



Florida's Warmest Welcome

**BID/CONTRACT DOCUMENTS
ESQUIRE LAKE NEIGHBORHOOD
STORMWATER IMPROVEMENTS
BID E-03-18**

For the City of Pompano Beach, Florida

MANDATORY PRE-BID CONFERENCE: October 30, 10:00 a.m. (local)

PUBLIC WORKS CONFERENCE ROOM

1201 N.E. 5TH AVENUE

POMPANO BEACH, FLORIDA 33060

BID OPENING: November 16, 2018 (local)

PURCHASING DIVISION

1190 N.E. 3RD AVENUE, BUILDING C (FRONT)

POMPANO BEACH, FLORIDA 33060

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INVITATION TO BID

Sealed Bids for **Bid E-03-18, Esquire Lake Neighborhood Stormwater Improvements** will be received until **2:00 PM (local), November 16, 2018.** Bids must be submitted electronically through the eBid System on or before the due date/time stated above. A list of proposers will be read aloud in a public forum. Bid openings are open to the public. All bidders and/or their representatives are invited to be present. Any bid received after the due date and time specified, will not be considered. Any uncertainty regarding the time a bid is received will be resolved against the Bidder.

Bidder must be registered on the City's eBid System in order to view the bid documents and plans and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: <https://pompanobeachfl.ionwave.net/CurrentSourcingEvents.aspx>. The City is not responsible for the accuracy or completeness of any documentation the Bidder receives from any source other than from the eBid System. Bidder is solely responsible for downloading all required documents.

A Mandatory Pre-Bid Conference will be held on October 30, 2018 at 10:00 a.m. (local) in the Public Works Conference Room, 1201 NE 5th Avenue, Pompano Beach, Florida 33060. Bids will not be accepted from firms that do not attend the pre-bid conference.

The project consists of furnishing all labor, equipment, tools and materials for the construction of the stormwater management system including removal of existing pavement, drainage pipe and inlets, installation of 49 inlet structures, 3,815 LF RCP/PVC drainage pipe (15" to 42" Diameter) 3,883 LF exfiltration trench; inlet weirs; lake outfalls; stormwater bypass pumping; erosion protection measures and turbidity barriers; endwalls; 16,218 SY swale re-grading and sodding; tree protection, mitigation and replacement; irrigation; realignment of existing watermain drainage inlet conflicts; sidewalk, driveway and miscellaneous restoration; 6,960 SY of asphalt pavement section restoration; traffic signage; pavement markings; sanitary lateral restoration; dewatering; safety and maintenance of traffic for Esquire Lake Neighborhood Stormwater Improvement Project.

Project Location: West of Powerline Road, south of Dr. Martin Luther King Boulevard, north of NW5th Street and east of NW 27th Avenue

On March 23, 2010, the City Commission approved a Resolution establishing a Local Business Program, a policy to increase the participation of City of Pompano Beach businesses in the City's procurement process. The City of Pompano Beach is **strongly committed** to ensuring the participation of City of Pompano Beach Businesses as contractors and subcontractors for the procurement of goods and services, including labor, materials and equipment. The City has set a 15% voluntary Local Business participation Goal for this project.

Bidders should utilize businesses that are physically located in the City of Pompano Beach with a current Business Tax Receipt. You can view the list of City businesses that have a current Business Tax Receipt on the City's website, and locate local firms that are available to perform the work required by the bid specifications. The business information, sorted by business use classification, is posted on the webpage for the Business Tax Receipt Division: www.pompanobeachfl.gov by selecting the Pompano Beach Business Directory in the Shop Pompano! section.

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Bid documents may be obtained at no charge from the City of Pompano Beach website www.pompanobeachfl.gov.

Each bid requires a certified check or bid bond executed on the prescribed form, payable to the City of Pompano Beach, Florida, in an amount not less than 5 percent (5%) of the amount bid. Bidder shall upload a copy of their bid bond or a copy of the certified check to the Response Attachments tab in the eBid System. The awarded bidder will be required to submit the original executed bid bond or cashier's check prior to the execution of the contract and before the commencement of any work.

The successful Bidder will be required to furnish the necessary additional bond(s) for the faithful performance of the Contract Documents. All bid bonds, contract bonds, insurance contracts and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the surety or insurance company having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said surety or insurance company shall be duly licensed and qualified to do business in the State of Florida. **Bid bonds and performance and payment bonds are required. Insurance is required for all bids.**

In order to perform public work, the successful Bidder shall, as applicable, hold or obtain such Contractor' and Business Licenses as required by State Statutes.

Before a Contract will be awarded for the work contemplated herein, the OWNER will conduct such investigation as is necessary to determine the performance record and ability of the apparent low Bidder to perform the size and type of Work specified under the Contract Documents, and to postpone the award of the Contract for a period of time which, however, shall not exceed 90 Days from the bid opening date.

Dated this 10th day of October, 2018

CITY OF POMPANO BEACH

By : Jeff English, Purchasing Agent

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS

Terms used in these Instructions to Bidders, which are defined in the 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 OWNER, as distinct from a sub-bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible and responsive Bidder to whom OWNER (on the basis of OWNER'S evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Invitation to Bid, Instructions to Bidders, the Bid Proposal, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

2. COPIES OF BIDDING DOCUMENTS

21 Complete sets of the Bidding Documents may be obtained from the City of Pompano Beach website at no charge.

22 Complete sets of Bidding Documents must be used in preparing Bids; the OWNER assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

23 OWNER, in making copies of Bidding Documents available on the above terms, does so only for the purpose of obtaining Bids on the Work and does not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

To demonstrate qualifications to perform the Work, and to be considered for award, each Bidder must submit written evidence, such as previous experience, present commitments and other such data as may be called for in this document.

4. PUBLIC ENTITY CRIMES

In accordance with Florida State Statute 287.133 (2)(a): 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 s. 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

5. DRUG FREE WORKPLACE

In accordance with Section 287.087, State of Florida Statutes, preference shall be given to businesses with Drug-free Workplace Programs.

6. ANTI-KICKBACK ACT

The successful bidder must comply with the Copeland “Anti-Kickback Act” (19 U.S.C. Section 874), as supplemented in U.S. Department of Labor Regulations (29 CFR, Part 3).

7. EXAMINATION OF CONTRACT DOCUMENTS AND SITES

7.1 It is the responsibility of each Bidder before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit the site to become familiar with local conditions that may affect costs, progress, performance or furnishing of the Work, (c) consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work, (d) study and carefully correlate Bidder’s observations with the Contract Documents, and (e) notify OWNER of all conflicts, errors or discrepancies in the Contract Documents.

7.2 Information and data reflected in the Contract Documents with respect to or contiguous to the site is based upon information and data furnished to OWNER by owners of such facilities or others, and OWNER does not assume responsibility for accuracy or completeness thereof unless it is expressly provided otherwise.

7.3 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in the General Conditions.

7.4 Before submitting a Bid, each Bidder will, at Bidder’s own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the Contract Documents.

7.5 On request in advance, OWNER will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition, or better, upon completion of such explorations.

7.6 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 OWNER unless otherwise provided in the Contract Documents.

7.7 The electronic submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this section and the General Conditions, that without exception the Bid is premised upon performing and furnishing 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 and furnishing of the Work.

8. INTERPRETATIONS AND ADDENDA

8.1 All questions must be in writing or be asked at the Pre-Bid Conference. All questions are to be submitted using the Questions feature in the eBid System.

All written questions must be submitted by **5:00 PM (local), November 9, 2018** in the eBid System. No further questions will be accepted after this date. Oral and other interpretations or clarifications will be without legal effect.

If any addenda are issued to this Bid solicitation the addendum will be issued via the eBid System. It shall be the responsibility of each Bidder, prior to submitting their bid, to contact the City Purchasing Office at (954) 786-4098 to determine if addenda were issued and to make such addenda a part of their Bid proposal. Addenda will be posted to Bid solicitation in the eBid System.

8.2 Addenda may also be issued to modify the Bidding Documents as deemed advisable by the OWNER.

9. BID SECURITY

9.1 Each Bid must be accompanied by Bid security made payable to OWNER in an amount of five percent of the Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond issued by a surety meeting the requirements stated herein. Bidder shall upload a copy of their bid bond or a copy of the certified check to the Response Attachments tab in the eBid System. The awarded bidder will be required to submit the original executed bid bond or cashier's check prior to the execution of the contract and before the commencement of any work.

9.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required contract security, (if provided as a cashier's check or bank officer's check), whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within 10 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have reasonable chance of receiving the award may be retained by OWNER until a completed contract has been issued, whereupon Bid security furnished by such Bidders will be returned.

9.3 The Bid Bond, if provided, shall be issued by a Company having a registered agent in the State of Florida. This check or bond shall be retained by the payee as liquidated damages should the bidder refuse or fail to enter into a contract with the payee for the execution of the work embraced in the proposal, in the event the proposal of the bidder is accepted.

10. CONTRACT TIME

The number of days within which, or the dates 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 section entitled Bid Proposal.

11. LIQUIDATED DAMAGES

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

11.2 All bidders must state in the Bid Proposal the amount of consideration required by the Bidder in return for the Bidder's promise of indemnity contained in the General Conditions. The amount to be stated shall be no less than \$10.00.

12. SUBSTITUTE OR "OR-EQUAL" ITEMS

The Contract, if awarded, will be on the basis of materials 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 OWNER, application for such acceptance will not be considered by OWNER until after the effective date of the agreement.

13. SUBCONTRACTORS, SUPPLIERS AND OTHERS.

13.1 Each Bid must identify the names and address of Subcontractors, Suppliers and other persons and organizations including those who are to furnish the principal items of material and equipment listed in the Bid Proposal section. If requested, the apparent Successful Bidder, and any other Bidder so requested, shall within seven days after the Bid opening submit to OWNER a list of all such Subcontractors, Suppliers and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, other persons or organization, if requested by OWNER. If OWNER after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, may before the Notice of Award is given request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price. If apparent Successful Bidder declines to make any such substitution, Owner may 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 OWNER does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER subject to revocation of each acceptance after the Effective Date of Agreement.

13.2 In contracts where the Contract Price is on the basis of Cost-of-the Work Plus a fee, the apparent Successful Bidder, prior to the Notice Award, shall identify in writing to OWNER those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with OWNER'S written consent.

133 No CONTRACTOR shall be required to employ any Subcontractor, Supplier, other person or organization against who CONTRACTOR has reasonable objection.

14. BID PROPOSAL

14.1 The Bid Proposal is included with the Bidding Documents.

14.2 All requested information on the Bid Proposal is to be provided electronically using the City's eBid System.

14.3 In case of discrepancy between unit prices and totals, unit prices will prevail.

14.4-14.8 Removed

15. SUBMISSION OF BIDS

15.1 Bids shall be submitted electronically using the City's eBid System on or before the due date/time stated above.

15.2 More than one Bid received for the same work from an individual, firm or partnership, Corporation or Association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one Bid for the same work will cause the rejection of all such Bids in which the Bidder is interested. If there are reasonable grounds for believing that collusion exists among the Bidders, the Bids of participants in such collusion will not be considered.

15.3 Bid tabulations will be posted for the bid in the City's eBid System. Bid results **will not** be read to you over the phone.

16. MODIFICATION AND WITHDRAWAL OF BIDS

16.1 Bids may be modified or withdrawn at any time prior to the set date and time of the opening of Bids.

16.2 After bids are opened, and a contractor defaults on a City contract, the contractor may be banned from doing business with the City for a period of 36 months from the date of default.

17. OPENING OF BIDS

Bids will be electronically unsealed and (unless obviously non-responsive) read aloud publicly. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to Bidders after the opening of Bids.

18. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.1 All bids will remain subject to acceptance for ninety (90) days after the day of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid Security prior to that date.

182 Extensions of time when Bids shall remain open beyond the ninety (90) day period may be made only by mutual agreement between OWNER, the Successful Bidder, and the surety, if any, for the Successful Bidder.

19. AWARD OF CONTRACT

19.1 OWNER reserves the right to reject any and all Bids, to waive any and all informalities not involving price, time and changes in the Work and to negotiate contract terms with the Successful Bidder, and the right to disregard all nonconforming nonresponsive, unbalanced or conditional Bids. Also, OWNER reserves the right to reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsible or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. Discrepancies in the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum therefor will be resolved in favor of the correct sum.

19.2 In evaluating Bids, OWNER will consider the qualifications of the Bidders, 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 Award.

19.3 OWNER 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 Subcontractor, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER 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 Award.

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

19.5 If the contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project.

19.6 If the contract is to be awarded, OWNER will give the Successful Bidder a Notice of Award within ninety (90) after the day of the Bid opening.

20. CONTRACT SECURITY

When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required Performance and Payment Bonds.

21. SIGNING OF AGREEMENT

When OWNER gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten (10) days thereafter, CONTRACTOR shall sign and deliver the required number of

counterparts of the Agreement and attached documents to OWNER with the required Bonds. Within fifteen (15) days thereafter OWNER shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

22. TAXES

The CONTRACTOR shall pay all applicable sales, consumer, use and other similar taxes required by law. The CONTRACTOR is responsible for reviewing the pertinent state statutes involving the sales tax and complying with all requirements.

23. NOTICE TO CONTRACTOR

The employment of unauthorized aliens by any contractor is considered a violation of Section 274A(e) of the Immigration and Nationality Act. If the Contractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the contract.

24. NON DISCRIMINATION

There shall be no discrimination as to race, color, religion, gender, national origin, ancestry, and physical or mental disability in the operations conducted under this contract. Included as applicable activities by the contractor under this section are the solicitation for, or purchase of, goods or services, or the subcontracting of work in performance of this contract.

25. OCCUPATIONAL HEALTH AND SAFETY

In compliance with Chapter 442, Florida Statutes, any items included in the latest edition of "Florida Substance List" which are delivered from a contract resulting from this bid must be accompanied by a Material Safety Data Sheet (MSDS). The MSDS must be maintained by the user agency and must include the following information:

- (a) The chemical name and the common name of the toxic substance.
- (b) The hazards or other risks in the use of toxic substance, including:
 - 1. The potential for fire, explosion, corrosiveness, and reactivity;
 - 2. The known acute and chronic health effects of risks from exposure, including the medical conditions which are generally recognized as being aggravated by exposure to the toxic substance; and
 - 3. The primary routes of entry and symptoms of overexposure.
- (c) The proper precautions, handling practices, necessary personal protective equipment, and other safety precautions in the use of or exposure to the toxic substances, including appropriate emergency treatment in case of overexposure.
- (d) The emergency procedure for spills, fire disposal, and first aid.

- (e) A description in lay terms of the known specific potential health risks posed by the toxic substance intended to alert any person reading this information.
- (f) The year and month, if available, that the information was compiled and the name, address, and the emergency telephone number of the manufacturer responsible for preparing the information.

Any questions regarding this requirement should be directed to:

Department of Labor and Employment Security, Division of Safety, 2002 Old St. Augustine Road, Tallahassee, Florida, 32399; telephone: 1-800-367-4378.

ALL TOXIC SUBSTANCES MUST BE LABELED FOR IDENTIFICATION, IN ACCORDANCE WITH O.S.H.A. STANDARDS.

Notice: Federal I.D. Number must be referenced on your invoice for us to process payment. Please note I.D. Number on Bid Response page.

26. WASTE REMOVAL SERVICES

The City has contracted with Waste Management Inc. of Florida for residential and commercial solid waste collection and disposal services. The City has granted to Waste Management Inc. of Florida the sole and exclusive right, franchise, license and privilege to provide non-hazardous solid waste collection, removal and disposal services within the corporate limits of the City, including collection and removal of certain Construction and Demolition Debris. The successful Contractor shall coordinate with Waste Management Inc. of Florida the level and type of service to be provided and the manner of collection charges. Any Contractor or Subcontractor performing construction work within the City of Pompano Beach must use the City's franchised hauler for garbage removal services including removal of Construction and Demolition debris generated over 10 cubic yards, with the exception of Source Separated Recovered Materials as defined in section 403.703(24), Florida Statutes and Chapter 96 of the City Ordinance. The City's current franchised hauler is Waste Management Inc. of Florida. Please contact them directly for dumpsters and/or rollofs at:

Waste Management Inc. of Florida
2700 Wiles Road
Pompano Beach, FL 33073
(954) 974-7500

27. PERMITS AND FEES

The Contractor awarded the project which is the scope of this bid document shall be required to obtain and pay for the permits and/or fees indicated on the chart below in the amounts set forth or pursuant to the formula for percent or unit method which is indicated.

Fees cannot be waived and must be collected by the City from the Contractor. Contact the City Department indicated for additional details regarding the required permit or fee.

