

B. Protect trees and shrubs, where indicated to remain, by plank wrappers securely wired in place or by providing a fence around the tree or shrub of sufficient distance away and of sufficient height so trees and shrubs will not be damaged in any way as part of this Work.
   1. Do not permit any equipment to operate within 5 feet of any trees or shrubs that are to remain or in a manner as to harm overhanging branches.

C. Protection of persons and property:
   1. Barricade open depressions and holes occurring as part of this Work, and post warning lights on property adjacent to or with public access.
   2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
   3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by operations under this Section.

D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

E. Maintain access to the site at all times.

3.3 CLEARING

A. Tree removal:
   1. Cut off trees and stumps at the existing ground level. Remove stumps and roots as needed.
   2. Remove trees and stumps within 2 feet of the proposed structures and underground piping to a depth of not less than 12 inches below the base elevation of proposed structures or underground piping.

3.4 CONSERVATION OF TOPSOIL

A. After the area has been cleared of vegetation, strip the existing topsoil in areas shown on the Drawings to be seeded or planted, and to fill planters, without contamination with subsoils.

B. Stockpile in an area clear of new construction.

C. Maintain the stockpile in a manner which will not obstruct the natural flow of drainage.
   1. Maintain stockpile free from debris and trash.
   2. Keep the topsoil damp to prevent dust and drying out.
   3. Provide silt fences around perimeters of all stockpiles.
   4. Provide temporary seeding of stockpiles.
   5. Comply with erosion and sediment control requirements of these specifications and all permitting agencies.

3.5 DISPOSAL

A. General:
   1. Remove and dispose of all debris from clearing and demolition work.
   2. Dispose away from the site in a legal manner.
   3. Do not store or accumulate debris at the job site.

B. Do not burn debris at the site.

3.6 UTILITIES

A. Coordinate with utility companies and agencies as required.

B. Where utility cutting, capping, or plugging is required, pay utility company to do the work, or perform such work in accordance with requirements of the utility company or governmental agency having jurisdiction.

END OF SECTION

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SECTION 31 22 22

EARTHWORK FOR ROADS, DRIVEWAYS, AND WALKS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section describes earthwork, including clearing, tree removal, hedge removal, excavation, embankment, compaction, and subgrade preparation for constructing roads, driveways, and sidewalks as shown on the Drawings, as specified herein, and as needed for a complete installation.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.
   2. Section 32 10 00 "Roads, Driveways, and Walks".
   3. The work of this Section will be measured and paid for in accordance with Section 01 22 29 "Measurement and Payment".

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.

C. Comply with requirements of governmental agencies having jurisdiction.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 (As specified in Part 3)

PART 3 - EXECUTION

3.1 GENERAL CONSTRUCTION REQUIREMENTS

A. Strip topsoil and stockpile for use with final grading.

B. Construct to the lines and grades as shown on the Drawings.

C. Use excess excavated materials for embankment in areas as shown on the Drawings and as directed by the Engineer.

3.2 CLEARING, TREE REMOVAL, AND HEDGE REMOVAL

A. Description:
1. These items consist of the removal and disposal of all obstructions, such as fences, walls, foundations, buildings, accumulations of rubbish of whatever nature and existing structures, logs, shrubs, brush, and other vegetation; the cutting, grubbing, removal and disposal of all trees and stumps.

B. Perform these items of work within the right of way, of excavation, and as directed by the Engineer in accordance with Section 110 of the FDOT "Standard Specifications" and the City of Delray Beach Construction Standards (2024 Edition).

3.3 ROADWAY EXCAVATION

A. Description:
1. Roadway excavation consists of excavation, removal and satisfactory disposal of all materials including pavement, taken from within the right of way for the construction of embankments, subgrade, sub-base, shoulders, intersections, ditches, waterways, and incidental work.
2. Roadway excavation does not include excavation for structures, or rock excavation.

B. Perform roadway excavation in accordance with Section 120 of the FDOT "Standard Specifications" and the City of Delray Beach Construction Standards (2024 Edition).
   1. Terminate excavation with a full depth sawcut and provide a smooth vertical surface between the existing to be removed and the existing to remain as directed by the Engineer.

3.4 EMBANKMENT

A. Description:
   1. This work consists of the construction of embankments by depositing, placing and compacting earth, stone, gravel, or other materials of acceptable quality above the existing grade.

B. Comply with applicable articles of Section 120 of the FDOT "Standard Specifications" and the City of Delray Beach Construction Standards (2024 Edition).

3.5 BORROW

A. Description:
   1. This work consists of obtaining embankment material from locations furnished by the Contractor or from borrow pits furnished by the Owner. It includes excavating, transporting, and placing the material for the construction of embankments, subgrade, shoulders, sub-base, intersections, approaches, entrances, and other parts of the project as shown on the Drawings and directed by the Engineer.

B. Comply with applicable articles of Section 120 of the FDOT "Standard Specifications" and the City of Delray Beach Construction Standards (2024 Edition).

3.6 SUBGRADE

A. Description:
   1. This work consists of preparing the subgrade including shaping and final compaction of the earth for the construction of sub-base, base, and surface course.

B. Comply with applicable articles of Section 120 and 160 of the FDOT "Standard Specifications" and the City of Delray Beach Construction Standards (2024 Edition).

C. Provide Type B stabilization (LBR 40). Perform mixing using rotary tillers, a plant or other equipment meeting the approval of the Engineer. The subgrade may be mixed in one course if the equipment and method of construction provides the uniformity, particle size limitation, compaction and other desired results per Section 160 of the FDOT “Standard Specifications”.

1. After completing mixing operations and satisfying the requirements for bearing value, uniformity and particle size, compact the materials at a moisture content permitting the specified compaction of LBR 40. If moisture content of the material is improper for attaining the specified density, either add water or allow the material to dry until reaching the proper moisture content for the specified compaction.
2. Shape the completed stabilized subgrade to conform with the finished graded surface shown on the Contract Drawings. Check the subgrade using elevation stakes or other means approved by the Engineer.
3. Maintain completed subgrade free from ruts, depressions, and any damage resulting from environmental conditions, the hauling or handling of materials, equipment, tools, etc. The contractor is responsible for maintaining the required density until the subsequent base or pavement is in place including any repairs, replacement, etc., of curb and gutter, sidewalk, etc. which might become necessary in order to recompact the subgrade in the event of underwash or other damage occurring to the previously compacted subgrade. Perform such recompaction at no expense to the Owner.

END OF SECTION

SECTION 31 23 19

DEWATERING

PART 1 - GENERAL

1.1 SUMMARY

A. The Work covered by this Section consists of furnishing all permits, labor, equipment, appliances and materials, and performing all operations required for dewatering excavations as required to ensure that all work is performed in the dry. The contract plans may include specific requirements limiting the controlling dewatering near areas of known contamination by VOC's and VOH's.

B. The Contractor shall not discharge water from dewatering operations in any manner that will:

1. Adversely affect the water quality of adjoining water bodies.

2. Violate Federal, State, or local laws and regulations.

3. Allow discharge to flow onto private property.

4. Hamper the movement of traffic.

5. Damage portions of the Work previously constructed.

C. Related sections:

1. Section 31 23 39 – Excavating, Backfilling, and Compacting

2. Section 31 23 79 – Trenching, Backfilling, and Compacting

1.2 SUBMITTALS

A. Furnish submittals in accordance with Section 01 33 01 – Submittals.

B. Prior to commencement of excavation, the Contractor shall submit a detailed plan and operation schedule for dewatering of excavations. The detailed plan shall include mitigation measures to prevent settlement of nearby structures and a contingency plan for restoring nearby structures if settlement is observed as a result of the Contractor's dewatering operations. The Contractor may be required to demonstrate the system proposed and to verify that adequate equipment, personnel, and materials are provided to dewater the excavations at all locations and times. The Contractor's dewatering plan is subject to review by the Engineer.

1.3 QUALITY ASSURANCE

A. It shall be the sole responsibility of the Contractor to control the rate and effect of the dewatering in such a manner as to avoid all objectionable settlement and subsidence.

B. All dewatering operations shall be adequate to assure the integrity of the finished project and shall be the responsibility of the Contractor.

C. All structures or facilities that are located within the radius of influence of the Contractor's dewatering operation shall have reference points established and observed at frequent intervals to detect any settlement which may develop. The responsibility for conducting the dewatering operation in a manner which will protect adjacent structures and facilities rests solely with the Contractor. The Contractor shall survey, record and report the reference points on a daily basis, and submit the written log to the Engineer at the completion of construction. The Engineer shall be immediately notified should any sign of settlement is observed. The cost of repairing any damage to adjacent structures and restoration of facilities shall be the responsibility of the Contractor.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Dewatering, where required, may include the use of well points, sump pumps, temporary pipelines for water disposal, rock or gravel placement, and other means. Standby pumping equipment shall be maintained on the Site.

PART 3 - EXECUTION

1.2 DELIVERY, STORAGE AND HANDLING

A. The Contractor 's proposed method for dewatering pipe trenches shall be reviewed by the Engineer prior to instituting any such operations. Methods may include wellpoints, sump pumps, bedding rock or other methods approved by the Engineer. If a dewater sock method is used, the sock must be grouted in place when work is complete. Wellpoint holes must be grouted or sand wash backfilled. The Contractor is responsible for means and methods of construction dewatering activities.

B. The Contractor shall provide all labor, materials, tools and equipment necessary to properly control the quality of the discharge from dewatering operations. The Contractor shall comply with all applicable laws, rules and regulations governing the discharge of water from dewatering operations. The Contractor shall have on hand, at all times, sufficient pumping equipment and machinery in good working condition and shall have available, at all times, competent workmen for the operation of the pumping equipment. Adequate standby equipment shall be kept available at all

times to insure efficient dewatering and maintenance of dewatering operation during power failure.

C. All dewatering shall be accomplished by the use of sanded well points and other techniques deemed necessary by the Contractor to properly dewater the trench excavations. Well points shall be adequately spaced to provide the necessary dewatering and shall be sandpacked and/or other means used to prevent pumping of fine sands or silts from the subsurface. A continual check by the Contractor shall be maintained to ensure that the subsurface soil is not being removed by the dewatering operation.

D. Dewatering for structures and pipelines shall commence when groundwater is first encountered, and shall be continuous until such times as water can be allowed to rise in accordance with the provisions of this Section or other requirements.

E. At all times, site grading shall promote drainage. Surface runoff shall be diverted from excavations. Water entering the excavation from surface runoff shall be collected in shallow ditches around the perimeter of the excavation, drained to sumps, and be pumped or drained by gravity from the excavation to maintain a bottom free from standing water.

F. Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.

G. If foundation soils are disturbed or loosened by the upward seepage of water or an uncontrolled flow of water, the affected areas shall be excavated and replaced with drain rock.

H. The Contractor shall maintain the water level below the bottom of excavation in all work areas where groundwater occurs during excavation construction, backfilling, and up to acceptance.

I. Flotation shall be prevented by the Contractor by maintaining a positive and continuous removal of water. The Contractor shall be fully responsible and liable for all damages which may result from failure to adequately keep excavations dewatered.

J. Upon removal of the wellpoints, the Contractor must protect the holes and fill with flowable fill within 24 hours. Flowable fill for backfill of wellpoints shall not be measured for payment and shall not be included in the cost of installing the pipe.

K. The Contractor is responsible for controlling the bacteriological quality of well point discharges into existing bodies of water. The maximum allowable level for fecal coliform in the wellpoint discharge is a mean MPN of 14 per 100 ML with not more than ten percent (10%) of the samples exceeding an MPN of 43 per 100 ML.

L. The Contractor shall dispose of water from the Work in a suitable manner without damage to adjacent property. Contractor shall be responsible for obtaining any permits that may be necessary to dispose of water. No water shall be drained into work built or under construction without prior consent of the Engineer. Water shall be filtered using an approved method to remove sand and fine-sized soil particles before disposal into any drainage system.

M. The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted backfill and prevent flotation or movement of structures, pipelines, and sewers.

N. The Contractor shall comply with the Owner's Noise Ordinance.

O. Dewatering of trenches and other excavations shall be considered as incidental to the construction of the Work and all costs thereof shall be included in the various contract prices in the Bid Forms, unless a separate bid item has been established for dewatering.

END OF SECTION

SECTION 31 23 39

EXCAVATING, BACKFILLING, AND COMPACTING

PART 1 - GENERAL

1.1 SUMMARY

A. Excavate, backfill, compact, and grade the site to the elevations shown on the Drawings, as specified herein, and as needed to meet the requirements of the construction shown in the Contract Documents.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. (Reserved).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use equipment adequate in size, capacity, and numbers to accomplish the work of this Section in a timely manner.

C. Comply with requirements of governmental agencies having jurisdiction.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 FILL AND EXCAVATED BACKFILL MATERIALS

A. Provide excavated backfill materials free from organic matter, rubble, or frozen material, containing no rocks or lumps over 6 inches, and with not more than 15 percent of the rocks or lumps larger than 2 inches.

B. Fill material is subject to the approval of the Engineer, and is that material removed from excavations or imported from off-site borrow areas, predominantly granular, non-expansive soils free from organic matter and other foreign matter.

C. Do not permit rocks having a dimension greater than 1-inch in the upper 12 inches of fill or embankment.

D. Satisfactory soil materials are defined as those complying with ASTM D 2487 soil classification groups GW, GP, SW, and SP.

E. Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GC, GM, SC, SM, ML, MH, CL, CH, OL, OH, and PT.

F. Course Aggregate shall conform to Section 901 of FDOT “Standard Specifications”.

G. Fine Aggregate shall conform to Section 902 of FDOT “Standard Specifications”.

2.2 TOPSOIL

A. Topsoil is specified under Section 32 92 00.13 of these Specifications.

B. Obtain topsoil from sources within the project limits, or provide imported topsoil obtained from sources outside the project limits, or from both sources.

2.3 STRUCTURAL BACKFILL MATERIAL

A. Provide well graded, 100 percent crushed gravel or crushed stone aggregate free of clay, loam, dirt, calcareous or other foreign matter, conforming to the FDOT "Standard Specifications" gradation No. 57 with the following gradation:

Sieve Size	Percent Passing
1.500-inch	100%
1.000-inch	95-100%

0.500-inch	25-60%
No. 4	0-10%
No. 16	0-5%

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 GENERAL CONSTRUCTION REQUIREMENTS

A. Protection of existing facilities, persons, and property:
   1. Unless shown to be removed, protect existing structures, conduits, active utility lines and all other facilities shown on the Drawings or otherwise made known to the Contractor. If damaged, repair or replace to a condition equal to or better than the original condition at no additional cost to the Owner.
   2. Notify all persons, firms, corporations, or agencies owning or using any existing structures, conduits, or utilities which may be affected by the Work prior to the start of construction.
   3. Make arrangements to locate, maintain, protect, and/or relocate facilities in order to complete the Work.
   4. If existing utilities are found to interfere with the permanent facilities being constructed under this Section, immediately notify the Engineer and secure his instructions.
   5. Do not proceed with permanent relocation of utilities until written instructions are received from the Engineer.
   6. Barricade open holes and depressions occurring as part of the Work, and post warning lights on property adjacent to or with public access.
   7. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
   8. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout, and other hazards created by operations under this Section.

B. Dewatering:
   1. Remove all water, including rain water, encountered during trench and sub-structure work to an approved location by pumps, drains, and other approved methods.
   2. Keep excavations and site construction area free from water.
      a. Whenever during construction operations any loose material is deposited in the flow line of gutters, drainage structures, or ditches such that the natural flow line of water is obstructed, remove this loose material at the close of each working day. At the conclusion of construction operations, keep all drainage structures and flow lines free from dirt and debris.

C. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

D. Maintain access to adjacent areas at all times.

3.3 EXCAVATING

A. Perform excavating of every type of material encountered within the limits of the Work to the lines, grades, and elevations indicated and specified herein.

B. Satisfactory excavated materials:
   1. Transport to, and place in, fill or embankment areas within the limits of the Work.

C. Unsatisfactory excavated materials:
   1. Excavate to a distance below grade as directed by the Engineer, and replace with satisfactory materials.
   2. Include excavation of unsatisfactory materials, and replacement by satisfactory materials, as parts of the work of this Section.

D. Surplus materials:
   1. Dispose of unsatisfactory excavated material, and surplus satisfactory excavated material, away from the site at disposal areas arranged and paid for by the Contractor.

E. Topsoil materials:
   1. Strip and stockpile topsoil materials from areas to be excavated and regraded for use in final grading.

F. Excavate and backfill in a manner and sequence that will provide proper drainage at all times.

G. Borrow:
   1. Obtain material required for fill or embankment in excess of that produced within the grading limits of the Work from borrow areas selected and paid for by the Contractor and approved by the Engineer.

H. Ditches and gutters:
   1. Cut accurately to the cross-sections, grades, and elevations shown.
   2. Maintain excavations free from detrimental quantities of leaves, sticks, trash, and other debris until completion of the Work.
   3. Dispose of excavated materials as shown on the Drawings or directed by the Engineer; except do not, in any case, deposit materials less than 3'-0" from the edge of a ditch.

I. Unauthorized excavation:

1. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific instruction from the Engineer.
2. Under footings, foundations, or retaining walls:
   a. Fill unauthorized excavations by extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation.
   b. When acceptable to the Engineer, lean concrete fill may be used to bring the bottom elevation to proper position.
3. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the Engineer.

J. Stability of excavations:
1. Slope sides of excavations to 1:1 or flatter, unless otherwise directed by the Engineer.
2. Shore and brace where sloping is not possible because of space restrictions or stability of the materials being excavated.
3. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

K. Sheeting and bracing:
1. Design, provide, and install sheeting and bracing as may be necessary for safety of personnel, protection of work, and compliance with requirements of governmental agencies having jurisdiction.
2. Maintain sheeting and bracing in excavations regardless of the time period excavations will be open.
3. Remove sheeting and bracing after the excavation has been backfilled to an elevation which will prevent caving of exposed side banks.
4. Fill voids left by the withdrawal of sheeting with compacted sand.
5. Leave sheeting and bracing in place whenever necessary to protect adjacent facilities or property.

L. Excavating for structures:
1. Conform to elevations and dimensions shown within a tolerance of 0.10 ft., and extending a sufficient distance from footings and foundations to permit placing and removing concrete formwork, installation of services, other construction required, and for inspection.
2. In excavating for footings and foundations, take care not to disturb bottom of excavation:
   a. Excavate by hand tools to final grade just before concrete is placed.
   b. Trim bottoms to required lines and grades to leave solid base to receive concrete.
3. Excavate for footings and foundations only after general site excavating, filling, and grading are complete.
4. Allowable net soil bearing pressure: 2500 psf minimum unless otherwise required on the Drawings.

a. Provide equipment and services of an independent geotechnical testing laboratory to determine allowable net soil bearing pressure complying with pertinent provisions of Section 01 45 29.
b. Include cost of the testing in the total amount of the contract price for excavating, backfilling, and compacting work.
c. Check every 500 square feet with minimum of two (2) tests per foundation or as directed by the Engineer.

M. Excavating for pavements:
1. Cut surface under pavements to comply with cross-sections, elevations, and grades.

N. Cold weather protection:
1. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.

3.4 FILLING AND BACKFILLING

A. General:
1. For each classification listed below, place acceptable soil material in layers to required subgrade elevations.
2. In excavations:
a. Use satisfactory excavated backfill or borrow fill materials.
3. Under concrete or bituminous pavements:
a. Use subbase materials as specified under Section 32 10 00.13 of these Specifications.
4. Under slabs, footings, conduits and other structures and facilities:
a. Use structural backfill material wrapped in filter fabric meeting Section 985 of the FDOT “Standard Specifications”.

B. Backfill excavations as promptly as progress of the Work permits, but not until completion of the following:
1. Acceptance of construction below finish grade including, where applicable, dampproofing and waterproofing.
2. Inspecting, testing, approving, and recording locations of underground utilities.
3. Removing concrete formwork.
4. Removing shoring and bracing, and backfilling of voids with satisfactory materials.
5. Removing trash and debris.
6. Placement of horizontal bracing on horizontally supported walls.

C. Ground surface preparation:
1. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious matter from ground surface prior to placement of fills.
2. Plow, strip, or break up sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.

3. When existing ground surface has a density less than that specified under "compacting" for the particular area, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

D. Placing and compacting:
1. Place excavated backfill and fill materials in layers not more than 12 inches in loose depth.
2. Place structural backfill material in layers not more than 6 inches in loose depth.
3. Compact each layer to the required density for the area.
4. Do not place backfill or fill material on surfaces that are muddy, frozen, or containing frost or ice.
5. Place backfill and fill materials evenly adjacent to structures, to required elevations.
6. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structure to approximately the same elevation in each lift.
7. Where the construction includes basement or other underground walls having structural floors over them, do not backfill such walls until the structural floors are in place and have attained sufficient strength to support the walls.
8. Compact each layer of structural backfill material with vibratory rollers, pneumatic tampers, or other compacting equipment approved by the Engineer.

3.5 GRADING

A. General:
1. Uniformly grade the areas within limits of grading under this Section, including adjacent transition areas.
2. Smooth the finished surfaces within specified tolerance.
3. Compact with uniform levels or slopes between points where elevations are shown on the Drawings, or between such points and existing grades.

B. Grading around structures:
1. Grade areas adjacent to structures to achieve drainage away from the structures, and to prevent ponding.
2. Finish the surfaces to be free from irregular surface changes, and:
   a. Shape the surface of areas scheduled to be under walks to line, grade, and cross-section, with finished surface not more than 0.10 ft. above or below the required subgrade elevation.
   b. Shape the surface of areas scheduled to be under pavement to line, grade, and cross-section, with finished surface not more than 0.05 ft. above or below the required subgrade elevation.

3.6 COMPACTING REQUIREMENTS

A. Control soil compaction during construction to provide the minimum percentage of density specified for each area as determined according to ASTM D1557 or AASHTO T-180.
   1. Provide equipment and services of an independent geotechnical testing laboratory for density tests complying with pertinent provisions of Section 01 45 29.
   2. Include the cost of the testing in the total amount of the contract price for excavating, backfilling, and compacting work.
   3. Test density of each lift for every 2,500 square feet of compacted backfill and fill placed.

B. Provide not less than the following maximum density of soil material compacted at optimum moisture content for the actual density of each layer of soil material in place, and as approved by the Engineer.
   1. Structures:
      a. Compact each layer of fill material or backfill material at 98 percent of maximum density.
   2. Lawn and unpaved areas:
      a. Compact filled areas or natural soils exposed by excavating, at 95 percent of maximum density.
   3. Walks:
      a. Compact each layer of fill material or backfill material at 98 percent of maximum density.
   4. Pavements:
      a. Compact each layer of fill material or backfill material at 98 percent of maximum density.

C. Moisture control:
   1. Where subgrade or layer of soil material must be moisture-conditioned before compacting, uniformly apply water to surface of subgrade or layer of soil material to prevent free water appearing on surface during or subsequent to compacting operations.
   2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compacting to the specified density.
   3. Soil material that has been removed because it is too wet to permit compacting may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing, or pulverizing.

3.7 MAINTENANCE

A. Protection of newly graded areas:
   1. Protect newly graded areas from traffic and erosion, and keep free from trash and weeds.
   2. Repair and reestablish grades in settled, eroded, and rutted areas to the specified tolerances.

B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

END OF SECTION

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SECTION 31 23 79

TRENCHING, BACKFILLING, AND COMPACTING

PART 1 - GENERAL

1.1 SUMMARY

A. Trench, backfill, and compact as specified herein and as needed for installation of underground pipelines and utilities associated with the Work.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. City of Delray Beach Construction Standards (2024 Edition).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.

C. Comply with requirements of governmental agencies having jurisdiction.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 GRANULAR PIPE BEDDING AND COVERING MATERIALS

A. Provide excavated backfill materials free from organic matter, rubble, or frozen material, containing no rocks or lumps over 6 inches, and with not more than 15 percent of the rocks or lumps larger than 2 inches.

B. Fill material is subject to the approval of the Engineer, and is that material removed from excavations or imported from off-site borrow areas, predominantly granular, non-expansive soils free from organic matter and other foreign matter.

C. Do not permit rocks having a dimension greater than 1-inch in the upper 12 inches of fill or embankment.

D. Satisfactory soil materials are defined as those complying with ASTM D 2487 soil classification groups GW, GP, SW, and SP.

E. Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GC, GM, SC, SM, ML, MH, CL, CH, OL, OH, and PT.

F. Course Aggregate shall conform to Section 901 of FDOT “Standard Specifications”.

G. Fine Aggregate shall conform to Section 902 of FDOT “Standard Specifications”.

2.2 EXCAVATED BACKFILL MATERIALS

A. Provide soil materials free from organic matter, rubble, or frozen material, containing no rocks or lumps over 6 inches, and with not more than 15 percent of the rocks or lumps larger than 2 inches.

2.3 GRANULAR BACKFILL

A. Provide either sand, pit run gravel, granular material, or excavated granular materials.
   1. Sand: Well graded, free from organic matter, cohesionless, complying with the Section 902 of the FDOT “Standard Specification”6.
   2. Pit run gravel: Free from organic matter, cohesionless granular material obtained from natural deposits of sand and gravel, passing 3/4-inch sieve, and not more than 15 percent passing the No. 200 sieve.
   3. Granular material: Use 100 percent crushed stone or gravel complying with Section 901 of the FDOT "Standard Specifications" gradation No. 57.

4. Excavated granular materials: A mixture of sand and gravel, free from organic matter, clay, loam, dirt, and other foreign material, passing the 1½-inch sieve, and not more than 15 percent passing the No. 200 sieve.

2.4 FLOWABLE FILL TRENCH BACKFILL MATERIALS

A. Contractor may utilize flowable fill for trench backfill in areas that are difficult to compact due to the size of excavation and volume of buried utilities**.**
   1. Comply with Section 121 of the FDOT "Standard Specification" for Flowable Fill.
   2. Flowable fill may be utilized within the trench from pipe bed to the base rock.
   3. Contractor shall prevent the floatation of pipes and structures during the installation of flowable fill.
   4. Flowable fill shall be excavatable with a 28 compressive strength of 100 psi.

2.5 GEOTEXTILE FABRIC

A. Provide geotextile fabric for separation of granular material and native soil in areas where trench is over-excavated to remove unsuitable materials.
   1. Acceptable manufacturers:
      a. Mirafi: 160N.
      b. Synthetic Industries: 601.
      c. Or equal.

2.6 GROUT FOR FILLING OF ABANDONED PIPES

A. Cellular grout:
   1. Low density cellular concrete capable of being mixed on site and pumped into place through a 2-inch hose.
   2. Foaming agent complying with ASTM C869.
   3. Portland Cement: ASTM C150, Type I or Type II.
   4. Contents: cement, fly ash, water and foaming agent.
   5. Minimum net density: 80 pcf.
   6. Acceptable manufacturers:
      a. Mearl Geofoam Liquid Concentrate.
      b. Geofill-Lite by "MixOnSite".
      c. Or equal.

2.7 PIPE TRACER WIRE

A. General:
   1. Provide wire to be used for electronic locating of PVC, HDPE, or other pipe installed by the open cut method.
   2. Pipes for stormwater use do not require trace wire.

B. Materials:
1. Wire: No. 10 AWG, single strand, single conductor, insulated copper wire, colored per code requirements.
2. Type: PE (45 mils) or UF (60 mils), 600 volt.
3. Tape: Polyethylene coated duct tape.

2.12 PIPE MARKING TAPE

A. General:
1. Provide marking tape manufactured for use in underground locations to be installed in open cut trenches.
2. Provide tape labeled with message that indicates what type of pipe is below, such as “Caution – Buried Water Line Below”.

B. Materials (Detectable):
1. Provide solid color, organic virgin polyethylene film with a 0.00035” solid aluminum foil core, with clear film reverse printed and laminated to aluminum foil.

2.	Thickness:	5.0 mil.	ASTM D2103
3.	Tensile strength:	15,000 psi	ASTM D882
4.	Elongation:	80%	ASTM D882-75B
5.	Adhesives:	AV1257/CA1001	
6.	Colors:	APWA code for sewer and water	
7.	Printability:	45 Dynes	ASTM D2578
8.	Width:	6.0 inches	

C. Acceptable product:
1. Pro-Line Safety Products by Pro-Line Safety Product Company.
2. Or approved equal.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 GENERAL CONSTRUCTION REQUIREMENTS

A. Protection of existing facilities:
1. Unless shown to be removed, protect existing structures, conduits, active utility lines and all other facilities shown on the Drawings or otherwise made known to the Contractor. If damaged, repair, replace, or restore to a condition equal to or better than the original condition at no additional cost to the Owner.

2. Notify all persons, firms, corporations, or agencies owning or using any existing structures, conduits, or utilities which may be affected by the Work prior to the start of construction.
3. Make arrangements to locate, maintain, protect, and/or relocate facilities in order to complete the Work.
4. Make such exploration as is necessary to determine the exact location of underground utilities.
5. Exercise care during the progress of work in the area to prevent damage to the utilities.
6. Whenever it becomes necessary to relocate underground gas mains, telephone conduit, or electrical lines or support or relocate utility poles, the utility company involved will make such relocation or provide pole support. Notify the utility company promptly.
7. Whenever it becomes necessary to relocate water or other pipes or conduits in direct conflict with the proposed pipe (exclusive of culverts) which are not shown on the Drawings, obtain the direction from the Engineer for the relocation. Compensation will be allowed only for such quantities as directed by the Engineer.
8. Do not block or obstruct sidewalks, streets, and pavements.
9. Whenever during construction operations any loose material is deposited in the flow line of gutters, drainage structures, or ditches such that the natural flow line of water is obstructed, remove this loose material at the close of each working day. At the conclusion of construction operations, keep all drainage structures and flow lines free from dirt and debris.
10. Do not obstruct accessibility of fire hydrants.
11. Maintain access to adjacent areas at all times.

B. Protection of Trees and Shrubs:
   1. Protect trees and shrubs from damage.
   2. Do not remove trees or shrubs unless indicated on the Drawings or authorized in the field by the Engineer.
   3. Where trees which are to remain interfere with normal excavation operations, use the following procedures:
      a. Prior to excavation, carefully remove trees with trunk diameters of less than 4 inches, shrubs, and other plantings in the way of construction.
      b. Do not machine excavate within a distance of three trunk diameters or 12 inches (whichever is greater) of any tree, and do not cut roots over 2-inch diameter unless approved by the Engineer.
      c. Excavate by hand when closer than three tree trunk diameters or 12 inches (whichever is greater).
      d. Tree tunneling where necessary to be determined by the Engineer.
      e. Tie back shrubs and tree limbs to prevent loss or damage.
      f. Prune damaged limbs and branches.
      g. Provide plank wrappers wired in place to protect tree trunks from being damaged by trench machinery, tractors, or trucks; remove protective planking as soon as practical after work in vicinity has been completed.

h. Remove spoil banks from around trees by hand to prevent damage to trunks by construction machinery.

4. Replace trees and shrubs which cannot be protected or are damaged during construction:
   a. Replant or replace with stock of like character, quality, variety, size, shape, color and condition upon completion of the construction.
   b. Replace 4-inch diameter and larger trees with one 4-inch diameter size tree for each 6" of original tree diameter or fraction thereof.
   c. Replace trees smaller than 4-inch diameter and shrubs with same kind and type.
   d. As an option, replant trees smaller than 2-inch diameter or shrubs which are not damaged.
5. Remove and replace trees and shrubs which do not survive in good condition for a period of 18 months after time of planting.

C. Work on private property:
1. Construct work on private property within easements obtained by the Owner or as approved by private property owner as shown on the Drawings.
   a. The Contractor will be permitted construction privileges within construction easement lines as shown on the Drawings.
   b. Perform the work in a manner such as to minimize damage to lawns, shrubs, trees and other plantings, driveways, sidewalks, fences, outbuildings, and any other miscellaneous improvements, using proper size and type of equipment.
   c. The Engineer has the authority to prohibit the use of any equipment which in his judgment is too large or otherwise unsuitable for the conditions of the work on private property.
2. Remove and replace fences, outbuildings and other miscellaneous improvements in the way of construction to the satisfaction of the property owner.
3. When working in cultivated fields or gardens, remove original topsoil to a depth of 12 inches prior to excavation, and replace the topsoil to its original depth and grade upon completion of trench backfill.
4. Restore the private property to its original condition or better, free of debris, stones and excess materials.

3.3 TRENCHING

A. Do not advance trench excavation more than 50 feet ahead of completed pipe installation except as approved by the Engineer.

B. Provide and maintain sheeting, shoring, and bracing necessary for protection of the Work, adjacent property, and for the safety of personnel.
1. Remove temporary sheeting and bracing after backfilling to an elevation which will prohibit caving of exposed sidebanks.
2. Fill voids left by the withdrawal of sheeting with compacted sand.

3. The Engineer may direct that supports in trenches be cut off at any specific elevation to protect adjacent facilities or property. Compensation for support left in place will be negotiated.
4. No extra payment will be made for the supports left in place without the direction of the Engineer.
5. Do not leave supports within 4 feet of the ground or pavement surface in place without the permission of the Engineer.

C. Provide pumping, bailing, wellpointing, and construct ditches and dikes required to dewater and drain ground water, sewage, or stormwater to keep the excavation and site dry for the completion of the Work.

D. Excavation:
1. Excavate by open cut unless otherwise indicated on the Drawings.
2. Excavate trenches to the depths and grades necessary for the pipelines with allowances for bedding material.
   a. Comply with the following minimum depth of cover unless otherwise noted on the Drawings.
   b. Water pipelines: 3 feet.
   c. Sewage and sludge pressure piping: 5 feet.
   d. Air and gas piping: 3 feet.
   e. Electrical or wiring conduits and cables: 30 inches.
3. Over-excavate organic, soft, spongy, or otherwise unsuitable soils found at or below the bottom of the trench to meet firm subsoil or as indicated on the Drawings or directed by the Engineer.
4. Comply with the following maximum trench widths at the top of pipelines:

Nominal Pipe Sizes (inches)	Trench Widths (inches)
12 or smaller	30
14 - 18	36
20 - 24	42
27 - 30	48
33 and larger	1-1/3 times pipe OD

3.4 EXCAVATION FOR APPURTENANCES

A. Excavate for manholes and similar structures to the depths as shown on the Drawings and to a distance sufficient to leave at least 12 inches clear between outer surfaces and the embankment or shoring that may be used to hold and protect the banks.

B. Over-depth excavation beyond depths indicated on the Drawings that has not been directed will be considered unauthorized. Fill with sand, gravel, or lean concrete as directed by the Engineer, and at no additional cost to the Owner. Granular material used for backfill shall be encased in filter fabric.

C. Unsuitable soils encountered shall be excavated a minimum of 2 feet below and 2 feet around the structure with filter fabric separating the unsuitable material from clean backfill, this work is considered incidental to installation of the pipe.

3.5 BEDDING AND COVERING OF PIPE

A. General:
   1. Bedding is defined as the shaped and tamped material which supports the pipes. Covering is defined as the compacted material which protects and covers the pipes.
   2. Provide continuous bedding and covering for underground pipelines, except where concrete encasement, concrete cradles, boring or jacking are indicated.

B. Pipe bedding:
   1. Provide compacted granular pipe bedding and covering material with a minimum thickness of 4 inches under pipe barrels and 2 inches under bells.
   2. Wherever the trench is over-excavated due to the removal of unsuitable material, refill the excavated area to the bottom of the pipe bedding with material conforming to Section 31 23 39 subsection 2.3.
      a. Removal and replacement of material, or unsuitable material, to a depth of 2 feet below the bottom and 2 feet from the sides of the pipe barrel and separating the unsuitable material from the clean material with geotextile fabric, this work is considered incidental to installation of the pipe.
   3. Wherever the trench is over-excavated to remove unsuitable material, install geotextile fabric between native soil and granular material:
      a. Install fabric to cover bottom and sides of trench to heights as follows:
         (1) For all flexible pipe and rigid pipe 24-inch and smaller: to envelop entire bedding (minimum 24 inches away from pipe side and bottom) and covering material and overlap 1-foot at the top.
         (2) For rigid pipe 27-inch and larger: to cover bedding material and from sides of trench (minimum 24 inches away from pipe side and bottom) to edge of pipe.
         (3) Where undercut is of a depth that requires more than one piece of fabric to provide envelope, provide sewn seams between sections of fabric.
   4. Wherever two or more pipes or conduits are placed in the same trench or excavated area, backfill the trench with granular pipe bedding and covering material to support the uppermost pipe or conduit.
   5. Provide sand bedding with a minimum thickness of 3 inches under electrical and wiring conduits and cables.

C. Pipe covering:

1. Following placement of pipe and inspection of joints, provide compacted granular pipe bedding and covering material for the full width of the trench to the following levels unless otherwise shown on the Drawings:
    a. For pipes sizes 24-inch and smaller, except flexible thermoplastic pipe: To 4 inches above the top of the pipe.
    b. For pipes sizes 27-inch and larger, except flexible thermoplastic pipe: To the horizontal centerline of the pipe.
    c. For flexible thermoplastic pipes, including ABS and PVC composite pipe, PVC plastic pipe, and other flexible type pipe: To 12 inches above the top of the pipe.
    d. If compacted excavated materials are used for backfilling under the pavement as indicated on the Drawings: To 12 inches above the top of the pipe for all pipe sizes.
2. Place granular pipe bedding and covering material in uniform loose layers not exceeding 6 inches thick.
    a. Compact each layer firmly by ramming or tamping with tools approved by the Engineer in such a manner as not to disturb or injure the pipe to yield a minimum density of 98 percent of maximum dry density as determined according to ASTM D1557 or AASHTO-T180.
3. Where trench is widened by installation of structures, jacking pits, or tunnel shafts, extend bedding and covering materials to total width of excavations and compact as noted in following section.
    a. As a contractor's option, to eliminate compacting of the material, replace bedding and covering material with flowable fill at no additional cost to Owner.

3.6 TRENCH BACKFILLING AND COMPACTING

A. General:
1. Backfill trench from the top of pipe cover to topsoil, paving subgrade, or foundation level.
2. If trenches settle during the period of construction and within the guarantee period of the work, fill trench back to the surrounding grade, and restore the surfaces.

B. For trench in lawns, parkways, and other improved areas not subject to vehicular traffic and unimproved areas and cultivated fields:
1. Backfilling:
    a. Backfill with excavated materials in uniform loose layer not exceeding 6 inches thick.
2. Compacting requirements:
    a. Compact each layer of trench backfill materials to yield a minimum of 95 percent of maximum dry density as determined according to ASTM D1557 or AASHTO-T180.
    b. Determine the density of compacted backfill at intervals of not more than 400 feet per 6 inch thick layer at locations selected by the Engineer.

c. Provide the services of an independent testing laboratory for the density tests complying with the pertinent provisions of Section 01 45 29.

C. For trench in streets, parking areas, driveways, sidewalks, curb and gutter, or within 2 feet of any proposed curb and gutter, sidewalk, or other paved areas:
1. Backfilling with granular backfill materials:
a. Place in uniform loose layer not exceeding 6 inches thick and compact with vibrating roller or equivalent.
b. Fill the top of trenches with temporary aggregate pavement material to the depth(s) required to provide aggregate base and pavement base, binder and surface courses of the depths(s) shown in the Details in the Drawings.
2. Compacting requirements:
a. Compact each layer of trench backfill materials to yield a minimum density of 98 percent of maximum dry density as determined according to ASTM D1557 or AASHTO T-180.
b. Determine the density of compacted backfill at intervals of not more than 400 feet per 6 inch thick layer at locations selected by the Engineer.
c. Provide the services of an independent testing laboratory for the density tests complying with the pertinent provisions of Section 01 45 29.
3. Maintain temporary aggregate pavement level with adjoining pavement surfaces until the permanent pavement is placed.

D. For trench in streets or difficult to compact situations:
1. Backfill with flowable fill mixture.
2. Comply with Section 121 of the FDOT “Standard Specifications” for Flowable Fill (excavatable).

3.7 BACKFILL AND BEDDING FOR APPURTENANCES

A. Provide 3 inches of sand or granular bedding material unless otherwise shown on the Drawings.

B. Do not backfill until new concrete has properly cured, and any required tests have been accepted.

C. Backfill in lawns and landscaped areas with excavated materials.

D. Backfill in pavement around manholes, catch basins, inlets, valve vaults, and other structures as directed by the Engineer with granular backfill materials.

3.8 FINISH GRADING

A. General:
1. Provide finish grading and filling to achieve the lines and grades.

2. Slope grades to drain away from structures.
3. Replace culverts damaged during the construction with new culverts of the same size and type unless instructed differently in other sections of these Specifications.

B. Finish grading:
1. Except where mounding over trenches is specified, grade smooth areas of the Work including previously grassed areas that have been disturbed, and adjacent transition areas.
2. Fill and compact depressions from settlement and round tops of embankments and breaks in grade.
3. Protect newly graded areas from traffic and erosion. Repair settlement or washing away that may occur prior to surface restoration and re-establish grades to the required elevations at no additional cost to the Owner.

C. Disposal of waste excavated material:
1. Remove unsuitable and surplus excavated materials not used for backfilling from the project site.
2. Do not deposit on public or private property without written permission from property owner or authorized representative of appropriate public agency.

3.9 TEMPORARY HOT-MIX PAVEMENT SURFACE

A. Provide a premixed hot-mix asphalt wearing surface for use during the period between backfilling the trench and constructing the permanent pavement surface at locations of all excavations in paved roadway surfaces.
1. Comply with requirements of Section 32 10 00.13 of these Specifications.

B. Remove the temporary pavement surface at the time of permanent pavement construction.

3.10 WATER MAIN REPAIR

A. Whenever existing water mains and water service pipes are damaged during construction, stop the pipe installation work and immediately repair the damaged portion of the existing piping.

B. Contact the Engineer and Owner immediately to report the location and extent of the damage.

C. Utilize only materials of repair as noted in the products section of this specification, meeting existing materials damaged during construction, or as dictated by the Owner.

D. Where water services have been stripped or pulled from the water main, replace the corporation stop as instructed by the Engineer and Owner, and replace the water service pipe to a point as directed by the Owner.

E. Comply with disinfection requirements as dictated by the Owner.

F. Do not cover the repair until work is inspected and approved by Owner.

3.11 PIPE TRACER WIRE

A. Place tracer wire on top of pipe and secure to pipe with tape at maximum intervals of 10 feet.

B. Continue wire through valve boxes, valve vaults, or other structures.

C. Extend wire up to top of valve boxes, vaults, structures, fire hydrants, or marker posts, if marker posts are included with project.

D. Where tracer wire terminates, make hard-wire connections, acceptable to Engineer, to ductile iron or other traceable pipe, or to tracer wire on pipe installed by other methods.

E. Install tracer wire test station per manufacturer’s direction.

3.12 PIPE MARKING TAPE

A. General:
   1. Install marking tape in trench directly above pipe to be marked.
   2. Protect tape during backfill procedures.
   3. Continue tape through vaults or structures.

B. Depth:
   1. Install tape 18 inches below finished grade unless different depths are noted on the drawings or in other sections of these Specifications.

END OF SECTION

SECTION 31 25 00

EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Provide soil erosion and sediment controls as shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. References:
1. “NPDES Generic Permit for Stormwater Discharge for Large and Small Construction Activities”, Florida Department of Environmental Protection(FDEP), latest revision.

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE

A. Provide adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide soil erosion and sediment controls in accordance with the FDOT "Standard Specifications".

B. Provide manufacturer's certification that product meets the minimum specified value, if requested by the Engineer.

2.2 TEMPORARY EROSION AND SEDIMENT CONTROL SYSTEMS

A. Silt fence:
1. Material: Geotechnical fabric of woven or nonwoven filaments of polypropylene, polyester, or polyethylene meeting the requirements of Section 104 of the FDOT “Standard Specifications”.
2. Support posts:
a. Type:
(1) Treated wood: 2-inch by 4-inch or 3.0 square inch cross section.
(2) Steel: Standard "T" or "U" sections weighing not less than 1.00 pound per linear foot.
b. Length: 4-1/2 feet minimum.
c. Interval: 5 feet (typical).
d. Use existing fence posts where available, if approved by Engineer.
3. Use metal staples, nails, or wire to fasten fabric to posts.

B. Ditch check (manufactured):
1. Rolled Erosion Control Products: products consisting primarily of totally encased straw or excelsior.
a. Acceptable products:
(1) Curlex 12-inch Sediment Log, American Excelsior.
(2) Curlex 20-inch Sediment Log, American Excelsior.
(3) AEC Premier 12-inch Straw Wattle, American Excelsior.
(4) AEC Premier 20-inch Straw Wattle, American Excelsior.
(5) Stenlog 12-inch, Erosion Control Blanket.com.
(6) Aspen Xcel Excelsior Log, Western Excelsior.
(7) BioD-SiltCheck, RoLanka International, Inc.
(8) WS-12, North American Green.
(9) Ditch Chexx, Filtrexx.
(10) Or equal.
2. Urethane Foam Geotextiles: inner core of urethane foam with an outer lining of geotextile fabric.
a. Acceptable products:
(1) Triangular Silt Dike, ACF Environmental.
(2) Or equal.
3. Other: use posts, staples, and other materials as recommended by manufacturer.

C. Ditch check (rock):
1. Rubble meeting Section 530 of the FDOT “Standard Specifications”.

2. Filter fabric shall meet the requirements of Section 985 of the FDOT ”Standard Specifications”.

D. Temporary cover:
1. Comply with pertinent portions of Section 32 92 00.13 of these Specifications for purity and germination.
2. Seed: Annual rye, spring oats, or winter wheat.

E. Inlet Protection Filter:
1. Provide filter fabric meeting Section 985 of the FDOT “Standard Specifications” over inlets to prevent sediment transportation through stormwater systems.

F. Silt bag:
1. Provide filter or silt bags for dewatering pump discharge hoses that are utilized at well points or on dewatering pumps used to lower the water table and allow trench work or structure installation.
2. Utilize bags made of non-woven geotextile material.
3. Acceptable products:
   a. Silt Bag by Layfield.
   b. Dirtbag by Geo-Synthetics.
   c. Or equal.

G. Compost filter sock:
1. Provide compost filter socks consisting of a compost material placed inside a geotextile bag, and held in place with wood support posts/stakes.
   a. Socks shall be minimum 12” diameter, unless otherwise shown on Drawings.
   b. Compost shall meet Material Specification 806, Coarse Compost, as described in the Illinois Urban Manual.
   c. Geotextile bags consisting of photodegradable or biodegradable knitted material with openings of 3/8 inches to contain the compost/wood chip material, but not limiting water infiltration.
2. Provide support posts consisting of wood stakes with minimum dimensions of 2-inch x 2-inch, with a minimum length of 28 inches for 12-inch diameter compost filter logs.
3. Acceptable products:
   a. Filtrexx Silt Soxx.
   b. Or equal.

2.2 EROSION CONTROL BLANKET OR MAT

A. Excelsior blanket:
1. Machine-produced mat of wood excelsior from wood properly cured to produce adequately curled and barbed fibers.
   a. Fiber length: 80 percent minimum at 6 inches or longer.
2. Properties:

a. Width: 24 inches minimum.
b. Weight: 0.9 pounds per square yard minimum.
c. Length of roll: 150 feet minimum.

3. Cover the top side of the blanket with a 60-day photodegradable, extruded plastic mesh netting or 12-month biodegradable natural (jute fiber) mesh netting.
   a. Minimum opening: 5/8-inch by 5/8-inch.
   b. Maximum opening: 2 inches by 2 inches.
4. Acceptable products:
   a. American Excelsior Company.
   b. North American Green.
   c. Or equal.

B. Knitted straw mat:
1. Machine-assembled blanket of clean, weed-free straw from agricultural crops, of approximately 1/2-inch loose thickness.
2. Cover the top side of the mat with a photodegradable plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting with 3/8-inch by 3/8-inch square openings.
   a. Attach mesh to the mat with photodegradable or biodegradable knitting thread.
3. Supply blanket in protected rolled mat form of 6'-6" width, with a dry weight of 0.70 pounds per square yard minimum.
4. Acceptable products:
   a. S150BN by North American Green.
   b. Curlex 1 by American Excelsior.
   c. Or equal.

C. Straw/coconut fiber mat:
1. Machine-assembled blanket of clean, weed-free 70 percent straw from agricultural crops and 30 percent coconut fiber, of approximately ¼-inch thickness.
2. Cover the top side of the mat with a photodegradable plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting with 3/8-inch by 3/8-inch square openings.
   a. Attach mesh to the mat with photodegradable or biodegradable knitting thread.
3. Supply blanket in protected rolled mat form of 6'-6" width, with a dry weight of 0.50 pounds per square yard minimum.
4. Acceptable products:
   a. SC150BN by North American Green.
   b. Or equal.

D. Coconut fiber blanket:
1. Machine-assembled mat of 100 percent coconut fiber, of approximately ¼-inch thickness.

2. Cover the top side of the mat with a photodegradable plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting with 3/8-inch by 3/8-inch square openings.
   a. Attach mesh to the mat with photodegradable or biodegradable knitting thread.
3. Supply blanket in protected rolled mat form of 6'-6" width, with a dry weight of 0.50 pounds per square yard minimum.
4. Acceptable products:
   a. C125BN by North American Green.
   b. Or equal.

E. Staples: 11-gage wire, 6 inches long.

2.4 RIPRAP

A. Bedding material:
1. Conform to Section 901 of FDOT “Standard Specification” with gradations meeting the following:

Type of Riprap	Bedding Stone
Type A	ASTM C33 Size No. 57
Type B	ASTM C33 Size No. 357
Type C	ASTM C33 Size No. 2
Type D	ASTM C33 Size No. 1

2. Material shall be composed of tough, durable particles, shall be reasonably free from thin, flat and elongated pieces, and shall contain neither organic matter nor soft, friable particles in quantities considered objectionable by the Engineer.

B. Riprap:
1. Stones shall consist of durable, sound, hard, angular rock meeting the following requirements for durability absorption ratio, soundness test, and abrasion:

Durability Absorption Ratio	Acceptability
Greater than 23	Passes
10 to 23	Pass only if Durability Index is 52 or greater
Less than 10	Fails

$$\text{Durability Absorption Ratio} = \frac{\text{Durability Index (Coarse)}}{\%\ \text{absorption} + 1}$$

2. Riprap Gradation:

Type A (6-Inch Average Size)		
Sieve Size		Percent Passing By Weight
Maximum	Minimum	
12”	9”	100
8”	7”	50
6”	5”	15

Type B (12-Inch Average Size)		
Sieve Size		Percent Passing By Weight
Maximum	Minimum	
21”	15”	100
14”	12”	50
11”	8”	15

Type C (18-Inch Average Size)		
Sieve Size		Percent Passing By Weight
Maximum	Minimum	
30”	22”	100
20”	18”	50
16”	12”	15

Type D (24-Inch Average Size)		
Sieve Size		Percent Passing By Weight
Maximum	Minimum	
48”	31”	100
28”	24”	50
22”	17”	15

3. Material shall not contain organic matter nor soft, friable particles in quantities considered objectionable by the Engineer.

C. Filter fabric:
1. Geotechnical fabric of non-woven filaments of polypropylene, polyester, or polyethylene meeting Section 985 of the FDOT “Standard Specifications”.

2.5 CELLULAR CONFINEMENT

A. Cellular system:
1. Material: Polymer with a carbon black content of $\pm$2 percent.
2. Height: 8 inches minimum.

3. Seams tensile Peel Strength: 450 lbs. minimum.
4. Welds per seam: 7 minimum.
5. Stakes: #3 or #4 J-hook rebar.

B. Acceptable products:
1. Geoweb Cellular Confinement System by Presto Products, Inc.
2. Or equal.

2.6 COFFERDAM

A. Provide flexible water diversion system to provide a dry work area for the purpose of constructing the proposed improvements.

B. Provide a system that is composed of modern synthetic fabrics and materials that complies with Federal Section 404 and Water Quality Standard requirements.

C. Provide a system that stands or lays on the existing bed of river, pond, or other body of water and does not require excavation of bed or driving of sheet piling into bed.

D. Materials:
1. Support system: Welded tubular steel.
2. Water barrier: Flexible waterproof membrane, or water-filled flexible membrane container.

E. Acceptable manufacturers:
1. Portadam, Inc.
2. Dam-It Dams, Inc.
3. Or approved equal.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare subgrade for the installation of erosion and sediment control systems to the lines and grades shown on the Drawings or as necessary to satisfy permit requirements.
1. Repair eroded or washed out areas prior to the installation of erosion and sediment control systems.

3.2 SILT FENCE

A. Install silt fence where shown on the Drawings, as directed by the Engineer or as necessary to satisfy permit requirements.
1. Perform maintenance as needed.
2. Remove material when it reaches 1/3 of the fence height, and as directed by Engineer.
3. Replace fence where it is torn or otherwise damaged.

4. Retrench or replace fence that is not properly entrenched or anchored.
5. Remove fence upon completion of Work, or as directed by Engineer.

3.3 DITCH CHECK

A. Install ditch check where shown on the Drawings, as directed by the Engineer or as necessary to satisfy permit requirements. in accordance with manufacturer's recommendations.
   1. Maintain ditch check during course of the Work.
      a. Remove trapped sediment.
      b. Clean fabric periodically, and after each rainfall.
   2. Remove ditch check upon completion of Work, or as directed by Engineer.

3.4 TEMPORARY GRASS

A. Install temporary grass where shown on the Drawings, in accordance with pertinent provisions of Section 32 92 00.13 of these Specifications.

3.5 INLET PROTECTION FILTER

A. General:
   1. Inspect and clean filters weekly and after every rainfall.
   2. Dispose of debris removed at an approved location.
   3. Remove filter fabric as directed by the Engineer.
   4. The drainage structure inlet filter fabric will remain the property of the Contractor.

3.6 SILT BAG

A. Provide protection from sedimentation to storm sewers, streams, ponds, or wetlands during well pointing or trench dewatering by the use of silt bags or silt socks at the hose or pipe discharge points.

B. Dispose of collected silt or sediment offsite or at locations approved by the appropriate permitting authority.

3.7 COMPOST FILTER SOCK

A. Install compost filter socks at locations shown, or as indicated by notes, on Drawings.

B. Stake compost filter socks in place with wood support posts.
   1. Drive wood stakes through logs with at least 12 inches of the stake in the ground and 3 inches of the stake above the filter log. Install stakes every 10 feet along each log unless conditions warrant closer spacing.
      a. Where more than one log is needed to achieve planned lengths, ends shall be overlapped at least 12 inches with both ends staked into place.

C. Perform maintenance as needed. Remove collected silt or sediment when silt/sediment reaches one-half the height of filter sock(s).

D. Remove compost filter socks upon completion of Work, or as directed by Engineer. If compost filter logs are intended to be left as a permanent filter, or part of the natural landscape, seed the logs as part of permanent seeding requirements.

3.8 EROSION CONTROL MATTING OR FABRIC

A. Install erosion control matting or fabric where shown on the Drawings, in accordance with manufacturer's recommended installation procedures, and as directed by the Engineer.

B. Immediately after rolling seeded area, place erosion control matting or fabric on slopes steeper than 3 horizontal to 1 vertical.
   1. Unless otherwise specified, place erosion control matting or fabric at sides and bottoms of ditches, swales, and areas within 10 feet of catch basins in seeded areas.

3.9 RIPRAP

A. Filter fabric:
   1. Install filter fabric as shown on the Drawings, and in accordance with manufacturer's recommended installation procedures.
   2. Protect filter fabric from punching, cutting, or tearing.
      a. Repair damage by placing another piece of fabric over the damaged area, or by completely replacing the fabric.
   3. Overlap filter fabric a minimum of one (1) foot.

B. Riprap:
   1. Install riprap where shown on the Drawings, in accordance with FDOT Section 530, and as directed by the Engineer, except as modified herein.
   2. Spread bedding material uniformly on filter fabric to neat lines as shown on the Drawings.
      a. Place bedding material by methods that will not segregate particle sizes within the bedding.
      b. Repair damage to bedding surface before proceeding with work.
      c. Finish bedding material to an even surface free of mounds, windrows, or depressions.
   3. Place riprap stone on the bedding layer to the lines and grades shown on the Drawings.
      a. Provide minimum voids and maximum interlocking of rock.
      b. Place the stone riprap to its full thickness in one operation.
      c. Place stones at lower elevations first, then progress up the slope, and from the center outward.
      d. Distribute larger stones evenly through the entire mass.

3.10 SEDIMENT TRAP

A. Construct sediment trap where shown on the Drawings.

B. Inspect after each rain and repair as needed.

C. Remove sediment when silt has accumulated to 1/2 of the design depth of the trap.

D. Remove trap when drainage area has been properly stabilized.

END OF SECTION

DIVISION 32

EXTERIOR IMPROVEMENTS

SECTION 32 10 00.13

ROADS, DRIVEWAYS, AND WALKS

PART 1 - GENERAL

1.1 SUMMARY

A. Provide roads, driveways and walks as shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Construct roads, driveways, and walks in accordance with the City of Delray Beach Standard Details, 2024 Edition, RT 1.0 through 5.0, except as herein modified.

C. Related work:
   1. The work of this Section will be measured and paid for in accordance with Section 01 22 29, "Measurement and Payment", of these Specifications.

D. References:
   1. (Reserved).

1.2 SUBMITTALS - (Reserved).

1.3 QUALITY ASSURANCE

A. Source quality control:
   1. Comply with Section 105 of the FDOT "Standard Specifications".
   2. Submit certificates from source of aggregate materials that aggregate meets specified standards.
   3. Submit certificates from geotextile manufacturer that fabric meets specified standards.
   4. Obtain hot-mix asphalt mixtures and Portland Cement concrete from plants approved by the FDOT.
   5. Submit the name of the source of materials proposed for use on the Project to the Engineer at the Preconstruction Meeting.
   6. Submit FDOT mix designs for hot-mix asphalt binder and surface courses and for Portland Cement concrete proposed to be constructed.

B. Sampling and testing:
   1. The Contractor will provide the services of an independent testing laboratory for the following specified sampling and testing requirements:
      a. Comply with the pertinent provisions of Section 01 45 29.
   2. Test one sample (minimum size of 4 lbs.) per each 250 tons of the following materials paved, for conformance with mix design:
      a. Hot-mix asphalt surface course.
      b. Hot-mix asphalt, binder course.

3. At the conclusion of paving operation, cut full depth samples (a minimum of 5 cores per day) as defined by the Standard Specifications of the following pavement types at locations directed by the Engineer, complying with Section 334-5.4.3 of the FDOT "Standard Specifications", and test for compaction.
   a. Hot-mix asphalt base course.
   b. Hot-mix asphalt surface course.
   c. Hot-mix asphalt binder course.
4. Determine the density of each core in accordance with Section 334-5.5.2 of the FDOT “Standard Specifications”.
5. Take cores and determine the thickness of the Portland Cement concrete pavement.

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 SUBBASE

A. Subbase granular materials:
   1. Use materials complying with the applicable articles of Section 290 of the FDOT "Standard Specifications".
      a. 12” Stabilized (75 P.S.I FBV) and compacted to 98%T max density per AASHTO T-180.

2.2 BASE COURSE

A. Aggregate base:
   1. Use base course composed of one of the optional materials complying with the applicable articles of Section 285 of the FDOT "Standard Specifications".

B. Hot-mix asphalt:
   1. Comply with applicable articles of Section 234 of the FDOT “Standard Specifications”

C. Portland Cement concrete:
   1. Comply with applicable articles of Section 346 of the FDOT "Standard Specifications" for materials and material preparation.

2.3 PRIME COATS

A. Bituminous prime coat: Comply with applicable articles of Section 300 of the FDOT “Standard Specifications”.

2.4 TACK COATS

A. Bituminous tack coat: Comply with applicable articles of Section 300 of the FDOT “Standard Specifications”.

2.5 SURFACE COURSE

A. Hot-mix asphalt: Comply with applicable articles of Section 334 of the FDOT “Standard Specifications”.
   1. Hot-mix asphalt surface course:
      a. Use Hot-mix asphalt Surface Course, Type S-III,
   2. Hot-mix asphalt base course:
      a. Use 8” limerock or 10” crushed concrete compacted to 98% max. density per AASHTO T-180. Prime and tack coat shall comply with Section 300 of the FDOT “Standard Specifications”.

B. Portland Cement concrete pavement:
   1. Comply with applicable articles of Section 350 of the FDOT "Standard Specifications" for materials and material preparation.

2.6 PORTLAND CEMENT CONCRETE DRIVEWAY

A. Comply with applicable articles of Section 346 of the FDOT "Standard Specifications" for materials and material preparation.

2.7 CURB AND GUTTER

A. Portland Cement concrete:
   1. Comply with applicable articles of Section 520 of the FDOT "Standard Specifications”.

2.8 GEOTECHNICAL FABRIC

A. Comply with applicable articles of Section 145 and 985 of the FDOT "Standard Specifications".

B. Geogrid shall comply with applicable articles of Section 145 and 985 of the FDOT "Standard Specifications".

2.9 CRACK AND JOINT REPAIR

A. Comply with applicable articles of Section 305 of the FDOT "Standard Specifications" for materials and material preparation.

2.10 PAVEMENT MARKINGS

A. General:
   1. Comply with applicable articles of Section 711 of the FDOT “Standard Specifications”.

B. Materials – Permanent:
   1. Thermoplastic: Section 971, FDOT “Standard Specifications”
   2. Paint: Section 971, FDOT “Standard Specifications”
   3. Preformed plastic: Section 971, FDOT “Standard Specifications” Epoxy pavement marking: Section 971, FDOT “Standard Specifications”
   4. Preformed Thermoplastic Pavement Marking: Section 971, FDOT “Standard Specifications”
   5. Raised reflective pavement markers: Section 970, FDOT “Standard Specifications”

C. Materials – Temporary:
   1. Tape: Section 971, FDOT “Standard Specifications”
   2.
      a. Do not use paint for temporary pavement markings.

PART 3 - EXECUTION

3.1 GENERAL CONSTRUCTION REQUIREMENTS

A. Comply with the applicable articles of the following Sections of the FDOT "Standard Specifications" except as noted in the drawings.

B. Comply with the thickness and width shown on the Drawings.
   1. Construct elevation and crown of the finished surfaces to meet the required profile and section shown on the Drawings.

C. Compaction test for aggregate subbase, base, and surface courses:
   1. Proof-roll for compaction by driving a rubber-tired, single-unit truck with 45,000-pound load slowly over the area to be inspected.
   2. Repair areas which show depressions or deflections greater than:
      a. 3/4-inch deep for subbase.
      b. 1/2-inch deep for base.
      c. 1/4-inch deep for surface.
   3. Repeat proof-roll and/or repair until approved by the Engineer.

3.2 PRIME COATS

A. Bituminous prime coat:
   1. Apply prime coat to all aggregate surfaces at a minimum rate of 0.10 gallons per square yard for limerock, limerock stabilized, shell-rock,

recycled concrete aggregate and local rock bases, 0.15 gallons per square yard for sandy-clay, cemented coquina, shell, and shell stabilized bases.

2. Apply prime coat on new binder course when traffic has been allowed on it and on all existing paved surfaces to be overlaid at a minimum rate of 0.10 gallons per square yard.
3. Apply with pressure distributor meeting the requirements of Section 300 of the FDOT "Standard Specifications".
4. Do not apply when ambient temperature is less than 40 degrees F. or when local conditions indicate that rain is imminent.

3.3 TACK COATS

A. Bituminous tack coat:
1. Apply tack coat to all aggregate surfaces at a minimum rate of 0.06 gallons per square yard for newly constructed asphalt layers, 0.09 gallons per square yard for milled asphalt pavement surface, oxidized and cracked asphalt pavement, and concrete pavement.
2. Apply with pressure distributor meeting the requirements of Section 300 of the FDOT "Standard Specifications".
3. Apply tack coat sufficiently in advance of placing bituminous mix to permit drying, but do not apply tack coat so far in advance that it might lose its adhesiveness due to dust or other foreign matter.
4. Do not allow traffic on surfaces with applied tack coats until after bituminous hot mix has been laid.

3.4 SURFACE COURSES

A. Bituminous concrete binder and surface courses:
1. A leveling binder course will be used only to correct crown or other irregularities between the existing surface and the proposed surface shape.
2. Maximum thickness: 2-inch per pass.
3. Do not apply hot-mix asphalt surface course until the hot-mix asphalt binder has been in place for one winter season unless the Engineer gives written approval for earlier placement.
4. Repair settled trenches, spalled asphalt, and other defective binder before placement of hot-mix asphalt surface course.

B. Acceptable tolerances for the pavement surface:
1. Longitudinal tolerance:
a. Sweep the surface clean and test for smoothness when finish surface is complete.
b. Use a 15-foot straightedge as specified in Section 330 of the FDOT "Standard Specifications".
c. Remove high points exceeding ¼-inch in 10 feet to within the specified tolerance either by grinding or further rolling.
d. Remove and replace depressions which cannot be corrected by grinding or further rolling.

e. Grinding high points or repairing depressions shall be done at the Contractor's expense.

3.5 CURB AND GUTTER

A. Install aggregate base course under the curb and gutter, if indicated on the Drawings.

B. Cut contraction joints as specified in Section 520 of the FDOT "Standard Specifications" on intervals not to exceed 10 feet but no less than 4 feet.

C. Construct expansion joints as shown on the Drawings and as specified in Section 520 of the FDOT "Standard Specifications" at the following locations:
1. End of intersection radii.
2. 5 feet on each side of drainage structures.
3. A maximum of 500 feet between other expansion joints or ends of a run.
4. Ensure that the joint is ½ inch in width.

D. Backfill in accordance with Section 31 22 22, "Earthwork for Roads, Driveways, and Walks", of these Specifications.

E. Construct depressed curb for wheelchair ramps and driveways at the locations designated by the Engineer. No additional compensation will be made for depressed curb at ramp or driveway locations.

3.6 SIDEWALKS

A. Construction requirements:
1. Construct to the lines and grades as shown on the Drawings.

B. Portland Cement concrete sidewalks:
1. Erect temporary forms for placement of concrete as specified in Section 522 of the FDOT "Standard Specifications" and City of Delray Beach Standard Detail RT 18.0 and 18.1.
2. Backfill over excavated area with approved granular material.
3. Construct in accordance with applicable articles of Section 522 of the FDOT "Standard Specifications".
   a. Provide a minimum thickness of 4 inches, 6 inches at driveways.
4. Provide ramps accessible to the disabled in locations as shown on the Drawings and in accordance with FDOT Standard Index 522.
5. Provide detectable warnings at ramps as specified in FDOT Standard Index 522.

3.7 CRACK AND JOINT REPAIR

A. Description:
1. Remove existing crack and joint fill material as directed by the Engineer and replace with a bituminous mixture.

B. Construction requirements:
   1. Remove all existing material in cracks and joints as directed by the Engineer and clean as specified in Section 305 of the FDOT "Standard Specifications" except as modified herein.
      a. Remove material in cracks ½-inch and larger to be cleaned.
   2. Fill the cracks as specified in Section 305 of the FDOT "Standard Specifications".

3.8 EXISTING AGGREGATE BASE

A. Scarify, grade, and shape the existing aggregate base to the required grades before constructing surface courses in accordance with Section 210 of the FDOT "Standard Specifications".

3.9 TEMPORARY AGGREGATE

A. Place, compact, and maintain coarse aggregate as a temporary driving surface where shown on the Drawings, as directed by the Engineer, and as specified herein:
   1. Place and compact additional material as directed by the Engineer.
   2. Provide dust control.
   3. Provide and maintain temporary culverts or other drainage devices.
   4. Shape the road bed to provide positive drainage.
   5. Completely remove the temporary aggregate. It may be reused for any of the following, if the Contractor receives approval from the Engineer:
      a. Trench backfill or bedding.
      b. Temporary aggregate at another location.
      c. Fill material for subgrade removal and replacement.
      d. Subbase granular material or aggregate base course if the Engineer determines that there is not significant segregation or contamination of the material and if it is constructed as specified in these Specifications.

3.10 TEMPORARY HOT-MIX ASPHALT PAVEMENT SURFACE

A. Provide a hot-mix asphalt wearing surface for use during the period between backfilling the trench and constructing the permanent pavement surface.

B. Provide 2-inch (compacted) minimum wearing surface.
   1. Utilize mechanical tamper, vibrating tamper, or self-propelled roller to achieve compaction.
   2. To facilitate extra compaction by traffic, surface of patch may be finished up to ½-inch above existing pavement.
   3. Provide smooth, drivable surface, free of ruts or depressions.
   4. Remove all loose materials from edges of patch, and provide temporary sawcuts if directed by the Engineer.

C. Remove and dispose of all temporary asphalt pavement surface materials at the time of permanent pavement construction.

3.11 PAVEMENT MARKINGS

A. General:
   1. Replace all existing pavement markings that are removed or damaged during pipe installation operations.
   2. Mark locations (by dimensions) on Job Plan of all existing pavement lane markings, turn arrow, stop bars, and parking stall markings prior to excavation.
   3. Replace all existing markings after placement of final surfaces.
   4. Replace pavement markings with same kind and type unless otherwise noted on the Drawings or in Contract Documents.

B. Removal:
   1. Remove pavement markings or reflectors in a manner that does not cause damage to pavement surface.

C. Temporary – tape:
   1. Use temporary marking tape to delineate temporary lanes of traffic, stop bars, or parking stall lanes on temporary asphalt pavement, asphalt base courses, and surface courses if indicated on the Drawings or if so directed by the Engineer.
   2. Remove temporary marking tape prior to installation of permanent markings.

END OF SECTION

SECTION 32 92 00.13

LAWNS AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

A. Provide topsoil, seeding, sodding, and care of grass during establishment period for a complete surface restoration of lawns, parkways, and other areas disturbed as a result of the construction in accordance with FDOT “Standard Specification for Road and Bridge Construction”, hereby referred to as FDOT “Standard Specification”.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

C. References:
   1. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING – (Reserved).

1.5 SITE CONDITIONS – (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 TOPSOIL

A. Provide a mixture of black dirt having at least 90 percent passing a No. 10 sieve, free of large roots, brush, sticks, weeds, and stones larger than 1/4-inch in diameter, and any other debris.

2.2 FERTILIZER

A. Provide commercial grade fertilizer per FDOT Section 982 – Fertilizer.

2.3 EROSION CONTROL MATERIALS

A. Excelsior blanket:
   1. Provide excelsior blanket consisting of a machine produced mat of wood excelsior of 80 percent 6 inches or longer fiber length.
   2. Provide cover with a 60-day photodegradable extruded plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting having an approximate minimum opening of 5/8" x 5/8" to maximum opening of 2" x 2".
   3. Comply with the following:
      Minimum width: 24 inches.
      Minimum weight: 0.9 lbs./sq.yd.
      Minimum length of roll: 150 feet.

B. Knitted straw mat:
   1. Provide knitted straw mat consisting of machine assembled blanket of clean, weed-free straw from agricultural crops, approximately 1/2-inch loose thickness.
   2. Cover the top side of the blanket with a photodegradable plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting of 3/8" x 3/8" square openings adhered to the straw by a knitting photodegradable or biodegradable thread.
   3. Supply the blanket in a protected rolled mat form of 6'-6" width and the dry weight not less than 0.70 pounds per square yard.

C. Straw/coconut fiber mat:
   1. Machine-assembled blanket of clean, weed-free 70 percent straw from agricultural crops and 30 percent coconut fiber, of approximately ¼-inch thickness.
   2. Cover the top side of the mat with a photodegradable plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting with 3/8-inch by 3/8-inch square openings.
      a. Attach mesh to the mat with photodegradable or biodegradable knitting thread.
   3. Supply blanket in protected rolled mat form of 6'-6" width, with a dry weight of 0.50 pounds per square yard minimum.
   4. Acceptable products:
      a. SC150BN by North American Green.
      b. Or equal.

D. Coconut fiber blanket:
   1. Machine-assembled mat of 100 percent coconut fiber, of approximately 1/4-inch thickness.
   2. Cover the top side of the mat with a photodegradable plastic (polypropylene) or biodegradable natural (jute fiber) mesh netting with 3/8-inch by 3/8-inch square openings.
      a. Attach mesh to the mat with photodegradable or biodegradable knitting thread.
   3. Supply blanket in protected rolled mat form of 6'-6" width, with a dry weight of 0.50 pounds per square yard minimum.
   4. Acceptable products:
      a. C125BN by North American Green.
      b. Or equal.

E. Provide 6-inch long staples of 11 gauge wire to hold mat or blanket in place.

2.4 MULCH

A. Vegetative mulch:
   1. Provide vegetative mulch for seeded areas of a high-quality, air-dried straw of wheat, rye, oats, beans, or other approved straw, free from grass, broom sedge, noxious weeds, and weed seeds detrimental to growth of grass.

B. Hydraulic mulch:
   1. Provide virgin wood cellulose fibers complying with the following properties (percent by weight):

Moisture content	15
Organic matter, minimum	95
Water holding capacity	400
pH	4.3-8.5

2.5 SOD

A. Sod shall be St. Augustine Floratam for irrigated locations. Non-irrigated locations shall be Bahia.

B. Provide field or nursery grown sod that is native to the locality of the Project.

C. Provide sod that will not break, crumble or tear during handling and placing, free of stones, crab grass, noxious weeds, and other objectionable plants or substances injurious to plant growth.

D. Provide sod having at least 1-inch of soil adhering firmly to the roots and cut in rectangular pieces with the shortest side not less than 12 inches. At the time of cutting sod, mow the grass height not less than 2 inches nor more than 4 inches.

E. Do not use sod cut for more than 48 hours.

PART 3 - EXECUTION

3.1 TOPSOIL PLACEMENT

A. Scarify the compacted subgrade to a depth of 3 inches to receive the topsoil.

B. Spread at least 4 inches of prepared topsoil in areas of new grading raked smooth and level.

C. Grade flush with walks, curbs, and paving.

3.2 PREPARATION FOR SODDING OR SEEDING

A. Do not start preparation until all other site and utility work and finished grading within the areas to be seeded have been completed.

B. Till topsoil to a depth of at least 3 inches and smooth out all surface irregularities resulting therefrom. Leave area free of rocks or hard soil clods which will not pass through the tines of a standard garden rake.

C. Take a test of the site soils to determine the need for application of agricultural limestone (soil pH less than 7.0). If agricultural limestone is needed, then at least 7 days before applying fertilizer, spread lime uniformly in sufficient quantity to produce in the soil a pH of 7.0. Work lime thoroughly into topsoil to a depth of 3 inches.

D. Apply fertilizer uniformly at a rate of 7 lbs. per 1,000 sq. ft. Work fertilizer into soil prior to seeding or sodding.

3.3 SODDING

A. Provide sod in developed areas that were grassed prior to construction and as indicated on the Drawings. Sodding shall also be used in ditches and drainage swales and on all embankment slopes steeper than 3 to 1 unless protection is provided against erosion of seeding. At the Contractor's option, sodding may be substituted for seeding, but at no additional cost.

B. Place sod with the edges in close contact and alternate courses staggered. Lightly tamp or roll to eliminate air pockets. On slopes 2 to 1 or steeper, stake sod with not less than 4 stakes per square yard and with at least one stake for each piece of sod. Stakes shall be driven with the flat side parallel to the slope. Do not place sod when the ground surface is frozen or when air temperature may exceed 90 degrees F. Water the sod thoroughly within 8 hours after placement and as often as necessary to become well established.

C. In ditches, the sod shall be placed with the longer dimension perpendicular to the flow of water in the ditch. On slopes, starting at the bottom of the slope, the sod shall be placed with the longer dimension parallel to the contours of the ground.

D. All exposed edges of sod shall be buried flush with the adjacent turf.

3.4 TEMPORARY EROSION CONTROL SEEDING

A. Seed all erodible/bare areas with a temporary cover crop within 7 days of disturbance, unless the area is to have an alternative temporary or permanent soil erosion control measure implemented within 7 days of disturbance, or as directed by Engineer.

B. Seed bed preparation will not be required if the soil is in a loose condition. Light disking shall be done if the soil is hard packed or caked. Fertilizer will not be required.