FEE OR PERMIT	CITY DEPARTMENT	COST (SET FEE OR PERCENT OF PROJECT AMOUNT)
All construction within City right-of-way	Engineering	Waived
All utilities tie-ins to City water, sewers, and drainage	Engineering	Waived
Paving	Engineering	Waived
Fire plan review for new construction, additions and alterations	Building Inspection	See City Code of Ordinances 95.14
Fire alarm and fire sprinkler plan review (new installations)	Fire Plan Review	See City Code of Ordinances 95.14
Fire hydrant flow test	Fire Plan Review	See City Code of Ordinances 95.14
Business Tax Receipt (only if the contractor has a temporary office in the City of Pompano Beach)	Zoning	See City Code of Ordinances
Site plan review	Zoning	See City Code of Ordinances
Rezoning	Zoning	See City Code of Ordinances
Variance	Zoning	See City Code of Ordinances
Tree Permit application fee	Zoning	See Zoning Code/City Code of Ordinances
Landscape reinspection fee	Zoning	See Zoning Code/City Code of Ordinances
Capital recovery fees	Customer Service	See City Code of Ordinances 50.13 and 51.11
Tapping fee	Customer Service	See City Code of Ordinances
Deposits (water bill)	Customer Service	Deposit based upon size of meter (only applies if contractor responsible for water bills during period between meter installation and City acceptance of project.)
Administrative fee	Customer Service	See City Code of Ordinances
Building permit	Building Inspection	See Bldg Fee Schedule/City Code of Ordinances
Building Reinspection fee	Building Inspection	See Bldg Fee Schedule/City Code of Ordinances
Certificate of occupancy	Building Inspection	See Bldg Fee Schedule/City Code of Ordinances
Lien law	Building Inspection	\$5.00
Surcharge Bwd. Cty. Bd. of Rules & Appeals	Building Inspection	\$0.60 per \$1,000 valuation
Surcharge Fla. Statute 553.721	Building Inspection	1.5% of permit fees, minimum \$2.00
Surcharge Fla. Statute 468.631	Building Inspection	1.5% of permit fees, minimum \$2.00

BID PROPOSAL

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 Contract Documents to perform and furnish 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 other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for ninety (90) Days after the Bid Opening. BIDDER will sign and submit the Agreement with the Bonds and other documents required by Bidding Requirements within ten (10) days after the date of OWNER'S Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
 - A. BIDDER has examined copies of all the bidding Documents and the Addenda.
 - B. BIDDER 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.
 - C. BIDDER has studied carefully all reports and drawings of physical conditions which are identified in the bid.
 - D. BIDDER has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement those referred to in (C) above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as BIDDER considers necessary for the performance or furnishing of the Work at the Contract Price within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by BIDDER for such purposes.
 - E. Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing site conditions and assumes responsibility for such. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said site are or will be required by Bidder in order to perform and furnish the Work at Work Contract Price, within the Contract Time and in accordance with other terms and conditions of the Contract Documents.
 - F. BIDDER has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

- G. BIDDER has given OWNER written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by Owner is acceptable to Bidder.
- H. This Bid is genuine and not made in the interest or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, 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 corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidding or over OWNER.
- 4. BIDDER agrees that the construction of the Project will be substantially complete within **270** calendar days after the date when the Contract Time commences to run as provided in the GENERAL CONDITIONS, and completed and ready for final payment within **300** calendar days after the date when the Contract Time commences to run.

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

- 5. BIDDER agrees that all Federal, State and local sales and use taxes are included in the stated bid prices for the Work.
- 6. BIDDER further proposes to accept as full payment for the work proposed herein the amounts computed under the provisions of the Contract Documents and based on the following unit prices (if applicable) represent a true measure of the labor, materials, equipment and any other incidentals required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in these Contract Documents.

7. BID PROPOSAL

The project consists of furnishing all labor, equipment, tools and materials for the construction of the stormwater management system including removal of existing pavement, drainage pipe and inlets, installation of 49 inlet structures, 3,815 LF RCP/PVC drainage pipe (15" to 42" Diameter) 3,883 LF exfiltration trench; inlet weirs; lake outfalls; stormwater bypass pumping; erosion protection measures and turbidity barriers; endwalls; 16,218 SY swale re-grading and sodding; tree protection, mitigation and replacement; irrigation; realignment of existing watermain drainage inlet conflicts; sidewalk, driveway and miscellaneous restoration; 6,960 SY of asphalt pavement section restoration; traffic signage; pavement markings; sanitary lateral restoration; dewatering; safety and maintenance of traffic for Esquire Lake Neighborhood Stormwater Improvement Project
(The rest of the page has been left blank intentionally.)

**BID LINE ITEM PRICING MUST BE SUBMITTED ELECTRONICALLY USING THE
CITY'S EBID SYSTEM.**

**CITY OF POMPANO BEACH
ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS**

BID SCHEDULE, BID NO. E-03-18

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
GENERAL CONDITIONS						
1*	Site Mobilization/ Demobilization	LS	1	_____ Dollars _____ Cents	\$ _____	\$ _____
2	Bonds and Insurance	LS	1	_____ Dollars _____ Cents	\$ _____	\$ _____
3	Maintenance of Traffic	LS	1	_____ Dollars _____ Cents	\$ _____	\$ _____
4	As-Built Record Drawings	LS	1	_____ Dollars _____ Cents	\$ _____	\$ _____
5	NPDES Permit/Erosion Protection Measures/ Turbidity Barriers	LS	1	_____ Dollars _____ Cents	\$ _____	\$ _____
6	Professional Video & Construction Photographs	LS	1	_____ Dollars _____ Cents	\$ _____	\$ _____
ROADWAY						
7	Roadway Demolition and Removal (Asphalt & Base)	SY	6,959	_____ Dollars	\$ _____	\$ _____ Dollars

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Cents		
8	Remove Existing Pavement in ROW Swales	SY	1815		\$	
				\$	Dollars	
				Cents		
9	1-1/2" Type S-3 Asphalt (2 lifts combines 9a & 9b)					
9a	First Type S-3 Asphalt Lift	SY	6959	\$	\$	Dollars
				Cents		
9b	Second Type S-3 Asphalt Lift	SY	6,959		\$	\$
				Dollars		
				Cents		
10	8" Limerock Base, Compacted	SY	7,277		\$	\$
				Dollars		
				Cents		
11	12" Stabilized, Compacted Subgrade	SY	7,592		\$	\$
				Dollars		
				Cents		
12	1" Mill & Overlay 1" Type S-3 Asphalt w/ tack coat	SY	10,733	\$	\$	Dollars
				Cents		
13	4' Wide Concrete Sidewalk Restoration (4-inch thick typ)	LF	870		\$	\$
				Dollars		
				Cents		
14	5' Wide Concrete Sidewalk Restoration (4-inch thick typ)	LS	20		\$	\$
				Dollars		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Cents		
15	Concrete Driveway Apron Replacement	SF	1863		\$	\$
				Dollars		
				Cents		
16	Asphalt Driveway Apron Replacement	SF	9,203		\$	\$
				Dollars		
				Cents		
17	Tactile Surface	EA	2		\$	\$
				Dollars		
				Cents		
18	Pavement Markings	LS	1		\$	\$
				Dollars		
				Cents		
DRAINAGE						
19	Open Cut Pavement Trench Repair	LF	3,511		\$	\$
				Dollars		
				Cents		
20	Core & Connect to Existing Drainage Structure (Dwg. C-1 & C-5)	EA	2		\$	\$
				Dollars		
				Cents		
21	Type C Drainage Inlet w/Casting	EA	36		\$	\$
				Dollars		
				Cents		
22	8' Diameter Manhole w/Casting	EA	1		\$	\$
				Dollars		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Cents		
23	6' Diameter Manhole w/Casting	EA	12		\$	\$
				Dollars		
				Cents		
24	5' Diameter Manhole w/Casting	EA	10		\$	\$
				Dollars		
				Cents		
25	4' Diameter Manhole w/Casting	EA	19		\$	\$
				Dollars		
				Cents		
26	5' Diameter Manhole w/PRB & Casting	EA	4		\$	\$
				Dollars		
				Cents		
27	6'x6' Drainage Inlet w/Casting	EA	1		\$	\$
				Dollars		
				Cents		
28	6'x4' Type J Inlet w/PRB & Casting	EA	1		\$	\$
				Dollars		
				Cents		
29	5'x3' Drainage Inlet w/Casting	EA	1		\$	\$
				Dollars		
				Cents		
30	Remove Existing Drainage Structure	EA	35		\$	\$

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Dollars		
				Cents		
31	Remove Existing Inlet Apron	EA	3		\$	\$
				Dollars		
				Cents		
32	Drainage Structure Concrete Inlet Apron	EA	6		\$	\$
				Dollars		
				Cents		
33	15" RCP Drainage Pipe	LF	52		\$	\$
				Dollars		
				Cents		
34	18" RCP Drainage Pipe	LF	1,331		\$	\$
				Dollars		
				Cents		
35	24" RCP Drainage Pipe	LF	295		\$	\$
				Dollars		
				Cents		
36	30" RCP Drainage Pipe	LF	616		\$	\$
				Dollars		
				Cents		
37	42" RCP Drainage Pipe	LF	866		\$	\$
				Dollars		
				Cents		
38	18" Slotted RCP w/ 4'x 4' Exfiltration Trench	LF	2,705		\$	\$
				Dollars		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Cents		
39	42" Slotted RCP w/ 5' x 5' Exfiltration Trench	LF	1,178		\$	\$
				Dollars		
				Cents		
40	15" PVC C-905 Drainage Pipe	LF	122		\$	\$
				Dollars		
				Cents		
41	42" PVC C-905 Drainage Pipe	LF	73		\$	\$
				Dollars		
				Cents		
42	Outfall #4 - 42" PVC Drainage Pipe (Dwg. C-20). Structure D-48 to D-53	LF	128		\$	\$
				Dollars		
				Cents		
43	Outfall #4 - 42" PVC Drainage Pipe (Dwg. C-20). Structure D-54 to Outfall	LF	121		\$	\$
				Dollars		
				Cents		
44	Outfall #4 - Remove 36" HDPE/RCP Drainage Pipe (Dwg. C-20)	LF	283		\$	\$
				Dollars		
				Cents		
45	Outfall #6 - 42" RCP Drainage Pipe (Dwg. C-34)	LF	94		\$	\$
				Dollars		
				Cents		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
46	Outfall #6 - 42" PVC Drainage Pipe within Drainage Easement (Dwg. C-34). Structure D-68 to D-85	LF	117	<hr/> Dollars Cents	<hr/> \$	<hr/> \$
47	Remove 24" PVC Drainage Pipe & Compact, Regrade & Sod (Dwg. C-34)	LF	100	<hr/> Dollars <hr/> Cents	<hr/> \$	<hr/> \$
48	Remove Existing 18" RCP Drainage Pipe	LF	52	<hr/> Dollars Cents	<hr/> \$	<hr/> \$
49	Remove Existing 36" RCP Drainage Pipe	LF	1,248	<hr/> Dollars <hr/> Cents	<hr/> \$	<hr/> \$
50	Remove Existing 18" HDPE Drainage Pipe	LF	153	<hr/> Dollars <hr/> Cents	<hr/> \$	<hr/> \$
51	Remove Existing 12" CMP Drainage Pipe	LF	104	<hr/> Dollars <hr/> Cents	<hr/> \$	<hr/> \$
52	Remove Existing 15" CMP Drainage Pipe	LF	324	<hr/> Dollars <hr/> Cents	<hr/> \$	<hr/> \$
53	Remove Existing 18" CMP Drainage Pipe	LF	234	<hr/> Dollars	<hr/> \$	<hr/> \$

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Cents		
54	Remove Existing 20" CMP Drainage Pipe	LF	43		\$	\$
				Dollars		
				Cents		
55	Connect to Existing Drainage Pipe w/Concrete Collar	EA	9		\$	\$
				Dollars		
				Cents		
56	Endwall on Single Barrel 42" (Per FDOT Index 250)	EA	2		\$	\$
				Dollars		
				Cents		
57	Swale Grading & Sod	SY	6,218		\$	\$
				Dollars		
				Cents		
58	Stormwater Bypass Pumping	LS	1		\$	\$
				Dollars		
				Cents		
MISCELLANEOUS						
59	Connect to Existing Weir Box, Structure D-47 (Dwg. C-20)	LS	1		\$	\$
				Dollars		
				Cents		
60	Remove and Dispose of Existing Chainlink/Wood/Metal Fencing	LF	509		\$	\$
				Dollars		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Cents		
61	Remove and Dispose of Existing Concrete Block Wall and Footer	LF	96		\$	\$
				Dollars		
				Cents		
62	Plug and Grout Existing 18" CMP Drainage Pipe (Dwg. C- 35)	LF	10		\$	\$
				Dollars		
				Cents		
63	Plug and Grout Existing 24" PVC Drainage Pipe (Dwg. C- 34)	LF	118		\$	\$
				Dollars		
				Cents		
64	Remove various improvements w/in drainage easement between Structure D-48 to D-53. Restore sod & existing irrigation. (Dwg. C-20, C-28). Does not include fencing, wall or landscape/tree removal or replacement.	LS	1		\$	\$
				Dollars		
				Cents		
65	Remove various improvements w/in drainage easement between Structure D-54 to outfall. Restore sod & existing irrigation (Dwg. C- 20). Does not include fencing or landscape/tree removal or replacement.	LS	1		\$	\$
				Dollars		
				Cents		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
66	Remove various improvements w/in drainage easement between Structure D-68 to outfall. Restore sod & existing irrigation (Dwg. C-34). Does not include fencing or landscape/tree removal or replacement.	LS	1		\$	\$
				Dollars		
				Cents		
67	Furnish and Install 4' tall Chainlink Fence	LF	257		\$	\$
				Dollars		
				Cents		
68	Furnish and Install 4' tall Aluminum Rail Fence	LF	58		\$	\$
				Dollars		
				Cents		
69	Furnish and Install 6' tall Wood Shadowbox Fence	LF	194		\$	\$
				Dollars		
				Cents		
70	Furnish and Install 6' tall Concrete Block Privacy Wall	LF	96		\$	\$
				Dollars		
				Cents		
71	Realign existing WM around Structure D-54, (2) 6" Line Stops (Dwg. C-20)	LS	1		\$	\$
				Dollars		
				Cents		
72	Realign existing WM around Structure D-63, (2) 6" Line Stops (Dwg. C-30)	LS	1		\$	\$

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
				Dollars		
				Cents		
73	Realign Existing WM around Structure D-68, (2) 6" Line Stops (Dwg. C-34)	LS	1		\$	\$
				Dollars		
				Cents		
74	Realign Existing WM around Structure D-7, (2) 6" Line Stops (Dwg. C-40)	LS	1		\$	\$
				Dollars		
				Cents		
75	Remove Existing Headwall (Dwg. C-20)	LS	1		\$	\$
				Dollars		
				Cents		
76	Remove & Reinstall Guardrail, replace posts and anchors	LF	85		\$	\$
				Dollars		
				Cents		
77	Tree Protection	LS	1		\$	\$
				Dollars		
				Cents		
78	Furnish Landscape (Tree) Material	AL	1	Thirty Thousand	\$30,000.00	\$30,000.00
				Dollars		
				No		
				Cents		
79	Landscape (Tree) Installation with Bubbler Including Maintenance	EA	17		\$	\$
				Dollars		
				Cents		

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
80	Remove & Dispose of Trees	EA	17	Dollars	\$	\$
				Cents		
81	Root Prune 24" Oak (Dwg. C-26)	LS	1	Dollars	\$	\$
				Cents		
82	Remove & Reinstall Existing Traffic Sign	EA	6	Dollars	\$	\$
				Cents		
83	Remove Shrubs	EA	23	Dollars	\$	\$
				Cents		
84	Vibration Monitoring D-48 to D-53; D-54 to outfall & D-68 to outfall	LS	1	Dollars	\$	\$
				Cents		
85	Replace Sanitary Sewer Laterals	EA	27	Dollars	\$	\$
				Cents		
86	Flowable Fill	CY	50	Dollars	\$	\$
				Cents		
87	Permit Fees Allowance	AL	1	Five Thousand Dollars No Cents	\$ 5,000.00	\$ 5,000.00

ITEM NO.	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE (in words)	UNIT PRICE	EXTENDED TOTAL PRICE
	Owners Contingency				\$250,000 .00	\$ 250,000.00
	Indemnification				\$ 10.00	\$ 10.00
*There is a 5% cap for Bid Item 1 (refer to Section 01025)						
	TOTAL BASE BID ITEMS 1 through 87 (IN NUMBERS)				\$	
	TOTAL BASE BID ITEMS 1 through 87 (IN WORDS)					
					Dollars	
					Cents	

(Amounts are to be shown in both figures and words. In case of discrepancies, the amount shown in words will govern for each bid item, unit price, and total bid. Extended unit price shall prevail over total price for bid items based upon unit price.)

8. The bid line item pricing includes all the necessary excavation, backfill, grading, restoration, and removal of materials attendant upon the construction of the work, complete in place, and the disposal of all excess materials, and the final cleaning up of the work.

9. At the preconstruction conference, the BIDDER shall submit a complete detailed schedule of shop drawing submittals which will show lead time for:

Date of Planned submittal.

Date of anticipated receipt of review (usually three weeks after submittal).

Delivery lead time.

Anticipated installation date.

COMPLETE THE QUALIFICATIONS OF BIDDERS – CONSTRUCTION FORM IN BID ATTACHMENTS TAB. BIDDERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND UPLOAD THE COMPLETED FORM TO THE RESPONSE ATTACHMENTS TAB FOR THE BID IN THE EBID SYSTEM

10. Qualifications Of Bidders

To demonstrate qualifications to perform the Work, and to be considered for award, each Bidder must submit written evidence, such as previous experience, present commitments and other such data as may be called for below (or in SUPPLEMENTARY CONDITIONS). Each Bid must contain evidence of Bidder's qualification to do business in the State where the Project is located or covenant to obtain such qualification prior to executing the Agreement.

10.1 How many years has your organization been in business as a General Contractor?

10.2 State of Florida Contractor's license # _____

Broward County Certificate of Competency #: _____

Expiration Date: _____

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

10.4 Have you ever failed to complete work awarded to you? If Yes, where and why?

10.5 List all work performed over the last year.

Project Name _____

Owner's Name _____

Owner's Address _____

Phone Number _____

Nature of Work _____

Original Contract Completion Time (Days) _____

Original Contract Completion Date _____

Actual Final Contract Completion Date _____

Original Contract Price _____

Actual Final Contract Price _____

(Attach additional information as required)

10.6 List all work of similar type, complexity, and comparable value over the past five (5) years and the nature of work performed. (Attach additional information on separate sheet)

Project Name _____

Owner's Name _____

Owner's Address _____

Phone Number _____

Nature of Work _____

Original Contract Completion Time (Days) _____

Original Contract Completion Date _____

Actual Final Contract Completion Date _____

Original Contract Price _____

Actual Final Contract Price _____

10.7 The following are names as three (3) individuals or corporations for which you have performed work of this nature and to which you list as references, excluding the City of Pompano Beach.

<u>NAME</u>	<u>ADDRESS</u>	<u>TELEPHONE</u>	<u>CONTACT PERSON</u>
-------------	----------------	------------------	-----------------------

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

10.8 Have you personally inspected the proposed work and have you a complete plan for it performance?

10.9 Will you sub-contract any part of this work? _____ Yes _____ No

If Yes, list all proposed subcontractors to be used on this project if the Bidder is awarded the Contract for this project. The successful Bidder shall submit a COMPLETE list of any work that he proposes to subcontract and the proposed subcontractors prior to execution of the contract.

<u>CLASSIFICATION OF WORK</u>	<u>NAME AND ADDRESS OF SUBCONTRACTOR</u>
_____	_____
_____	_____
_____	_____
_____	_____

(Submit any additional contractors to be used on a separate sheet.)

10.10 The following information shall be provided for this project:

- (a) Estimated total construction manhours _____
- (b) Percent manhours to be performed by Contractor's permanent staff _____
- (c) Percent manhours to be performed by direct hire employees _____
- (d) Percent manhours to be performed by Subcontractors _____

11. Equipment

11.0 What equipment do you own that is available for the proposed work?

11.1 What equipment will you rent for the proposed work?

11.2 What equipment will you purchase for the proposed work?

REQUESTED INFORMATION BELOW IS ON THE ATTRIBUTES TAB FOR THE BID IN THE EBID SYSTEM. PROVIDE THIS INFORMATION ELECTRONICALLY.

12. Conflict Of Interest

Conflict of Interest: For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Pompano Beach employee is also an owner, corporate officer, or employee of their business. Indicate either "Yes" (a City employee is also associated with your business), or "No". If answer is "Yes", you must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.313.)

No____ Yes ____

END OF SECTION

REQUESTED CERTIFICATION BELOW IS ON THE ATTRIBUTES TAB FOR THE BID IN THE EBID SYSTEM. PROVIDE THIS INFORMATION ELECTRONICALLY.

**STATEMENT UNDER SECTION 287.087
FLORIDA STATUTES, ON DRUG-FREE WORKPLACE**

Preference must be given to Contractors submitting certification with their bid or proposal, certifying they have a drug-free workplace in accordance with Florida Statutes, Section 287.087. This requirement affects all public entities of the State and becomes effective January 1, 1991.

Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quality 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. 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, any 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 an 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 this statement, I certify that his firm complies with the above requirements.

CONTRACTOR'S SIGNATURE

CONTRACTOR'S PRINTED NAME

Date: _____

REQUESTED CERTIFICATION BELOW IS ON THE ATTRIBUTES TAB FOR THE BID IN THE EBID SYSTEM. PROVIDE THIS INFORMATION ELECTRONICALLY.

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: _____

Vendor FEIN: _____

Section 287.135, Florida Statutes, prohibits agencies from contracting with companies, for goods or services over \$1,000,000, that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above is not listed on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. I understand that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

Certified By: _____

Authorized Signature Print Name and Title: _____

City of Pompano Beach Florida

Local Business Subcontractor Utilization Report

Project Name (1)		Contract Number and Work Order Number (if applicable) (2)	
Report Number (3)	Reporting Period (4) to	Local Business Contract Goal (5)	Estimated Contract Completion Date (6)
Contractor Name (7)		Contractor Telephone Number (8) () -	Contractor Email Address (9)
Contractor Street Address (10)	Project Manager Name (11)	Project Manager Telephone Number (12) () -	Project Manager Email Address (13)

Local Business Payment Report						
Federal Identification Number (14)	Local Subcontractor Business Name (15)	Description of Work (16)	Project Amount (17)	Amount Paid this Reporting Period (18)	Invoice Number (19)	Total Paid to Date (20)
Total Paid to Date for All Local Business Subcontractors (21) \$						0.00

I certify that the above information is true to the best of my knowledge.

Contractor Name – Authorized Personnel (print) (22)	Contractor Name – Authorized Personnel (sign) (23)	Title (24)	Date (25)
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Local Business Subcontractor Utilization Report Instructions

- Box (1) Project Name** – Enter the entire name of the project.
- Box (2) Contract Number (work order)** – Enter the contract number and the work order number, if applicable (i.e., 4600001234, and if work order contract include work order number – 4600000568 WO 01).
- Box (3) Report Number** - Enter the Local Business Subcontractor Utilization Report number. Reports must be in a numerical series (i.e., 1, 2, 3).
- Box (4) Reporting Period** - Enter the beginning and end dates this report covers (i.e., 10/01/2016 – 11/01/2016).
- Box (5) Local Contract Goal** - Enter the Local Contract Goal percentage on entire contract.
- Box (6) Contract Completion Date** - Enter the expiration date of the contract, (not work the order).
- Box (7) Contractor Name** - Enter the complete legal business name of the Prime Contractor.
- Box (8) Contractor Telephone Number** - Enter the telephone number of the Prime Contractor.
- Box (9) Contractor Email Address** - Enter the email address of the Prime Contractor.
- Box (10) Contractor Street Address** – Enter the mailing address of the Prime Contractor.
- Box (11) Project Manager Name** - Enter the name of the Project Manager for the Prime Contractor on the project.
- Box (12) Project Manager Telephone Number** – Enter the direct telephone number of the Prime Contractor's Project Manager.
- Box (13) Project Manager Email Address** – Enter the email address of the Prime Contractor's Project Manager.
- Box (14) Federal Identification Number** – Enter the federal identification number of the Local Subcontractor(s).
- Box (15) Local Subcontractor Business Name** – Enter the complete legal business name of the Local Subcontractor(s).
- Box (16) Description of Work** – Enter the type of work being performed by the Local Subcontractor(s) (i.e., electrical services).
- Box (17) Project Amount** – Enter the dollar amount allocated to the Local Subcontractor(s) for the entire project (i.e., amount in the subcontract agreement).
- Box (18) Amount Paid this Reporting Period** – Enter the total amount paid to the Local Subcontractor(s) during the reporting period.

- Box (19) Invoice Number** – Enter the Local Subcontractor’s invoice number related to the payment reported this period.
- Box (20) Total Paid to Date** – Enter the total amount paid to the Local Subcontractor(s) to date.
- Box (21) Total Paid to Date for All Local Subcontractor(s)** – Enter the total dollar amount paid to date to all Local Subcontractors listed on the report.
- Box (22) Contractor Name Authorized Personnel (print)** – Print the name of the employee that is authorized to execute the Local Subcontractor Utilization Report.
- Box (23) Contractor Name Authorized Personnel (sign)** – Signature of authorized employee to execute the Local Subcontractor Utilization Report.
- Box (24) Title** – Enter the title of authorized employee completing the Local Subcontractor Utilization Report.
- Box (25) Date** – Enter the date of submission of the Local Subcontractor Utilization Report to the City.

BID BOND

[illegible]

KNOW ALL MEN BY THESE PRESENTS, that we , _____
 _____ as principal, and

hereinafter called Surety, are held and firmly bound unto The City of Pompano Beach, Pompano Beach, Florida, a political subdivision of the State of Florida, and represented by its City Commission hereinafter called OWNER, in the sum of _____ Dollars (\$_____) lawful money of the United States of America, for the payment of which well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigned, jointly and severally, by these presents.

WHEREAS, the Principal contemplates submitting or has submitted a Bid to the OWNER for the furnishing of all labor, materials, equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Proposal and the detailed Drawings and Specifications, entitled:

(Bid Name) _____

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the OWNER for the performance of said Contract, within 10 consecutive calendar days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that is the Principal within 10 consecutive calendar days after written notice of such award being given to Principal, enters into the contract to such award and gives a Performance and Payment Bond, each in an amount equal to 100 percent of the base bid, satisfactory to the OWNER, then this obligation shall be void; in the event of the failure of Principal to enter into such contract and bond, the sum herein stated shall be due and payable to the OWNER and the Surety herein agrees to pay the sum immediately upon demand of the OWNER in good and lawful money of the United States of America, as liquidated damages for failure thereof of said Principal; otherwise, it shall remain in full force and effect.

IN WITNESS WHEREOF, the said _____,
as Principal herein, has caused these presents to be signed in the name by its _____
_____ and attested by its _____ under its corporate seal,
and the said _____
_____ as Surety herein, has caused these presents to be signed in its name by
its _____
under its corporate seal, this _____ day of _____ A.D. _____ (year)

Signed, sealed and delivered in
the presence of:

_____ As to Principal

Principal -

By: _____

Surety
By: _____

Attorney-in-Fact
(Power-of-Attorney to be attached)

By: _____
Resident Agent

END OF SECTION

AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____
in the year _____ by and between CITY OF POMPANO BEACH, FLORIDA (hereinafter call
OWNER) and _____
(hereinafter called CONTRACTOR).

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

Article 1. WORK

The project consist of the furnishing of all labor, equipment and materials for:

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: (Bid Name)_____.

Article 2. ENGINEER

The Project has been designed by _____ who is hereinafter called ENGINEER and who is to act as OWNER'S representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. CONTRACT TIME

The Work will be substantially completed within _____ days from the date the Contract Time commences to run as provided in the GENERAL CONDITIONS, and completed and ready for final payment in accordance with the GENERAL CONDITIONS within _____ days from the date the Contract Time commences to run.

Article 4. LIQUIDATED DAMAGES

OWNER and CONTRACTOR recognize that time is of the essence of the Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in Article 3, above, plus any extensions thereof allowed in accordance with the GENERAL CONDITIONS. They also recognize the delays, expense and difficulties involved in the proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER five hundred and 00/100 dollars (\$500.00) for each day that expires after the time specified in Article 3 for Substantial Completion, plus any monies paid by the OWNER to the ENGINEER for additional engineering and inspection services 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 OWNER, CONTRACTOR shall pay the OWNER four hundred and 00/100 (\$400.00) for each day that expires after the time specified in Article 3 for completion of Work and readiness for final payment, plus any monies paid by the OWNER to the ENGINEER for additional engineering and inspection services.

Article 5. CONTRACT PRICE

OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds as follows:

See BID PROPOSAL attached from bid/contract documents.

Article 6. PAYMENT PROCEDURES

6.1 CONTRACTOR shall submit Applications for Payment in accordance with the GENERAL CONDITIONS. Applications for Payment will be processed by ENGINEER as provided in the GENERAL CONDITIONS.

6.2 Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER, on or about the 1st day of each month during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the schedule of values established in 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.

6.2.1 Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and such amounts as ENGINEER shall determine, or OWNER may withhold, accordance with the GENERAL CONDITIONS.

10% of Work completed will be withheld by OWNER as retainage.

6.2.2 Upon Substantial Completion, in an amount sufficient to increase total payments to CONTRACTOR to 90% of the Contract Price, less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with the GENERAL CONDITIONS.

6.3 Final Payment. Upon final completion and acceptance of the Work in accordance with the GENERAL CONDITIONS, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said GENERAL CONDITIONS.

Article 7. CONTRACTOR'S REPRESENTATIONS

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

7.1 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.

7.2 CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the bid, and accepts the determination set forth in the bid of the extent of the technical data contained in such reports and Drawings upon which CONTRACTOR is entitled to reply.

7.3 CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies in addition to or to supplement physical 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 Time and in accordance with other terms and conditions of the Contract Documents, including specifically the provisions 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.

7.4 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, or 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.

7.5 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.

7.6 CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

Article 8. CONTRACT DOCUMENTS

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

8.1 This Agreement.

8.2 Exhibits to this Agreement.

8.3 Performance and other Bonds, identified as exhibits Performance and Payment Bond.

8.4 Notice of Award.

8.5 GENERAL CONDITIONS.

8.6 SUPPLEMENTARY CONDITIONS.

8.7 Specifications bearing the title (Bid Name) consisting of (# of sections) and () pages, as listed in table of contents thereof.

8.8 Drawings, consisting of a cover sheet and sheets numbered () through () inclusive with each sheet bearing the following general title:

(Bid Name)

8.9 Addenda numbers to , inclusive.

8.10 Contractor's Bid pages.

8.11 Contractor's Sworn Statement on Drug-Free Workplace Section 287.087, Florida Statutes, on Drug-Free Workplace and consisting of one (1) page.

8.12 Documentation submitted by CONTRACTOR prior to Notice of Award (Pages to , inclusive).

8.13 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 the GENERAL CONDITIONS.

8.14 The documents listed in paragraphs 8.2 et seq. above are attached to this Agreement (except as expressly noted otherwise above). There are no Contract Documents other than those listed above in the Article 8.

8.15 The insurance certificate detailing terms and provisions of coverage as required by the bid and approved by the City of Pompano Beach Risk Manager.

The Contract Documents may only be amended, modified or supplemented as provided in the GENERAL CONDITIONS.

Article 9. MISCELLANEOUS

9.1 Terms used in this Agreement which are defined in the GENERAL CONDITIONS will have the meanings indicated in the GENERAL CONDITIONS.

9.2 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.

9.3 OWNER and CONTRACTOR each binds itself, its partners, 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.

Witnesses:

CITY OF POMPANO BEACH

By: _____
Lamar Fisher, Mayor

By: _____
Gregory P. Harrison, City Manager

Attest:

Asceleta Hammond, City Clerk

(SEAL)

Approved as to form:

Mark E. Berman, City Attorney

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this _____ day of _____, 20____ by **LAMAR FISHER**, as Mayor, **GREGORY P. HARRISON** as City Manager and **ASCELETA HAMMOND**, as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

NOTARY PUBLIC, STATE OF FLORIDA

(Name of Acknowledger Typed, Printed or Stamped)

Commission Number

CONTRACTOR

(Print name of company)

Witnesses:

By:_____

Print Name:_____

Title:_____

ACKNOWLEDGMENT OF CONTRACTOR, IF AN INDIVIDUAL

STATE OF }
 } ss:
COUNTY OF }

On this _____ day of _____, before me personally came and
appeared _____, to me

known to me to be the person described in and who executed the foregoing contract and acknowledged
that he executed the same.

Witness my hand and official notarial seal at _____
_____ the day and year above written.

Notary Public

My Commission Expires: _____

ACKNOWLEDGMENT OF CONTRACTOR, IF A PARTNERSHIP

STATE OF }
 } ss:
COUNTY OF }

On this _____ day of _____, before me
personally came and appeared _____,
known to me to be one of the members of the partnership of _____
_____ described in and who executed the foregoing instrument and he
acknowledged that he executed the same on behalf of said partnership and that same is the act and
deed of said partnership.

Witness my hand and official notarial seal at _____
_____ the day and year above written.

Notary Public

My Commission Expires: _____

ACKNOWLEDGMENT OF CONTRACTOR, IF A CORPORATION

STATE OF _____ }
COUNTY OF _____ } ss:

On this _____ day of _____, _____, before me personally came
and appeared _____,
to me known, who, being by me duly sworn, did depose and say that he resides at _____
_____, that he is the _____
of _____, the corporation described in
and which executed the foregoing instrument; that he knows the seal of said corporation; that one of
the impressions affixed to said instrument is an impression of such seal; that he is the proper official
of said corporation designated to execute such contract, that he has authority so to do, that he
executed same for and in behalf of said corporation, and this his act is the act and deed of said
corporation.

Witness my hand and official notarial seal at _____
_____ the day and year above written.

Notary Public

My Commission Expires: _____

Bond No. _____

Performance Bond

Project No:
Project Title:

KNOW ALL PERSONS BY THESE PRESENTS, that:

as Principal, and

a corporation duly authorized to transact business in the State of Florida, as Surety, are held and firmly bound unto The City of Pompano Beach, Florida, a body Corporate and politic under the laws of Florida, in the sum of:

(Written Amount)

(Figures)

good and lawful money of the Unites States, well and truly to be paid, and for the payment whereof, we the undersigned, Principal and Surety, jointly and severally, hereby firmly bind ourselves, our heirs, assigns, successors, and legal representatives.

WHEREAS, the above bounded Principal (hereafter alternately referred to as “Contractor”) did on

enter into a Contract with the said The City of Pompano Beach, Florida (hereafter alternately referred to as “Owner”) a body corporate and politic as aforesaid, in and by which the said above bounded Principal did undertake and agree to furnish all labor, implements, machinery, equipment, tools and materials necessary therefore and to install, build, erect, construct the project named above in accordance with the certain plans and specifications prepared by:

to which plans and specifications and said contract reference is here made and all thereof made a part hereof as if fully set forth herein.