3.5 EROSION CONTROL MATTING OR FABRIC

A. Immediately after rolling seeded areas, place erosion control excelsior blanket or fiber mat on slopes steeper than 4 horizontal to 1 vertical. Unless otherwise indicated, also place erosion control material at sides and bottoms of ditches, swales, and all areas within 10 feet of catch basins in seeded areas.

B. Apply erosion control in accordance with the FDOT "Standard Specifications".

3.6 WATERING

A. Immediately after placing erosion control matting or mulch, water seeded areas thoroughly with a fine mist spray. Keep soil thoroughly moist until seeds have sprouted and achieved a growth of 1-inch. For sod, immediately begin watering and continually keep moist until the sod has firmly knit itself to the topsoil.

B. Effluent water shall meet all Federal, State and local requirements.

3.7 PROTECTION OF WORK

A. Protect newly seeded and sodded areas from all traffic by erecting temporary fences and signs. Protect slopes from erosion. Properly and promptly repair all damaged work when required.

3.8 APPLICATION OF FERTILIZER

A. Six weeks after completion of seeding or sodding apply granular fertilizer over all areas at the rate of 2 lbs. of nitrogen nutrients per 1,000 sq.ft. of area.

3.9 CLEAN-UP

A. At the time of final inspection of work, but before final acceptance, remove from seeded and sodded areas all debris, rubbish, excess materials, tools, and equipment.

3.10 MAINTENANCE

A. Provide watering, mowing, and replanting and continue as necessary until a close healthy stand of specified grasses is established.

B. Replace lawns not showing a close uniform stand of healthy specified grasses at the end of the guaranty period and maintain until acceptance.

END OF SECTION

DIVISION 33

UTILITIES

SECTION 33 13 00

RECLAIMED WATER MAINS

PART 1 - GENERAL

1.1 SUMMARY

A. Provide reclaimed water distribution system as shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Provide labor, materials, tools, chemicals, and equipment necessary to perform the pressure and leakage tests and disinfection.

C. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Division 01 - General Requirements of these Specifications.

D. References:
   1. American Water Works Association (AWWA).
   2. American National Standards Institute (ANSI).
   3. American Association of State Highway and Transportation Official (AASHTO).

1.2 SUBMITTALS

A. Shop Drawing Submittals – (Reserved).

B. Operation and Maintenance Manuals – (Reserved).

C. Certificates and Guarantees – (Reserved).

D. Spare Parts – (Reserved).

1.3 QUALITY ASSURANCE – (Reserved).

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01 66 11.

1.5 SITE CONDITIONS - (Reserved).

1.6 MAINTENANCE – (Reserved).

PART 2 - PRODUCTS

2.1 PIPE

A. Ductile Iron Pipe
1. Ductile iron pipe shall conform to AWWA C151 (ANSI A21.51) and shall conform to working pressure class of 350 psi and 250 psi.
a. Lining: Ductile iron pipe for reclaimed water mains shall have an internal lining of cement mortar in accordance with AWWA C104/A21.50.
b. Coating: Buried ductile iron pipe shall be bituminous coated per AWWA C151/A21.51.
c. Encasement: In corrosive environments, ductile iron pipe shall be encased in polyethylene in accordance with AWWA C105.
d. Prior to installation, apply two (2) 4” wide stripes of purple paint along the full length at approximately 2 and 10 o’clock considering pipe diameter.
2. Acceptable Manufacturers:
a. Push-on and Mechanical Joint Pipe
(1) American Cast Iron Pipe Company
(2) U.S. Pipe
(3) McWane Ductile

2.2 FITTINGS

A. Ductile Iron Fittings
1. Ductile iron fittings shall be mechanical joint type and shall conform to ANSI/AWWA C110/A21.10.
2. All fittings shall have a working pressure rating of 350 psi in sizes 4-inch through 12-inch and 250 psi for sizes 16-inch through 54-inch and shall be coated and lined as specified for pipe.
3. DIP fittings shall be encased in polyethylene in accordance with AWWA C105.
4. Acceptable manufacturers:
a. Mechanical Joints
(1) Tyler Union
(2) US Pipe
(3) American
(4) Slow
b. Flexible Restraint Fittings
(1) American – Flex-Ring, Lok-Ring
(2) US Pipe – Tr Flex, Bolt-Lok
(3) McWane Corporation – Super Lock

2.3 JOINTS

A. Push-On Joints

1. For bell and spigot ductile iron pipe and fittings shall be rubber gasket compression, push-on type as specified in AWWA C111 (ANSI A21.11).
2. Acceptable manufacturers:
   a. American Cast Iron Pipe Company
   b. U.S. Pipe
   c. McWane Ductile

B. Restrained Joints
1. Restrained joints shall be used in lieu of thrust blocks for changes in elevation or alignment as shown on the Plans or as required in the field by the CEI.
2. The length of restraint required shall be approved by the CEI.
3. Acceptable manufacturers:
   a. Flexible Joint Restraint Pipe
      (1) U.S. Pipe TR Flex.
      (2) American Flex Ring or Lok Ring.
   b. Mechanical Joint Restraint
      (1) EBAA Megalug
      (2) Or approved equal.

2.4 VALVES

A. Provide valves with clockwise closing direction.

B. Gate valves:
1. Valves smaller than 3-inch size:
   a. Provide bronze body, wedge disc, screwed bonnet, non-rising stem, threaded-end type with handwheel.
   b. Design valves for 300-pound non-shock W.O.G.
2. Valves 3-inch and larger:
   a. Design in accordance with AWWA C509 (cast iron body), or AWWA C515 (ductile iron body), bronze fitted, resilient wedge and seat type with non-rising stem and O-ring packing.
   b. Provide gear operator for valves 14-inch and larger.
3. Provide mechanical joint ends for buried valves and ANSI Class 125 flange ends or mechanical joint ends for valve installed in vaults as indicated on the Drawings.
   a. Provide restrained type joints for all mechanical joint end valves.
   b. Provide and install nuts and bolts matching the nuts and bolts used for fittings.
4. Acceptable valve manufacturers:
   a. Mueller A-2361, A-2362
   b. AmericanSeries 2500 (MM, FF)
   c. Kennedy Ken Seal Series
   d. Clow Models 2638, 2639/2640

2.5 VALVE BOXES

A. Provide adjustable valve boxes on buried valves:
   1. Valve box compatible with size and type of valve protected.
   2. Extend box to finished grade.
   3. Mark valve box cover "WATER" for potable water piping valves. Other valve box covers unmarked.
   4. Bituminous coated carbon steel valve extension stems and 2-inch square operating nuts 2 inches below the cover.

B. Provide valve box stabilizer for all valve boxes.
   1. Acceptable manufacturers:
      a. Tyler No. 6850

2.6 TAPPING SLEEVES AND VALVES

A. Tapping sleeves:
   1. Use two-piece bolted sleeve stainless steel type with mechanical joints.
   2. Provide joint accessories.
   3. Measure existing water main outside diameter to determine proper tapping sleeve size.
   4. Acceptable manufacturers:
      a. Stainless steel:
         (1) Romac SST-H (for HDPE Pipe minimum SDR17)
         (2) Mueller H-304
         (3) Ford FTSS
         (4) Clow 5205
         (5) Tyler (5-149)
         (6) JCM 432-widebankd (304)

B. Tapping valves:
   1. Use fully ported gate valves complying with AWWA C500.
   2. Acceptable manufacturers:
      a. American #2500
      b. Mueller T2361
      c. Clow 5093 (Medallion)
      d. Kennedy Guardian
      e. US Pipe TUSP0

2.7 STAINLESS STEEL STIFFENERS FOR HDPE

A. Acceptable Manufacturers:
   1. Cascade
   2. JCM
   3. Romac

2.8 FOUNDATION ROCK

A. A sieve analysis of foundation rock shall conform to the following limits:

Passing ¾" – 100%	Passing #4 – 0-10%
Passing 3/8" – 20-55%	Passing #8 – 0-5%

PART 3 - EXECUTION

3.1 The installation and testing of the reclaimed water main shall be done in accordance with AWWA (ANSI) C600 plus the additional requirements described herein or shown on the Plans.

A. Testing

1. All mains shall be pressure-tested with Potable Water to the required pressure, 150 psi. Mains located in road rights-of-way shall be pressure tested after the rock and "tack coat" is installed in the road right-of-way. Reclaimed water shall not be used for pressure testing. The maximum length of line to be tested as one section will be 2,500 feet. The test shall be performed as determined in the current AWWA specification. The standard test duration is two (2) hours. Certifications of Completion to the FDEP and project releases for service from the FDEP for the reclaimed water distribution and irrigations systems are required prior to any Service Activation.

3.2 PREPARATION

A. Clearing

1. The Contractor shall perform all clearing necessary, where applicable, for the proper installation of all reclaimed water mains, and appurtenances in the locations shown on the drawings.
2. Plantings, shrubbery, trees, utility poles, or structures subject to damage resulting from the excavation shall be transplanted, relocated, braced, shored, or otherwise protected and preserved unless otherwise directed by the CEI.

B. The layout of some of the piping systems shown on the drawings may be diagrammatic but shall be followed as closely as the work will permit.

C. Ream pipes and tubes: Clean off scale and dirt, inside and out, before assembly. Remove all foreign materials from piping.

3.3 TRENCHING

A. Perform trench excavation and provide pipe protection to the line and grade indicated on the contract drawings and as specified in Section 31 23 79. Remove all muck and organic material.

B. Foundation – Foundations are shown on the plan details and described in this specification.

1. Type 1 Trench – Type 1 Trench shall be considered “Standard” for this project and shall be installed under all pipe when an undisturbed trench bottom is found.
2. Bedding shall consist of at least four inches of 3/8-inch to 3/4-inch (where unsuitable in-situ materials are encountered) washed and graded limerock placed in the trench and tamped to the proposed elevation of the center line of the pipe prior to any pipe laying. Bell holes shall be excavated at each bell so that the pipe is supported along the barrel only. This bedding shall not be used under any circumstances as a drain for ground water. The Contractor shall take all precautions necessary to maintain the bedding in a compacted state and to prevent washing, erosion, or loosening of this bed.
3. Preparation of Trench – The trench shall be excavated to the depth shown on the Plans. Care shall be taken during the excavation operation not to disturb the soil below the grade line of the bottom of the pipe. Bell holes shall be hand excavated so that there are no bearing surfaces on the bells. The pipe barrel shall be uniformly supported along its entire length.
4. In granular material and where the conditions permit, the bottom shall be shaped to fit the lower quarter of the pipe barrel. Where rock or unstable material is encountered, the trench shall be excavated 8 inches below the required depth. The subgrade for the pie shall be made by backfilling with approved material and compacted as directed by the CEI. The pipe shall not be installed when the stabilization of the trench bottoms are rendered soft or unstable as a result of construction methods, such as improper or inadequate sheeting, dewatering or other causes. The Contractor shall correct such conditions so as to provide proper bedding or foundations for the proposed installation as indicated in the paragraph above.

3.4 INSTALLATION

A. All pipe, fittings and valves shall be installed according to AWWA Specification C600 and C605. Prior to installation, all pipe and appurtenances shall be examined for damage and defects. Under no circumstances shall defective pipe be installed. All lumps, blisters and excess coating materials shall be removed from the socket and plain ends of each pipe. While being placed in the trench, care shall be taken to prevent foreign material from entering the pipe. As each length of pipe is placed in the trench, the joint shall be assembled and the pipe brought to correct line and grade.

B. At times when pipe laying is not in progress, the open end of the pipe shall be closed by a watertight plug. When practical, the plug shall remain in place until the trench is pumped completely dry. When it is necessary to deflect the pipe from a straight line in either the vertical or horizontal plane, or where long radius curves are permitted, the amount of deflection shall not exceed that of Table 3 and 4 in AWWA Specification C600.

C. Pipe Restraint

1. All bends, tees, and dead ends shall be restrained by mechanical joint restraints as detailed on the drawings (or other approved method).
2. The restraint for all bends, tees and dead ends shall be by restraint joints on the piping on each side of the fittings for distances detailed on the drawings.

D. Polyethylene Encasement
1. Ductile Iron Pipe installed in corrosive environments shall be encased in either 8-mil low-density (LD) polyethylene or 4 mil, high-density, cross-laminated (HDCL) polyethylene, in accordance with AWWA C105 latest edition.

E. Backfill
1. Where the trench has been dewatered, backfilling must progress sufficiently before pumps are shut off to prevent flotation of pipe. Any pipe that has been displaced perceptibly from its correct position shall be removed and relaid properly at the Contractor's expense. Backfilling shall follow pipe laying within 100 feet, unless otherwise directed by the CEI, but shall not be performed in any case until the CEI has approved the line for backfilling. Water shall not be added except as required to obtain Optimum Moisture Content and "flooding" or "puddling" will not be allowed.
2. Backfill material shall be free of roots, logs, limbs, large rocks or any material or debris determined to be unsuitable by the CEI. The CEI may reject any material which he considers unsuitable for backfill.
3. The compaction procedures specified herein shall be considered "minimum procedures" to prevent after-settlement and the Contractor shall reopen, refill and recompact any trenches indicating improper backfill procedures or after settlement.
4. All road crossings shall be backfilled immediately, made passable and maintained passable until the permanent repair is made.
5. City Rights-of-Way
    a. Typical backfill requirements shall be in accordance with the City of Delray Beach Standard Details, 2024 edition, GU 2.0.
    b. Initial Lift (to 12 inches above pipe) – The initial lift shall be carefully backfilled around and over the pipe with select materials, not exceeding 7/8 inch in diameter, and compacted in 6 inch layers with manual equipment to an average maximum density of 98 percent as determined by AASHTO T-180 (Modified Proctor).
    c. Final Lift – The final lift (to finish grade or bottom of pavement as applicable) shall be carefully backfilled with material free from organic material and stones or clumps exceeding 6 inches (4 inches in the final 12 inch layer) in diameter, and compacted in 12 inch layers to an average maximum density of 98 percent (under pavement) or 95 percent (not under pavement) as determined by AASHTO T-180 (Modified Proctor).
    d. Density Compliance – In determining compliance with the density specifications, the lowest acceptable density shall be 98 percent. In

determining “job average maximum density,” 102 percent shall be the highest percentage used.

F. PIPELINE CLEANING

1. The Contractor shall clean and flush reclaimed water mains in the following manner:
   a. Foreign material shall be kept out of the pipe or cleaned from pipe prior to installation. Upon completion of installation, the reclaimed water mains shall be flushed with potable water and the water disposed of without creating a nuisance. The use of reclaimed water for flushing will not be permitted. The ends of the pipe installed during one day shall be capped at the end of each day with pipe plugs to prevent contamination.

G. FIELD QUALITY CONTROL

1. Hydrostatic Tests:
   a. The Contractor shall provide all necessary material and shall perform all work required in connection with the test, including temporary plugs where required. All pipe shall be tested to a hydrostatic pressure of 150 psi. The required pressure as measured at the point of highest elevation shall be applied for not less than two hours, and all pipe, fittings, valves and joints shall be made water tight if leakage is evident.
   b. No pipe installation will be accepted unless and until the leakage is less than that as specified under Section 5.2 of the AWWA (ANSI) C600.
2. Connections to the Existing System:
   a. Connections to be made by the Contractor are shown on the Plans. Connections shall not be made until the new main is cleared by and approved by the CEI.
3. Density Tests:
   a. The CEI shall specify at what locations test will be made in the backfill to determine the adequacy of the compaction operation.

H. ADJUSTING AND CLEANING

1. Restoring Surfaces:
   a. The top surfaces of the backfill shall be restored to present standards or better conditions. Trenches shall be carefully examined upon the completion of backfilling and surface irregularities, that are dangerous or obstructive to traffic, are to be removed.
   b. Paved sections shall conform in grade with adjacent areas and shall be of at least equal quality. Design mixes for flexible pavement shall be subject to approval by the CEI. All damaged or undermined areas of existing pavement, not previously removed, shall be

removed, and restored to original conditions or in the specified manner.

c. Equipment shall not travel over loose rock fragments, or other hard material, lying on sections or pavement which are not to be removed. Removal, replacement, and restoration of areas of pavement shall be as indicated on drawings.

END OF SECTION

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APPENDIX A
SURVEY

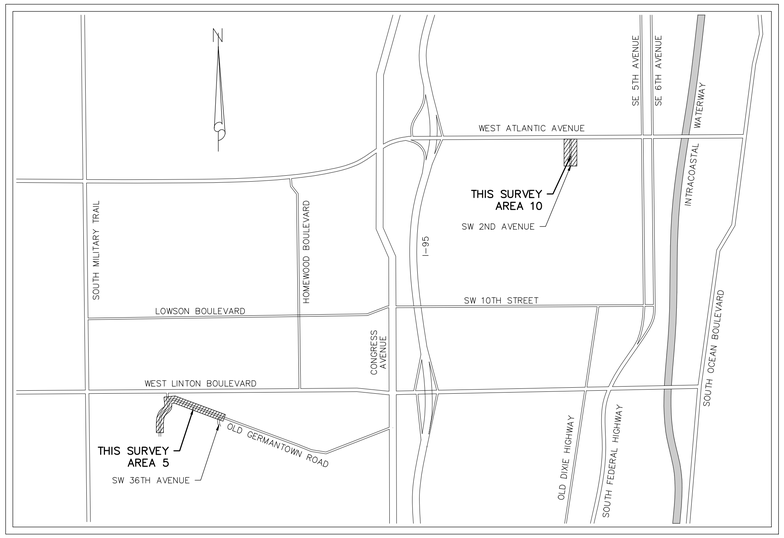
TOPOGRAPHIC SURVEY

BAXTER & WOODMAN, INC.

LOCATED IN: SECTION 17 , TOWNSHIP 46 SOUTH AND RANGE 43 EAST AND
SECTION 25, TOWNSHIP 46 SOUTH, RANGE 42 EAST
CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA

REPORT OF SURVEY:

1. The survey depicted hereon has been classified as a Topographic Survey, as defined in Rule 5J–17.050 of the Florida Administrative Code, pursuant to Chapter 472.027, Florida Statutes as amended.
2. This survey has been prepared in the office of Dennis J. Leavy & Associates, Inc. located at: 460 Business Park Way, Suite B, Royal Palm Beach, Florida, whose certificate of authorization number is LB #6599, and the certifying surveyor's (David A. Bower) license number is LS #5888.
3. The survey sketch shown hereon does not necessarily contain all of the information obtained or developed by the undersigned surveyor in his field work, office work, or research.
4. THIS IS NOT A BOUNDARY SURVEY
5. This survey does not address environmental matters, jurisdictional boundaries or hazardous waste concerns should any of the foregoing exist.
6. The elevations shown hereon are for the purpose of indicating the ground elevation only at the position shown and in no way indicate elevations at any other point than shown hereon and do not determine sub surface conditions.
7. The undersigned makes no representations or guarantees as to the information reflected hereon pertaining to easements, rights of way, setback lines, agreements and other matters, and further, this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and confirmed by others through appropriate title verification. Lands shown hereon were not abstracted for rights of way and/or easements of record.
8. This survey does not meet those standards established by the American Land Title Association.
9. Underground apparent use and/or improvements have not been shown unless otherwise noted.
10. This instrument may not be reproduced in part or whole without the written consent of Dennis J. Leavy & Associates Inc.
11. Date of field survey: July 3rd, 2024, as recorded in Field Book 553, Pages 41 through 44, and 46 through 50 & Field Book 554, Pages 25, 26, 28 through 31, 35 through 42, 46, 48 through 50, 62, 73, 78, and 79 & Field Book 555, Pages 21 and 22 & Field Book 556, Page 10.
12. This survey lies in Section 17, Township 46 South, Range 43 East and Section 25, Township 46 South, Range 42 East, City of Delray Beach, Palm Beach County, Florida.
13. By graphic plotting only the subject property lies within Zone X, as shown on the U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, Map Numbers: 12099C0978F 12099C0979F and 12099C0986F, Community: City of Delray Beach, Number: 125102, Panels: 978, 979 and 986, Suffix: F, Effective date: October 5, 2017.
14. In some instances, graphic representations have been exaggerated to more clearly illustrate relationships between physical improvements and/or lot lines. In all cases, dimensions shown shall control the location of the improvements over scaled positions.
15. Measurements shown hereon are expressed in feet and decimal parts thereof unless otherwise noted.
16. All dates shown within the revision block hereon are for interoffice filing use only, and in no way affect the date of the field survey stated herein.
17. Benchmarks of Origin: Palm Beach County Benchmarks "MILOWSON" and "LOW–1" whose published elevations are 17.367' and 13.615' respectfully, based on the North American Vertical Datum of 1988.
18. Elevations referenced hereon are based on the North American Vertical Datum of 1988 (NAVD 88).



LOCATION MAP
NOT TO SCALE

LEGEND:

AL:	ARC LENGTH
ARV	AIR RELEASE VALVE
℄	CENTERLINE
(C)	CALCULATED
CA:	CENTRAL ANGLE
CONC	CONCRETE
DC	DROP CURB
DE	DRAINAGE EASEMENT
DIP	DUCTILE IRON PIPE
E	EAST
EL	ELEVATION
G.U.E.	GENERAL UTILITY EASEMENT
HDPE	HIGH DENSITY POLYETHYLENE
L.A.A.	LIMITED ACCESS AREA
LB	LICENSED BUSINESS
LS	LICENSED SURVEYOR
LSA	LANDSCAPED AREA
MISC	MISCELLANEOUS
N	NORTH
NAVD	NORTH AMERICAN VERTICAL DATUM
NO.	NUMBER
OHW	OVERHEAD WIRES
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PC	POINT OF CURVATURE
PNC:	PARCEL CONTROL NUMBER
PG.	PAGE
PT	POINT OF TERMINATION
R:	RADIUS
RCP	CONCRETE PIPE
S	SOUTH
TON	TOP OF NUT
TP	TEXTURED PAD
UE	UTILITY EASEMENT
W	WEST

SYMBOL LEGEND:

Ⓐ	AIR RELEASE MANHOLE
ATT	AT&T RISER
	BENCHMARK
BFP	BACKFLOW PREVENTOR
BOL	BOLLARD
	CATCH BASIN
CO	CLEAN OUT
	COMMUNICATIONS HANDHOLE
	CONCRETE POWER POLE
	CONCRETE POWER POLE WITH LIGHT
CP	CUT POWER POLE
	DECORATIVE LIGHT POLE
Ⓓ	DRAINAGE MANHOLE
	ELECTRIC HANDHOLE
	FIBER OPTIC HANDHOLE
HYD	FIRE HYDRANT
FO	FIBER OPTIC RISER
GAS	GAS RISER
	IRRIGATION HANDHOLE
MP	METAL POST
(	POWER POLE ANCHOR
RWV	RECLAIMED WATER VALVE
RWV	RECLAIMED WATER VALVE WITH CONCRETE APRON
Ⓢ	SANITARY MANHOLE
	SIGN
Ⓦ	WATER METER
WV	WATER VALVE
WV	WATER VALVE WITH CONCRETE APRON
	WOOD POWER POLE
	WOOD POWER POLE WITH LIGHT
	YARD LIGHT

PLAT LEGEND:

(P1)	PLAT OF PALM BEACH COUNTY SOUTH COUNTY JUDICIAL CENTER (P.B. 60, PG. 124, P.B.C.R.)
(P2)	CODA REPLAT NO. 1 (P.B. 119, PG. 9, P.B.C.R.)
(P3)	SOUTH COUNTY COURTHOUSE COMPLEX EXPANSION (P.B. 117, PG. 11, P.B.C.R.)
(P4)	MAP OF THE TOWN OF LINTON, FLORIDA (P.B. 1, PG. 3, P.B.C.R.)
(P5)	HAMMOCK RESERVE (P.B. 80, PG. 166, P.B.C.R.)
(P6)	MIDTOWN DELRAY (P.B. 111, PG. 87, P.B.C.R.)
(P7)	FOXE CHASE (P.B. 38, PG. 1, P.B.C.R.)
(P8)	AMENDED PLAT OF FAIRCREST HEIGHTS (P.B. 42, PG. 68, P.B.C.R.)

PAINT MARK LEGEND:

–BPM–	BLUE PAINT MARK
–OPM–	ORANGE PAINT MARK
–PPM–	PURPLE PAINT MARK
–YPM–	YELLOW PAINT MARK

TREE SYMBOL LEGEND:

X"	OAK TREE
X"	PALM TREE
X"	MISC. TREE

X" DENOTES TRUNK DIAMETER AT CHEST HEIGHT

TOPOGRAPHIC SURVEY CERTIFICATION:

This is to certify that this survey is classified as a Topographic Survey as defined in Rule 5J–17.050 of the Florida Administrative Code, pursuant to Chapter 472.027, Florida Statutes as amended. The fieldwork was completed on July 3rd, 2024.

Dated: July 3rd, 2024

DAVID A. BOWER
LICENSE NUMBER
5888
STATE OF FLORIDA
PROFESSIONAL SURVEYOR AND MAPPER

DAVID A. BOWER
STATE OF FLORIDA
PROFESSIONAL SURVEYOR & MAPPER No. LS 5888

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FOR: BAXTER & WOODMAN, INC.
CITY OF DELRAY BEACH – AREAS 5 AND 10
RE–CLAIMED WATERMAIN PROJECT
CITY OF DELRAY BEACH, PALM BEACH COUNTY, FLORIDA
SECTION 17, TOWNSHIP 46S, RANGE 43E AND
SECTION 25, TOWNSHIP 46S, RANGE 42E

DENNIS J. LEAVY & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
460 BUSINESS PARK WAY, SUITE B, ROYAL PALM BEACH, FL 33411
PHONE: (561) 753–0650 EMAIL: SURVEY@DJLASURVEY.NET

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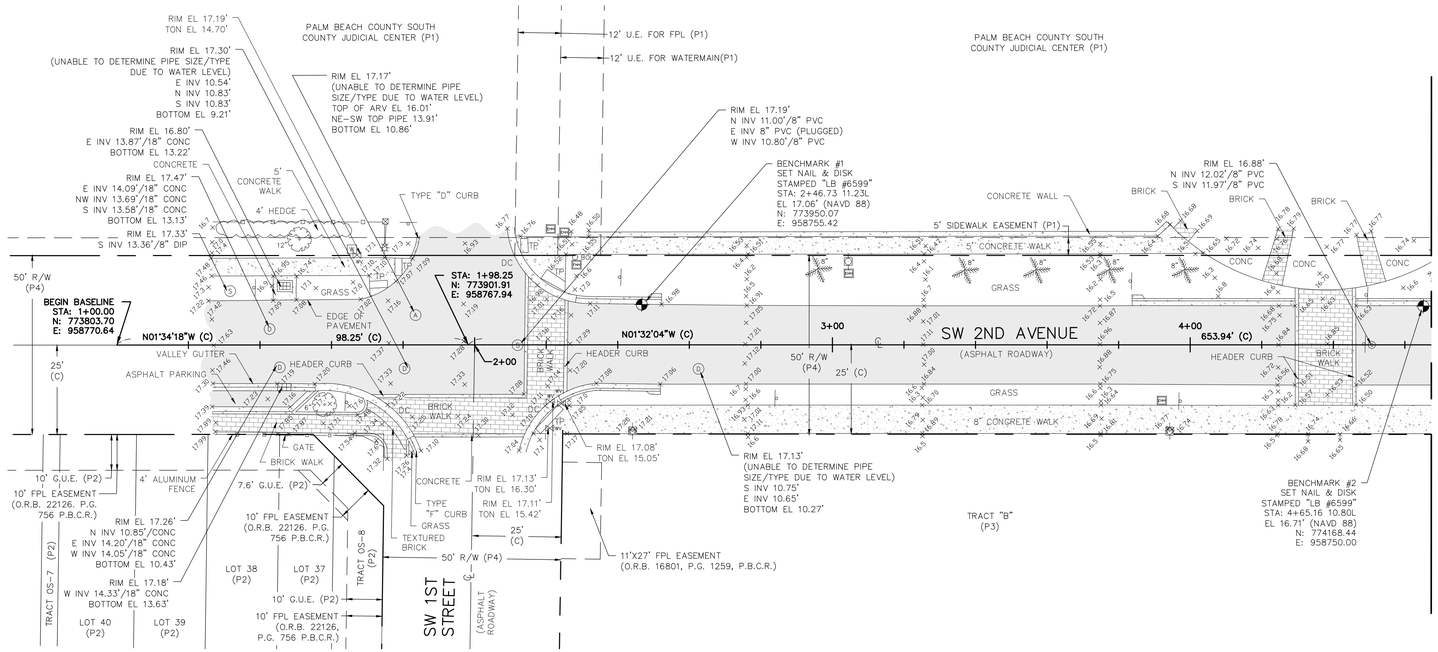
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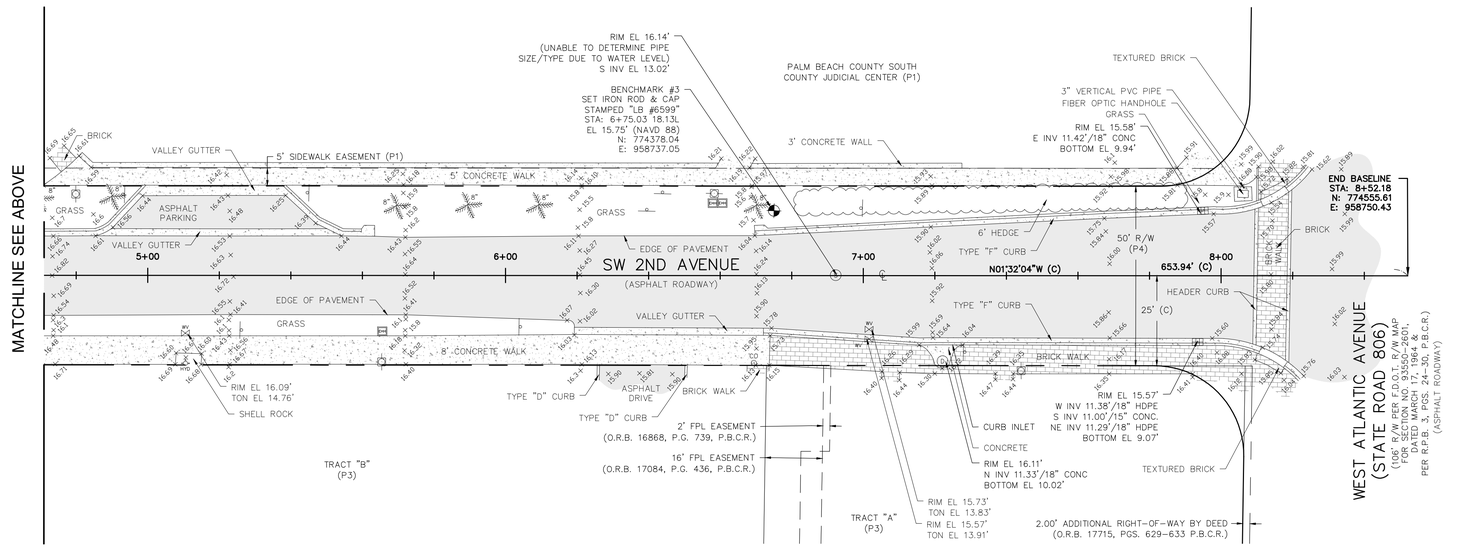
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AREA 10