WHEREAS, it was one of the conditions of the award of said contract with The City of Pompano Beach, Florida that these presents should be executed.

NOW THEREFORE, the conditions of this obligation are such that if the above bounded Principal shall in all aspects fully comply with, carry out and perform the terms and conditions of said contract and his obligations thereunder, including the Specifications, Proposal, Plans and Contract Documents therein referred to and made a part hereof, and therein provided for and shall indemnify and save harmless The City of Pompano Beach, Florida against and from all costs, expenses, damages, injury, or be subjected by reason of any wrongdoing, misconduct, want of care or skill, negligence, or default, including patent infringement on the part of said Principal or his agents, employees or subcontractors, in the execution or performance of said contract and shall promptly pay all just claims for damages or injury to property and for all work done or skill, tools, and machinery, supplies, labor, and materials furnished and debts incurred by said principal in or about the construction or improvements or additions contracted for, then this obligation to be void, otherwise, to remain in full force and effect.

Whenever Contractor shall be, and declared by the Owner to be in default under the Contract, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions: or
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible Bidder, or, if the Owner elects, upon determination by Owner and Surety jointly of the lowest responsible Bidder, arrange for a contract between such Bidder and Owner, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

To the limit of the amount of this Bond, Surety's liability to Owner shall include but not be limited to, the cost of the completion of the construction contract and correction of defective work before or after completion of the construction contract; additional legal, design professional, and liquidated damages as specified in the Contract Documents arising out of and in connection with Principal's default and Surety's actions, inactions, and all costs incident to ascertaining the nature and extent of the Principal's default, including engineering, accounting and legal fees.

And the said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations or additions to the terms of the contract or to the work to be performed thereunder or the specifications accompanying same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extensions of the time, alteration or addition to the terms of the contract or to the work or to the specifications. Additionally, Surety hereby stipulates and agrees that the bond penalty set forth above shall automatically increase coextensively with any Owner approved change orders which increase the overall contract amount.

Contractor shall give written notice to Owner of any alleged default by the Owner under the Construction Contract. Owner shall have not less than ninety (90) days after receipt of such notice to cure such default before the surety is allowed to assert the default as a defense against Owner. The only types of default that may be asserted against Owner shall be monetary defaults. The surety waives any defense of timeliness of completion if time extensions are granted by the Owner to the Construction Contractor.

No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors or assigns. Any suit under this Bond must be instituted within five (5) years from the date the cause of action accrued.

IN TESTIMONY WHEREOF, the Principal and Surety have caused these presents to be duly signed in, at Pompano Beach, Broward County, Florida, this

_____ day of _____

Countersigned By:

Contractor:

By: (Signature)

(SEAL)

Surety:

By:

**(SEAL OF
SURETY)**

Address:

Bond No. _____

PAYMENT BOND FORM

Project No:

Project Title:

Facility Name:

BY THIS BOND, WE, _____, as Principal,

and _____, a corporation, as Surety, are bound to The City of Pompano Beach, Florida, herein called "Owner", in the sum of :

(Written Amount)

(Figures)

for the payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally. This Payment Bond is intended to be governed by 255.05, F.S.

THE CONDITION OF THIS BOND is that if Principal:

1. Promptly makes payments to all lienors supplying labor, material, and supplies used directly or indirectly by Principal in the prosecution of the work provided in the contract dated

between Principal and Owner for construction of the Project named above, the contract being made a part of this bond by reference; and

2. Pays Owner all loss, damage, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of default by Principal under paragraph 1. of this bond;

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

Any changes in or under the contract documents and compliance or noncompliance with formalities connected with the contract or with the changes do not affect Surety's obligation under this bond.

Dated on : _____

(SEAL OF SURETY)

Name of Surety: _____

By: _____

Attorney in Fact

(SEAL OF PRINCIPAL)

Name of Principal: _____

By: _____

Its authorized officer

General Conditions of the Contract

ARTICLE 1. DEFINITIONS.

- 1.1 **The Contract Documents:** The Contract Documents consist of the Agreement Form, Addenda, Supplementary Conditions, General Conditions, Documents contained in the Project Manual, Drawings, Plans, Specifications, and all modifications issued after execution of the Contract.
- 1.2 **The Owner, the Contractor, and the Project Consultant:** are those mentioned as such in the Contract Documents.
 - 1.2.1 **Owner:** The City of Pompano Beach, Florida, (also referred to as the "City").
 - 1.2.2 **Contractor:** The "party of the second part" to the Contract. The person, firm or corporation with whom a contract has been made with the Owner for the performance of the Work defined by the Contract Documents.
 - 1.2.3 **Project Consultant:** The individual, partnership, corporation, association, joint venture, or any combination thereof, of properly registered professional architects, engineers or other design professionals who has entered into a contract with the Owner to provide professional services for development of the design and Contract Documents for the Work of this Project and provide Construction Contract Administration as described in the Contract Documents.
- 1.3 **City Engineer:** City Engineer of the City of Pompano Beach, Florida.
- 1.4 **Final Completion:** Means that date subsequent to the date of Substantial Completion at which time the Contractor has completed all of the Work (or designated portion thereof) in accordance with the Contract Documents as certified by the Project Consultant and/or approved by the Owner. In addition, Final Completion shall not be deemed to have occurred until any and all governmental bodies, boards, entities, etc., which regulate or have jurisdiction of the Work, have inspected, approved and certified the Work.
- 1.6 **Inspector:** An employee(s) of The City of Pompano Beach, Florida, referred to hereinafter as the "**Inspector,**" who(m) is/are assigned by the City Engineer to periodically inspect the Project during the construction process, and who assist(s) the City Engineer in reviewing field performance and its compliance with the Contract Documents.
 - 1.06.01 **Resident Inspector:** An employee or subconsultant of the **Project Consultant** employed to perform either periodic or full-time specific inspection duties.
- 1.7 **Other Contractors:** Any person, firm or corporation with whom a Contract has been made by the Owner for the performance of any work on the site, which work is not a portion of the Work covered by the Contract.
- 1.8 **Owner's Representative:** The City Official who has been delegated responsibility by the City Manager to act as the City's project coordinator. (In most cases, the City Engineer shall be assigned this duty.)
- 1.9 **Phase:** A designated subdivision of the Work, usually with its own requirements for Substantial and Final Completion, and liquidated damages. A Phase may be designated for completion by the Owner's own forces, or by Other Contractors.
- 1.10 **The Project:** The total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.
- 1.11 **Punch List:** A list of items of work required to render complete, satisfactory, and acceptable the construction services provided for in the Contract Documents and created pursuant to Florida Statute 218.735(7)(a).

- 1.12 **Subcontractor:** A person or entity other than a materialman or laborer who enters into a Contract with Contractor for the performance of any part of Contractor's Work. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
- 1.13 **Sub-subcontractor:** A person or entity other than a materialman or laborer who enters into a contract with a Subcontractor for the performance of any part of such Subcontractor's contract. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor. The term "Sub-subcontractor" does not include separate subcontractors of a separate contractor.
- 1.14 **Submittals:** Are prepared by the Contractor or those working on his behalf (subcontractors, material suppliers, and others) to show how a particular aspect of the Work is to be fabricated and installed. The Contractor's submittals include shop drawings, product data, samples, mock-ups, test results, warranties, maintenance agreements, workmanship bonds, project photographs, record documents, field measurement data, operating and maintenance manuals, reports, certifications, periodic and final "as-builts", surveys, videos and other types of information described in the specifications.
- 1.15 **Substantial Completion:** The term Substantial Completion as used herein, shall mean that point at which, as certified in writing by the Project Consultant, the Work, or a designated portion thereof, is at a level of completion in substantial compliance with the Contract Documents such that the Owner or its designee can enjoy use or occupancy and can use or operate it in all respects for its intended purpose. In the event the Work includes more than one Phase, the Owner, at its discretion, may set Substantial Completion dates for each Phase and may impose provisions for liquidated damages for each Phase.
- 1.16 **Subconsultant:** A person or organization of properly registered professional architects, engineers or other design professionals who has entered an agreement with the Project Consultant to furnish professional services in support of the Project Consultants agreement with the Owner.
- 1.17 **Superintendent:** The executive representative for the Contractor present on the work at all times during progress, authorized to receive and fulfill instructions from the Owner and the Project Consultant and capable of superintending the work efficiently.
- 1.18 **Work:** The totality of the obligations, including construction and other services, imposed on the Contractor by the Contract Documents, whether completed or partially completed, and including all labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.
- 1.19 **Written Notice:** Shall be deemed to have been duly served 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, if delivered at or sent by registered mail or other traceable delivery service to the last business address known to him who gives notice. Electronic, FAX or other telephonic transmission shall not be considered as written notice.

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.
- 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 to the Owner that:

- 2.3.1 It is financially solvent and has sufficient working capital to perform the obligations under this Construction Contract;
- 2.3.2 It is experienced and skilled in the construction of the type of project described in the 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 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, and is legally permitted to perform all the work set forth in this 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 water ways 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, as well as site ingress and egress. The Contractor acknowledges receipt and has reviewed the site geotechnical report provided for the Owner.
- 2.3.6 It will comply with all federal, state and local governmental laws, rules and regulations relating to its responsibilities as set forth in the Contract Documents.

ARTICLE 3. COORDINATION AND CORRELATION OF DRAWINGS AND SPECIFICATIONS.

- 3.1 The Contractor represents that:
 - 3.1.1 The Contractor and Subcontractors have fully examined and compared all Drawings, Specifications and other Contract Documents including but not limited to those relating to the architectural, structural, mechanical, electrical, civil engineering and plumbing elements and have compared and reviewed all general and specific details on the Drawings and the various technical and administrative requirements of the Specifications.
 - 3.1.2 All construction materials, labor, methods, means, techniques, sequences and procedures required to carry out the Work, all 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.
 - 3.1.3 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.
 - 3.1.4 The Contract Time is adequate for the performance of the Work.
- 3.2 The Contractor is responsible for all means, methods, techniques and sequencing of construction.
- 3.3 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 Project Consultant and Owner prior to proceeding with the specific portion of the Work.

ARTICLE 4. INTENT AND INTERPRETATION.

- 4.1 With the respect to the intent and interpretation of this Contract, the Owner and the Contractor agree as follows:
 - 4.1.1 The 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 Owner and the Project

Consultant of any conflict, ambiguity, error or omission which the Contractor may find with respect to these documents before proceeding with the affected Work.

- 4.1.2 The Contract Documents are complementary, and what is called for by one shall be as binding as if called for by all.
- 4.1.3 The intent of the Contract Documents is to include all labor, materials, equipment services and transportation necessary for the proper execution of the Work. The Contractor shall continually refer to drawing, specifications and other Contract Documents in this regard.
- 4.1.4 In the event of a conflict among the Contract Documents, the most stringent requirement to the Contractor shall control.
- 4.2 The Project Consultant shall be the initial interpreter of the requirements of the Contract Documents and the judge of the performance thereunder.
- 4.2.1 The Project Consultant shall render interpretations necessary for the proper execution or progress of the Work with reasonable promptness on written request of either the Owner or the Contractor, and shall render written decisions, within a reasonable time, on all claims, disputes, change order requests, substitution requests, requests for interpretation and other matters in question between the Owner and the Contractor relating to the execution or progress of the Work or the interpretation of the Contract Documents.
- 4.2.2 Interpretations and decisions of the Project Consultant shall be consistent with the intent of and reasonably inferable from the Contract Documents.
- 4.2.3 In the capacity of interpreter the Project Consultant shall endeavor to secure faithful performance by both the Owner and the Contractor, and shall not show partiality to either.

ARTICLE 5. OWNERSHIP OF THE CONTRACT DOCUMENTS WHICH MAKE UP THE CONTRACT

- 5.1 Subject to any rights the Project Consultant may have, the Contract Documents and each of them, as well as any other documents, intellectual property, software, computer-assisted material or disks relating to or regarding the Work, shall be and remain the property of the Owner. This shall be the case even if prepared, created or provided by the Project Consultant, Contractor, Subcontractor or others.
- 5.2 The Contractor shall have the right to keep copies of same upon completion of the Work; provided, however, that in no event shall the Contractor use, or permit to be used, any portion or all of same on other projects without the Owner's prior written authorization.
- 5.3 The Contractor agrees to provide any and all items referred to in this Paragraph to Owner upon demand by Owner. In the event Contractor fails to provide same to Owner as demanded, Contractor acknowledges that the Owner will need same and will be irreparably harmed and be subject to an injunction to provide same.

ARTICLE 6. TEMPORARY UTILITIES.

- 6.1 Water For Execution of the Work: The Contractor shall provide temporary water lines sufficient to supply all water needed for the construction and other services required by the Contract Documents and shall pay for all service connections and water used by the Contractor or Subcontractors unless the contrary is provided for elsewhere in the Contract Documents.
- 6.2 Electrical Energy: The Contractor shall provide temporary electrical energy and power lines sufficient to supply all electricity needed for the construction and other services required by the Contract Documents and shall pay for all service connections and electricity used by the Contractor or Subcontractors unless the contrary is provided for elsewhere in the Contract Documents.
- 6.3 Temporary Sanitary Facilities And Sewers:

- 6.3.1 The Contractor shall provide and maintain in a neat and sanitary condition such accommodations and facilities for the use of his employees as may be necessary to comply with the regulations of any governmental agencies, departments, etc. which address or govern these issues.
- 6.3.2 No nuisance will be permitted.
- 6.3.3 Upon completion of Work, such facilities shall be removed and the premises left in a sanitary condition.
- 6.3.4 Contractor is not permitted to use restrooms or other sanitary facilities within the Owner's existing building or on-site facilities unless the contrary is provided for elsewhere in the Contract Documents.

ARTICLE 7. PROGRESS.

- 7.1 Contractor shall provide the Owner with full information in advance as to its plans for performing each part of the Work. This shall include, but not be limited to, schedules provided to the Owner as Post-Award Information and subsequently updated schedules submitted to the Owner on a monthly basis as required in Article 10 below, as a condition precedent to payment(s).
 - 7.1.1 Such schedule shall be in a form acceptable to the Owner.
 - 7.1.2 The Contractor's schedule shall be updated no less frequently than monthly (unless the parties otherwise agree in writing) and shall be updated to reflect conditions encountered from time to time and shall apply to the total Project.
 - 7.1.3 Each such revision shall be provided to the Owner and the Project Consultant.
 - 7.1.4 Compliance with the requirements of this Subparagraph shall be a condition precedent to payment to the Contractor, and failure by the Contractor to comply with said requirements shall constitute a material breach of this Contract.
 - 7.1.5 By providing these Schedules to Owner, Owner does not in any way acknowledge or consent that the Schedules are acceptable or reasonable, but it is simply reviewing same for its own informational purposes.
- 7.2 If at any time during the progress of Work, the Contractor's actual progress is inadequate to meet the requirements of the Contract Documents, such as the required completion dates, the Owner may so notify Contractor who shall thereupon take such steps as may be necessary to improve its progress so as to complete the Work on or before the required Substantial Completion Date.
 - 7.2.1 If within a reasonable period as determined by Owner, the Contractor does not improve performance to meet the requirements of the Contract Documents, such as the required completion dates, then the Owner may require an increase in any or all of the following: Contractor's Subcontractor crews and Contractor's own labor force, the number of shifts, overtime operation, Contractor's supervision and additional days of work per week, all without cost to Owner.
 - 7.2.2 Neither such notice by Owner nor Owner's failure to issue such notice shall relieve Contractor of its obligation to achieve the quality of work and rate of progress required by the Contract Documents.
- 7.3 Failure of Contractor to comply with the instructions of the Owner may be grounds for determination by Owner that Contractor is not prosecuting its Work with such diligence as will assure completion within the time specified.
- 7.4 Upon such determination, Owner, in addition to any and all other rights set forth in the Contract Documents and remedies afforded Owner under the Contract Documents or at law, may:
 - 7.4.1 Elect to proceed with the Work with its own employees, agents, contractors, subcontractors, suppliers and assess all costs, expenses or fees for same against contractors and/or

- 7.4.2 Terminate for cause Contractor's right to proceed with the performance pursuant to the Contract Documents, or any separable part thereof, in accordance with the applicable provisions of the Contract Documents.

ARTICLE 8. EXPEDITING

- 8.1 The Work, equipment and material provided under this Contract may be subject to expediting by Owner.
- 8.2 Owner shall be allowed reasonable access to the shops, factories and other places of business of the Contractor and/or Subcontractors for expediting purposes.
- 8.3 As required by Owner, Contractor shall supply schedules and progress reports for Owner's use in expediting, and Contractor shall cooperate with Owner and require Subcontractors to cooperate with Owner in such expediting.
- 8.4 Any expediting performance by Owner shall not relieve Contractor of its sole and primary responsibility for timeliness of delivery of the equipment and material to be provided under the Contract Document.

ARTICLE 9. COMPLETION

- 9.1 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Project Consultant a comprehensive Punch List of items to be completed or corrected prior to final payment. Failure to include an item on the Punch List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- 9.1.1 For a Project with an estimated cost of less than \$10 million, the Punch List shall be completed within thirty (30) calendar days after Substantial Completion of the Project, as same is defined in the Contract Documents. If Substantial Completion is not defined in the Contract Documents, the list shall be completed upon reaching beneficial occupancy or use.
- 9.1.2 For a Project with an estimated cost of \$10 million or more, the Punch List shall be completed within thirty (30) calendar days, unless otherwise extended elsewhere in the Contract Documents, but not to exceed sixty (60) calendar days, after reaching Substantial Completion, as same is defined in the Contract Documents. If Substantial Completion is not defined in the Contract Documents, the list shall be completed upon reaching beneficial occupancy or use.
- 9.2 For a Project involving the construction of more than one building or structure, or involving a multiphased project, a Punch List shall be created for each building, structure, or phase of the Project pursuant to the limitations provided for above in 9.01.01 and 9.01.02, as applicable.
- 9.3 The failure to include any corrective work or pending items not yet completed on the List does not alter the responsibility of the Contractor to complete all the construction services purchased pursuant to the contract. All items that require correction under the Contract Documents and that are identified after the preparation and delivery of the Punch List remain the obligation of the Contractor as defined by the Contract Documents.
- 9.4 Upon completion of all of the items on the Punch List, the Contractor may submit a payment request for all remaining retainage withheld by the local governmental entity pursuant to this section. If a good faith dispute exists as to whether one or more items identified on the list have been completed pursuant to the Contract Documents, the Owner may continue to withhold an amount not to exceed 150 percent of the total costs to complete the outstanding item.
- 9.5 In the event that the Contractor fails, in whole or in part, to comply with the obligations and responsibilities required hereunder in paragraph 9.01, the Owner need not pay or process any payment request for remaining retainage.

ARTICLE 10. CONTRACT PAYMENTS

- 10.1 Schedule of Values:

- 10.1.1 The Contractor shall maintain and update the Schedule of Values originally provided to the Owner as Post-Award Information.
- 10.1.2 The Contractor's Schedule of Values apportions the Contract Price among the different elements of the required Work for purposes of periodic and final payments and shall be submitted as detail in support of the Contractor's monthly Application for Payment.
- 10.1.3 The Schedule of values shall be presented with such detail, and supported with whatever information the Project Consultant or the Owner reasonably requests.
- 10.1.4 The Contractor shall not imbalance its Schedule of Values nor artificially inflate or exaggerate any element thereof. Contractor's failure to comply with this provision shall be grounds for Owner to terminate Contractor, as provided for elsewhere herein.
- 10.2 The Owner shall pay the Contract Price to the Contractor in accordance with the procedures provided herein.
- 10.2.1 On or before the **15th** day of each month after commencement of performance, but no more frequently than once monthly, the Contractor may submit an Application for Payment to the Owner for the period ending the last day of the previous month or other pay period as mutually defined and agreed to by the Contractor and Owner and as provided for in the Contract Documents. The Contractor shall also deliver a copy of the Application for Payment to the Project Consultant.
- 10.2.2 Said Application for Payment shall be in the format required elsewhere in the Contract Documents and include whatever supporting information as may be required by the Project Consultant, the Owner, or both.
- 10.2.3 The Owner shall not be required to pay for stored materials or equipment except as set forth in Article 25 below.
- 10.2.4 Each Application for Payment shall be signed by the Contractor and shall constitute the Contractor's representation that the quantity of work has reached the level for which payment is requested, that the Work has been properly installed or performed in substantial compliance with the requirements of the Contract Documents, and that the Contractor knows of no reason why payment should not be made as requested.
- 10.2.5 Upon receipt of the Application for Payment, the Project Consultant shall:
- a. Within ten (10) days review the Application for Payment and may also review the Work at the Project site or elsewhere to determine whether the quantity and quality of the Work is as represented in the Application for Payment and is as required by the Contract Documents.
 - b. Approve in writing the amount which, in the opinion of the Project Consultant, is properly owing to the Contractor.
- 10.2.6 The Owner shall make payment to the Contractor within fifteen (15) days following the Project Consultant's written approval of the Application for Payment but in no event later than twenty-five (25) days after the invoice was received by the Owner.
- 10.2.7 The Owner may reject the Application for Payment within twenty (20) business days after the date on which the Application for Payment is stamped as received. The rejection shall be in writing and shall specify the deficiency in the payment request or invoice and the action necessary to make the payment request or invoice proper.
- 10.2.8 If the Owner disputes a portion of an Application for Payment, the undisputed portion must be timely paid.
- 10.2.9 The Contractor may submit a corrected Application for Payment which corrects the deficiency or deficiencies specified in writing by the Owner. The Owner shall either pay or reject the corrected Application for Payment within ten (10) business days after receipt of same.

- 10.2.10 If a dispute regarding the Application for Payment cannot be resolved pursuant to the process outlined herein, it must be resolved in accordance with the dispute resolution procedures outlined in Article 45.
- 10.2.11 The amount of each monthly payment shall be the amount approved for payment by the Project Consultant less such amounts, if any, otherwise owing by the Contractor to the Owner or which the Owner shall have the right to withhold as authorized by the Contract Documents or reasonable business practices. In the event of a dispute with regard to a portion of the Application for Payment, the Owner shall pay the undisputed portion pursuant to the timeline established in this Section.
- 10.2.12 The Project Consultant's approval of the Contractor's Applications for Payment shall not preclude the Owner from the exercise of any of its rights as set forth in the Contract Documents.
- 10.2.13 The submission by the Contractor of an Application for Payment also constitutes an affirmative representation and warranty that all Work for which the Owner has previously paid is free and clear of any lien, claim, or other encumbrance by any person whatsoever.
- 10.2.14 As a condition precedent to payment, the Contractor shall, as required elsewhere in the Contract Documents and as required by the Owner, also provide to the Owner documents relating to the Project, including but not limited to, updated schedules and daily logs, properly executed documents that all subcontractors, materialmen, suppliers or others having rights, acknowledge receipt of all sums due pursuant to all prior Payment Requests and waive and relinquish any rights or other claims of any nature relating to the Project.
- 10.2.15 Furthermore, the Contractor warrants and represent that, upon payment of the Application for Payment submitted, title to all work included in such payment shall be vested in the Owner.
- 10.2.16 Dollar Value/Time Graphs: Each of the Contractor's Application for Payment shall be accompanied by a graph, prepared by the Contractor, that consecutively tracks the percentage of completion of both the Application for Payment's dollar value attained and the contract time (calendar days) elapsed, all coinciding with the date of the Application for Payment.
- 10.3 When payment is received from the Owner, the Contractor shall within five (5) days pay all subcontractors, materialmen, laborers and suppliers the amounts they are due for all work covered by such payment. In the event such payments are not made in a timely manner the Owner may, in its discretion, invoke reasonable procedures in order to protect Owner's interest or Owner's desire to assist in having subcontractors, laborers, suppliers, materialmen or others paid.
- 10.4 It is mutually agreed that payments made under this Contract shall not constitute acceptance of defective or improper materials or workmanship nor shall same act as a waiver or release of future performance in accordance with the Contract Documents.

ARTICLE 11. WITHHOLDING PAYMENT TO CONTRACTOR

- 11.1 The Owner may withhold as retainage ten (10) percent of the payment owed to the Contractor until fifty-percent (50%) completion of the Project. After fifty-percent (50%) completion is reached, the Owner will reduce the amount of retainage withheld from each subsequent progress payment to five percent.
- 11.1.1 Fifty-percent (50%) completion shall be defined in the Contract Documents. If not defined, fifty-percent (50%) completion shall be the point at which the Owner has expended fifty-percent (50%) of the total cost of the construction services purchased with all costs associated with existing change orders and any other additions or modifications to the construction services provided for in the Contract Documents.
- 11.1.2 After fifty-percent (50%) completion of the Project, the Contractor may present to the Owner an Application for Payment of up to one-half of the retainage retained by the Owner prior to the fifty-percent completion date. The Owner shall promptly make such payment unless the Owner has grounds for withholding the payment retainage as provided herein.

- 11.2 If the City pays the retainage amount upon the Contractor's request which is attributable to the labor, services, or materials supplied by one or more contractors or suppliers, the Contractor shall timely remit payment of such retainage to those subcontractors or suppliers.
- 11.3 Regardless of the provisions in this Article, in no event shall the Owner be required to pay or release any amounts that are the subject of a good faith dispute, a claim brought pursuant to Fla. Stat. § 255.05, or otherwise the subject of a claim or demand by the Owner.
- 11.4 In addition to the Retainage, payments, including but not limited to Final Payment, may be withheld or reduced by the Owner in its sole discretion if any of the following exists:
- 11.4.1 The Work is not proceeding in accordance with the Construction Documents Schedule as anticipated by the Project Consultant or the Owner. In that event, the Project Consultant or the Owner will assess the anticipated delay and the Owner will use the amounts specified for Liquidated Damages as the basis for amounts withheld. Said funds shall be held until such time as the Project Consultant or Owner determine that the Work is back on schedule. By making said funds available to Contractor, Owner does not waive its right to assess liquidated damages at the completion of the Project;
- 11.4.2 Liquidated Damages as set forth in this Contract;
- 11.4.3 Defective Work unremedied;
- 11.4.4 Punch-List items unremedied;
- 11.4.5 Subject to Owner's written notice to Contractor in accordance with the Contract Documents back charge items for work performed by Owner or another contractor at the request of Owner, which work is within the scope of the Work under this Construction Contract;
- 11.4.6 Claims filed by subcontractors, laborers, suppliers, materialmen or others;
- 11.4.7 Failure to comply with any and all insurance requirements;
- 11.4.8 Failure of the Contractor to make payment properly to Subcontractors or others;
- 11.4.9 Damage to the Owner or another contractor;
- 11.4.10 Reasonable evidence that the Work will not be completed on or before the Substantial Completion or Final Completion Date;
- 11.4.11 Failure of the Contractor to carry out any of its obligations in accordance with the Contract Documents;
- 11.4.12 Failure of the Contractor to submit the information or documents required by this Contract or reasonably required by Owner, including but not limited to schedules and daily logs.

ARTICLE 12. CONTRACTOR'S RIGHT UPON NONPAYMENT.

- 12.01 If within thirty (30) days of the date payment to the Contractor is due, the Owner, without cause or basis hereunder, fails to pay the Contractor any amounts then due and payable to the Contractor, the Contractor shall have the right to cease work until receipt of proper payment after first providing ten (10) days written notice of its intent to cease work to the Owner.

ARTICLE 13. INFORMATION AND MATERIAL SUPPLIED BY THE OWNER.

- 13.1 The Owner shall furnish to the Contractor, prior to the execution of the Contract, any and all written and tangible material, including but not limited to surveys and other information concerning existing conditions on the Site.

13.2 The Owner shall also furnish, if appropriate, the legal description of the Project site, and any required survey.

ARTICLE 14. LICENSES AND PERMITS.

14.01 All licenses and permits necessary to commence and prosecute the Work to completion shall be procured and paid for by the Contractor, unless expressly provided for elsewhere in the Contract Documents.

14.03 All easements and rights-of-way will be procured and paid for by the Owner unless otherwise specifically provided within the Contract Documents.

ARTICLE 15. CEASE AND DESIST ORDER.

15.1 In the event the Contractor fails or refuses to perform the Work as required herein, the Owner may instruct the Contractor to cease and desist from performing the Work in whole or in part. Upon receipt of such instruction, the Contractor shall immediately cease and desist as instructed by the Owner and shall not proceed further until the cause for the Owner's instructions has been corrected and the Owner instructs that the Work may resume.

15.2 In the event the Owner issues such instruction to cease and desist, and in the further event the Contractor fails and refuses within seven (7) days of receipt of same to provide adequate assurance to the Owner that the cause of such instructions will be eliminated or corrected, then the Owner shall have the right, but not the obligation, to carry out the Work with its own forces, or with the forces of another contractor, and the Contractor shall be fully responsible and liable for the costs of performing such work by the Owner.

15.3 The rights set forth herein are in addition to, and without prejudice to, any other rights or remedies the Owner may have against the Contractor.

ARTICLE 16. DUTIES, OBLIGATIONS AND RESPONSIBILITIES OF THE CONTRACTOR.

16.1 The Contractor shall perform the Work in accordance with the Contract Documents.

16.2 The Contractor shall supervise the Work and bear full responsibility for any and all acts or omissions of those engaged in the Work on behalf of the Contractor.

16.3 The Contractor hereby warrants that all labor provided under this Contract shall be competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results, that all material and equipment provided shall be new and of high quality, that the Work will be complete, of high quality, without defects, and in compliance with the requirements of the Contract Documents. Any Work not complying with the requirements of this Subparagraph shall constitute a breach of the Contractor's warranty.

16.4 Unless expressly provided for elsewhere in the Contract Documents, the Contractor shall obtain and pay for all required permits, fees, and licenses and shall comply with all legal requirements applicable to the Work.

16.5 The Contractor shall prepare and submit schedules and supporting documentation as required elsewhere in the Contract Documents.

16.6 Record Keeping on Site:

16.6.1 The Contractor shall keep a daily log, an updated copy of the Contract Documents, approved shop drawings and other submittals, and other documents and materials as required by the Contract Documents at the site.

16.6.2 All of these items shall be available to the Owner and the Project Consultant at all regular business hours.

16.6.3 Upon final completion of the Work, all of these items shall be finally updated and provided to the Owner and shall become the property of the Owner.

16.7 Shop Drawings And Other Submittals:

- 16.7.1 The Contractor shall submit for approval with reasonable promptness and in a timely manner so as to cause no delay in the Work, various submittals including shop drawings as required for the Work of the various trades.
- 16.7.2 These shop drawings and other submittals shall be in accordance with the requirements of the Contract Documents and shall be carefully checked in every respect and signed by the Contractor before submitting same to the Project Consultant.
- 16.7.3 Shop drawings and other submittals from the Contractor are not part of the Contract Documents but are documents prepared and utilized by the Contractor to coordinate the Work.
- 16.7.4 The Contractor shall not do any Work requiring shop drawings or other submittals unless such have been approved in writing by the Project Consultant.
- 16.7.5 All Work requiring approved shop drawings or other submittal shall be done in compliance with such approved documents. However, approval by the Project Consultant or the Owner shall not be evidence that Work installed pursuant thereto conforms with the requirements of the Contract Documents.
- 16.7.6 The Owner and the Project Consultant shall have no duty to review partial submittal or incomplete submittal except as may be provided otherwise within the Contract Documents.
- 16.7.7 The Contractor shall maintain a submittal log which shall include, at a minimum, the date of each submittal, the date of any resubmittal, the date of any approval or rejection, and the reason for any approval or rejection.
- 16.7.8 The Contractor shall have the duty to carefully review, inspect and examine any and all submittal and resubmittals before submission of same to Owner or the Project Consultant.
- 16.8 The Contractor shall maintain the Project site in a reasonably clean condition during performance of the Work. Upon final completion, the Contractor shall thoroughly clean the Project site of debris, trash and excess materials or equipment. In the event the Project is located at or near occupied facilities, then Owner may establish additional rules and regulations regarding condition at the Project, including but not limited to, keeping the Project and the occupied premises clean, safe and secure.
- 16.9 At all times, the Contractor shall permit the Owner and the Project Consultant to enter upon the Project site and to review or inspect the Work.

ARTICLE 17. SUBCONTRACTS.

- 17.1 The Contract Documents make no attempt to fix the scope of the Work of any Subcontractor nor the responsibilities of any such Subcontractor, it being understood that the Contractor shall fix the scope of all Work and responsibilities of the Subcontractor. Contractor shall not replace Subcontractor without good cause.
- 17.2 The Contractor shall continuously update information concerning Subcontractors submitted to the Owner as Post-Award Information by submitting:
 - 17.2.1 The general form of Subcontract Agreement used by the Contractor within thirty (30) days of execution of the Construction Contract.
 - 17.2.2 Updated listings of Subcontractors denoting changes to the list submitted as Post-Award Information within ten (10) days of said change.
 - 17.2.3 Copies of executed Subcontractor Contracts within ten (10) days of their execution.
 - 17.2.4 A complete accounting of all payments made to Subcontractors and the balances owed to the Subcontractors with each Application For Payment submitted by the Contractor.

- 17.3 All contracts with Subcontractors shall incorporate by reference the terms and conditions of this Construction Contract.
- 17.4 The Contractor shall cause and require to be included in all Subcontracts a provision for the benefit of the Owner binding the Subcontractors to remain bound by the Subcontracts in the event the Contractor is replaced by another contractor pursuant to the terms of the Contract Documents. The Contractor shall also include in all Subcontracts a provision requiring the Subcontractor, in the event of the Contractor's termination, to consent to the assignment of their Subcontracts to the Owner.
- 17.5 The Owner may at any time request from the Subcontractors, or any of them, a sworn statement of account with the Contractor and the Contractor shall cause to be included in all Subcontracts a requirement that the Subcontractors provide said sworn statement upon Owner's request.
- 17.6 Each Subcontractor and supplier must agree to assign all of its warranties to Owner. In addition each Subcontractor and supplier must warrant all of its Work, equipment, materials and labor to Owner in accordance with the terms and provisions of its contractual obligations to Contractor and any legal or statutory provisions that apply to its work, materials or equipment.
- 17.7 Owner may at its discretion require Contractor to have major sub-subcontractors or suppliers comply with the requirements of this Article 16 or other provisions of the Contract Documents.