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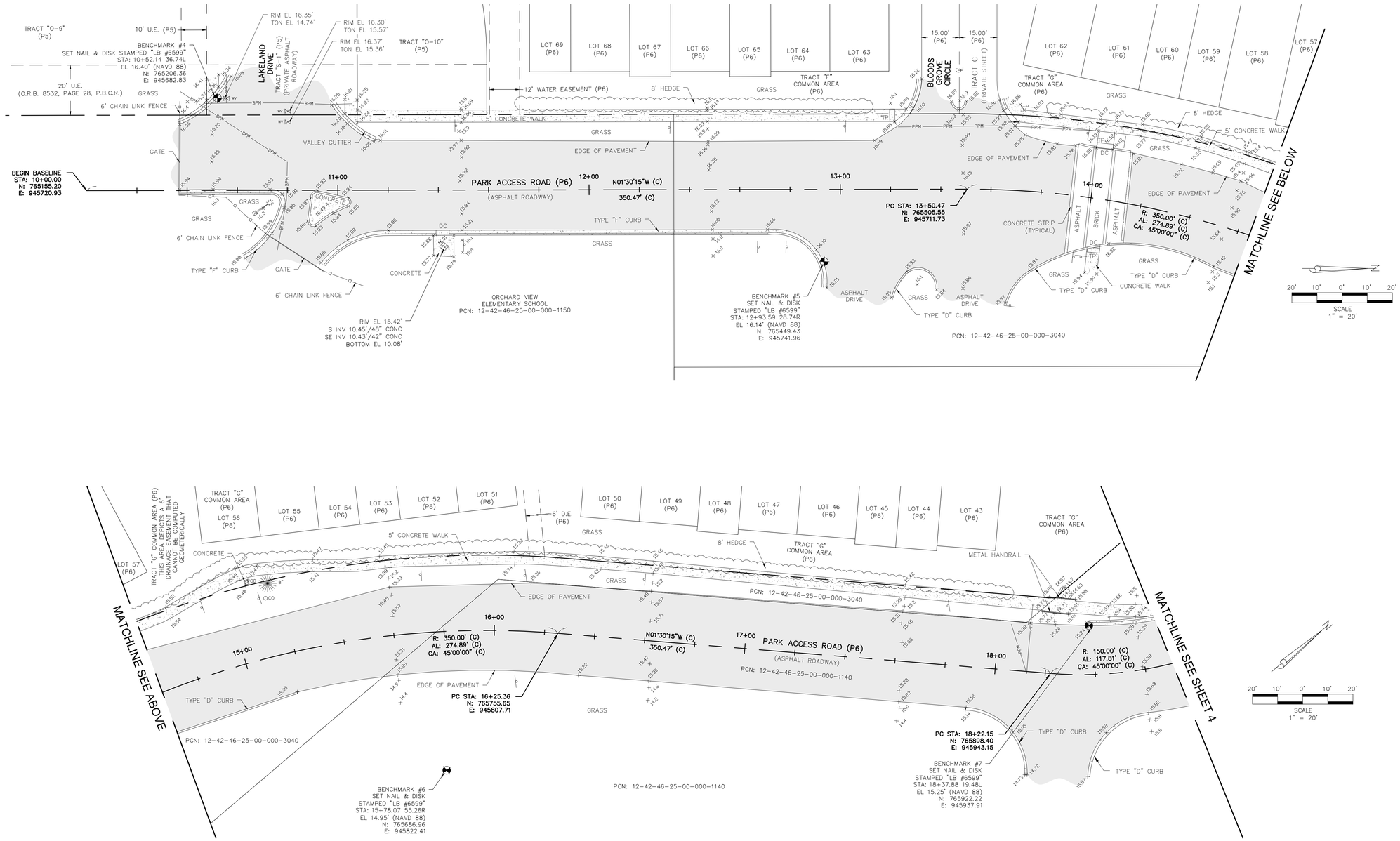
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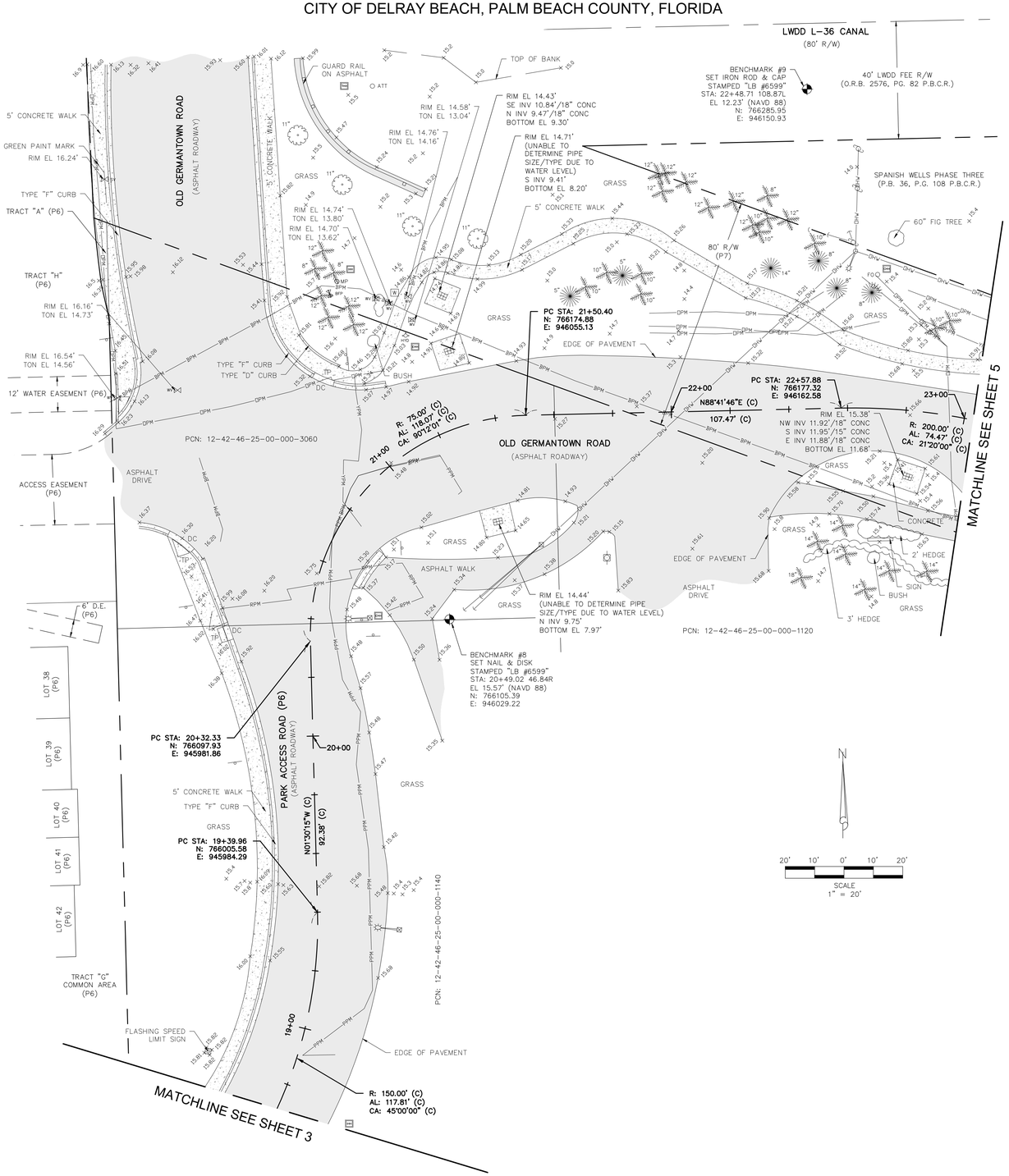
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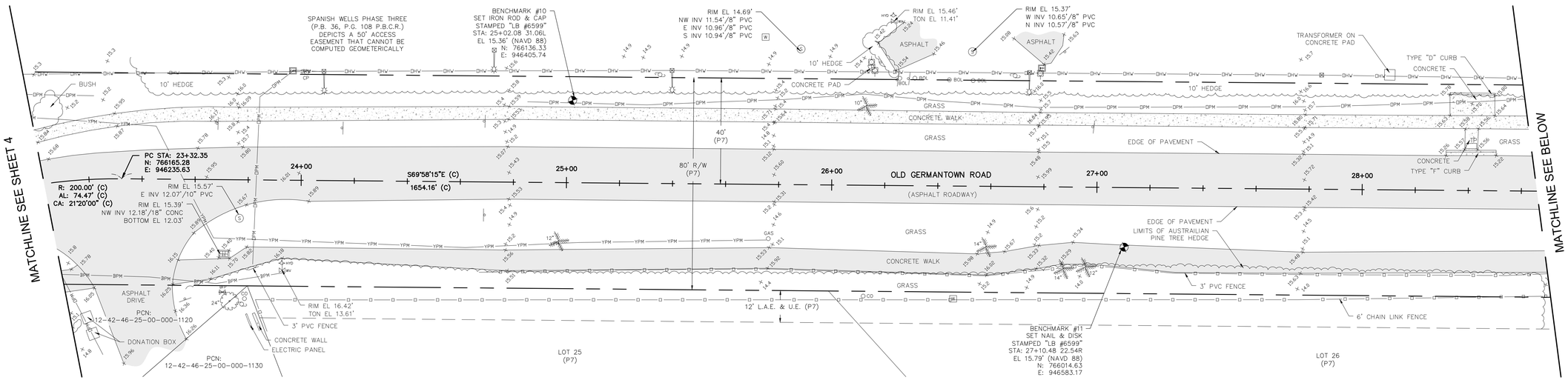
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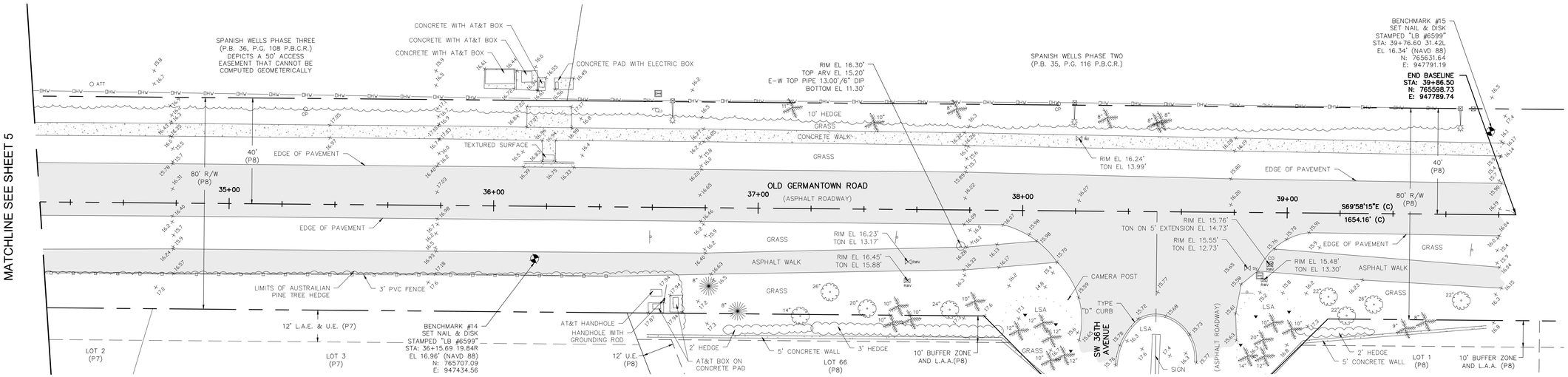
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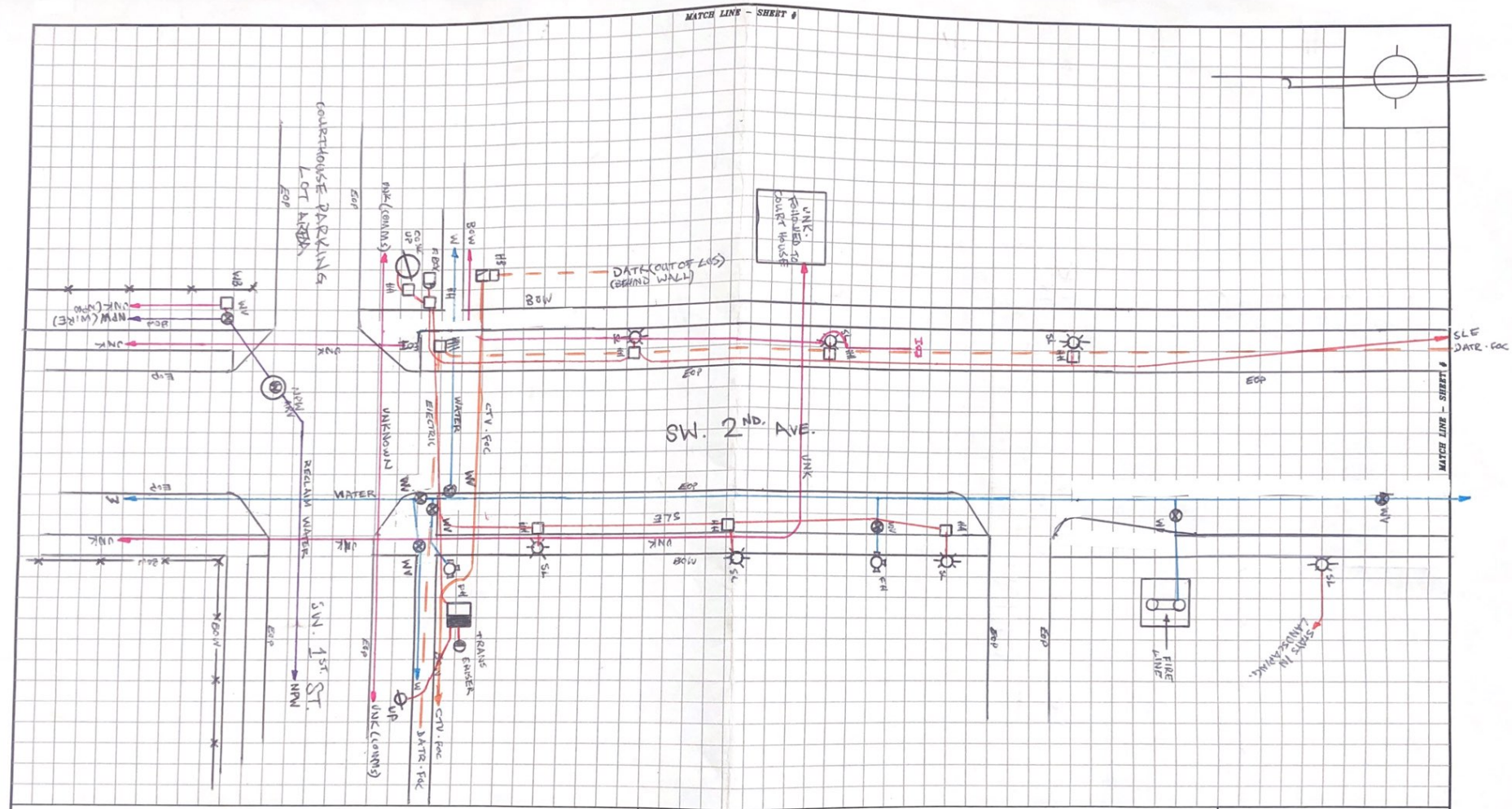
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APPENDIX B
SUBSURFACE UTILITY ENGINEERING

SW 4th Ave
SW 1st St
SW 4th Ave
W Atlantic Ave
Ave
SW 2nd Ave
W Coda Cir
S Coda Cir
N Coda Cir
E Coda Cir
W Atlantic Ave
SW 1st St
SW 1st Ave
S Swinton Ave
S Swinton Ave
SE 1st Ave
E Atlantic Ave



Page 1

ASCE STANDARDS OF DEPICTION OF SUBSURFACE UTILITIES

QUALITY LEVEL A (QLA)
IS THE USE OF EXCAVATING EQUIPMENT THAT IS NONDESTRUCTIVE AT CERTAIN AREAS TO OBTAIN HORIZONTAL AND VERTICAL INFORMATION ON UTILITIES ALONG WITH TYPE, CONDITION, SIZE AND MATERIAL OF A UTILITY.

QUALITY LEVEL B (QLB)
IS THE USE OF ELECTRONIC SURFACE TECHNIQUES TO OBTAIN THE HORIZONTAL POSITION AND EXISTENCE OF UNDERGROUND UTILITIES. THESE FIELD LOCATED UTILITIES ARE SURVEYED.

APPROXIMATE LOCATION
UTILITY IS FIELD LOCATED AND SURVEYED USING OTHER THAN ELECTRONIC OR DERIVED INFORMATION. IF IS MORE RELIABLE THAN QUALITY LEVEL C (QLC), BUT LESS THAN QUALITY LEVEL B (QLB)

QUALITY LEVEL C (QLC)
IS THE SURVEYING OF ABOVE GROUND UTILITY SURFACE FEATURES SUCH AS VALVES, METERS, ETC., ALONG WITH OBTAINING INFORMATION OF THE UTILITIES FROM THE UTILITY RECORDS.

QUALITY LEVEL D (QLD)
THIS INFORMATION IS OBTAINED ONLY FROM EXISTING UTILITY RECORDS.

CATV CABLE TELEVISION
HH CABLE TELEVISION HAND BOX
MH CABLE TELEVISION MANHOLE
PED CABLE TELEVISION PEDESTAL
RISER CABLE TELEVISION RISER
TC TRAFFIC CONTROL
TC/FO TRAFFIC CONTROL/FIBER OPTIC
E ELECTRIC
BOX ELECTRIC BOX
HH ELECTRIC HAND BOX
MH ELECTRIC MANHOLE
LP ELECTRIC POLE
LSL LANDSCAPE LIGHTING
PSP PEDESTRIAN SIGNAL POLE
SL STREET LIGHT
TSP TRAFFIC SIGNAL POLE
TRNS TRANSFORMER
TO/LD TO TRAFFIC LOOP DETECTOR
IRR IRRIGATION CONTROL WIRE
CROSS ELECTRIC RISER
G GAS
GMH GAS MANHOLE
GM GAS METER
GTS GAS TEST STATION
GV GAS VALVE
VENT GAS VENT

SAN SANITARY SEWER
CO SANITARY CLEAN OUT
FMN SANITARY FORCE MAIN VALVE
SMH SANITARY MANHOLE
STM STEAM
STMH STEAM MANHOLE
TS STEAM TEST STATION
VENT STEAM VENT
SD STORM DRAIN
SPOT STORM DRAIN CLEAN OUT
DS DOWN SPOUT
SDI STORM DRAIN INLET (CURB)
SDI STORM DRAIN INLET (GRATE)
SDI STORM DRAIN INLET (ROUND)
STMH STORM DRAIN MANHOLE
TELEPHONE / COMMUNICATION
FO FIBER OPTIC
TB TELEPHONE BOOTH
BOX TELEPHONE BOX
HB TELEPHONE HAND BOX
MH TELEPHONE MANHOLE
PED TELEPHONE PEDESTAL
UP TELEPHONE POLE
RISER TELEPHONE RISER
UNK UNKNOWN
CO UNKNOWN CLEAN OUT
MH UNKNOWN MANHOLE

W WATER
BO BLOW OFF VALVE
ICV IRRIGATION CONTROL VALVE
FH FIRE HYDRANT
PIV POST INDICATOR VALVE
SC SIAMESE CONNECTION
WMH WATER MANHOLE
WM WATER METER
SPOT WATER SPOUT
WV WATER VALVE
WELL WATER WELL
SURVEY CONTROL POINT
TEST HOLE
APLOC – APPROXIMATE LOCATION
EOI – END OF FIELD LOCATED INFORMATION
NFL – NOT FIELD LOCATED
LOI – LIMITS OF INVESTIGATION
LOS – LIMITS OF SURVEY
ABAND. – ABANDONED
AC – ASBESTOS CEMENT
CI – CAST IRON
PL – PLASTIC
TC – TERRA COTTA
STUB – CAP, PLUG, CUT END OF UTILITY
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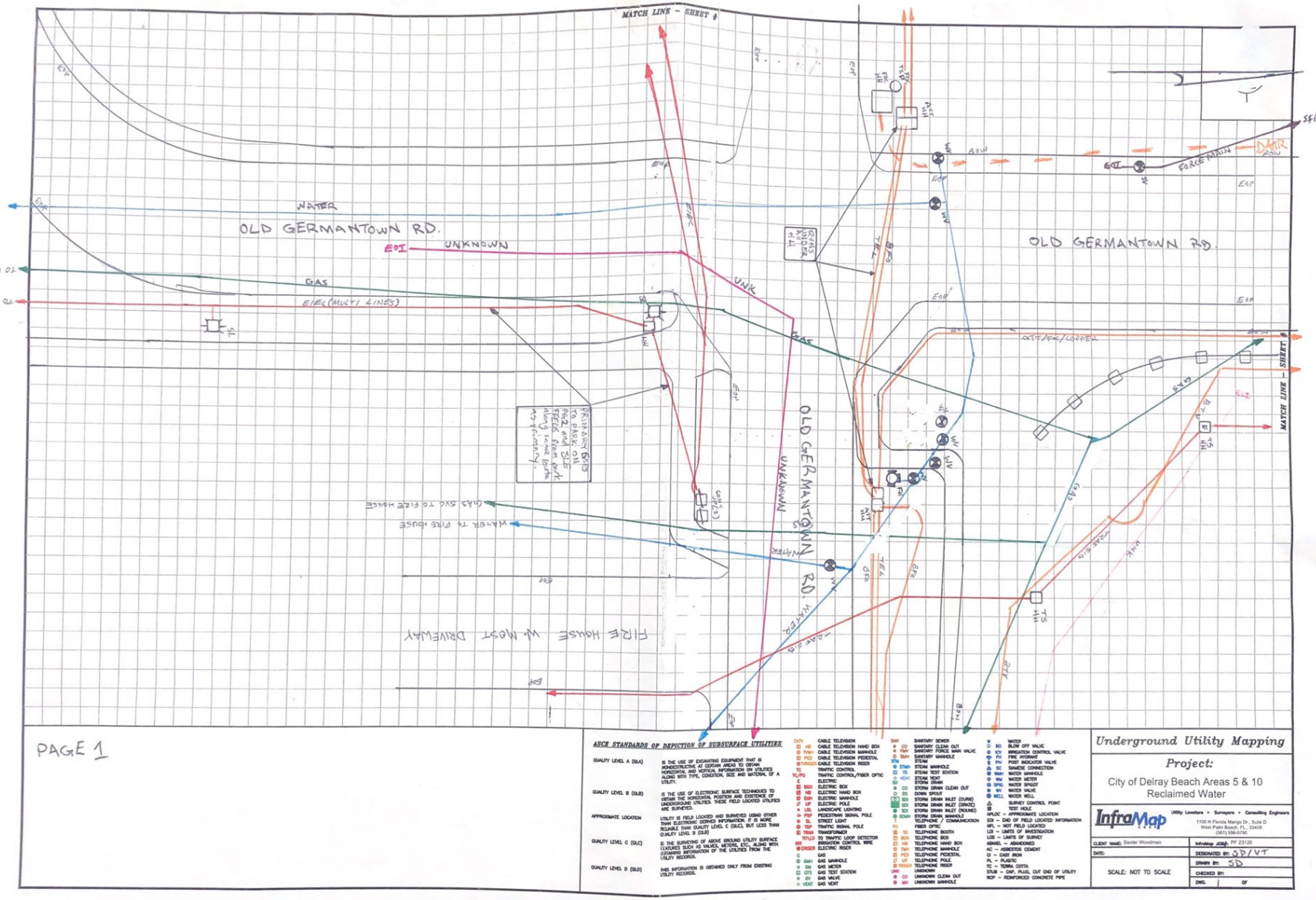
Underground Utility Mapping

Project:
City of Delray Beach Areas 5 & 10
Reclaimed Water

InfraMap
Utility Locators • Surveyors • Consulting Engineers
1100 N Florida Mango Dr., Suite D
West Palm Beach, FL. 33409
(561) 586-0790

CLIENT (NAME): Baxter Woodman
DATE:
SCALE: NOT TO SCALE
Infralmap JOB#: PF 23126
DESIGNATED BY:
DRAWN BY:
CHECKED BY:
DWG. OF


Palm Forest Dr S
Arelia Dr S
Arelia Dr S
W Linton Blvd
W Linton Blvd
W Linton Blvd
Old Germantown Rd
Old Germantown Rd
Old Germantown Rd
Old Germantown Rd
San Fernando Dr
Spanish Wells Dr
San Clara Dr
Palm Cove Blvd
San Juan Dr
Copley Pl
Temple Dr
Blossom Dr
Orchard Ln
Bloods Grove Cir
Lakeland Dr
Valencia Dr
Bridlewood Cir
Bridlewood Cir
SW 36th Ave
SW 36th Ter
SW 35th Ave
SW 23rd St
Rabbit Hollowe Dr
Hammock Cir
Orchard Ln



ASCE STANDARDS OF DEPICTION OF SUBSURFACE UTILITIES

QUALITY LEVEL A (QLA): IS THE USE OF EXCAVATING EQUIPMENT THAT IS NONDESTRUCTIVE AT CERTAIN AREAS TO OBTAIN HORIZONTAL AND VERTICAL INFORMATION ON UTILITIES ALONG WITH TYPE, CONDITION, SIZE AND MATERIAL OF A UTILITY.

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CATV CABLE TELEVISION
CB CABLE TELEVISION HAND BOX
CTMH CABLE TELEVISION MANHOLE
CTED CABLE TELEVISION PEDESTAL
CTRISER CABLE TELEVISION RISER
TC TRAFFIC CONTROL
TC/FO TRAFFIC CONTROL/FIBER OPTIC
E ELECTRIC
EB ELECTRIC BOX
EH ELECTRIC HAND BOX
EMH ELECTRIC MANHOLE
EP ELECTRIC POLE
LSL LANDSCAPE LIGHTING
PSP PEDESTRIAN SIGNAL POLE
SL STREET LIGHT
TSP TRAFFIC SIGNAL POLE
TRNF TRANSFORMER
TO/LD TO TRAFFIC LOOP DETECTOR
IRR IRRIGATION CONTROL WIRE
ERISER ELECTRIC RISER
G GAS
GMH GAS MANHOLE
GM GAS METER
GTS GAS TEST STATION
GV GAS VALVE
VENT GAS VENT

SAN SANITARY SEWER
CO SANITARY CLEAN OUT
FM SANITARY FORCE MAIN VALVE
MH SANITARY MANHOLE
STM STORM SEWER
STMH STORM MANHOLE
TS STORM TEST STATION
VENT STORM VENT
SD STORM DRAIN
CO STORM DRAIN CLEAN OUT
DS DOWN SPOUT
SDI STORM DRAIN INLET (CURB)
SDI STORM DRAIN INLET (GRATE)
SDI STORM DRAIN INLET (MOUND)
SDMH STORM DRAIN MANHOLE
T TELEPHONE / COMMUNICATION
FO FIBER OPTIC
TB TELEPHONE BOOTH
TBOX TELEPHONE BOX
TH TELEPHONE HAND BOX
TMH TELEPHONE MANHOLE
TPED TELEPHONE PEDESTAL
TP TELEPHONE POLE
TRISER TELEPHONE RISER
UNK UNKNOWN
CO UNKNOWN CLEAN OUT
MH UNKNOWN MANHOLE

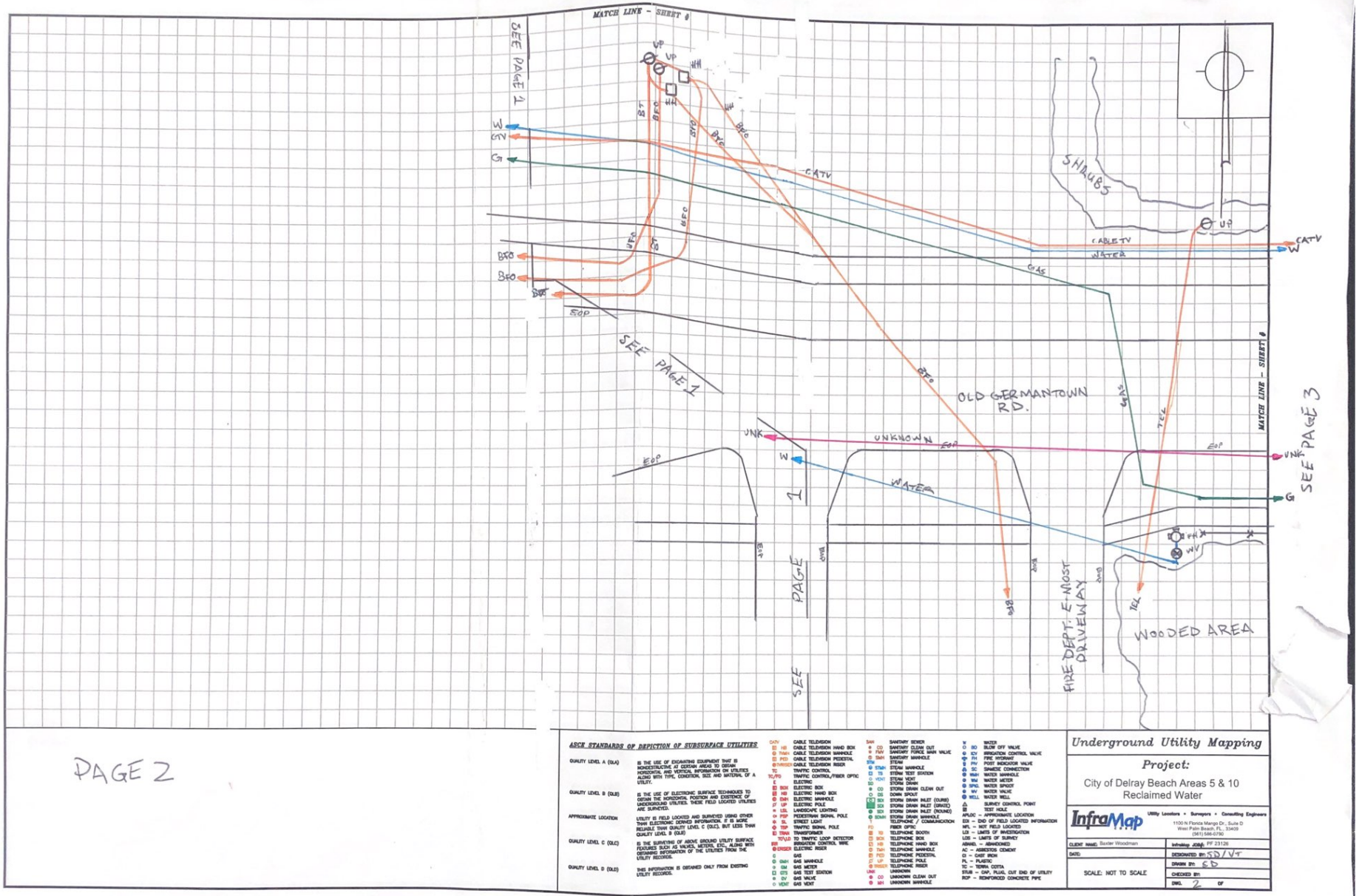
W WATER
BO BLOW OFF VALVE
ICV IRRIGATION CONTROL VALVE
FH FIRE HYDRANT
PIV POST INDICATOR VALVE
SC SHADOE CONNECTION
WMH WATER MANHOLE
WM WATER METER
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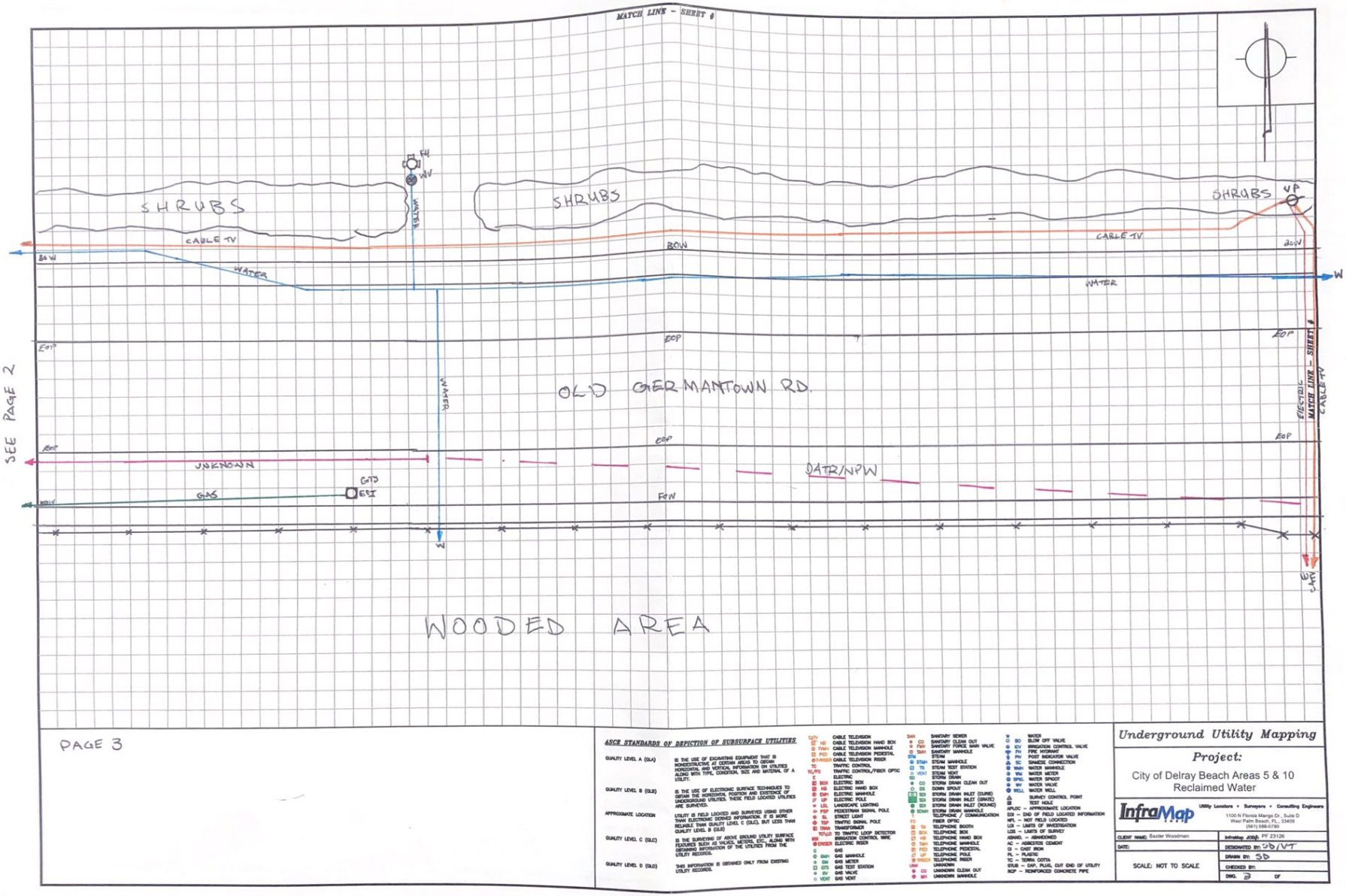
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DRAWN BY: SD
CHECKED BY:
DWG. | OF


MATCH LINE - SHEET 8
SEE PAGE 1
SEE PAGE 1
SEE PAGE 1
SEE PAGE 3
MATCH LINE - SHEET 8
OLD GERMANTOWN RD.
SHRUBS
CABLE TV
WATER
CATV
UNKNOWN
WATER
FIRE DEPT. EXIST DRIVEWAY
WOODED AREA
PAGE 2
ASCE STANDARDS OF DEPICTION OF SUBSURFACE UTILITIES
QUALITY LEVEL A (QLA)
QUALITY LEVEL B (QLB)
APPROXIMATE LOCATION
QUALITY LEVEL C (QLC)
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PAGE 3

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CATV	CABLE TELEVISION	SAN	SANITARY SEWER	W	WATER
HB	CABLE TELEVISION HAND BOX	● CO	SANITARY CLEAN OUT	○ BO	BLOW OFF VALVE
○ TVMH	CABLE TELEVISION MANHOLE	⊕ FMH	SANITARY FORCE MAIN VALVE	⊕ ICV	IRRIGATION CONTROL VALVE
PED	CABLE TELEVISION PEDESTAL	□ SMH	SANITARY MANHOLE	FH	FIRE HYDRANT
○ RISER	CABLE TELEVISION RISER	STM	STEAM	⊕ PIV	POST INDICATOR VALVE
TC	TRAFFIC CONTROL	⊕ STMH	STEAM MANHOLE	△ SC	SPANCIC CONNECTION
TC/FO	TRAFFIC CONTROL/FIBER OPTIC	□ TS	STEAM TEST STATION	⊕ WMH	WATER MANHOLE
E	ELECTRIC	○ VENT	STEAM VENT	○ WM	WATER METER
EB	ELECTRIC BOX	SD	STORM DRAIN	⊕ SPIG	WATER SPIGOT
HB	ELECTRIC HAND BOX	● CO	STORM DRAIN CLEAN OUT	⊕ WV	WATER VALVE
EMH	ELECTRIC MANHOLE	○ DS	DOWN SPOUT	⊕ WELL	WATER WELL
LP	ELECTRIC POLE	SDI	STORM DRAIN INLET (CURB)	△	SURVEY CONTROL POINT
LSL	LANDSCAPE LIGHTING	SDI	STORM DRAIN INLET (GRATE)	▤	TEST HOLE
PSP	PEDESTRIAN SIGNAL POLE	SDI	STORM DRAIN INLET (ROUND)	APLOC	– APPROXIMATE LOCATION
SL	STREET LIGHT	⊕ SDMH	STORM DRAIN MANHOLE	EOI	– END OF FIELD LOCATED INFORMATION
TSP	TRAFFIC SIGNAL POLE	T	TELEPHONE / COMMUNICATION	NFL	– NOT FIELD LOCATED
TRAN	TRANSFORMER	FO	FIBER OPTIC	LOI	– LIMITS OF INVESTIGATION
TO/LD	TO TRAFFIC LOOP DETECTOR	TB	TELEPHONE BOOTH	LOS	– LIMITS OF SURVEY
IRR	IRRIGATION CONTROL WIRE	TBX	TELEPHONE BOX	ABAND.	– ABANDONED
○ RISER	ELECTRIC RISER	THH	TELEPHONE HAND BOX	AC	– ASBESTOS CEMENT
G	GAS	TMH	TELEPHONE MANHOLE	CI	– CAST IRON
⊕ GMH	GAS MANHOLE	TPED	TELEPHONE PEDESTAL	PL	– PLASTIC
GM	GAS METER	TP	TELEPHONE POLE	TC	– TERRA COTTA
GTS	GAS TEST STATION	○ TRISER	TELEPHONE RISER	STUB	– CAP, PLUG, CUT END OF UTILITY
GV	GAS VALVE	UNK	UNKNOWN	RCP	– REINFORCED CONCRETE PIPE
○ VENT	GAS VENT	● CO	UNKNOWN CLEAN OUT		
		⊕ MH	UNKNOWN MANHOLE		

Underground Utility Mapping

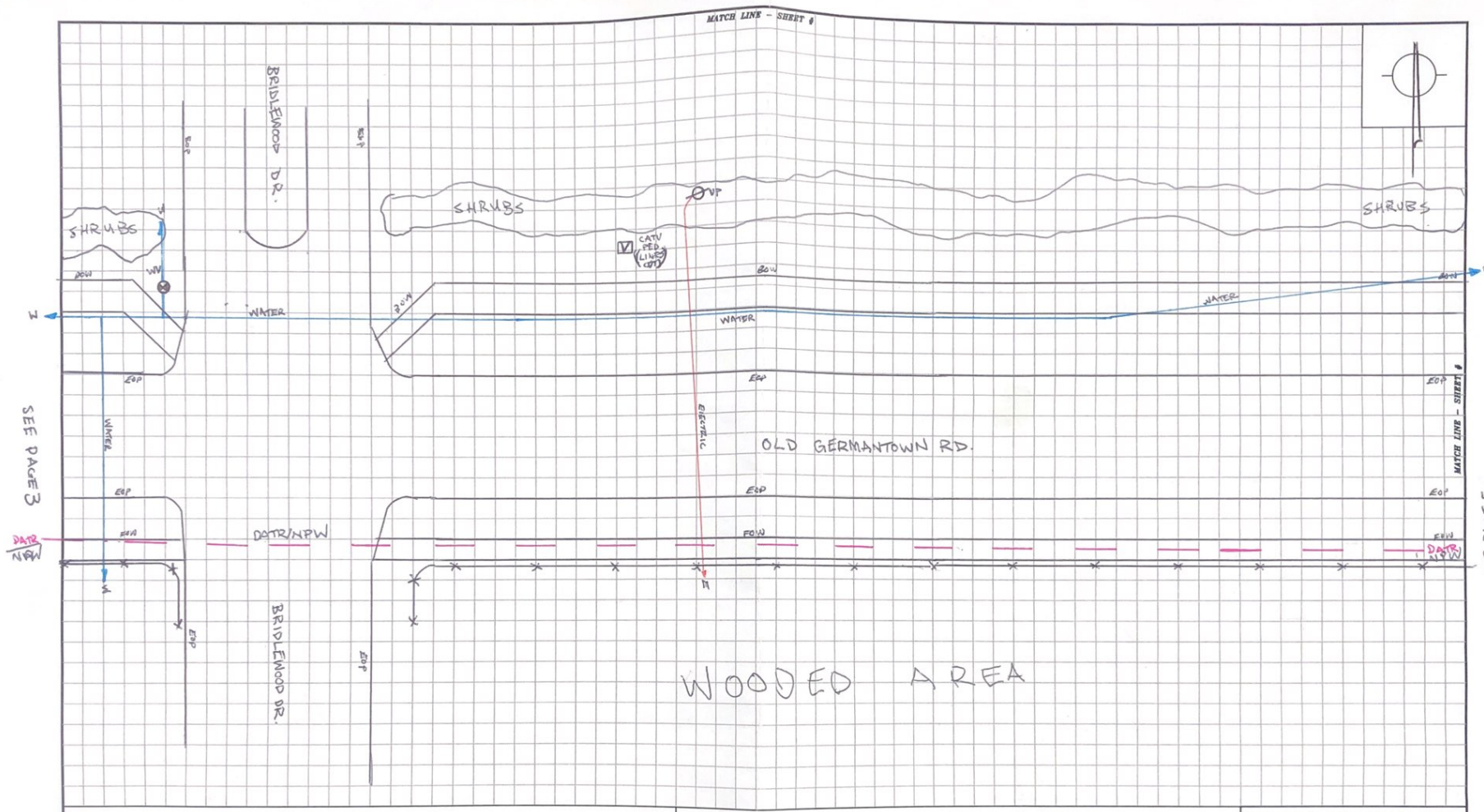
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ASCE STANDARDS OF DEPICTION OF SUBSURFACE UTILITIES

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CATV	CABLE TELEVISION
CATV HH	CABLE TELEVISION HAND BOX
CATV MH	CABLE TELEVISION MANHOLE
CATV PED	CABLE TELEVISION PEDESTAL
CATV RISER	CABLE TELEVISION RISER
TC	TRAFFIC CONTROL
TC/FO	TRAFFIC CONTROL/FIBER OPTIC
E	ELECTRIC
E BOX	ELECTRIC BOX
E HB	ELECTRIC HAND BOX
E MH	ELECTRIC MANHOLE
E LP	ELECTRIC POLE
LSL	LANDSCAPE LIGHTING
PSP	PEDESTRIAN SIGNAL POLE
SL	STREET LIGHT
TSP	TRAFFIC SIGNAL POLE
TRANS	TRANSFORMER
TC/LD	TO TRAFFIC LOOP DETECTOR
IRR	IRRIGATION CONTROL WIRE
E RISER	ELECTRIC RISER
G	GAS
G MH	GAS MANHOLE
G M	GAS METER
G TS	GAS TEST STATION
G V	GAS VALVE
VENT	GAS VENT

SAN	SANITARY SEWER
SAN CO	SANITARY CLEAN OUT
SAN FM	SANITARY FORCE MAIN VALVE
SAN MH	SANITARY MANHOLE
STM	STEAM
STEAM MH	STEAM MANHOLE
STEAM TS	STEAM TEST STATION
STEAM VENT	STEAM VENT
SD	STORM DRAIN
SD CO	STORM DRAIN CLEAN OUT
SD DS	DOWN SPOUT
SD DI (CURB)	STORM DRAIN INLET (CURB)
SD DI (GRATE)	STORM DRAIN INLET (GRATE)
SD DI (ROUND)	STORM DRAIN INLET (ROUND)
SD MH	STORM DRAIN MANHOLE
T	TELEPHONE / COMMUNICATION
FO	FIBER OPTIC
T BOOTH	TELEPHONE BOOTH
T BOX	TELEPHONE BOX
T HB	TELEPHONE HAND BOX
T MH	TELEPHONE MANHOLE
T PED	TELEPHONE PEDESTAL
T LP	TELEPHONE POLE
T RISER	TELEPHONE RISER
UNK	UNKNOWN
UNK CO	UNKNOWN CLEAN OUT
UNK MH	UNKNOWN MANHOLE

W	WATER
W BO	BLOW OFF VALVE
W ICV	IRRIGATION CONTROL VALVE
W FH	FIRE HYDRANT
W PIV	POST INDICATOR VALVE
W SC	SIAMESE CONNECTION
W MH	WATER MANHOLE
W WM	WATER METER
W SPIG	WATER SPIGOT
W WV	WATER VALVE
W WELL	WATER WELL
△	SURVEY CONTROL POINT
⊞	TEST HOLE

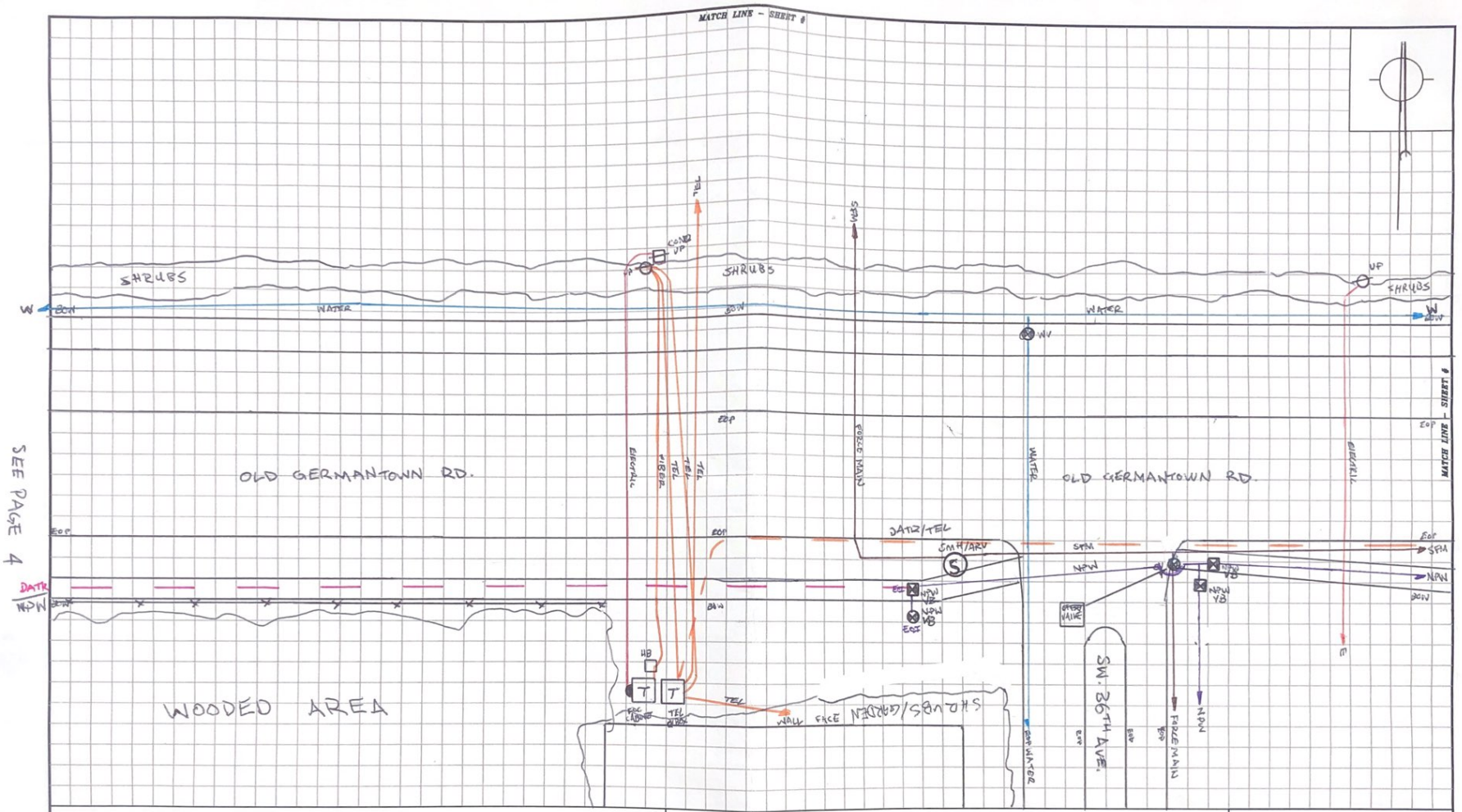
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- HH — CABLE TELEVISION HAND BOX
- MH — CABLE TELEVISION MANHOLE
- PED — CABLE TELEVISION PEDESTAL
- RISER — CABLE TELEVISION RISER

TC — TRAFFIC CONTROL
TC/FO — TRAFFIC CONTROL/FIBER OPTIC
E — ELECTRIC
- BOX — ELECTRIC BOX
- HH — ELECTRIC HAND BOX
- MH — ELECTRIC MANHOLE
- UP — ELECTRIC POLE
- LSL — LANDSCAPE LIGHTING
- PSP — PEDESTRIAN SIGNAL POLE
- SL — STREET LIGHT
- TSP — TRAFFIC SIGNAL POLE
- TRNS — TRANSFORMER

TD/LD — TO TRAFFIC LOOP DETECTOR
IRR — IRRIGATION CONTROL WIRE
ERISER — ELECTRIC RISER
G — GAS
- GMH — GAS MANHOLE
- GM — GAS METER
- GTS — GAS TEST STATION
- GV — GAS VALVE
- VENT — GAS VENT

SAN — SANITARY SEWER
- CO — SANITARY CLEAN OUT
- FMV — SANITARY FORCE MAIN VALVE
- SMH — SANITARY MANHOLE

STM — STORM
- STMH — STORM MANHOLE
- TS — STORM TEST STATION
- VENT — STORM VENT
- SD — STORM DRAIN
- CO — STORM DRAIN CLEAN OUT
- DS — DOWN SPOUT
- SDI — STORM DRAIN INLET (CURB)
- SDI — STORM DRAIN INLET (GRATE)
- SDI — STORM DRAIN INLET (ROUND)
- SDMH — STORM DRAIN MANHOLE

FO — TELEPHONE / COMMUNICATION FIBER OPTIC
- TB — TELEPHONE BOOTH
- BOX — TELEPHONE BOX
- HH — TELEPHONE HAND BOX
- TMH — TELEPHONE MANHOLE
- PED — TELEPHONE PEDESTAL
- UP — TELEPHONE POLE
- RISER — TELEPHONE RISER

UNK — UNKNOWN
- CO — UNKNOWN CLEAN OUT
- MH — UNKNOWN MANHOLE

W — WATER
- BO — BLOW OFF VALVE
- CV — IRRIGATION CONTROL VALVE
- FH — FIRE HYDRANT
- PIV — POST INDICATOR VALVE
- SC — SHACKLE CONNECTION
- MH — WATER MANHOLE
- VM — WATER METER
- SPIG — WATER SPIGOT
- VV — WATER VALVE
- WELL — WATER WELL

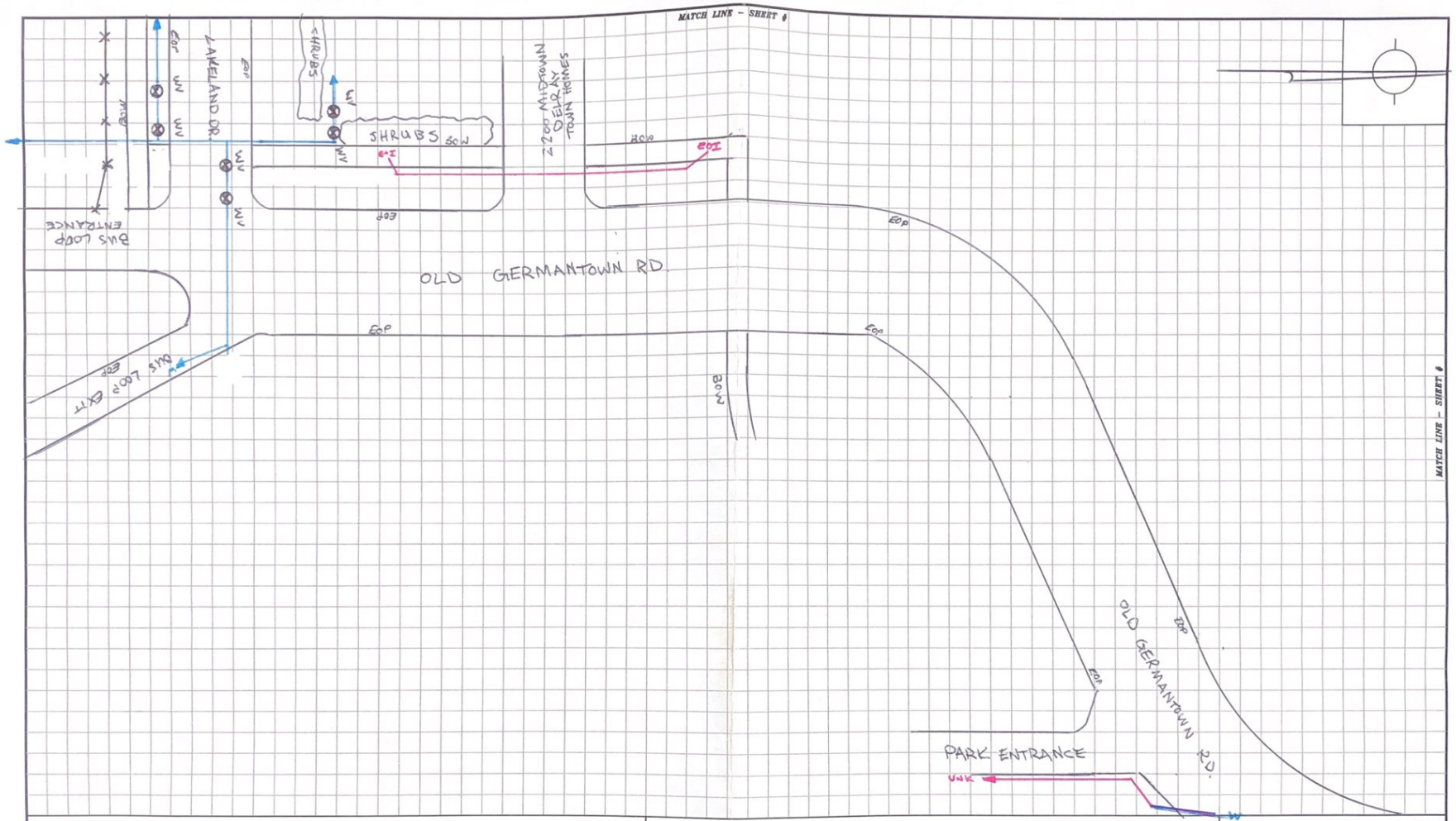
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SAN SANITARY SEWER; CO SANITARY CLEAN OUT; FMV SANITARY FORCE MAIN VALVE; SMH SANITARY MANHOLE; STEM STEAM; STMH STEAM MANHOLE; TS STEAM TEST STATION; VENT STEAM VENT; SD STORM DRAIN; CO STORM DRAIN CLEAN OUT; SO STORM DRAIN SPOUT; SCG STORM DRAIN INLET (CURB); SCS STORM DRAIN INLET (GRATE); SDI STORM DRAIN INLET (ROUND); SDMH STORM DRAIN MANHOLE; TELEPHONE / COMMUNICATION; FO FIBER OPTIC; TD TELEPHONE BOOTH; BOX TELEPHONE BOX; HB TELEPHONE HAND BOX; TMH TELEPHONE MANHOLE; PED TELEPHONE PEDESTAL; LP TELEPHONE POLE; RISER TELEPHONE RISER; UNK UNKNOWN; CO UNKNOWN CLEAN OUT; MH UNKNOWN MANHOLE

W WATER; BO BLOW OFF VALVE; IV IRRIGATION CONTROL VALVE; FH FIRE HYDRANT; PIV POST INDICATOR VALVE; DC DEMAND CONNECTION; WMH WATER MANHOLE; WM WATER METER; SPIG. WATER SPIGOT; WV WATER VALVE; WELL WATER WELL; SURVEY CONTROL POINT; TEST HOLE; APLOC – APPROXIMATE LOCATION; EOI – END OF FIELD LOCATED INFORMATION; NFL – NOT FIELD LOCATED; LOI – LIMITS OF INVESTIGATION; LOS – LIMITS OF SURVEY; ABAND. – ABANDONED; AC – ASBESTOS CEMENT; GI – CAST IRON; PL – PLASTIC; TC – TERRA COTTA; STUB – CAP, PLUG, CUT END OF UTILITY; RCP – REINFORCED CONCRETE PIPE

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Project:
City of Delray Beach Areas 5 & 10
Reclaimed Water

InfraMap
Utility Locators + Surveyors + Consulting Engineers
1100 N Florida Mango Dr., Suite D
West Palm Beach, FL, 33409
(561) 586-0790

CLIENT NAME: Baxter Woodman
InfraMap JOB#: PF 23126
DATE:
DESIGNATED BY: SD/VT
DRAWN BY: SD
SCALE: NOT TO SCALE
CHECKED BY:
DWG. 6 OF 6

SEE PAGE 1

TEST HOLE INVENTORY
PROJECT: CITY OF DELRAY BRACH 5 10 RECLAIMED WATER
PROJECT NO.: PF23126
PROJECT MANAGER: ANDRES GARCIA
CLIENT: BAXTER WOODMAN
DATE: 10/31/24

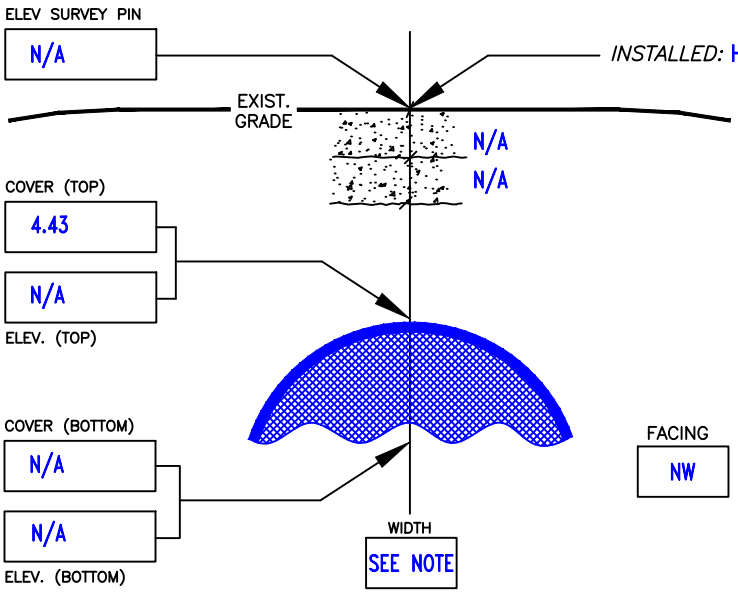
TH#	REQUESTED UTILITY	UTILITY FOUND	REMARKS
1	UNKNOWN	UNKNOWN	SEE TEST HOLE FORM
2	GAS	1.5" GAS PLASTIC	
3	ELECTRIC	ELECTRIC	SEE TEST HOLE FORM
6	TELEPHONE	(2) 4" TELEPHONE PVC (GRAY)	
7	WATER	WATER CAST IRON	SEE TEST HOLE FORM
8	WATER	12" WATER PVC (WHITE)	
9	UNKNOWN	SEE NOTE	SEE TEST HOLE FORM
10	SANITARY FORCE MAIN	8" SANITARY FORCE MAIN PVC (GREEN)	
11	ELECTRIC	(3) 2" ELECTRIC PVC (GRAY)	
12	CATV	2" CATV PVC (ORANGE)	
14	ELECTRIC	(2) 2" ELECTRIC PVC (GRAY)	
16	ELECTRIC	2" ELECTRIC PVC (GRAY)	
17	FIBER OPTIC	1.5" FIBER OPTIC PVC (ORANGE)	
18	TELEPHONE	(2) 4" TELEPHONE PVC (WHITE)	
19	TELEPHONE	1" TELEPHONE DIRECT BURIED CABLE	
21	SANITARY FORCE MAIN	6" SANITARY FORCE MAIN PVC (GREEN)	
22	SANITARY FORCE MAIN	SEE NOTE	SEE TEST HOLE FORM
23	WATER (RAW)	6" WATER (RAW) PLASTIC	
24	ELECTRIC	6" WATER	SEE TEST HOLE FORM
25	FIBER OPTIC	(2) 1.5" FIBER OPTIC PLASTIC	
26	WATER	6" WATER CAST IRON	
27	ELECTRIC	2" ELECTRIC PVC (GRAY)	
28	30" WATER (RAW)	WATER (RAW)	SEE TEST HOLE FORM
29	20" WATER (RAW)	WATER (RAW)	SEE TEST HOLE FORM
30	8" WATER	8" WATER CAST IRON	

infra**map**

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 1

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: UNKNOWN	SHEET #: C-2 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: UNKNOWN	FORM BY: DL ASSISTED BY: DC JA # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: N/A DATE DUG: 10/15/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: SOFT WET MOIST SAND ROCKY
	UTILITY CONDITION: SEE NOTE



INSTALLED: HUB & TACK AT: TOP OF UTILITY MARKING TAPE: PINK

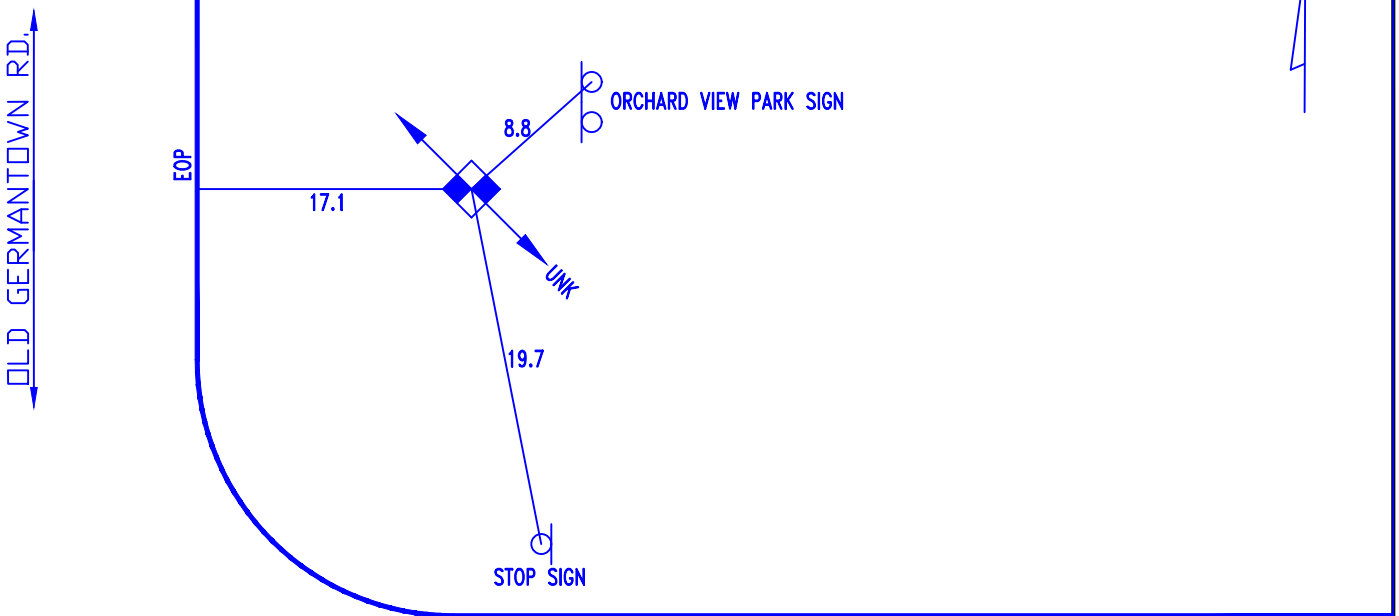
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: UNABLE TO VERIFY SIZE & MATERIAL DUE TO EXCESSIVE GROUNDWATER.

NOT TO SCALE



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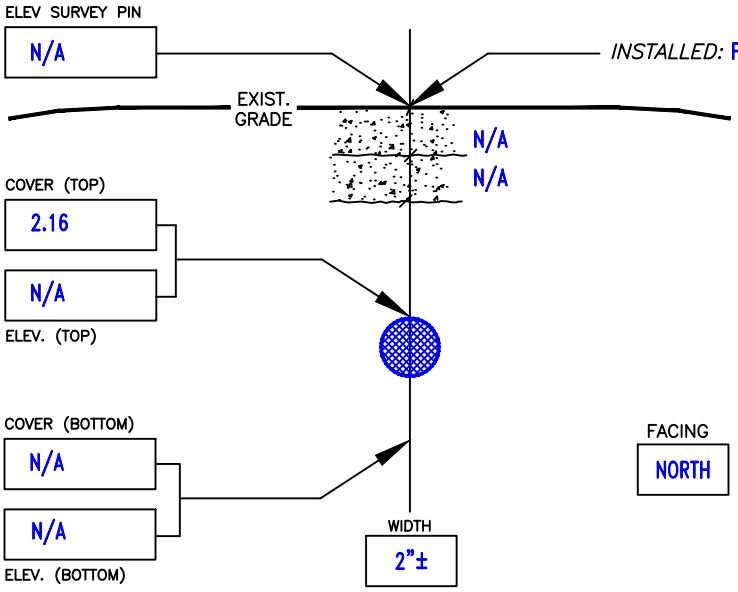
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infraMAP

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 2

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: GAS	SHEET #: C-3 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: GAS	FORM BY: DL ASSISTED BY: DC TJ # OF HOLES: 1
MATERIAL AS FOUND: PLASTIC	PAVING CONDITION: FAIR DATE DUG: 10/14/24
SIZE AS FOUND: 1.5"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: GOOD



INSTALLED: PK AT: CROWN OF UTILITY MARKING TAPE: YELLOW

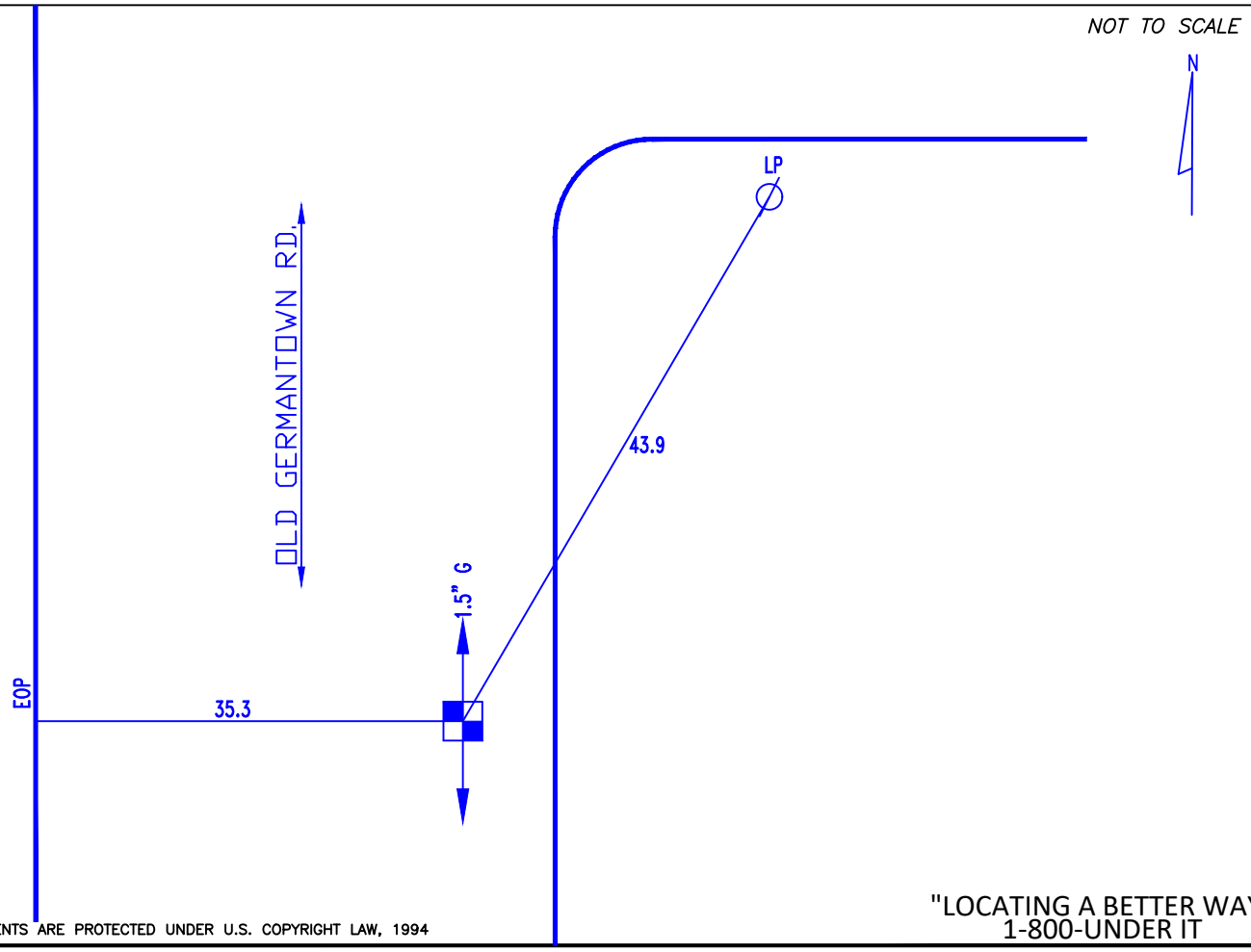
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE



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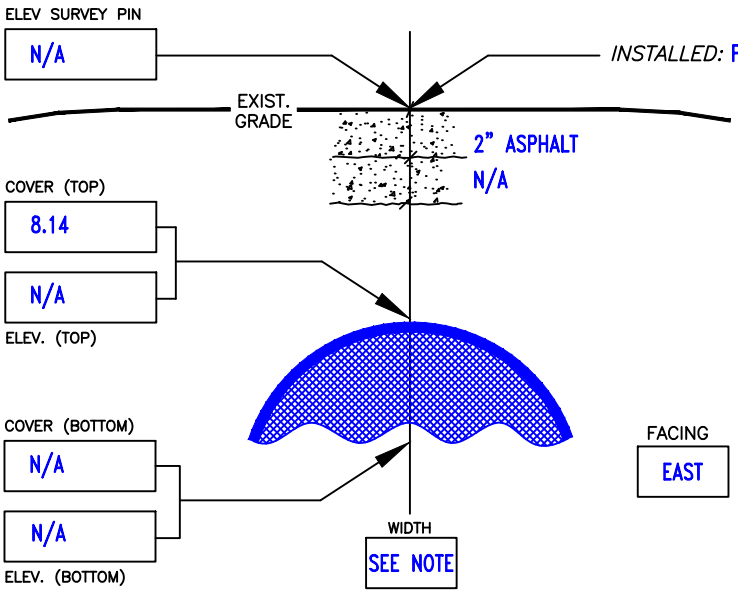
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infra**map**

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 3

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: ELECTRIC	SHEET #: C-3 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: ELECTRIC	FORM BY: DL ASSISTED BY: DC TJ # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: FAIR DATE DUG: 10/14/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: SEE NOTE



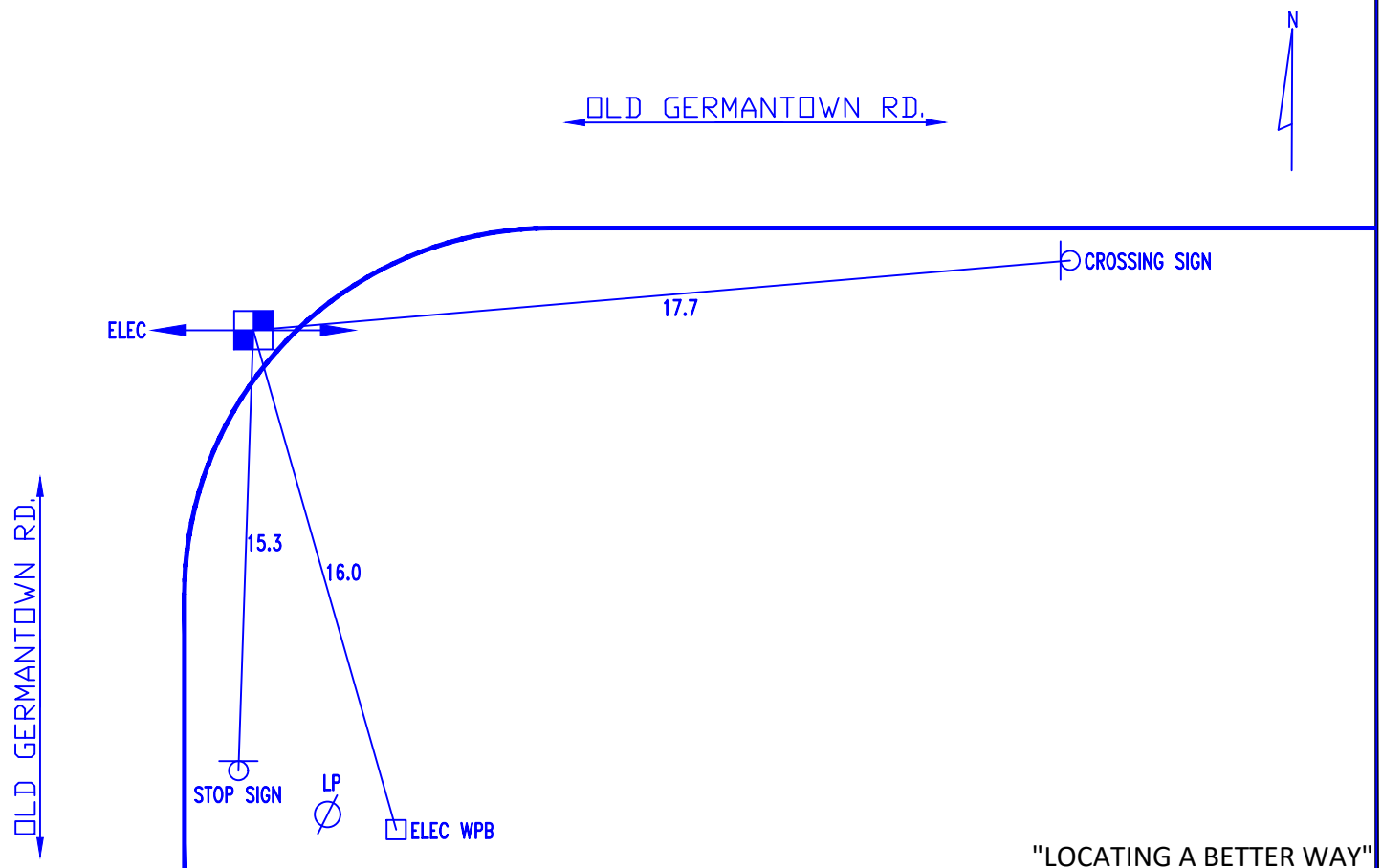
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: UNABLE TO VERIFY SIZE & MATERIAL DUE TO EXCESSIVE GROUNDWATER.

NOT TO SCALE



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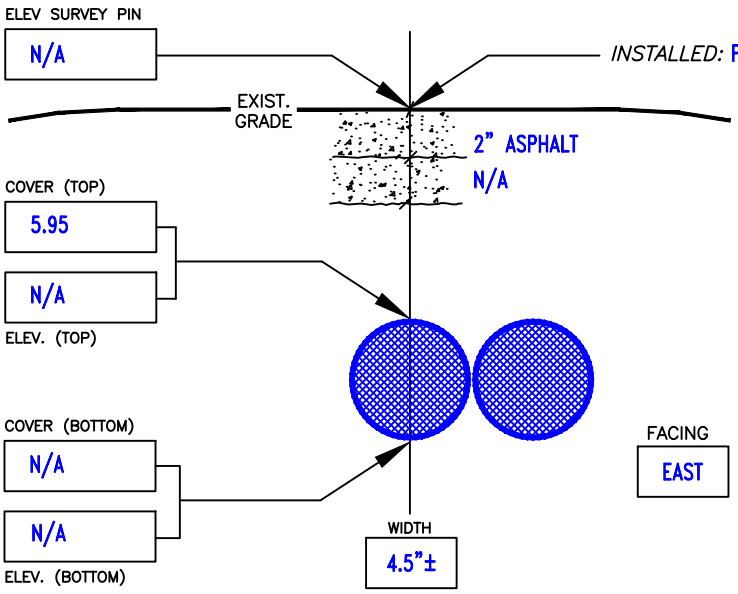
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infra**map**

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 6

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: TELEPHONE	SHEET #: C-3 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: TELEPHONE	FORM BY: DL ASSISTED BY: DC TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (GRAY)	PAVING CONDITION: FAIR DATE DUG: 10/14/24
SIZE AS FOUND: (2) 4"	SOIL CONDITIONS: HARD SOFT MOIST SAND ROCKY
	UTILITY CONDITION: FAIR



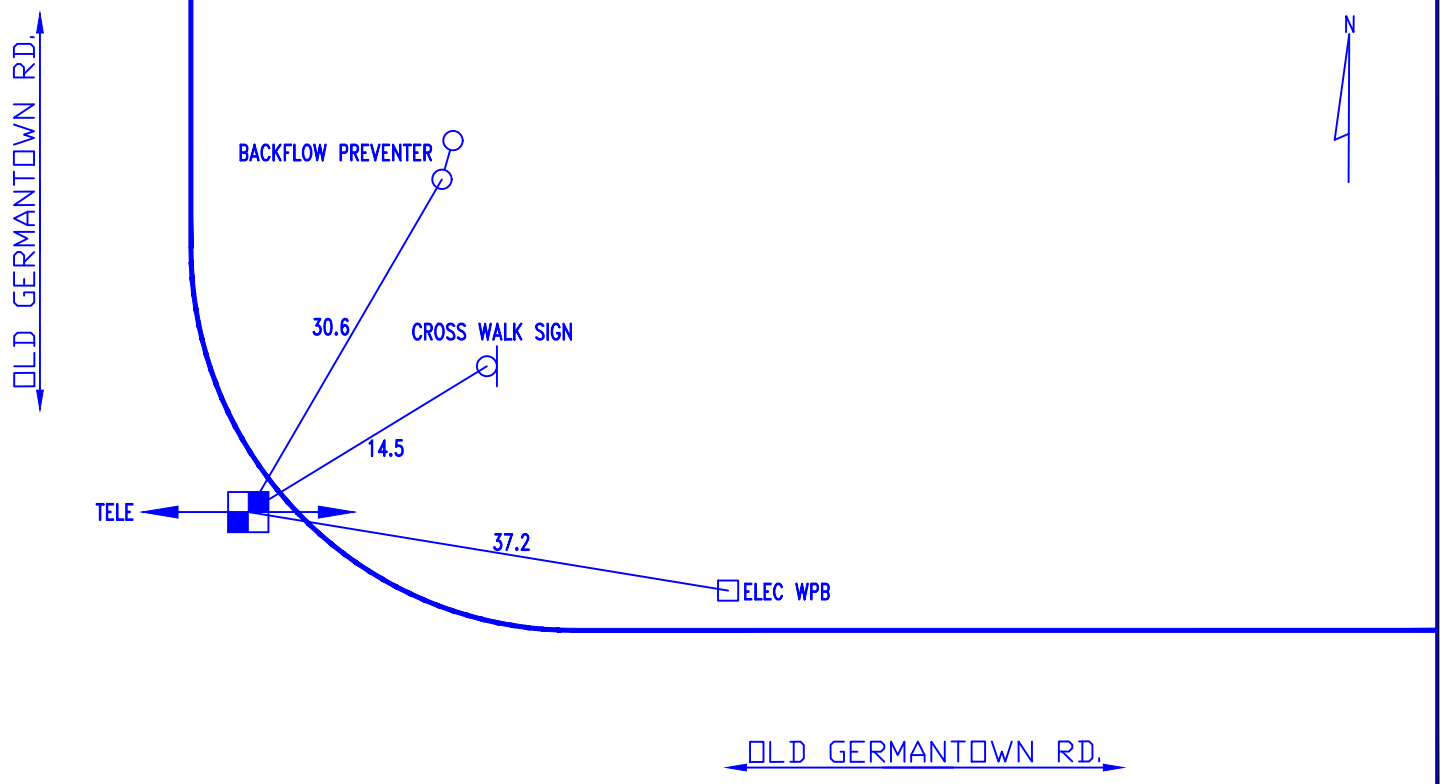
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SURVEY INFO NOT REQUIRED.