ARTICLE 18. CONTRACTOR'S SUPERINTENDENT

- 18.1 Before starting the Work, Contractor shall designate an English speaking, competent, authorized representative (hereinafter Superintendent), acceptable to the Owner, to represent and act for the Contractor. The Contractor shall:
- 18.1.1 Inform Owner, in writing, of the name and address of such representative together with a clear definition of the scope of his authority to represent and act for Contractor and shall specify any and all limitation on such authority.
- 18.1.2 Keep the Owner informed of any subsequent changes in the foregoing.
- 18.2 The Superintendent shall be present (or be temporarily represented by a person familiar with the project work activities and schedule) at the site of the Work at all times when the Work is actually in progress.
- 18.4 All notices, determinations, instructions and other communications given to the Contractor's Superintendent shall be binding upon the Contractor.
- 18.5 The Superintendent shall maintain a daily log/report which shall include at least the following information: weather conditions; trades at site; manpower totals by trade; heavy equipment in use; activities in progress; and inspections at site. Copies of the daily entries shall be provided to the Owner once per month, or as required elsewhere in the Contract Documents.

ARTICLE 19. COOPERATION WITH OTHERS.

- 19.1 The Owner and other contractors and subcontractors may be working at the site during the performance of the Construction Contract, and Contractor's work may be interfered with as a result of such concurrent activities. Contractor shall fully cooperate with Owner and other contractors to avoid any delay or hindrance of the Work. Owner may require that certain facilities be used concurrently by Contractor and other parties and Contractor shall comply with such requirements.
- 19.2 If any part of the Contractor's work depends on proper execution or results from any work performed by the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Owner any apparent discrepancies or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acceptance of the Owner or separate contractor's work as fit and proper to receive Contractor's Work, except as to defects which may subsequently become apparent in such work performed by others.

ARTICLE 20. SITE CONDITIONS.

- 20.1 Contractor shall have the sole responsibility to conduct reasonable inspection of the site and to satisfy itself concerning the nature and location of the Work and the general and local conditions, and particularly, but without limitation, with respect to the following: those affecting transportation, access, disposal, handling and storage of material; availability and quality of labor, water and electric power; availability and condition of roads; climatic conditions; location of underground utilities as depicted in the Contract Documents; governmental processes and requirements for obtaining permits other than issuance of the original building permits, certificates of occupancy and other regulatory/utility approvals; physical conditions at the work sites and the Project area as a whole; topography and ground surface conditions; subsurface geology, and nature and quality of surface and subsurface materials to be encountered; equipment and facilities needed preliminary to and during performance of the Construction Contract; and all other matter which can in any way affect performance of the Construction Contract, or the cost associated with such performance.
- 20.2 The failure of Contractor to acquaint itself with any applicable condition will not relieve it from the responsibility for properly estimating either the duration, difficulties, or the costs of successfully performing the Work.
- 20.3 Contractor may reasonably rely upon site documentation provided by the Owner. In the event that during the course of the Work Contractor encounters an underground utility facility that was not shown on the Contract Documents; or subsurface or concealed conditions at the Project site which differ materially from those shown on the Contract Documents and from those ordinarily encountered and generally recognized as inherent in work of the character called for in the Contract Documents; or unknown physical conditions of the Project site, of an unusual nature, which differ materially from that ordinarily encountered and generally recognized as inherent in work of the character called for in the Contract Documents, Contractor, without disturbing the conditions and before performing any work affected by such conditions, shall, within forty-eight (48) hours of their discovery, notify Owner and Project Consultant in writing of the existence of the aforesaid conditions. Project Consultant and Owner shall, within two (2) business days after receipt of Contractor's written notice, investigate the site conditions identified by Contractor. If, in the sole opinion of Project Consultant, the conditions do materially so differ and cause an increase or decrease in Contractor's cost of, or the time required for, the performance of any part of the Work, whether or not changed as a result of the conditions, Project Consultant shall recommend an equitable adjustment to the Contract Price, or the Contract Time, or both. If Owner and Contractor cannot agree on an adjustment in the Contract price or the Contract time, the adjustment shall be referred to Project Consultant for determination. Should Project Consultant determine that the conditions of the Project site are not so materially different to justify a change in the terms of the Contract, Project Consultant shall so notify Owner and Contractor in writing, stating the reasons, and such determination shall be final and binding upon the parties hereto. No request by Contractor for an equitable adjustment to the Contract under this provision shall be allowed unless Contractor has given written notice in strict accordance with the provisions of this Article. No request for an equitable adjustment or change to the Contract Price or Contract Time for differing site conditions shall be allowed if made after the date certified by Project Consultant as the date of substantial completion.

ARTICLE 21. RESPONSIBILITY FOR WORK SECURITY.

- 21.1 Contractor shall at all times conduct, at its expense, all operations under the Construction Contract in a manner to avoid the risk of loss, theft or damage by vandalism, sabotage or other means to any property.
- 21.1.1 Contractor shall promptly take such reasonable precautions as are necessary and adequate against any conditions which involve risk of a loss, theft or damage to its property.
- 21.1.2 Contractor shall continuously inspect all of its Work, materials, equipment and facilities to discover and determine any such conditions and shall be solely responsible for discovery, determination and correction of any such condition.
- 21.2 Contractor shall comply with all applicable laws and regulations.

- 21.2.1 Contractor shall cooperate with Owner on all security matters as set forth elsewhere in the Contract Documents and shall promptly comply with any project security requirements established by Owner.
- 21.2.2 These security requirements may be more stringent in the event portions of the facilities or project are occupied or otherwise being used.
- 21.2.3 Such compliance with these security requirements shall not relieve Contractor of its responsibility for maintaining property security for the above noted items, nor shall it be constructed as limiting in any manner Contractor's obligation to undertake reasonable action as required to establish and maintain secure conditions at the site.
- 21.3 Contractor shall prepare and maintain accurate reports of incidents of loss, theft or vandalism and shall provide these reports to Owner in a timely manner.

ARTICLE 22. PROTECTION OF WORK IN PROGRESS, MATERIALS AND EQUIPMENT.

- 22.1 Contractor shall be responsible for and shall bear any and all risks of loss or damage to Work in progress, all materials delivered to the site, and all materials and equipment involved in the Work until completion and final acceptance of the Work under this Contract.
- 22.2 Permanent openings for the introduction of work and materials to the structure and construction site shall be protected so that upon completion, the Work will be delivered to the Owner in proper, whole and unblemished condition.

ARTICLE 23. ADMINISTRATION OF THE CONTRACT.

- 23.1 The Project Consultant will provide Administration of the Contract.
- 23.1.1 For those projects for which the City Engineer serves as the Project Consultant, all references to the Project Consultant shall be considered to be the City Engineer.
- 23.1.2 In the event the Owner should find it necessary to replace the Project Consultant, the Owner shall retain a replacement and the role of the replacement shall be the same as the role of the original Project Consultant.
- 23.2 Unless otherwise directed by the Owner in writing, the Project Consultant will perform those duties and discharge those responsibilities allocated to the Project Consultant by the Owner.
- 23.3 Neither the Project Consultant nor the Owner will be responsible for construction means, methods, techniques, sequences or procedures, safety precautions and programs in connection with the Work or for the acts of omission or commission of the Contractor, its Subcontractors or their agents or employees.
- 23.4 The Project Consultant and Owner will each have the authority to reject Work which does not conform to the Contract Documents and to require special inspection or testing with prior approval by the Owner. Neither the Project Consultant's nor the Owner's authority to act under this Paragraph, nor any decision made by them in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Project Consultant or the Owner to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work.
- 23.5 The Contractor shall forward all communications to the Project Consultant, with simultaneous copies to the Owner.
- 23.6 The Project Consultant will review and certify the Contractor's Application for Payments which the Owner must subsequently approve prior to Payment of the Contractor.
- 23.7 The Project Consultant shall approve shop drawings for design only, the Contractor being responsible for all dimensions, quantities, etc., necessary to complete the Work in compliance with the Drawings and Specifications and other Contract Documents.

- 23.8 The duties, responsibilities and limitations of authority of the Project Consultant and the Owner will not be modified nor extended without written consent of the Contractor, the Project Consultant, and the Owner.
- 23.9 Notwithstanding anything to the Contrary in these General Conditions or any other "Contract Document" as that term is defined in the Professional Services Agreement between the City of Pompano Beach, Florida and the Project Consultant, it is not the intention nor shall any of the provisions of those documents act as a release, limitation or discharge of the obligations or responsibilities of the Project Consultant pursuant to its agreement with the Owner.
- 23.10 The Project Consultant will utilize the Contractor Performance Report to monitor and record the Contractor's performance for the work specified by the contract. The Contractor Performance Report has been included as an exhibit to the contract.

ARTICLE 24. MATERIALS.

- 24.1 The Contractor shall provide materials and equipment as required in the Contract Documents
- 24.1.1 Any such substitution must be approved by the Project Consultant and Owner prior to incorporation of the proposed substitution into the Work.
- 24.1.2 Proposed substitutions must be submitted for consideration from the Contractor to the Project Consultant and the Owner.
- 24.1.3 Product delivery lead times shall not serve as a basis for any substitution request except for where approved in advance by the Owner.
- 24.1.4 All additional costs incurred by the Owner as the result of any substitution will be the direct responsibility of and borne by the Contractor.
- 24.2 The Contractor shall make written request to the Project Consultant for and obtain his written approval of the use of any materials proposed for use when "approval" materials are specified or a performance type specification is utilized without mentioning any standard by name.
- 24.3 If, in the opinion of the Project Consultant, a specified product or equipment no longer meets the quality of the products or equipment required for the Work, Project Consultant shall request a Change Order Proposal from the Contractor for modifying the Contract to incorporate the respective changes to the Work required, the Contract amount, and the Contract Time as beneficial to the Owner.

ARTICLE 25. STORED MATERIALS.

- 25.1 Contractor shall, at its expense, receive, unload, store in a secure place, and deliver from storage to the construction site all materials and equipment required for the performance of the Contract.
- 25.1.1 Contractor is not entitled to payment for same except for those materials which in Owner's discretion are properly stored and are going to be installed or incorporated into the construction of the Project within thirty (30) days of delivery to the construction site.
- 25.1.2 The storage facilities and methods of storing shall meet Owner's approval and shall be in accordance with manufacturer's recommendations, or Owner will not be obligated to pay for same.
- 25.1.3 Materials and equipment subject to degradation by outside exposure shall be stored in a weather tight enclosure provided by Contractor at its expense.
- 25.1.4 Owner may at its discretion require material to be stored in an air-conditioned location.

- 25.2 Provided the above conditions are met, the stored materials may be included in a subsequent Application for Payment if the Contractor also complies with the following:
- 25.2.1 An applicable purchase order is provided listing the materials in detail and identifying the Contract Documents, by name, with verification that the total value of the purchase order amount reconciles with the corresponding application for payment stored materials line item value.
- 25.2.2 Evidence that proper storage security is provided.
- 25.2.3 The Owner is provided legal title (free of liens or encumbrances of any kind) to the material that is stored or stockpiled.
- 25.2.4 The Contractor and/or its Subcontractor have provided insurance for the Stored Materials against loss, damage (from whatever source), or disappearance, including loss or theft prior to incorporation into the Work. By execution of the Contract, Contractor releases Owner from any responsibility for Stored Materials and assumes all liability for and risk of loss or damage, by whatever means, including Owner's alleged negligence, regardless of whether the Owner has paid for said Stored Materials.
- 25.3 Once any Stored Material is paid for by Owner, it shall not be removed from the designated storage area except for incorporation into the Project or upon subsequent written approval by Owner.
- 25.4 No Applications for Payment shall be submitted nor payments made based on the value of materials stored at locations other than the Project, unless otherwise approved in writing by the Owner.
- 25.5 It is further agreed between the parties that the transfer of title and the Owner's payment for any Stored Material pursuant to the Contract Documents shall in no way relieve the Contractor of the responsibility for providing and installing such material in accordance with the requirements of the Contract Documents.
- 25.6 The Contractor warrants that title to all of the Work or Stored Materials covered by the Application for Payment will pass to the Owner either by incorporation in the Project or upon receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security, interest or encumbrance; and that none of the Work and none of the Stored Materials covered by the Application for Payments will have been acquired by the Contractor, or by any other person performing the Work at the site or providing materials and equipment to the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such person.
- 25.7 In the event stored materials which Owner is paying for in advance of their being installed or incorporated into the Project pursuant to this Paragraph are not installed or incorporated into the Project within thirty (30) days of when they are delivered to the site, Contractor shall not be entitled to payment for any future stored materials on this Project and the amounts previously approved for payment for said materials shall be deducted from the Contractor's next application for payment..

ARTICLE 26. INSPECTION: REJECTION OF MATERIALS AND WORKMANSHIP.

- 26.1 All material and equipment provided and work performed shall be properly inspected by Contractor, at its expense, and shall at all times be subject to quality surveillance, inspections, observations or quality audit by Owner, Project Consultant and any inspectors conducting an inspection pursuant to code, law, regulations, etc.
- 26.1.1 Contractor shall provide safe and adequate facilities, and all samples, drawings, lists and documents necessary for such quality surveillance, observation or quality audit.
- 26.1.2 The Contractor shall permit and facilitate inspection of the Work by the Owner, Project Consultant, Inspectors for any governmental agency, authority, or board.

- 26.1.3 Owner also reserves the right to designate others such as consultants, commissioning authorities, test and balance agents, forensic specialists, etc. to conduct inspections during or subsequent to the Work as Owner in its discretion desires.
- 26.1.4 Owner and Project Consultant shall be afforded full and free access to the shops, factories or places of business of Contractor and its Subcontractors for such quality surveillance, observation or quality audit and to determine the status of the Work.
- 26.1.5 In the event the Project Consultant or Owner requires a factory inspection, the Contractor shall notify the suppliers that the material shall not be produced or fabricated without due notice to the Project Consultant and Owner and an opportunity for such inspection.
- 26.2 If any Work should be covered up without approval or consent of the Project Consultant or Owner, it must, if required by the Project Consultant or Owner, be uncovered for examination at the Contractor's expense.
- 26.3 If any material, equipment or workmanship is determined by Owner, City Engineer, Project Consultant or Inspector either during performance of the Work or on final quality surveillance, or during any applicable warranty period, to be defective or not complying with the requirements of this Construction Contract, Owner, City Engineer, Project Consultant or Inspector will notify Contractor in writing that such material, equipment or portions of the Work is rejected and Owner reserves the right to withhold payment on any such item or seek compensation from Contractor for same. Thereupon, Contractor shall, at its own expense, immediately remove, replace or correct such defective material, equipment or portions of the Work by making the same comply strictly with all requirements of the Contract Documents. The Contractor shall be responsible for the costs of any additional site observations, special inspections and/or testing, or other activities of either the Project Consultant or the Owner made necessary by the correction of such defective materials, equipment or portions of the Work.
- 26.4 Neither the failure to make such quality surveillance, observation or quality audit, nor to discover defective workmanship, materials, or equipment, shall prejudice the rights of Owner to correct or reject the same as hereinafter provided.

ARTICLE 27. WARRANTY.

- 27.1 Unless otherwise provided elsewhere in the Contract Documents, all material 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 Owner and Project Consultant.
- 27.2 Unless otherwise provided in the Contract Documents, Contractor warrants all Work, equipment, materials and workmanship to be in accordance with the Contract Documents, any and all applicable codes, proper and workmanlike, first class and free from defects for a period of twelve (12) months (unless longer guarantees or warranties are provided for elsewhere in the Contract Documents in which case the longer periods of time shall prevail) from and after Final Completion of the Work under the Contract Documents, regardless of whether the same were provided or performed by Contractor or by any Subcontractor.
- 27.3 Contractor's warranty with respect to latent defects shall be in accordance with Chapter 95, Florida Statutes, and other applicable provisions of State law.
- 27.4 In the event of damage or injury to persons or property or other consequential or resultant damages result from Contractor's breach of any warranties, then the Contractor will be responsible for same.

ARTICLE 28. OFFICE SPACE FOR THE OWNER'S PERSONNEL.

- 28.01 The Contractor shall provide, at Contractor's expense, for the duration of the Work, a suitable lockable office for any Owner designated personnel.

ARTICLE 29. PROJECT RECORD DOCUMENTS AND SURVEY.

- 29.1 A marked up record set of the Contract Documents and other project records as required elsewhere within the Contract Documents will be kept up to date by the Contractor on the jobsite at all times. These documents will be given to the Project Consultant at the completion of the Work as required by the Contract Documents, and properly labeled as "Project Record Documents."
- 29.2 In addition to the "Project Record Documents", the Contractor will cause to have prepared by a Surveyor, registered in the State of Florida, a site survey clearly representing all Work done under this Contract and updating the original survey as may have been provided by the Owner.
- 29.3 The Contractor shall submit Project Record Documents and Survey in the manner and format specified elsewhere in the Contract Documents.
- 29.4 This is a critical item and final payment will be withheld from the Contractor until "Project Record Documents" and survey are provided by the Contractor and approved by the Project Consultant.

ARTICLE 30. SALVAGE.