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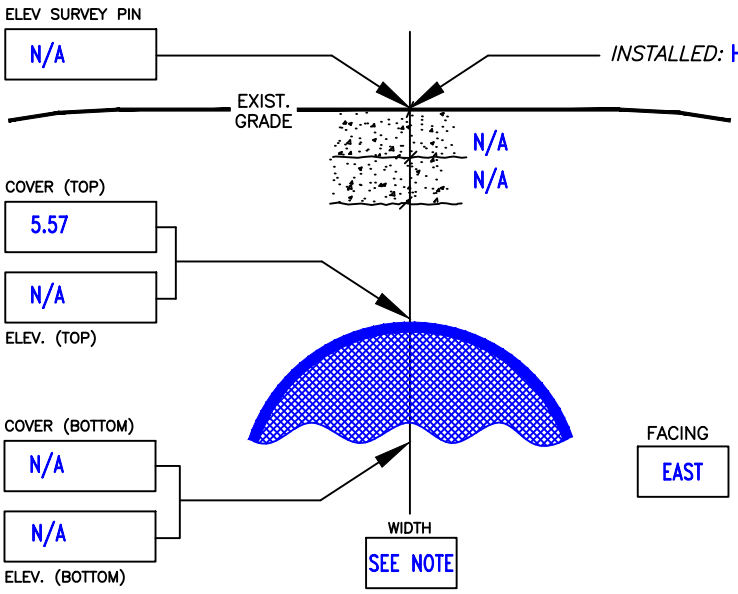
NOT TO SCALE



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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER - TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: WATER	SHEET #: C-4 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER	FORM BY: SD ASSISTED BY: DC JA # OF HOLES: 1
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: N/A DATE DUG: 10/8/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: SOFT WET MOIST SAND
	UTILITY CONDITION: GOOD



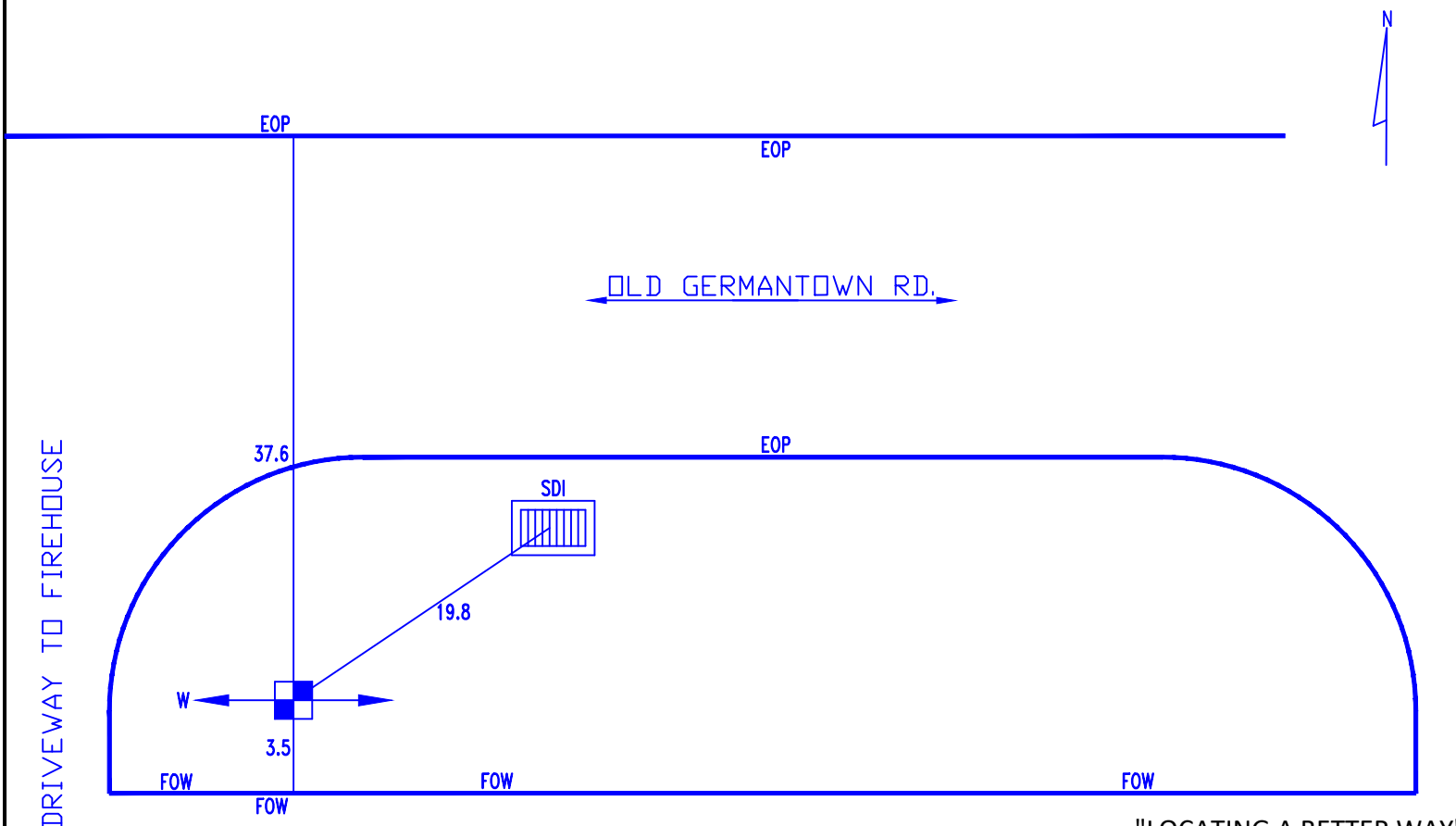
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SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: UNABLE TO CONFIRM ACCURATE SIZE DUE TO GROUNDWATER.

NOT TO SCALE



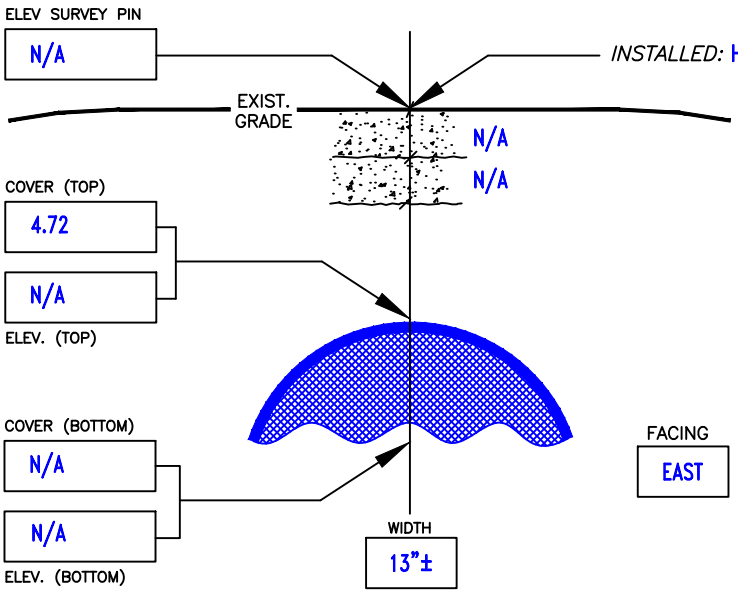
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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 8

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: WATER	SHEET #: C-4 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER	FORM BY: SD ASSISTED BY: DL JA # OF HOLES: 1
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: N/A DATE DUG: 10/8/24
SIZE AS FOUND: 12"	SOIL CONDITIONS: SOFT MOIST DRY SAND
	UTILITY CONDITION: GOOD



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: BLUE

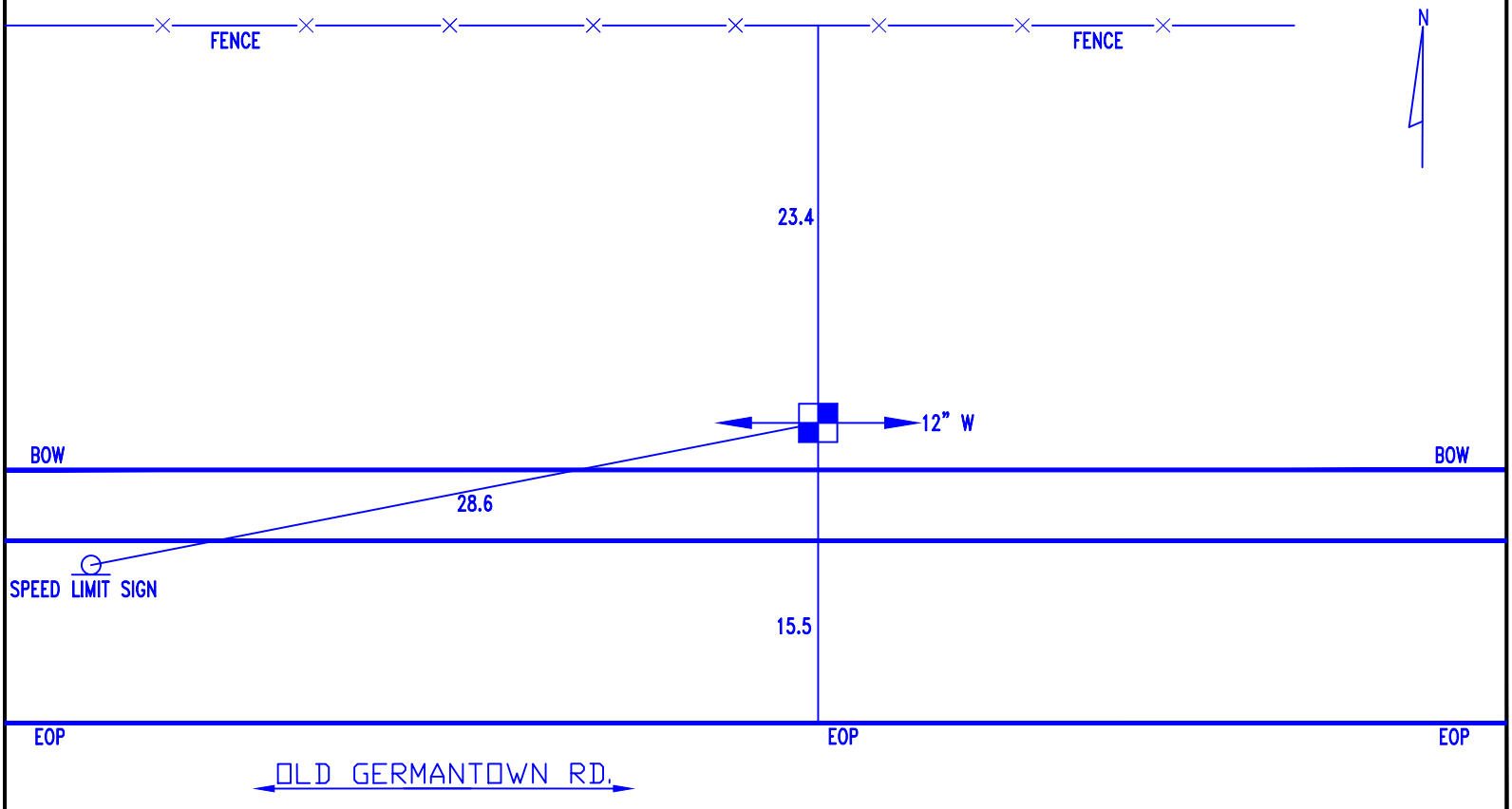
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SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

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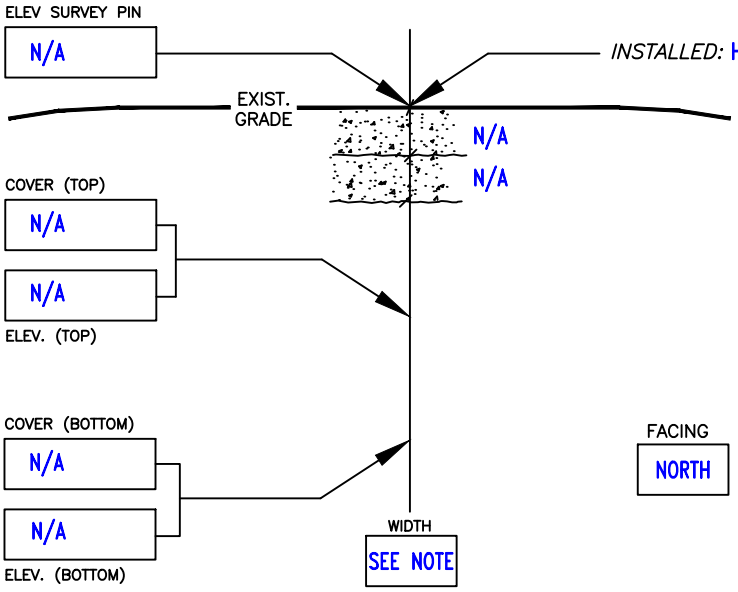
NOT TO SCALE



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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER - TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: UNKNOWN	SHEET #: C-4 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: SEE NOTE	FORM BY: SD ASSISTED BY: DL JA # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: N/A DATE DUG: 10/8/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: HARD SOFT WET MOIST DRY SAND ROCKY
	UTILITY CONDITION: SEE NOTE



INSTALLED: HUB & TACK AT: N/A OF UTILITY MARKING TAPE: WHITE

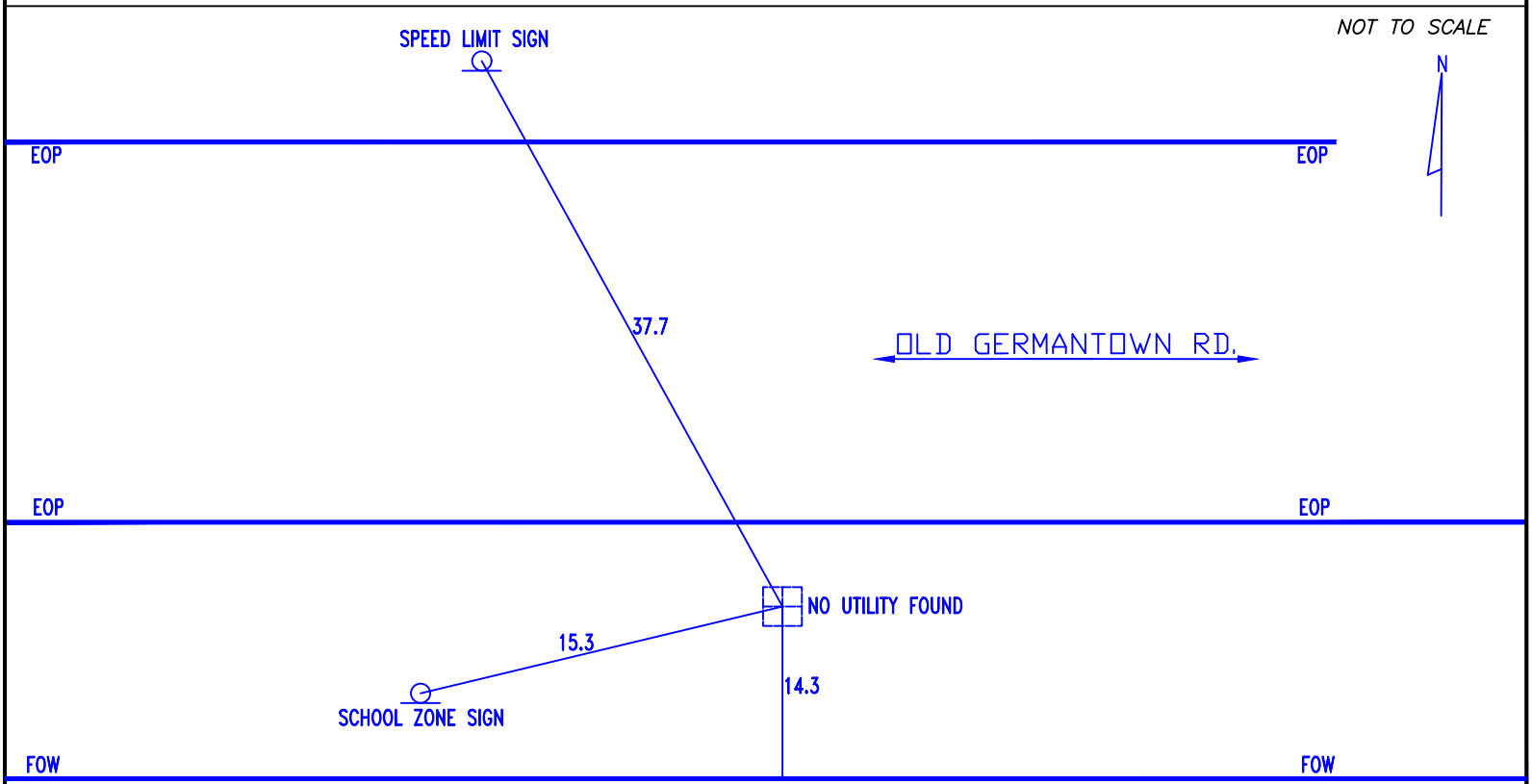
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: TEST HOLE DUG AT REQUESTED LOCATION, NO UTILITY FOUND.

NOT TO SCALE



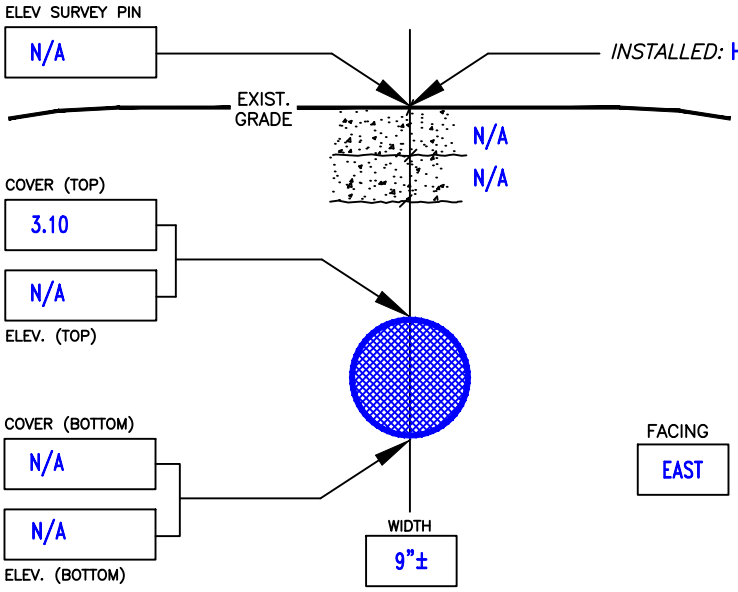
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infra**map**

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 10

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: SANITARY FORCE MAIN	SHEET #: C-4 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: SANITARY FORCE MAIN	FORM BY: SD ASSISTED BY: DL JA # OF HOLES: 1
MATERIAL AS FOUND: PVC (GREEN)	PAVING CONDITION: N/A DATE DUG: 10/8/24
SIZE AS FOUND: 8"	SOIL CONDITIONS: SOFT WET MOIST SAND ROCKY
	UTILITY CONDITION: GOOD



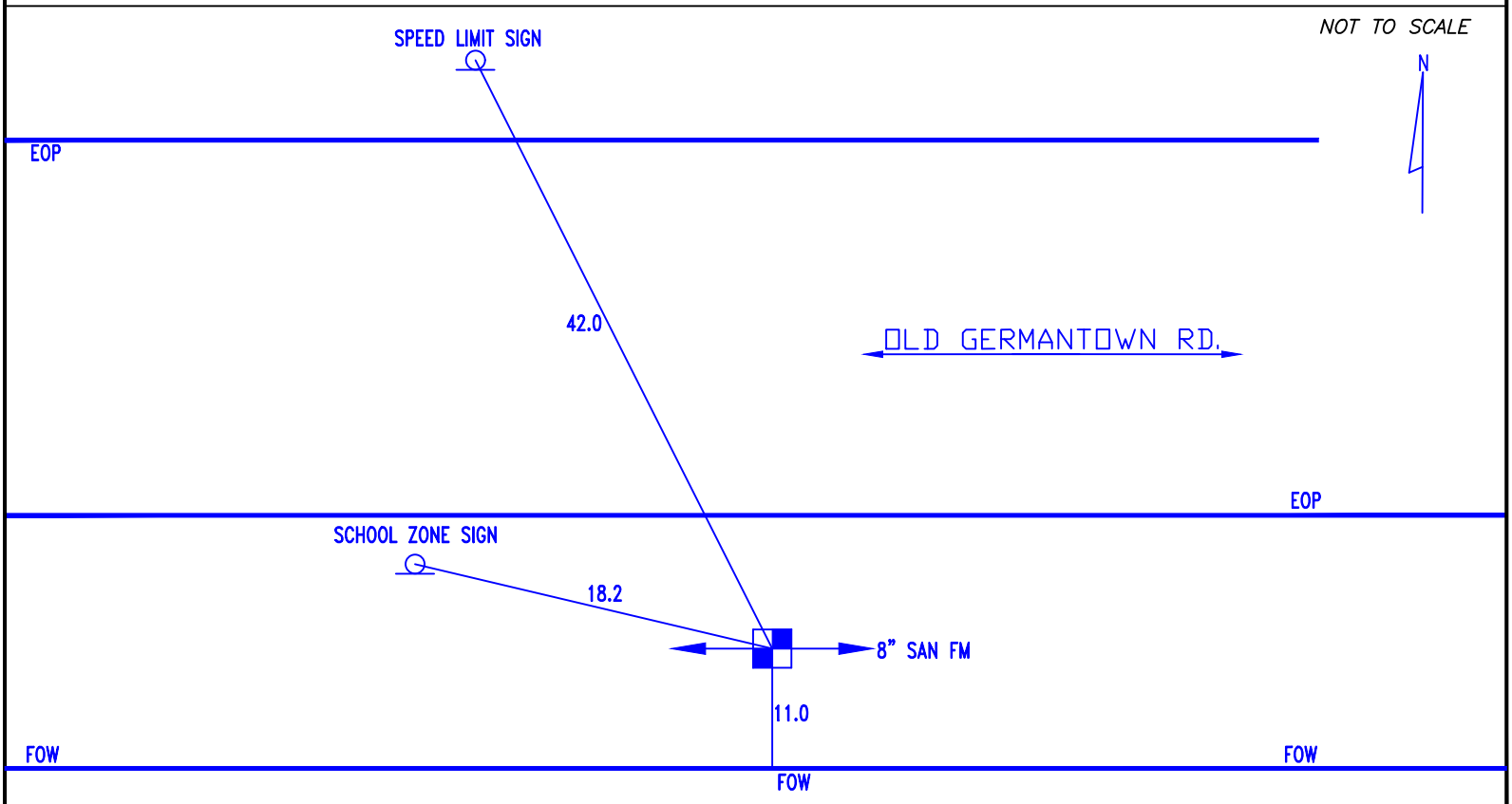
INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: GREEN

SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:



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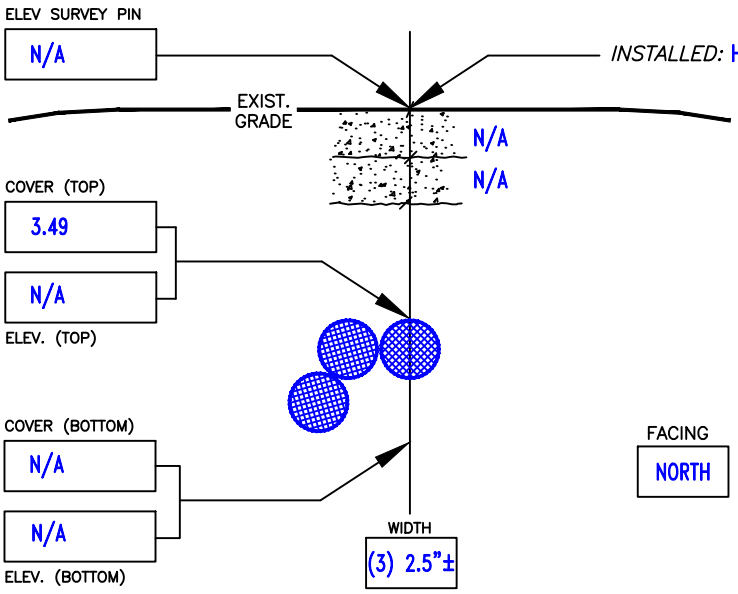
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infra**map**

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 11

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: ELECTRIC	SHEET #: C-5 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: ELECTRIC	FORM BY: DL ASSISTED BY: JA SD # OF HOLES: 1
MATERIAL AS FOUND: PVC (GRAY)	PAVING CONDITION: N/A DATE DUG: 10/8/24
SIZE AS FOUND: (3) 2"	SOIL CONDITIONS: SOFT WET MOIST SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: RED

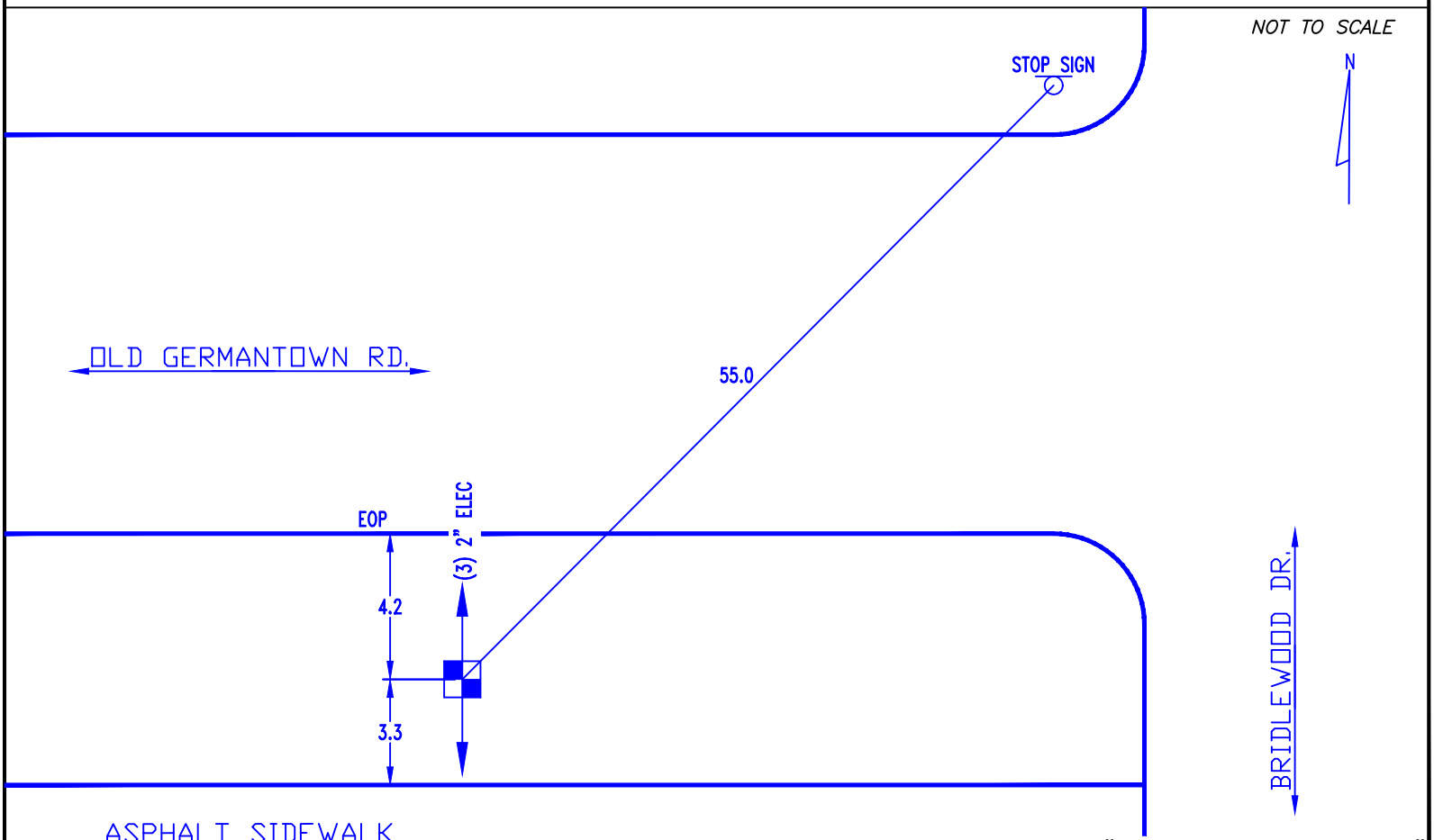
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SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE



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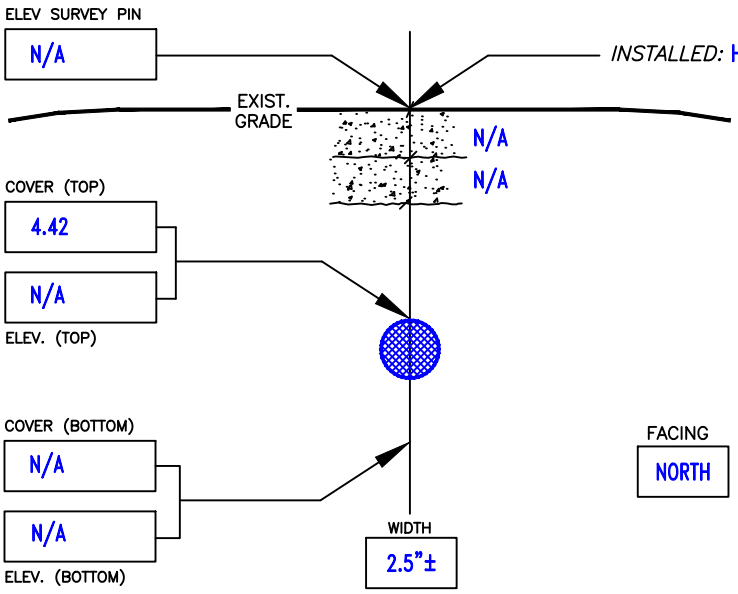
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infra**map**

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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 12

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: CATV	SHEET #: C-5 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: CATV	FORM BY: DL ASSISTED BY: JA SD # OF HOLES: 1
MATERIAL AS FOUND: PVC (ORANGE)	PAVING CONDITION: N/A DATE DUG: 10/8/24
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY
	UTILITY CONDITION: GOOD



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: ORANGE

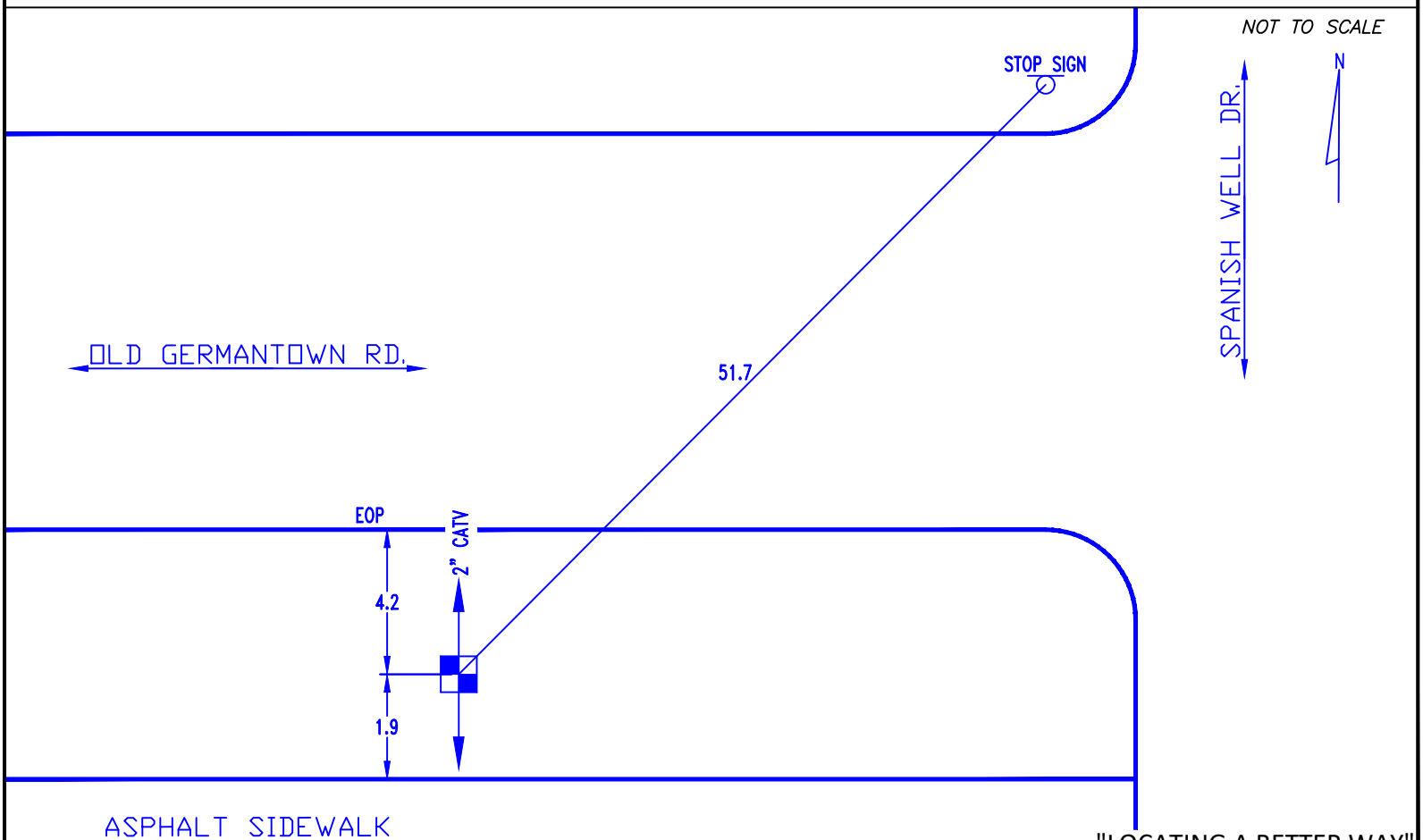
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SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

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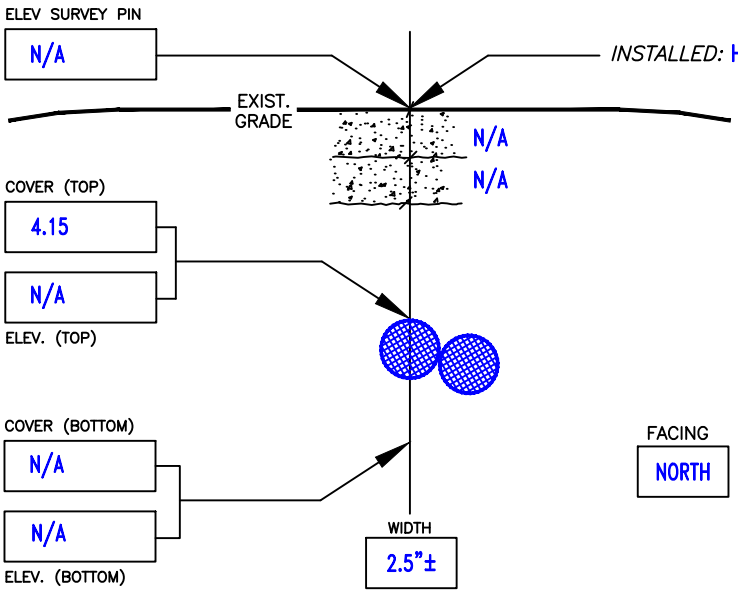
NOT TO SCALE



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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER - TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: ELECTRIC	SHEET #: C-6 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: ELECTRIC	FORM BY: DL ASSISTED BY: DC TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (GRAY)	PAVING CONDITION: N/A DATE DUG: 10/14/24
SIZE AS FOUND: (2) 2"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: RED

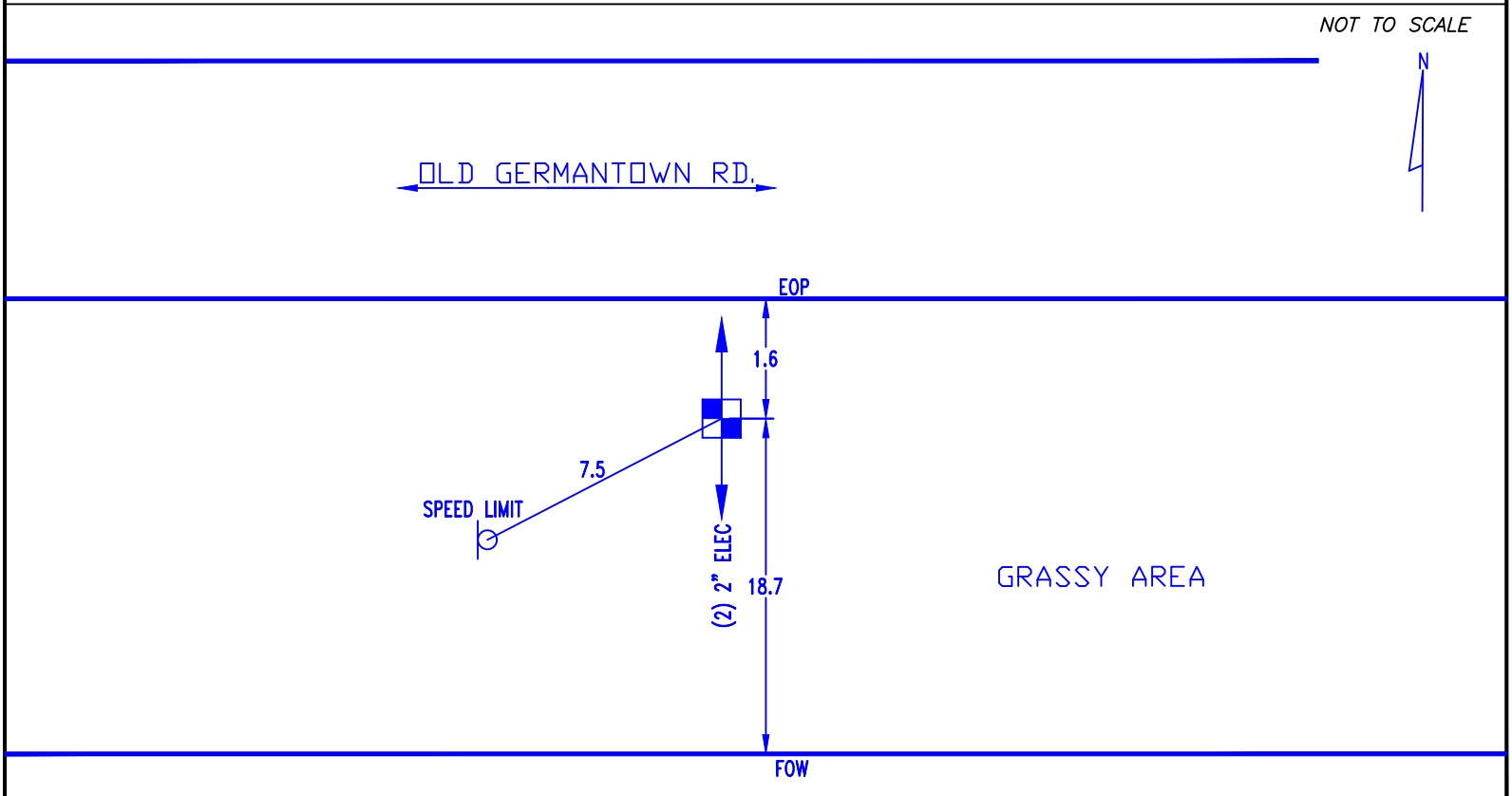
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SURVEY INFO NOT REQUIRED.

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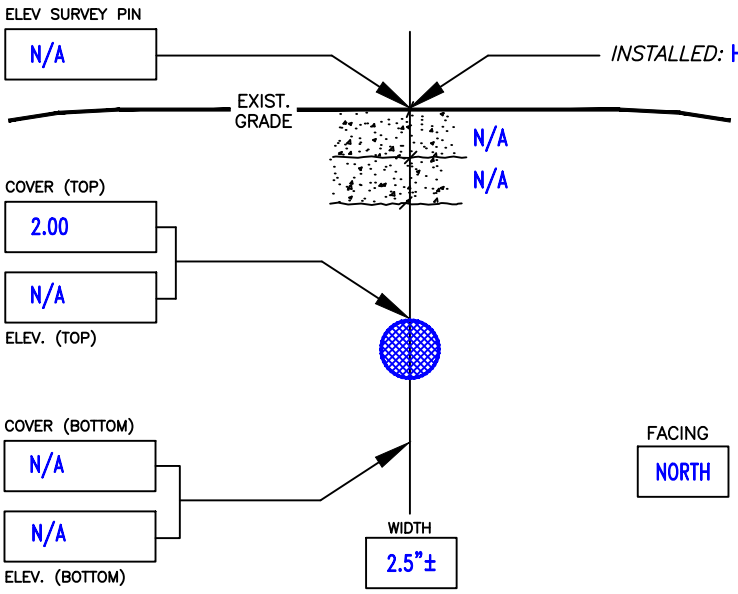


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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 16

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: ELECTRIC	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: EELCTRIC	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (GRAY)	PAVING CONDITION: N/A DATE DUG: 10/9/24
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: RED

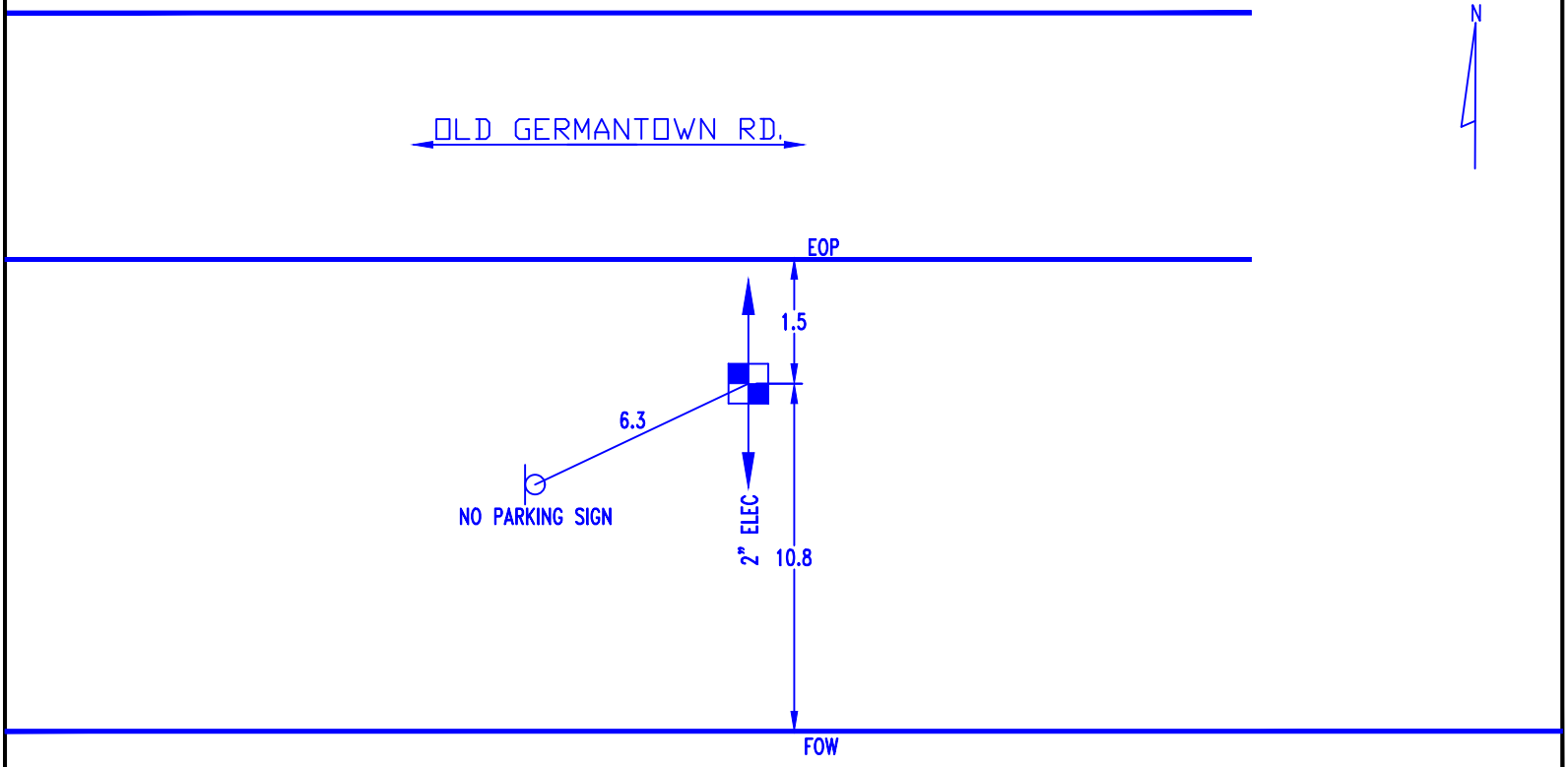
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

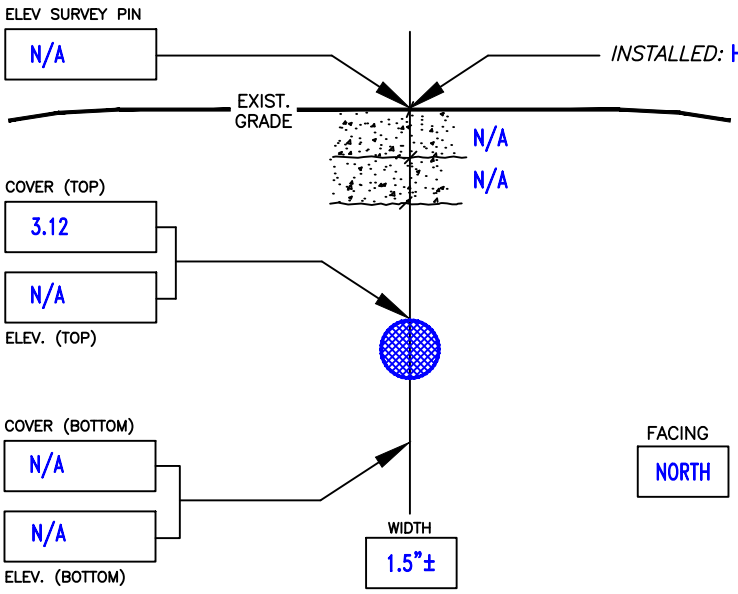
NOT TO SCALE



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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 17

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER - TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: FIBER OPTIC	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: FIBER OPTIC	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (ORANGE)	PAVING CONDITION: N/A DATE DUG: 10/9/24
SIZE AS FOUND: 1.5"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: ORANGE

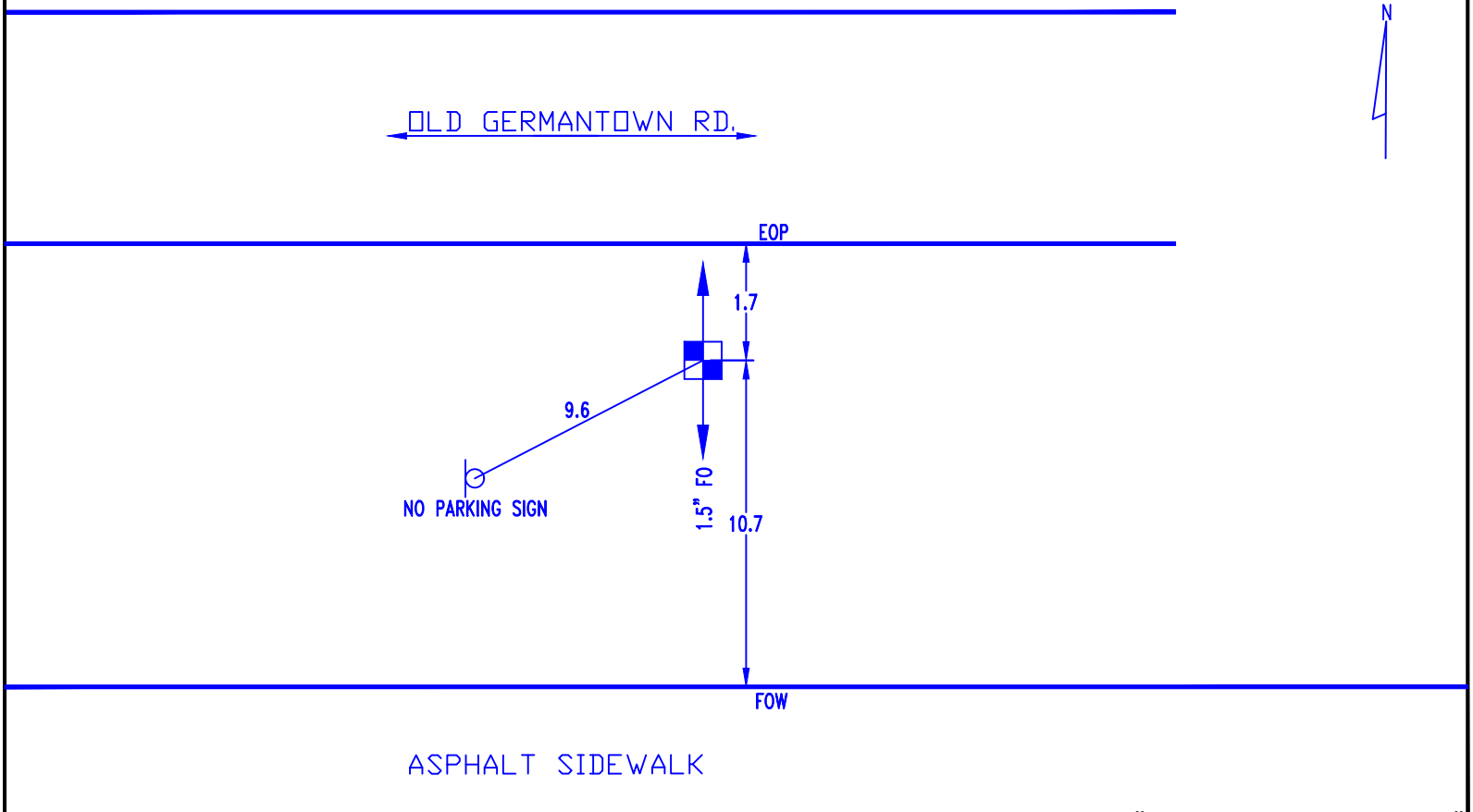
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

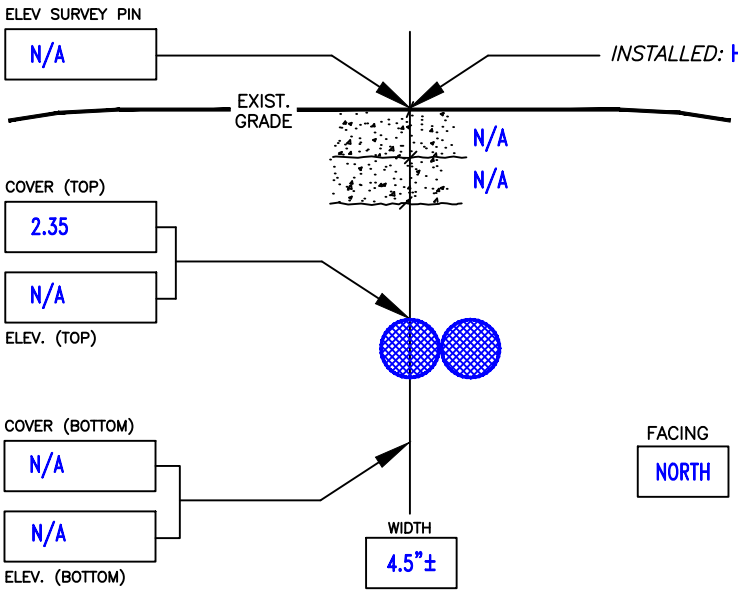
NOT TO SCALE



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"LOCATING A BETTER WAY"
1-800-UNDER IT

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER - TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: TELEPHONE	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: TELEPHONE	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: N/A DATE DUG: 10/9/24
SIZE AS FOUND: (2) 4"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: ORANGE

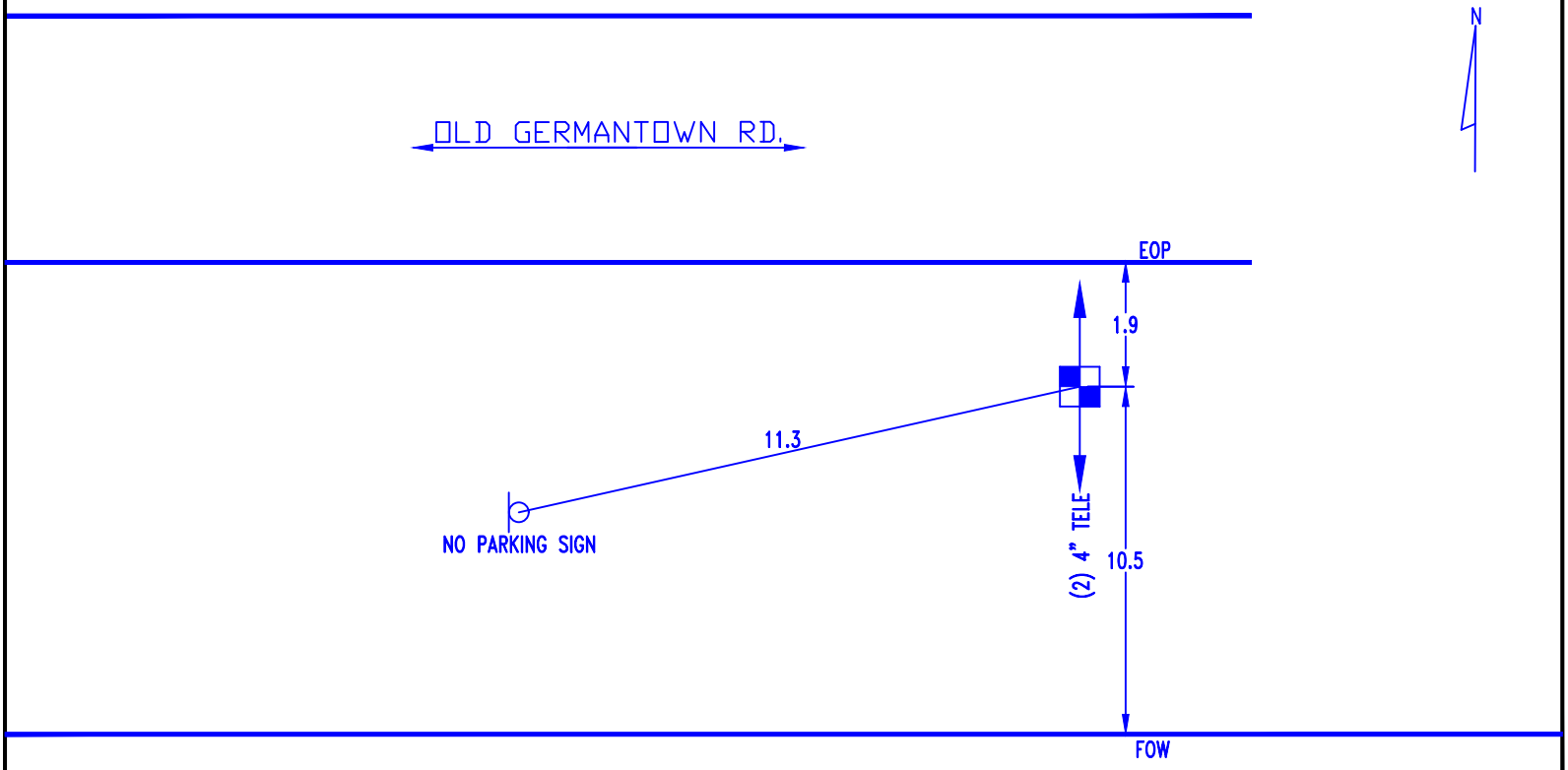
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

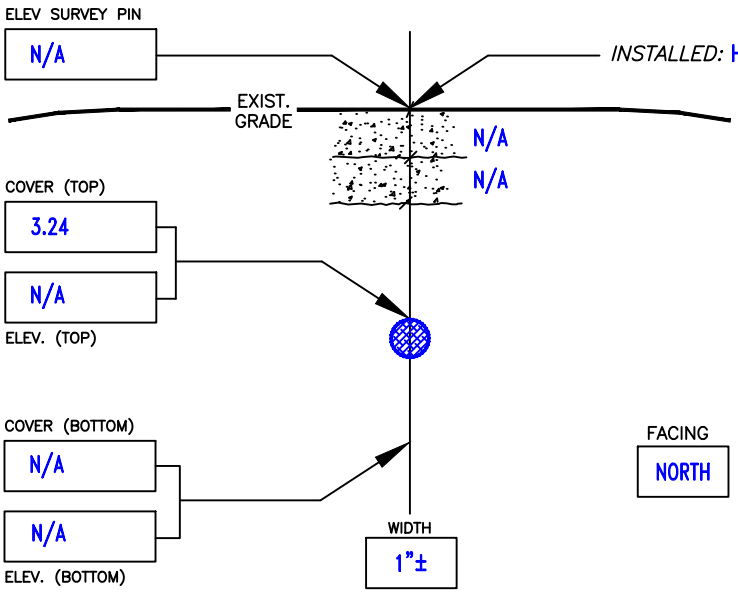
NOTES: HUB & SET ON WESTERNMOST CONDUIT.

NOT TO SCALE



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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER - TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: TELEPHONE	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: TELEPHONE	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: DIRECT BURIED CABLE	PAVING CONDITION: N/A DATE DUG: 10/9/24
SIZE AS FOUND: 1"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: ORANGE

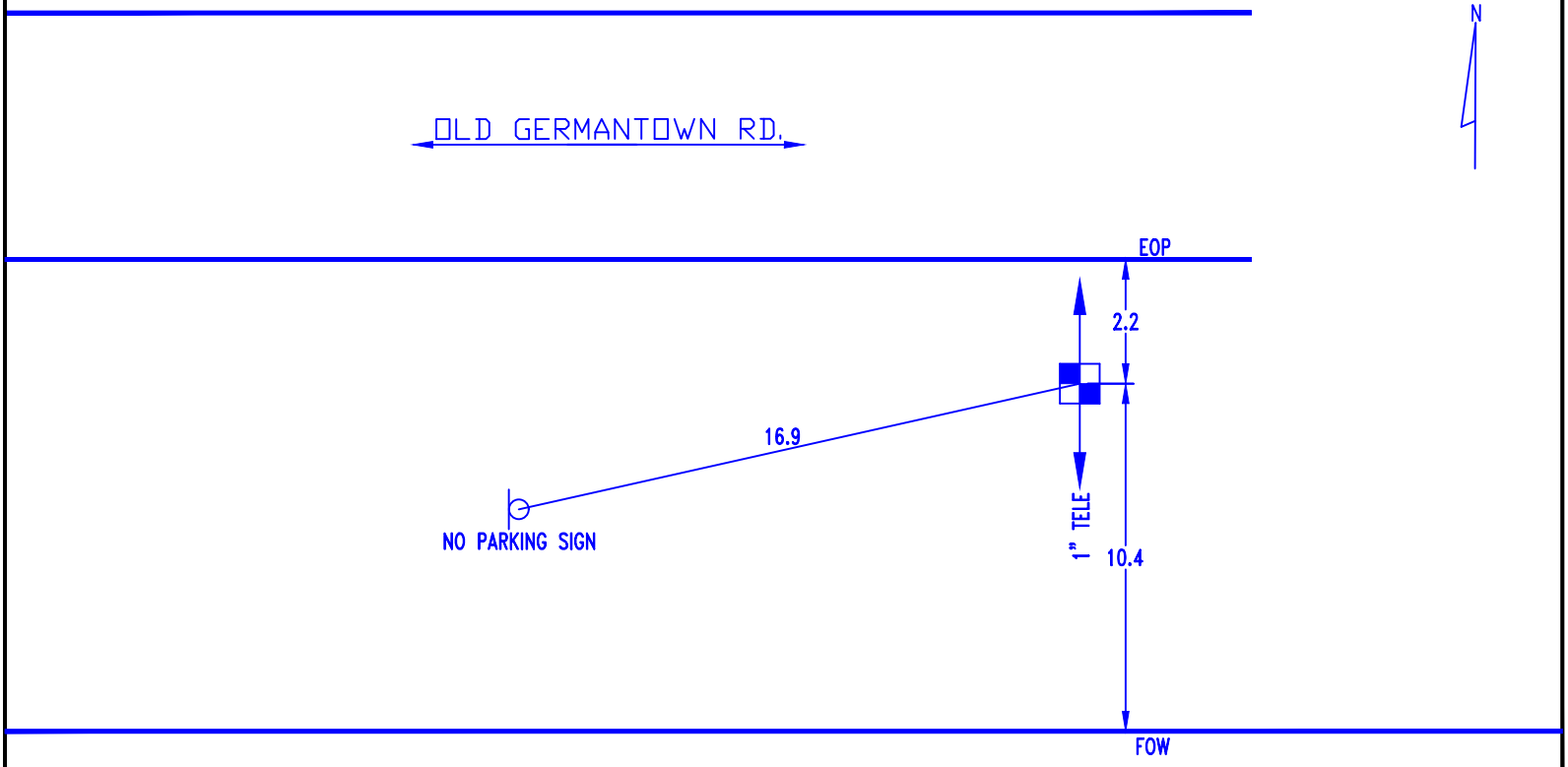
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

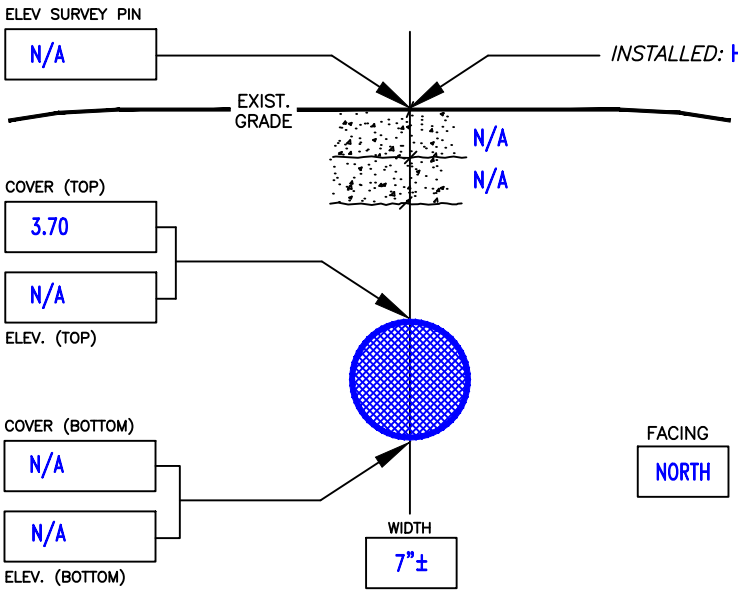
NOT TO SCALE



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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 21

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: SANITARY FORCE MAIN	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: SANITARY FORCE MAIN	FORM BY: DL ASSISTED BY: DC TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (GREEN)	PAVING CONDITION: N/A DATE DUG: 10/14/24
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: GREEN

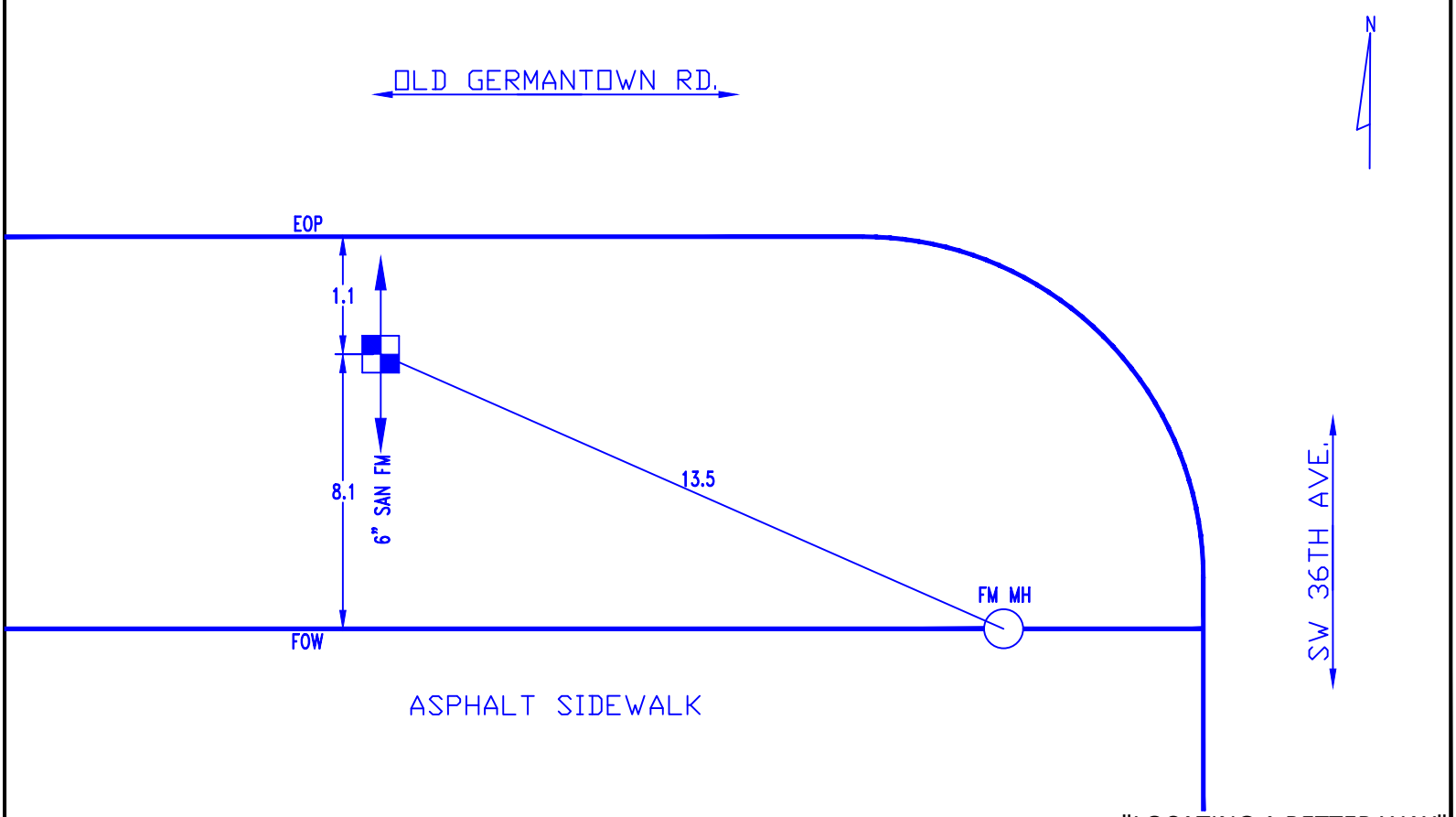
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE



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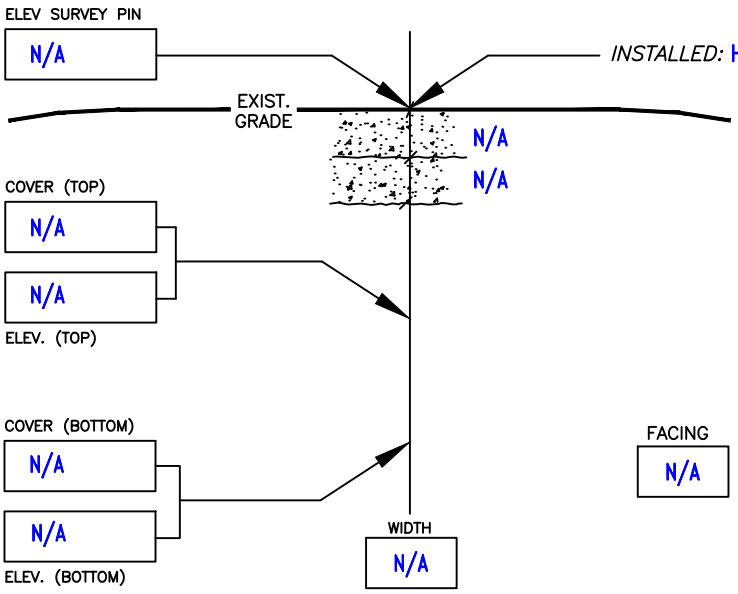
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infraMAP

Complete Utility Infrastructure Surveying and Mapping Since 1987

PN: PF23126 VACUUM TEST HOLE REPORT NO.: 22

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: SANITARY FORCE MAIN	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: SEE NOTE	FORM BY: DL ASSISTED BY: DC JA # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: N/A DATE DUG: 10/15/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: N/A



INSTALLED: HUB & TACK AT: N/A OF UTILITY MARKING TAPE: WHITE

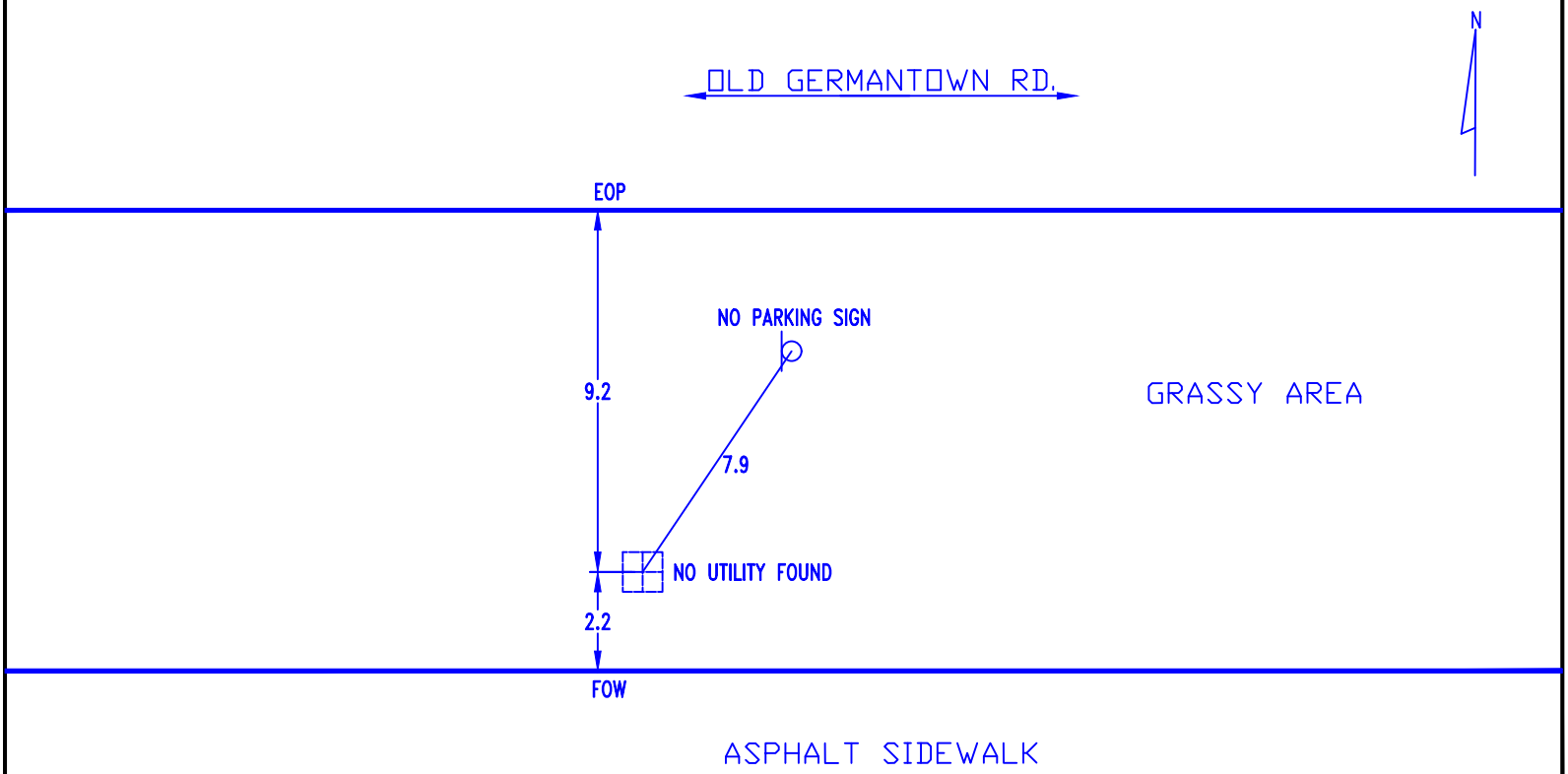
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: TEST HOLE DUG FOR FORCE MAIN WHERE REQUESTED, DUG TO 3', PROBED TO 7'. NO UTILITY FOUND.