- 30.1 Any salvage resulting from clearing, grubbing, grading, draining, remodeling or altering any existing facilities on this site shall be the property of the Owner; and this material shall be piled or stacked on the site if the Owner desires this material.
- 30.2 If this material is not desired by the Owner, it shall be disposed of by the Contractor at his expense.

ARTICLE 31. CLAIMS BY THE CONTRACTOR.

- 31.1 Although Contractor acknowledges the No Damage for Delay clause set forth in Article 6 of the Agreement between Owner and Contractor, in the event the Contractor is entitled to assert any other claim against Owner for any reason, claims by the Contractor against the Owner (except for claims asserted under Article 20 which are treated as set forth therein), are subject to the following terms and conditions:
- 31.1.1 All Contractor claims against the Owner shall be initiated by a written claim submitted to the Owner, c/o the City Engineer, and the Project Consultant. Such claim shall be received by the Owner and the Project Consultant no later than fifteen (15) calendar days after the event, or the first appearance of the circumstances causing the claim, and same shall set forth in detail all known facts and circumstances supporting the claim and the actual damages or injuries suffered;
- 31.1.2 The Contractor shall continue diligently with its performance hereunder regardless of the existence of any claims submitted by the Contractor;
- 31.1.3 In the event the Contractor seeks to make a claim, as a condition precedent to any such claim the Contractor shall strictly comply with the notice requirements above and such claim shall be made by the Contractor before proceeding to execute any additional or changed Work. Failure of the condition precedent to occur, i.e., providing notice as required in Article 31.01.01 above, shall constitute a complete waiver by the Contractor of any claim for additional compensation or extension of time. This written notice requirement may not be waived by verbal representations or the acts of representatives of the Owner or Project Consultant;
- 31.1.4 In connection with any claim by the Contractor against the Owner for compensation in excess of the Contract Price, any liability of the Owner for the Contractor's cost shall be strictly limited to direct cost of labor and materials incurred by the Contractor at the jobsite and shall in no event include indirect cost, overhead, loss of profit, or consequential damages of the Contractor. The Owner shall not be liable to the Contractor for claims of third parties including, but not limited to, subcontractors, suppliers, laborers, etc.

ARTICLE 32. CHANGE ORDERS.

- 32.1 One or more changes to the Work within the general scope of this Contract may be ordered by the Owner by Change Order, Project Consultant's Supplementary Instructions, and Construction Change Directives.
- 32.2 The Contractor shall proceed with any extra Work or changes which alter the Contract by adding to, or deducting from the Contract Sum or Contract Time in strict accordance with the following terms and conditions:
- 32.2.1 Change Order shall mean a written order to the Contractor executed by the Owner and the Project Consultant after execution of this 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;
- 32.2.2 Any change in the Contract Price or time resulting from a Change Order shall be determined as follows:
- a. By mutual agreement between the Owner and the Contractor as evidenced by (a) the change in the Contract Price or time being set forth in Change Order in accordance with Article 32.02.08 below, and (b) the execution of the Change Order; or,
 - b. If no mutual agreement occurs between the Owner and the Contractor, the change in the Contract Price, if any, shall be derived based upon the Cost Plus Price basis (as set forth in Article 32.02.08 below) by determining the "total actual costs" (in accordance with Article 32.02.09 below), incurred or savings achieved, resulting from revisions in the Work. Such total actual costs or savings shall include a component for direct jobsite overhead and profit but under no circumstances shall it include non-job site overhead expenses or costs or any other indirect costs or components. Any such costs or savings shall be documented in the format, and with such content and detail as the Owner or the Project Consultant requires. If agreement is not reached as to the change in time, Contractor shall be given a reasonable time based upon the scope of Work required by the change.
- 32.2.3 The execution of a Change Order by the Contractor shall constitute 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 Owner 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.
- 32.2.4 The Contractor shall notify and obtain the consent and approval of the Contractor's surety with reference to all Change Orders if such notice, consent or approval are required by the Owner, the Project Consultant, the Contractor's surety or by law. The Contractor's execution of the Change Order shall constitute the Contractor's warranty to the Owner that the surety has been notified of, and consents to, such Change Order and the surety shall be conclusively deemed to have been notified of such Change Order and to have expressly consented thereto, and that the penal sums of the performance and payment bonds furnished by Contractor and Surety are adjusted coextensively with the amount of the Change Order.
- 32.2.5 The Owner, without invalidating the Contract, may require the change for any reason whatsoever. All such Work shall be executed under the terms of the original Contract.
- 32.2.6 All change orders and adjustments shall be in writing and executed by the Contractor and Owner; otherwise, no claim for additional compensation or time will be allowed.
- 32.2.7 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be the total actual cost (as set forth in Article 32.02.09 below) saved as confirmed by the Project Consultant. The amount shall not include an amount for the overhead and profit of the Contractor which the Owner is not required to pay as a result of the deletion or decrease. When both additions and credits covering related Work or substitutions are involved in a change, the overhead and profit shall be calculated on the basis of net increase, if any, with respect to that change.

32.2.8

The value of any change ordered under the Contract for extra Work and/or any reductions in Work required, shall be determined under one or more of the following procedures before a written Change Order is issued.

- a. By **UNIT PRICES** named in the Contract or subsequently agreed upon by the Owner and the Contractor, which prices shall include Contractor's overhead and profit.
- b. By **LUMP SUM PRICE** agreed upon actual reasonable costs and direct job site overhead by the Owner and the Contractor, which price shall include Contractor's overhead and profit but under no circumstances shall it include non job site overhead, expenses or costs or any other indirect costs; a breakdown of the estimated costs comprising the lump sum price may be required by the Project Consultant for his review. Percentage for overhead and profit shall be determined in accordance with the method listed for **COST PLUS PRICE**, subparagraph (c.) below.
- c. By a **COST PLUS PRICE** based on total actual costs as defined in Article 32.02.09 below, plus an added percentage, all determined as follows:

OVERHEAD AND PROFIT:

JOB SITE OVERHEAD, including supervision and the furnishing, use and maintenance of small tools and ordinary equipment incidental to and required for the work of subcontractors (whether performed by them or others) shall be considered to be just and fully compensated for, by adding an amount equal to five percent (5%) of the sum of material costs (as defined under Article 34.08.09(a) below) and labor costs (as defined under Article 34.08.09(b) below), and rentals (as defined under Article 32.08.09(c) below). There shall be no compensation for any non job site overhead, expenses or costs.

PROFIT, may then be added by the subcontractor to the above material costs and labor costs, including the JOB SITE OVERHEAD allowance, at the rate of 10% of the sum of those costs.

JOB SITE OVERHEAD, including general supervision and the furnishing, use and maintenance of small equipment incidental to and required for the Work of the General Contractor (including that of his subcontractors) shall be considered to be just and fully compensated for by adding an amount equal to ten percent (10%) of the sum of material costs (as defined under Article 32.08.09(a) below) and labor costs (as defined under Article 32.08.09(b) below) and rentals (as defined under Article 32.08.09(c) below). There shall be no compensation for any non job site overhead expenses or costs.

PROFIT may then be added by the Contractor to the above material costs and labor costs, including the JOB-SITE OVERHEAD allowance, at the rate of five percent (5%) of the sum of those costs.

- d. **BOND ALLOWANCE**, for maintaining the Performance Bond at 100% of the contract amount, a sum of one percent (1%) of the total cost of the change, (including material, labor, overhead and profit, and equipment rentals) shall be allowed on all change orders.

32.2.9

The total actual costs of materials, labor and equipment rentals may include the following only:

- a. Material costs actually recorded by the Contractor and/or subcontractors as they are delivered to the site and as evidenced from originally receipted invoices, listing appropriate quantities and unit prices. Records in proper form shall be maintained and available to the Project Consultant at all times.
- b. Labor costs represented by the actual wages paid to all laborers, apprentices, journeymen, and foremen involved in and necessary to completing the particular construction operations, for each day and every hour such labor teams and foremen are actually employed and on the extra Work required, including the net cost of insurance, Social Security and Workmen's Compensation. The furnishing, use and maintenance of small tools and ordinary equipment normal to the work of individual workmen in the trades will be considered part of the labor costs. Records in proper form shall be maintained and available to the Project Consultant at all times.

- c. Rentals for special equipment or machinery such as power driven roller, tractors, trucks, shovels, drills, mixers, pumps, hoists, etc., required for the economical performance of the Work, at reasonable rental prices agreed upon before work commences, shall be allowed the Contractor and/or his subcontractors by the Project Consultant for each and every hour such special equipment is in use on the particular work.
- 32.2.10 The Contractor is obligated to proceed with the Work for a Change Order, even though there has not been an agreement reached with the Owner as to an adjustment to the Contract Price or time, and even if there is a dispute as to same. In such instances the Owner, City Engineer or Project Consultant will issue a Construction Change Directive to Contractor providing for the scope of work to be performed and the payment therefore based on 32.02.09 above. A Change Order or proposed Change Order shall not be the basis of the Contractor not performing pursuant to the Contract Documents.
- 32.2.11 The Contractor, Owner and Project Consultant shall administer and document the Change Order process by utilizing the documentation specified elsewhere in the Contract Documents, including a Construction Change Directive.
- 32.3 The Project Consultant will have authority to order minor changes in the Work not involving an adjustment to the Contract Sum or Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order of the Project Consultant and such changes shall be binding on the Owner and the Contractor.
- 32.4 The Owner has authorized the following approval thresholds for Change Orders in the Name of The City of Pompano Beach, Florida under its General Services Manual, the rules of which are incorporated below:
 - A. The City Manager is authorized to approve change orders up to the cumulative total of 10 percent of the original construction contract amount, not to exceed \$75,000 in the aggregate.
 - B. When the cumulative total of all change orders on a project has exceeded the ceiling established in 32.04A above, all subsequent change orders will require prior City Commission approval, except in emergency cases as declared by the City Manager, or where the change order in question would be in the form of a credit, thereby reducing the adjusted contract amount.
 - C. Approval of change orders under this policy shall be for the purposes of expediting the work in progress and shall be confirmed by City Commission action at the next regular meeting of the City Commission.

ARTICLE 33. DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK.

- 33.1 In the event that the Contractor covers, conceals or obscures its work in violation of this Contract or in violation of a directive from the Owner or the Project Consultant, such work shall be uncovered and displayed for the Owner's or Project Consultant's inspection upon request, and shall be reworked at no cost in time or money to the Owner.
- 33.2 If any of the work is covered, concealed or obscured in a manner not covered by Subparagraph (A) above, it shall, if directed by the Owner or the Project Consultant, be uncovered and displayed for the Owner's or Project Consultant's inspection. If the uncovered work conforms substantially with this Contract, the costs incurred by the Contractor to uncover and subsequently replace such work shall be borne by the Owner; otherwise, such costs shall be borne by the Contractor.
- 33.3 The Contractor shall, at no additional cost in money to the Owner or extension of time correct work rejected by the Owner or by the Project Consultant as defective or failing to conform to this Contract. Additionally, the Contractor shall reimburse the Owner for all testing, inspections and other expenses incurred as a result thereof.
- 33.4 In addition to its warranty obligations set forth elsewhere herein, the contractor shall be specifically obligated to correct any and all defective or nonconforming work for a period of twenty-four (24) months following final completion upon written direction from the Owner.

- 33.5 The Owner may, but shall in no event be required to, choose to accept defective or nonconforming work.
- 33.5.1 In such event, the Contract Price shall be reduced, at Owner's option, by the greater of (i) the reasonable costs of removing and correcting the defective or nonconforming work, or (ii) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming work.
- 33.5.2 If the remaining portion of the unpaid Contract Price, if any, is insufficient to compensate the Owner for the acceptance of defective or nonconforming work, the Contractor shall, upon written demand from the Owner, pay the owner such remaining compensation for accepting defective or nonconforming work.

ARTICLE 34. SAFETY, PROTECTION OF WORK AND PROPERTY.

- 34.1 Contractor shall be fully and solely responsible for conducting all operations under this Construction Contract at all times in such a manner as to avoid the risk of bodily harm to persons and damage to property. Contractor shall continuously and diligently inspect all Work, material and equipment to discover any conditions which might involve such risks and shall be solely responsible for discovery and correction of any such conditions.
- 34.2 Contractor shall instruct its personnel on the requirements of the Contractor's safety program and shall coordinate with other contractors and subcontractors on safety matters.
- 34.3 Contractor shall provide safety equipment and enforce the use of such equipment by its employees.
- 34.4 Contractor shall maintain accurate accident and injury reports and shall provide to Owner a monthly summary of injuries and man hours lost due to injuries.
- 34.5 Contractor shall maintain all portions of the Work in a neat, clean and sanitary condition at all times.
- 34.6 Contractor shall assure that all Subcontractors shall, without expense to Owner, comply with the foregoing.
- 34.7 Contractor shall comply with any and all rules, regulations, laws, etc., which apply to safety requirements, including but not limited to OSHA requirements.
- 34.8 Safety Precautions and Programs:
- 34.8.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.
- 34.8.2 In the event the Contractor encounters on the site material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and Project Consultant in writing. The Work in the affected area shall not thereafter be resumed except by written notice from the Owner. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless, by written agreement of the Owner, Contractor and Project Consultant.
- 34.8.3 The Contractor shall not be required to perform without consent any Work relating to asbestos or polychlorinated biphenyl (PCB).
- 34.9 Safety of Persons and Property
- 34.9.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
- a. Employees on the Work and other persons who may be affected thereby;

- b. The Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
 - c. Other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 34.9.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of person or property or their protection from damage, injury or loss.
 - a. The Contractor and his Subcontractors shall comply with and conform in all respects to the standard set forth in the Occupational Safety and Health Act (OSHA) of 1970.
 - b. The Contractor shall prominently post and maintain on the jobsite:
 - 1) OSHA 200: Log and summary of occupational injuries and illnesses.
 - 2) OSHA 2203: Provisions of the Act poster.
- 34.9.3 The Contractor shall implement and maintain a continuing safety program applicable to all Contractor employees, Subcontractors, and Sub-subcontractors, to include:
 - a. Designating a responsible member of the Contractor's organization at the site as the Contractor's "Safety Officer" whose duty shall be the prevention of accidents, safety inspections, and accident documentation. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and the Project Consultant.
 - b. Holding weekly safety meetings with employees and Subcontractors.
 - c. Implementing OSHA Voluntary Protection Programs.
 - d. Ensuring the presence of an American Red Cross (or other organization acceptable to the Owner) certified Cardiopulmonary Resuscitation (CPR) and first-aid trained individual on site at all times.
 - e. Compliance with the Drug Free Work Place Act of 1988, the Federal Omnibus Transportation Employee Testing Act of 1991, and the certification of compliance with the same as required by the Owner in Document 00457, Drug-Free Workplace Certification.
 - f. Erecting and maintaining reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.
 - g. Ensuring that employees are not discriminated against or discharged for filing reasonable safety or health complaints or for otherwise exercising their rights in these regards.
- 34.9.4 When use of hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.
- 34.9.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to properly caused in whole or in part by the Contractor, a Subcontractor or a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is reasonable, except damage or loss attributable to acts or omissions of the Owner or Project Consultant or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault of negligence of the Contractor.
- 34.9.6 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

- 34.9.7 Building materials, Contractor's equipment and other supplies may be stored on the premises, but the placing of same shall be in substantial, watertight storage sheds upon the premises where directed in which he shall store all materials which would be damaged by weather. This shall in no manner relieve the Contractor from full responsibility for such materials. Sheds and other storage structures must be secured and anchored in a manner sufficient to withstand hurricane force winds as defined by applicable codes but not less than a 120 mile per hour wind uplift force.
- 34.10 **Emergencies:** In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss.

ARTICLE 35. ROYALTIES AND PATENTS.

- 35.1 The Contractor shall pay all royalties and license fees.
- 35.2 The Contractor shall be responsible for all infringement of patent rights and shall assume the defense, including payment of attorney fees and costs, of any suit brought against Contractor and/or Owner for infringement of any United States patent or for wrongful use of proprietary information of any third party.
- 35.3 Contractor hereby indemnifies and shall defend and hold harmless Owner and its representatives, respectively, from and against all claims, losses, costs, damages, and expenses, including attorney's fees, incurred by Owner and its representatives, respectively, as a result of or in connection with any claims or actions based upon infringement or alleged infringement of any patent, and arising out of the use of the equipment or materials provided under this Construction Contract by Contractor, or out of the process of actions employed by, or on behalf of Contractor in connection with the performances of this Construction Contract. Contractor shall, at its sole expense, promptly defend against any such claim or action unless directed otherwise by Owner or its representatives; provided that Owner or its representatives shall have notified Contractor upon becoming aware of such claims or actions, and provided further, that Contractor's aforementioned obligations shall not apply to equipment, materials, or processes furnished or specified by Owner or its representatives.
- 35.4 Contractor shall have the right, in order to avoid such claims or actions, to substitute at its expense non-infringing equipment, materials, or processes, or to modify such infringing equipment, materials and processes so they become non-infringing, or obtain the necessary licenses to use the infringing equipment, materials or processes, provided that such substituted and modified equipment, materials and processes shall meet all the requirements and be subject to all the provisions of the Contract Documents.
- 35.5 The indemnification pursuant to Florida Statute 725.06 and other Florida laws, etc., shall have a separate consideration of \$1.00, receipt of which is hereby acknowledged and incorporated into the project sum. This is incorporated by reference into the Bid Documentation and Specifications if any.