NOT TO SCALE

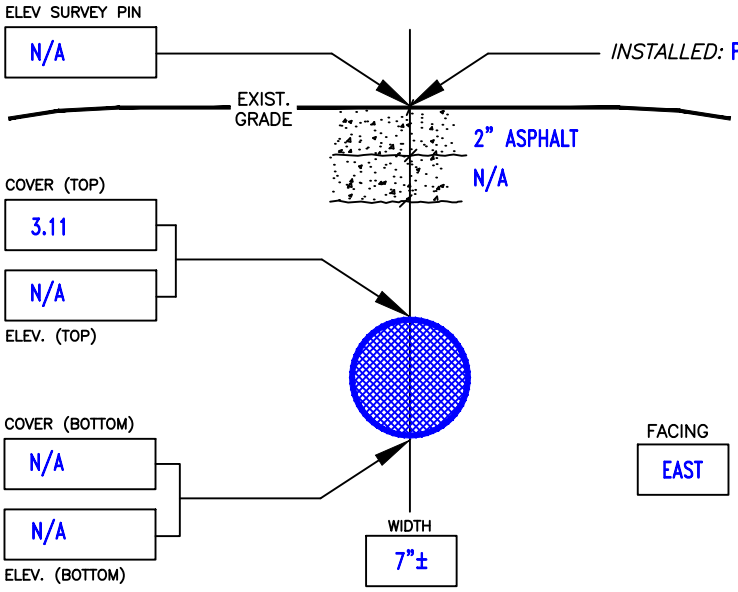


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"LOCATING A BETTER WAY"
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PN: PF23126 VACUUM TEST HOLE REPORT NO.: 23

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: WATER (RAW)	SHEET #: C-7 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER (RAW)	FORM BY: DL ASSISTED BY: DC JA # OF HOLES: 1
MATERIAL AS FOUND: PLASTIC	PAVING CONDITION: GOOD DATE DUG: 10/15/24
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND ROCKY
	UTILITY CONDITION: GOOD



INSTALLED: PK AT: CROWN OF UTILITY MARKING TAPE: BLUE

SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

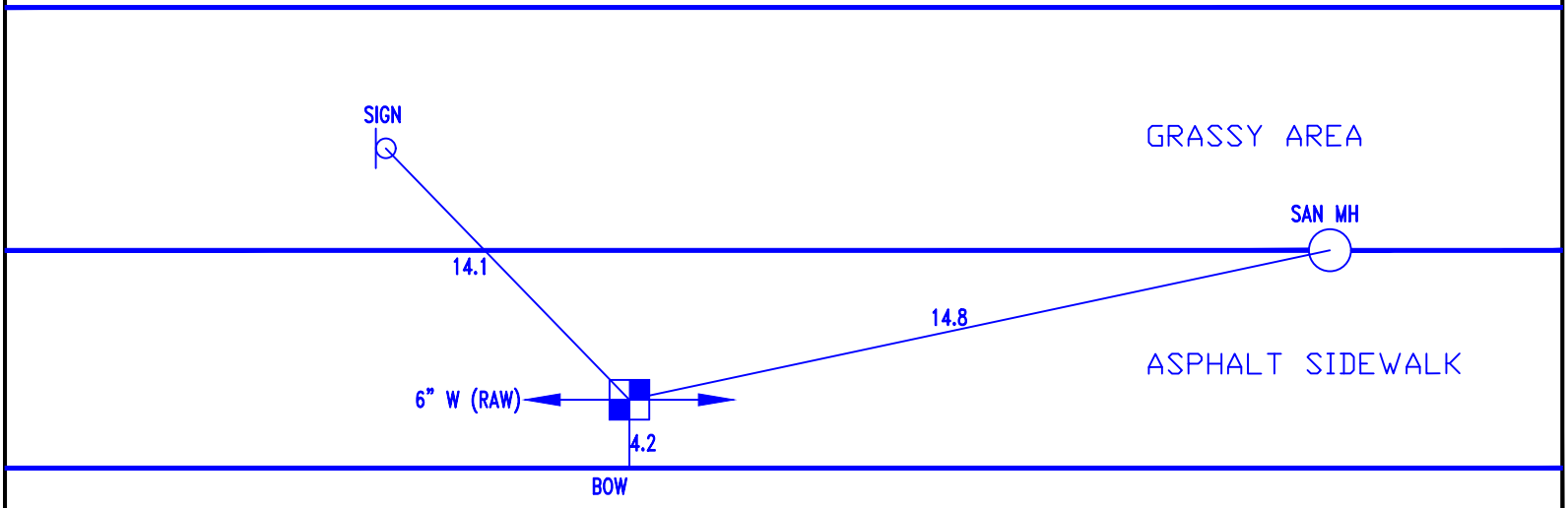
SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE

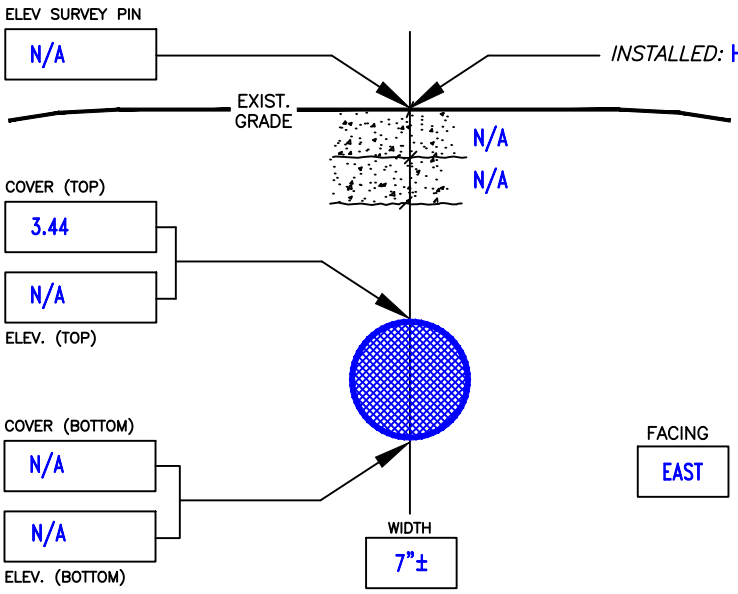






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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: ELECTRIC	SHEET #: C-8 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER	FORM BY: DL ASSISTED BY: DC JA # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: N/A DATE DUG: 10/15/24
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: BLUE

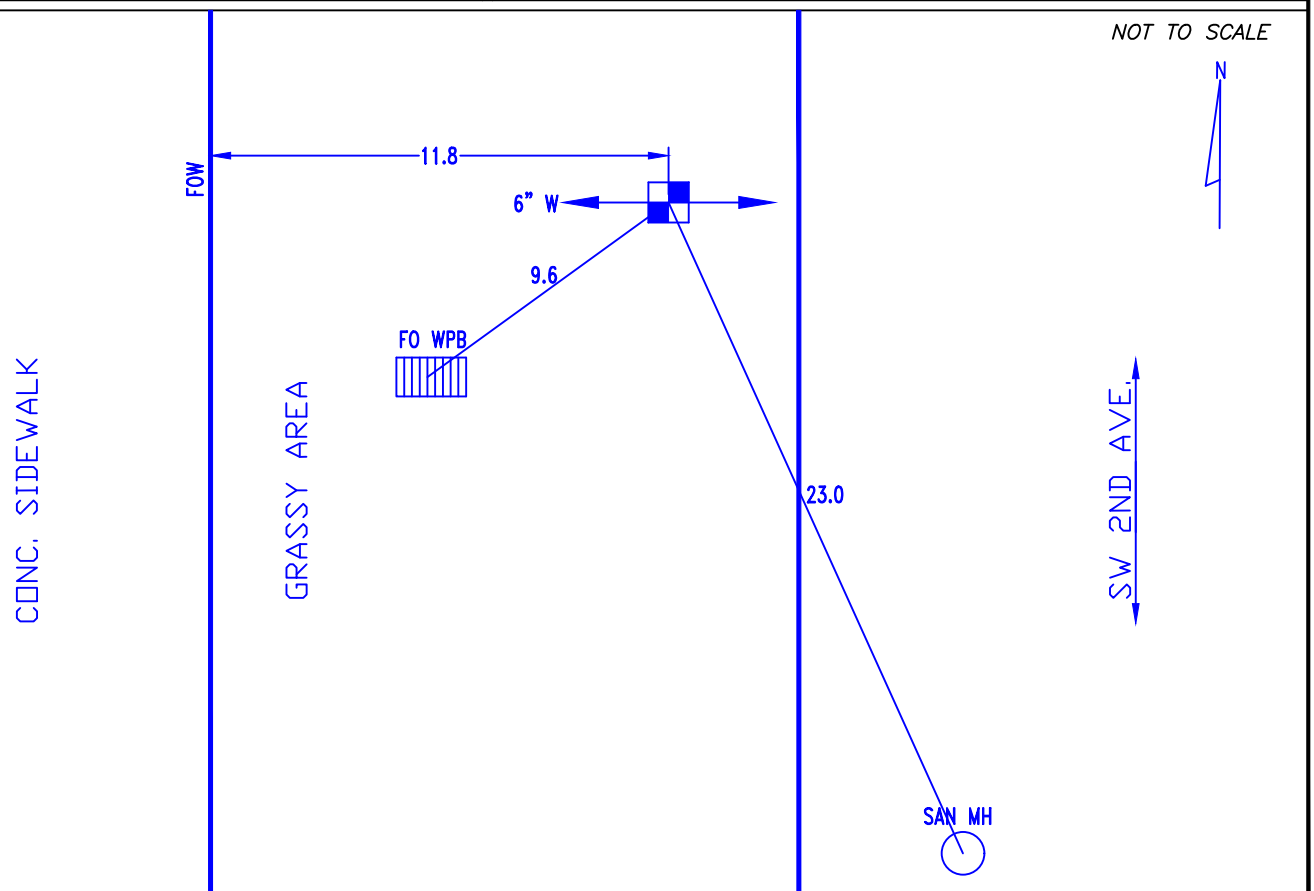
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: NO EVIDENCE OF ELECTRIC CROSSING SW 2ND AVE.

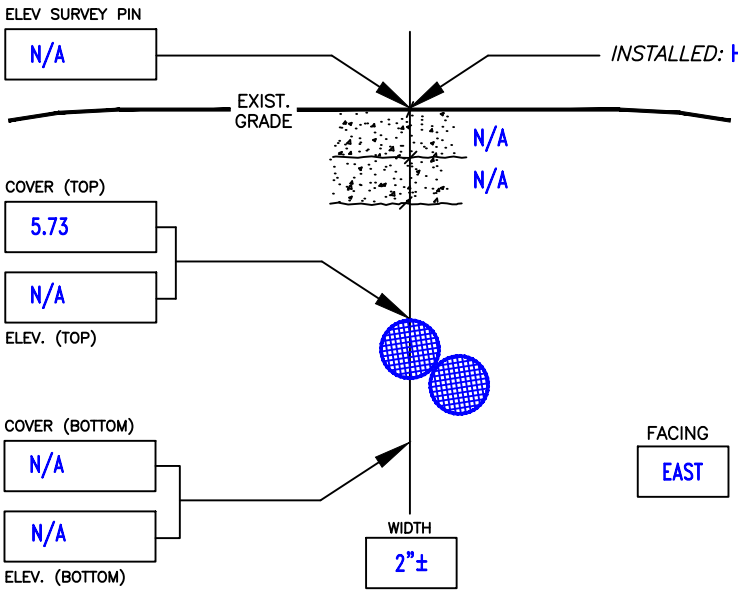
NOT TO SCALE



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"LOCATING A BETTER WAY"
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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: FIBER OPTIC	SHEET #: C-8 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: FIBER OPTIC	FORM BY: DL ASSISTED BY: DC JA # OF HOLES: 1
MATERIAL AS FOUND: PLASTIC	PAVING CONDITION: N/A DATE DUG: 10/15/24
SIZE AS FOUND: (2) 1.5"	SOIL CONDITIONS: SOFT SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: ORANGE

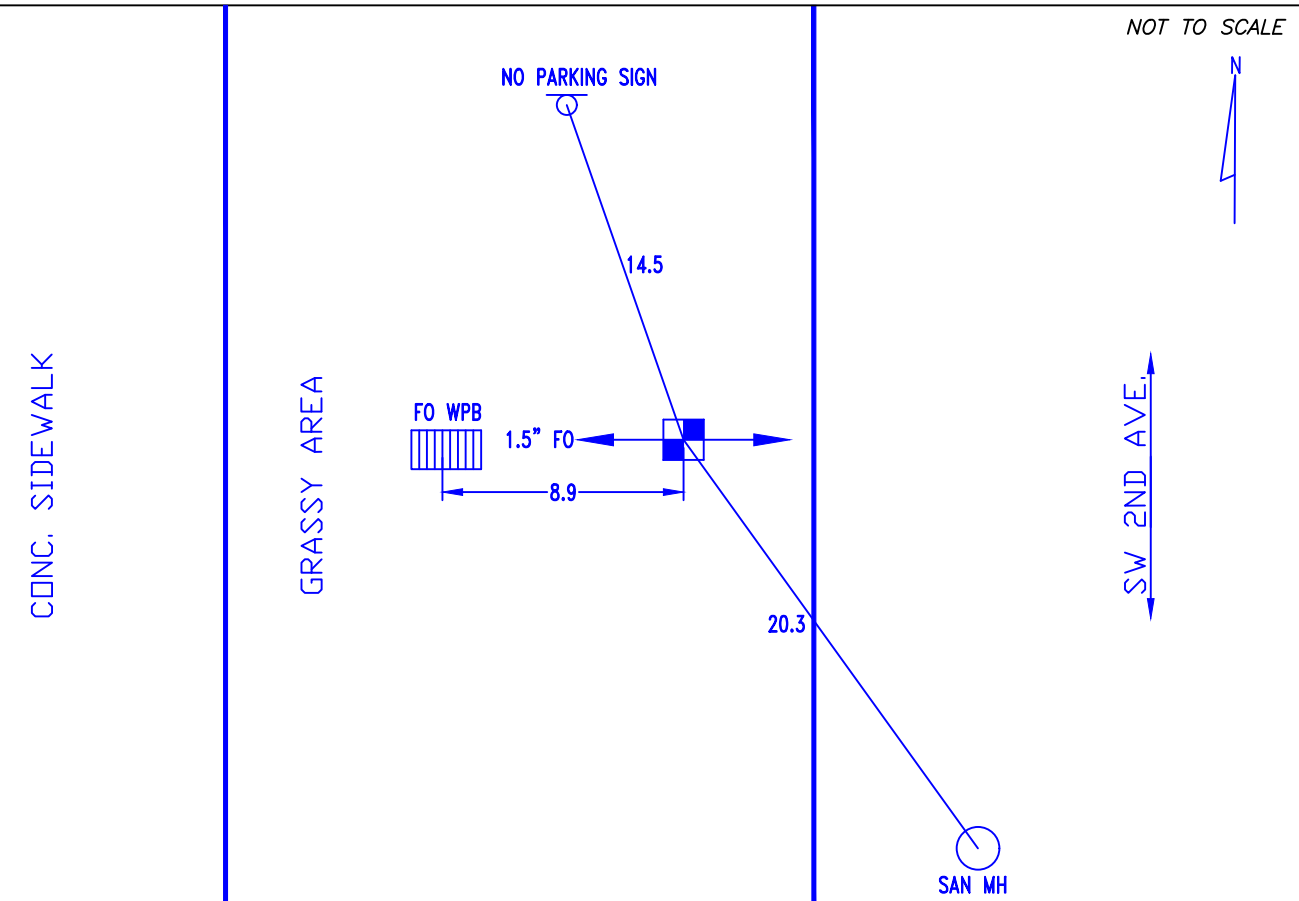
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE



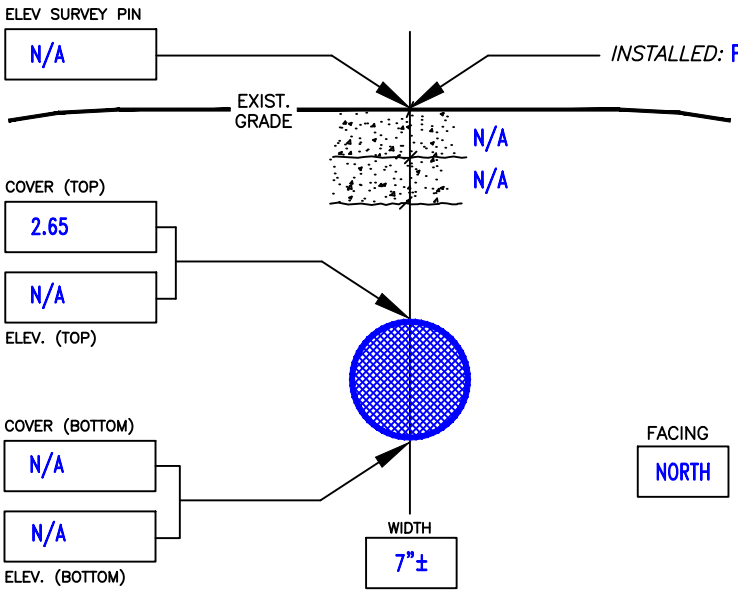
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infraMAP

Complete Utility Infrastructure Surveying and Mapping Since 1987

PN: PF23126 VACUUM TEST HOLE REPORT NO.: 26

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: WATER	SHEET #: C-9 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER	FORM BY: DC ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: N/A DATE DUG: 10/16/24
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY
	UTILITY CONDITION: POOR

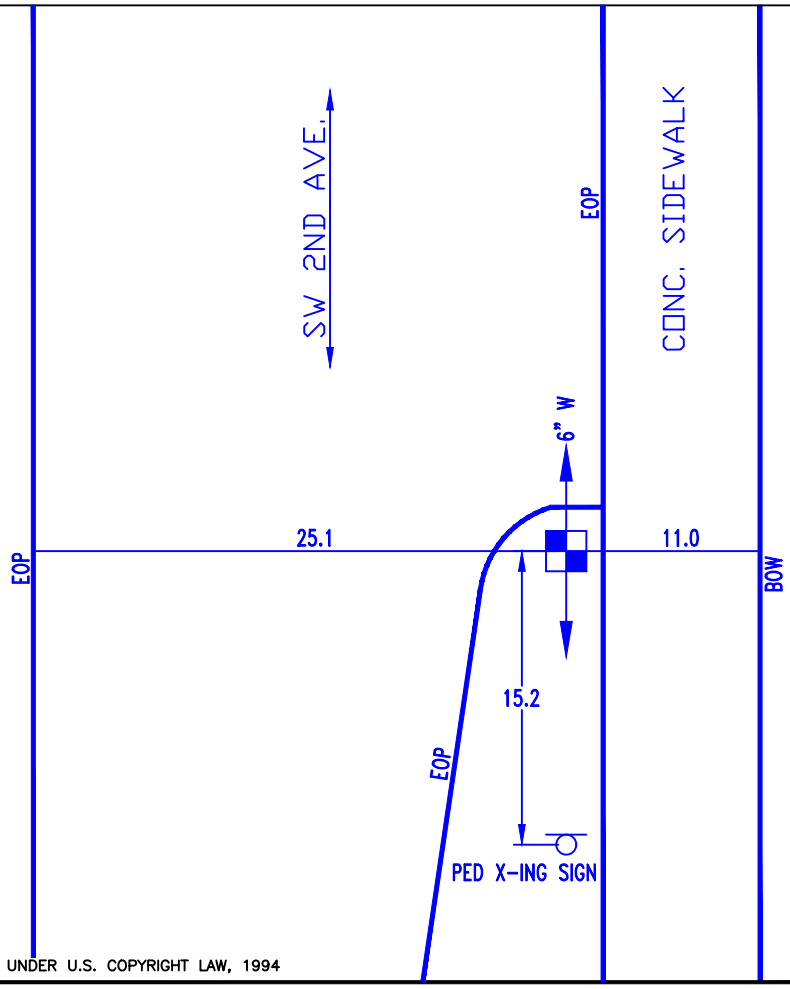


SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

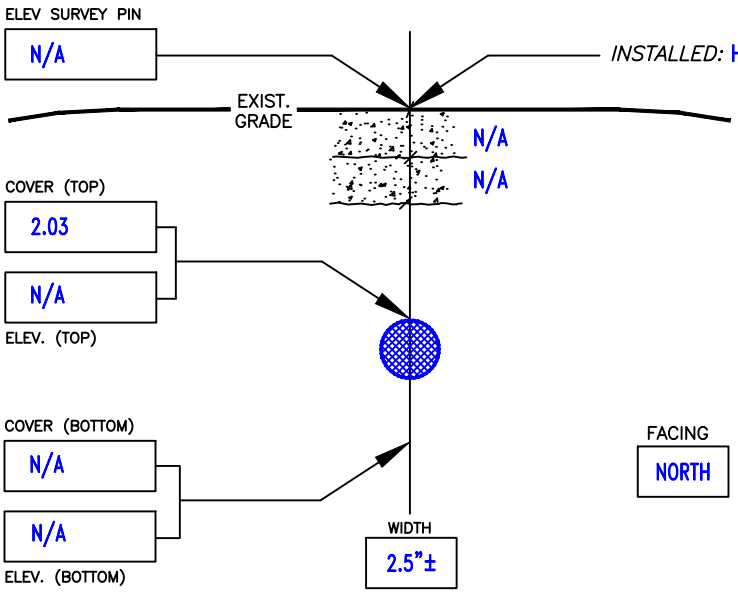
NOTES:



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"LOCATING A BETTER WAY"
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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: ELECTRIC	SHEET #: C-9 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: ELECTRIC	FORM BY: DC ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: PVC (GRAY)	PAVING CONDITION: N/A DATE DUG: 10/16/24
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: RED

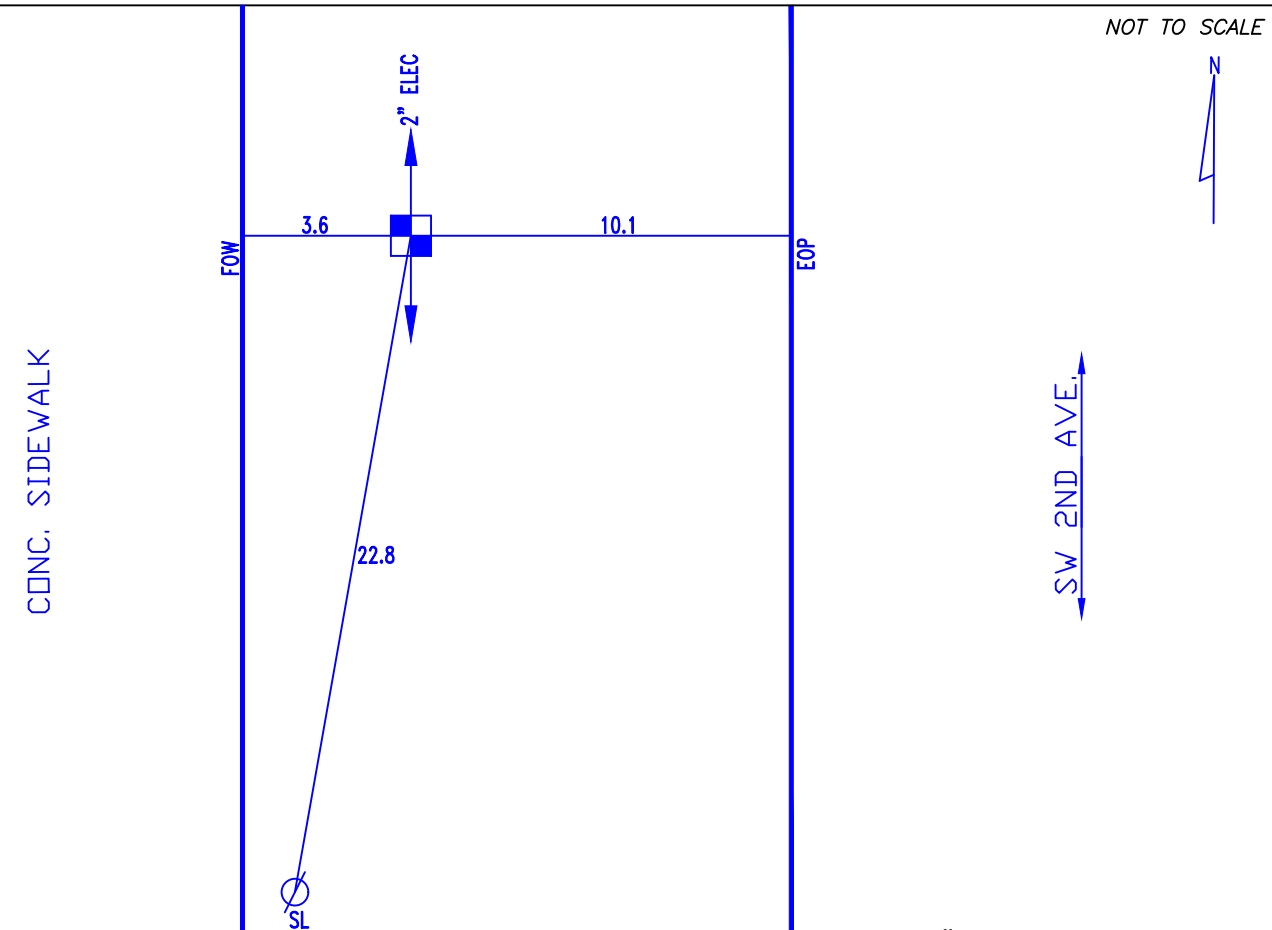
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE



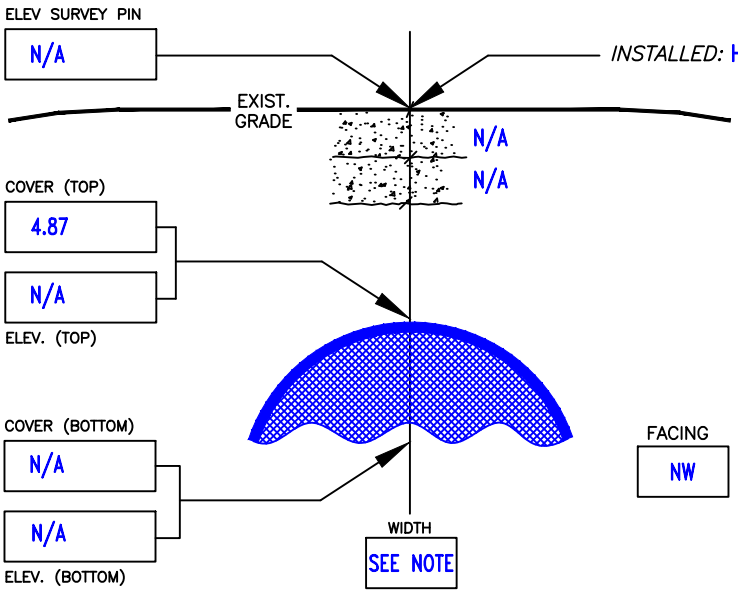
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infra**map**

Complete Utility Infrastructure Surveying and Mapping Since 1987

PN: PF23126 VACUUM TEST HOLE REPORT NO.: 28

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: 30" WATER (RAW)	SHEET #: C-15 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER (RAW)	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: N/A DATE DUG: 10/16/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: FAIR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: BLUE

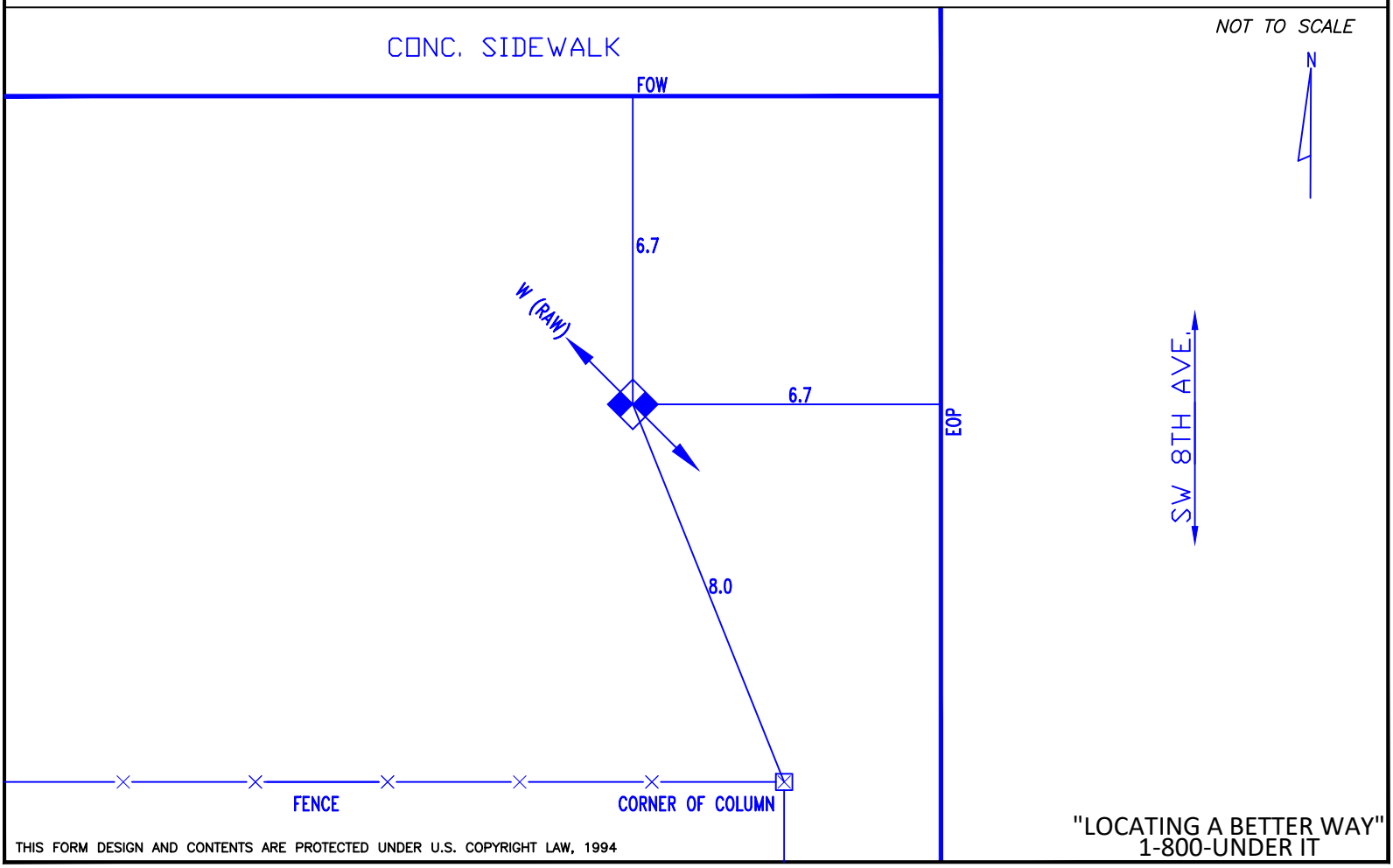
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: UNABLE TO DETERMINE SIZE & MATERIAL DUE TO EXCESSIVE GROUNDWATER.

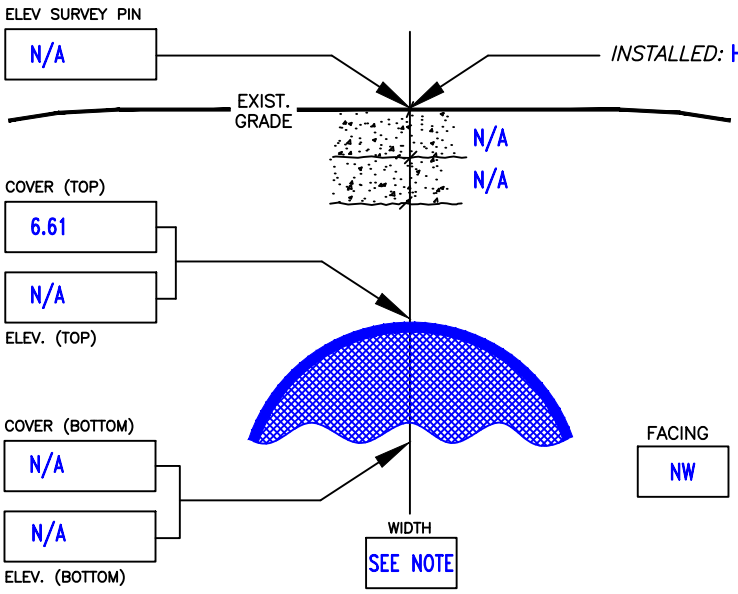
NOT TO SCALE



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PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: 20" WATER (RAW)	SHEET #: C-15 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER (RAW)	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: SEE NOTE	PAVING CONDITION: N/A DATE DUG: 10/16/24
SIZE AS FOUND: SEE NOTE	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: SEE NOTE



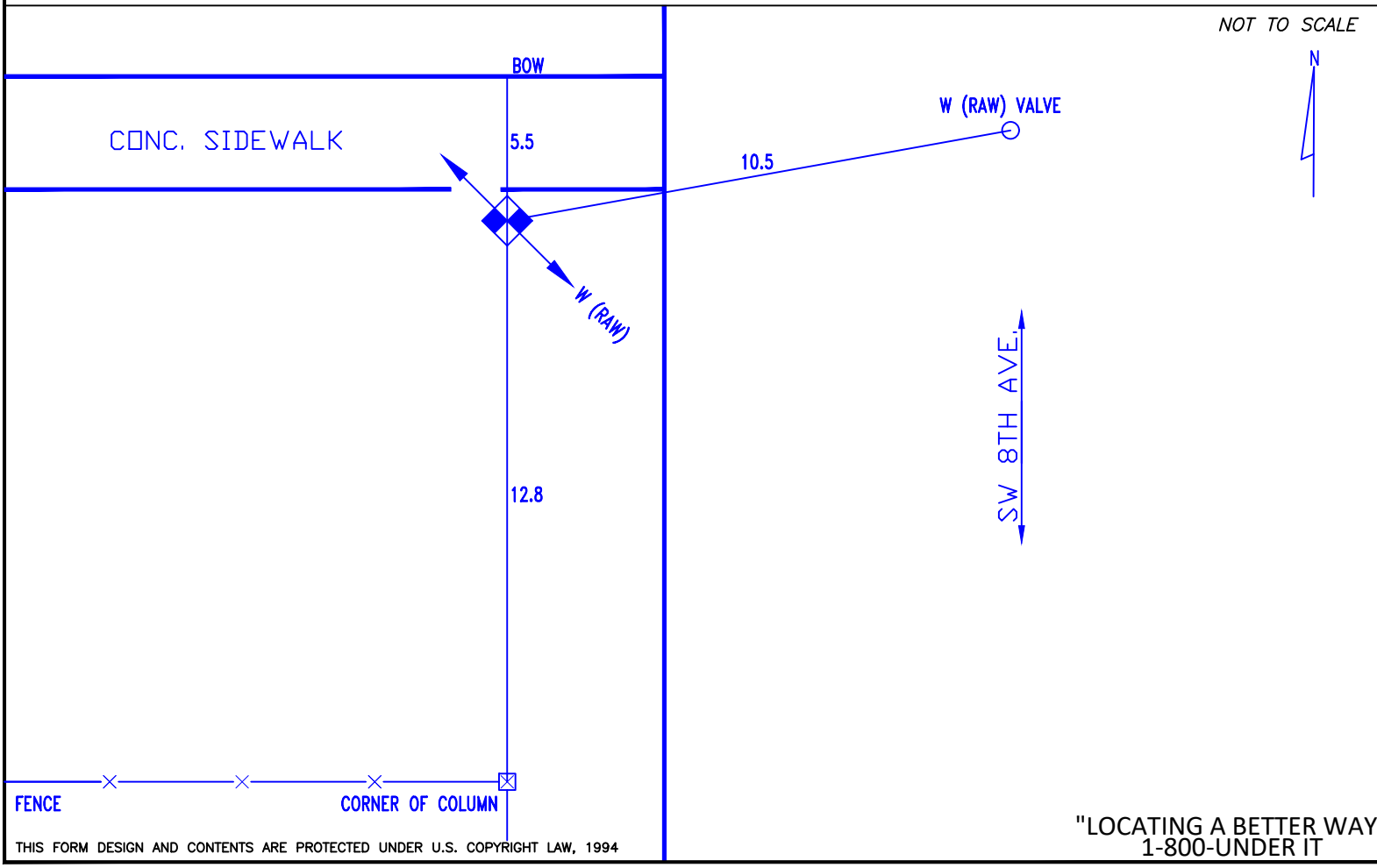
INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: BLUE

SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES: UNABLE TO DETERMINE SIZE & MATERIAL DUE TO EXCESSIVE GROUNDWATER.



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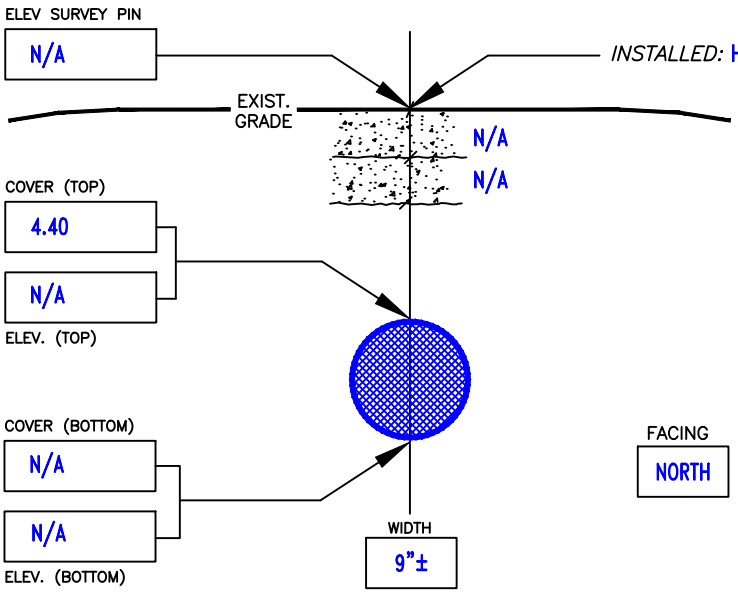
"LOCATING A BETTER WAY"
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infra**map**

Complete Utility Infrastructure Surveying and Mapping Since 1987

PN: PF23126 VACUUM TEST HOLE REPORT NO.: 30

PROJECT NAME: CITY OF DELRAY BEACH 5 10 RECLAIMED WATER – TEST HOLES	CLIENT JOB# N/A WORK ORDER # N/A
LOCATE REQUESTED BY: BAXTER WOODMAN	PROJECT LOCATION: N/A
UTILITY REQUESTED: 8" WATER	SHEET #: C-17 OF N/A PROPOSED: UTILITY WORK
UTILITY FOUND: WATER	FORM BY: DL ASSISTED BY: JA TJ # OF HOLES: 1
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: N/A DATE DUG: 10/16/24
SIZE AS FOUND: 8"	SOIL CONDITIONS: SOFT MOIST DRY SAND ROCKY
	UTILITY CONDITION: POOR



INSTALLED: HUB & TACK AT: CROWN OF UTILITY MARKING TAPE: BLUE

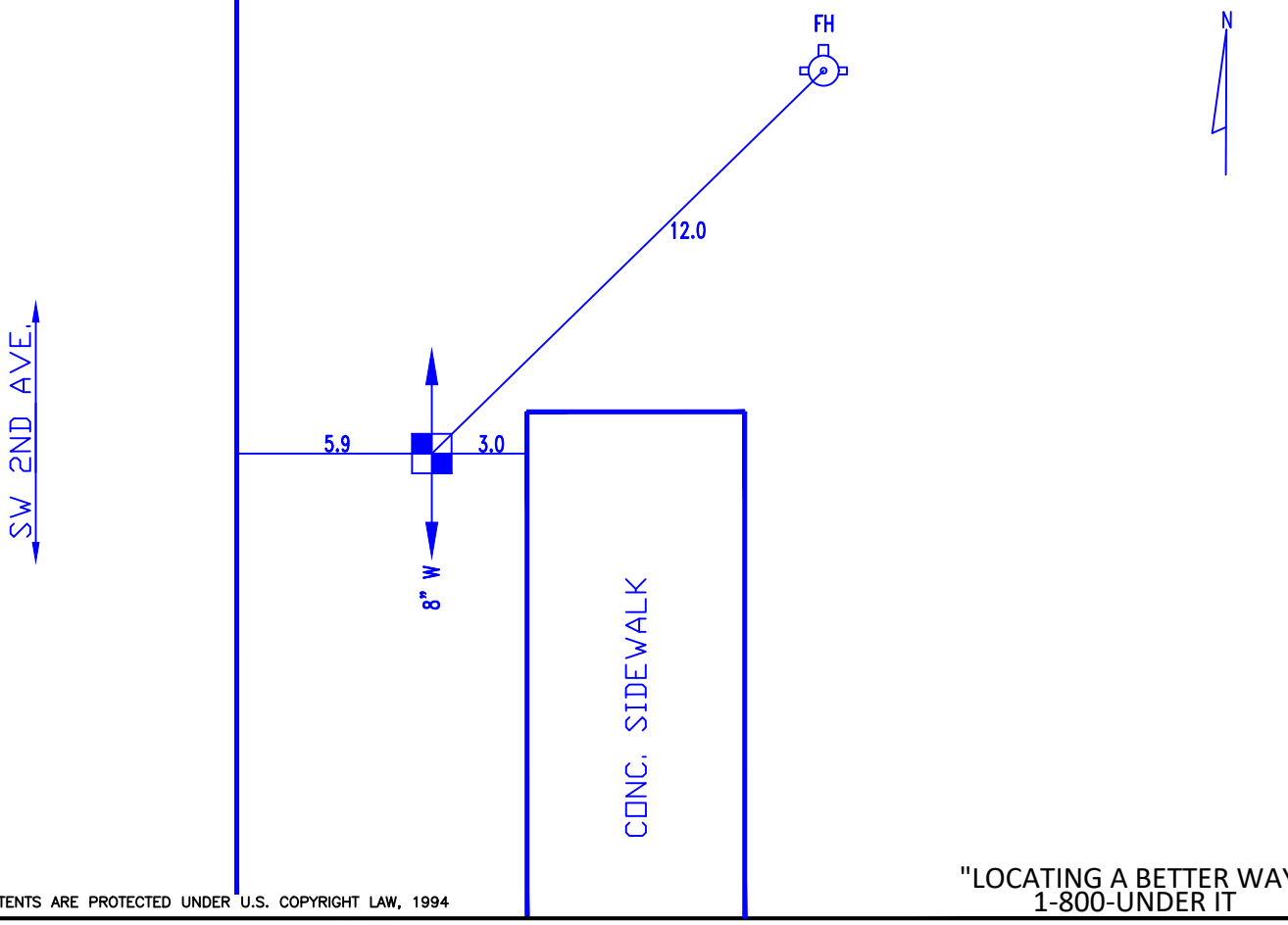
SURVEY PIN LOCATED BY: OTHERS

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

SURVEY INFO NOT REQUIRED.

NOTES:

NOT TO SCALE



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