ARTICLE 36. TAXES.

- 36.1 Contractor shall pay all taxes, levies, duties and assessments of every nature which may be applicable to any Work under this Contract.
- 36.2 The Contract Sum and any agreed changes thereto shall include all taxes imposed by law. Contractor shall make any and all payroll deductions as required by law.
- 36.3 Contractor herein indemnifies and holds the Owner harmless from any liability on account of any and all such taxes, levies, duties, assessments and deductions.

ARTICLE 37. INDEMNITY AND HOLD HARMLESS.

- 37.1 To the fullest extent permitted by law, the Contractor shall defend, indemnify and hold harmless the Owner, its agents and employees and each of them hereinafter collectively referred to as the Owner, from and against any and all judgments, demands, claims, causes of action, liability, expenses, losses, costs, fines, and damages (including reasonable attorney's fees and expert's fees) of every kind and character brought against the Owner by any person,

party or entity of any kind or nature whatsoever arising out of, incident to, relating or regarding the Contractor's performance under this Agreement, the condition of the premises, and/or the Contractor's acts of omission or commission.

- 37.2 Contractor, however, shall not be responsible to Owner for damages resulting out of bodily injury or damages to property which a Court of competent jurisdiction determines as being attributed to the negligence of Owner, its respective agents, servants, employees or officers.
- 37.3 Said indemnifications by Contractor shall be extended to include all "Subcontractors", deliverers, suppliers, furnishers of material or anyone acting for, on behalf of, or at the request of the Contractor.
- 37.4 Contractor recognized the broad nature of this indemnifications and hold harmless clause and voluntarily makes this covenant and expressly acknowledge the receipt of Ten (\$10.00) Dollars, which payment is incorporated into the Contract Sum, and such other good and valuable consideration provided by Owner in support of this indemnification in accordance with the laws of the State of Florida.
- 37.5 This clause shall survive termination of this Agreement and pursuant to Florida Statute 725.06 be incorporated by reference into any and all Bid Documentation or Specifications.

ARTICLE 38. TERMINATION BY THE CONTRACTOR.

- 38.1 If the Owner repeatedly fails to perform its material obligations to the Contractor for a period of 30 days after receiving written notice from the Contractor of its intent to terminate hereunder, the Contractor may terminate performance under this Contract by written notice to the Owner and the Project Consultant.
- 38.2 In such event, the Contractor shall be entitled to recover from the Owner as though the Owner had terminated the Contractor's performance for convenience pursuant to the terms and conditions of this Contract.

ARTICLE 39. OWNER'S RIGHT TO SUSPEND CONTRACTOR'S PERFORMANCE.

- 39.1 The Owner shall have the right at any time to direct the Contractor to suspend its performance, or any designated part thereof, for any reason whatsoever, or without reason. If any such suspension is directed by the Owner, the Contractor shall immediately comply with same;
- 39.2 In the event the Owner directs a suspension of performance under this Paragraph through no fault of the Contractor, the Owner shall pay the Contractor as full compensation for such suspension the Contractor's reasonable costs, actually incurred and paid, of the following items only:
 - 39.2.1 Demobilization and remobilization, including such costs paid to subcontractors;
 - 39.2.2 Preserving and protecting Work in place;
 - 39.2.3 Storage of materials or equipment purchased for the Project, including insurance thereon;
 - 39.2.4 Performing in a later, or during a longer, time frame than that contemplated by this Contract.

ARTICLE 40. TERMINATION BY THE OWNER.

- 40.1 The Owner may, at the Owner's option, for any reason and at any time terminate for convenience, any work under this Contract, in whole or, from time to time, in part, in accordance with the following terms and conditions:
- 40.2 The Owner shall give written notice of such termination to Contractor 7 days before it becomes effective.
 - 40.2.1 The Contractor shall incur no further obligations in connection with the Work and the Contractor shall stop work when such termination becomes effective.

- 40.2.2 The Contractor shall also terminate outstanding orders and subcontracts.
- 40.2.3 The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders.
- 40.2.4 The Owner may direct the Contractor to assign the Contractor's right, title and interest under termination orders or subcontracts to the Owner or its designee.
- 40.2.5 The Contractor shall transfer title and deliver to the Owner such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights as the Contractor has.
- 40.2.6 When terminated for convenience, the Contractor shall be compensated as follows:
- a. The Contractor shall submit a termination claim within one year to the Owner and the Project Consultant specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the Owner or the Project Consultant. If the Contractor fails to file a termination claim with the Owner's Project Consultant within one (1) year from the effective date of termination, the Owner shall have no further obligation to the Contractor and Contractor waives any and all rights for compensation based upon the termination.
 - b. The Owner and the Contractor may agree to the compensation, if any, due to the Contractor hereunder;
 - c. Absent agreement to the amount due to the Contractor, the Owner shall pay the Contractor the following amounts:
 1. Contract prices for labor, materials, equipment and other services accepted under this Contract;
 2. Reasonable costs incurred in preparing to perform and in performing the terminated portion of the Work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for direct jobsite overhead (and not home office or other overhead) and profit thereon (such profit shall not include anticipated profit or consequential damages); provided, however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;
 3. Reasonable costs of settling and paying legitimate claims arising out of the termination of subcontractors or orders pursuant to this Paragraph. These costs shall not include amounts paid in accordance with other provisions hereof.
 4. The total sum to be paid the Contractor under this Subparagraph shall not exceed the total Contract Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.
- 40.3 The Owner may terminate this Contract for cause in accordance with the following terms and conditions:
- 40.3.1 If the Contractor does not perform the Work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Contract, then the Owner, in addition to any other rights it may have against the Contractor or others, may terminate the performance of the Contractor for cause upon seven (7) day written notice and assume possession of the Project site and of all materials and equipment at the site and may complete the Work.
- 40.3.2 In such case, the Contractor shall not be paid further until the Work is complete.
- 40.3.3 After final completion has been achieved, if any portion of the Contract Price (as it may be modified hereunder) remains after the cost to the Owner of completing the Work, including all costs and expenses of every nature incurred, has been deducted by the Owner, such remainder shall be paid to the Contractor. Otherwise, the

Contractor shall pay the Owner any and all costs, fees, damages or expenses which the Owner has paid or is obligated to pay in excess of the contract price (as it may be modified hereunder). This obligation for payment shall survive the termination of the Contract. In the event the employment of the Contractor is terminated by the Owner for cause pursuant to this Subparagraph and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience and the terms of Article 40.02 shall apply.

ARTICLE 41. CONTRACTOR'S INSURANCE

- 41.1 The Contractor shall maintain such insurance as will protect the Contractor and Owner from claims under Workmen's Compensation Acts, and from any other claims or damages for personal injury, including death and property damage, which may arise from operations under this Contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either, as more fully set forth below and in the amounts provided herein. Prior to commencement of the Work, all Certificates of Insurance executed by authorized representatives of the insurance company shall be filed with the Owner and shall be subject to its approval for accuracy of protection. In addition, the Owner may at any time require that Contractor or its insurer provide any other documentation regarding insurance to Owner including, but not limited to, the policy. The Contractor shall not commence Work under this Contract until the provisions of this paragraph have been complied with. Owner may withhold payments due to Contractor in accordance with this Contract or terminate or suspend this Contract with all costs or expenses associated with same to be paid by Contractor in the event Contractor fails to comply with any requirement in the Contract regarding insurance. In the event of cancellation of any policy, Contractor is obligated to immediately notify Owner of same and obtain policy(s) in accordance with the Contract Documents.
- 41.2 Contractor shall comply with any and all insurance obligation required by law, rules, regulations, etc., including but not limited to those required by State Regulations for Educational Facilities.
- 41.3 The Contractor will be required to provide a Certificate of Insurance indicating that Workers' Compensation has been provided for all employees in compliance with Chapter 440, Florida Statutes.
- 41.4 The Contractor shall procure and carry Comprehensive General Liability insurance including contractual and indemnification liability covering this Contract and Products/Completed Operations Liability Insurance covering personal injury and bodily injury in limits of not less than \$1,000,000 for injury or death to any one person and not less than \$2,000,000 each occurrence; and shall carry insurance against property damage in limits of not less than \$1,000,000 per claimant and \$2,000,000 per occurrence as a minimum coverage. The Contractor shall also procure and carry Owner's and Contractor's protective liability insurance. In the event that work to be performed hereunder by Contractor involves the removal and disposal of asbestos-related materials, Contractor shall, in addition to the foregoing coverages, also provide and carry Asbestos Liability-Occurrence form only, with \$1,000,000 per occurrence, \$2,000,000 aggregate. All insurance shall name the Owner as an additional insured, and shall remain in full force and effect for two (2) years following Contractor's completion of the work.
- 41.5 The Contractor shall carry at no additional expense to the Owner, Builders' Risk Insurance for the perils of fire, vandalism, malicious mischief and those included in extended coverage in the amount of one hundred percent (100%) of the values at risk. Such policies shall be written to protect the Contractor and the Owner as their interest may appear.
- 41.6 All Contractors shall maintain automobile liability insurance against bodily injury and property damage in at least the amounts of one million dollars (\$1,000,000) per claimant, one million dollars (\$1,000,000) per occurrence.
- 41.7 The insurance coverage amounts provided for in this Section are the minimum required insurance amounts. The Owner may require additional insurance or coverage on a case-by-case basis. Any insurance or coverage amounts in addition to those provided for herein shall be specified in the Contract Documents.
- 41.7 The Owner is not maintaining any insurance on behalf of Contractor covering against loss or damage to the Work or to any other property of Contractor. In the event Contractor maintains insurance against physical loss

or damage to Contractor's construction equipment and tools, such insurance shall include an insurer's waiver or rights of subrogation in favor of Owner.

- 41.8 The requirements contained herein as to types and limits, as well as Owner's approval of insurance coverage to be maintained by Contractor, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by Contractor under the Contract.
- 41.9 The policies of such insurance in force, shall be issued by companies qualified to do business in the State of Florida and be acceptable to the Owner and shall provide that the Owner be given thirty (30) days advance written notice of the cancellation, expiration or any material change in the coverage afforded thereunder. The companies must be rated at least A-VI by AM Best or Aa3 by Moody's Investor Service. All policies must remain in effect during performance of the Work and for a period of one year after final completion.
- 41.10 Uninsured Claims. If any action by any person, firm or corporation is brought or threatened against the Owner or against the Contractor and the Owner for any alleged loss, damage or injury arising out of or in the consequence of the performance or nonperformance of the Contract which, in the reasonable opinion of the Owner, may not be covered by the contingent liability, public liability or property damage insurance policy, or, which together with other such actions or claims seeks a recovery in excess of the amount payable under such policies, the amount of such recovery sought or so much thereof as the Owner reasonably deems necessary, may be withheld by the Owner from any money due the Contractor. The Owner in its sole discretion may permit the Contractor to substitute other satisfactory security in lieu of the monies so withheld. If the liability of the Owner is determined by judgment or award of a court or other tribunal of competent jurisdiction, or if such recovery sought shall have been admitted by the Contractor to be valid, the Owner may pay such judgment, award of admitted recovery out of the monies retained by the Owner under the provisions of this subparagraph and return the remaining balance, if any, to the Contractor.
- 41.11 Adequate funds shall be retained for the insurance costs listed in the Schedule of Values attached to the Contractor's respective Applications for Payment to account for insurance coverage renewals on multi-year projects coupled with invoices to substantiate the annual costs.

ARTICLE 42. PERFORMANCE BOND AND PAYMENT BOND

- 42.01 For a Project with an estimated cost of \$200,000.00 or more, the Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as specifically required in the Contract Documents on the date of execution of the Contract.

ARTICLE 43. RIGHT TO AUDIT PROVISIONS

- 43.1 Contractor's records which shall include but not be limited to accounting records, written policies and procedures, computer records, disks and software, videos, photographs, subcontract files (including proposals of successful and unsuccessful bidders), originals estimates, estimating worksheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this contract (all the foregoing hereinafter referred to as "records") shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by Owner's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the contractor or any of his payees pursuant to the execution of the contract. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this contract.
- 43.2 For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent or authorized representative shall have access to said records from the effective date of this contract, for the duration of the Work, and until 5 years after the date of final payment by Owner to Consultant pursuant to this contract.
- 43.3 Owner's agent or its authorized representative shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate work space, in order to conduct audits in

compliance with this article. Owner's agent or its authorized representative shall give auditees reasonable advance notice of intended audits.

- 43.4 Contractor shall require all subcontractors, insurance agents, and material suppliers (payees) to comply with the provisions of this article by insertion of the requirements hereof in any written contract agreement. Failure to obtain such written contracts which include such provisions shall be reason to exclude some or all of the related payees' costs from amounts payable to the Contractor pursuant to this contract.
- 43.5 If an audit inspection or examination in accordance with this article, discloses overcharges (of any nature) by the Contractor to the Owner in excess of 10% percent of the total contract billings, the actual cost of the Owner's audit shall be paid by the Contractor.

ARTICLE 44. LAWS AND REGULATIONS

- 44.1 Contractor and its employees and representative shall at all times, comply with all applicable laws, ordinances, statutes, rules and regulations in effect at the time Work is performed pursuant to the Contract Documents.
- 44.2 If, during the term of this Construction Contract, there are any changed or new laws, ordinances or regulations not in existence at the time of signing this Construction Contract which become effective and which affect the cost or time of performance of the Construction Contract, Contractor shall within fifteen (15) days of the discovery of said law, ordinance or regulation, notify Owner in writing and submit detailed documentation of such effect in terms of both time and cost of performing the Construction Contract. Upon concurrence by Owner as to the effect of such changes, an adjustment in the compensation and/or time of performance may be made at Owner's discretion.
- 44.3 If any discrepancy or inconsistency should be discovered between the Contract Documents and any law, ordinance, regulation, order or decree, Contractor shall within fifteen (15) days of discovery of same report the same in writing to Owner who will issue such instructions as may be necessary.

ARTICLE 45. DISPUTE RESOLUTION.

- 45.1 The Owner and Contractor agree that, in the event of a dispute, the parties will attempt to resolve such dispute without litigation and that resolution through mediation procedures will be encouraged.
- 45.2 The existence of a dispute between the parties shall not be the basis of the Contractor unilaterally electing not to continue performance pursuant to the terms of the Contract Documents.

ARTICLE 46. GOVERNING LAW AND ATTORNEYS FEES.

- 46.1 The Construction Contract shall be governed by the laws of the State of Florida.
- 46.2 In the event either party institutes litigation regarding or relating to this Contract or for breach of any of its terms all litigation and appeals shall have venue in Broward County, Florida or in the U.S. District Court for the Southern District of Florida.
- 46.3 To the fullest extent permitted by law, Owner, Contractor, and Contractor's Surety do hereby each waive the right to trial by jury in any action or proceeding, including any counterclaims/crossclaims/third (or more remote) party complaints which may be brought by Owner, Contractor, or Surety, jointly and/or severally, arising out of or in any way related to this Construction Contract and/or attendant suretyship including, without limiting the generality thereof, any claim for damages resulting from any act or omission of Owner, Contractor, or Surety, jointly or severally, in any way connected with this Construction Contract.

ARTICLE 47. RIGHTS AND REMEDIES.

- 47.01 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

ARTICLE 48. SUCCESSORS, ASSIGNS AND ASSIGNMENT.

- 48.1 The Owner and the Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party in respect to all covenants, agreements and obligations contained in the Construction Contract. It is agreed that the Contractor shall not assign, transfer, convey or otherwise dispose of the contract or its right, title and interest in and to the same or any part thereof, without previous consent of the Owner and concurred to by the Sureties.
- 48.2 If requested by Owner the Contractor agrees to assign all Subcontracts required for performance of this Contract to the Owner upon the Owner or Project Consultant's determination that Contractor has defaulted under the Contract Documents. The Contractor shall include in all Subcontracts, equipment leases and purchase orders a provision requiring the subcontractor, equipment lessor or supplier, in the event of Contractor's default under this Contract, to consent to the assignment of their subcontracts to the Owner.

ARTICLE 49. PUBLIC RECORDS.

- 49.1 A. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law, as amended. Specifically, the Contractor shall:
- a. Keep and maintain public records required by the City in order to perform the service;
 - b. Upon request from the City's custodian of public records, provide the City with a copy of 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;
 - c. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law;
 - d. 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; and
 - e. Upon completion of the contract, transfer, at no cost to the City, all public records in possession of the Contractor, or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of 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, upon request from the City's custodian of public records in a format that is compatible with the information technology systems of the City.
- 49.2 The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this Agreement and the City shall enforce the Default in accordance with the provisions set forth in Article 40.

PUBLIC RECORDS CUSTODIAN

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

CITY CLERK

100 W. Atlantic Blvd., Suite 253

Pompano Beach, Florida 33060

(954) 786-4611

RecordsCustodian@copbfl.com

Exhibit to General Conditions of the Contract



**City of Pompano Beach, Purchasing Division
1190 N.E. 3rd Avenue, Building C
Pompano Beach, Florida, 33060**

**CITY OF POMPANO BEACH
CONTRACTOR PERFORMANCE REPORT**

1. Report Period: from _____ to _____

2. Contract Period: from _____ to _____

3. Bid# & or P.O.#: _____

4. Contractor Name: _____

5. City Department: _____

6. Project Manager: _____

7. Scope of Work (Service Deliverables): _____

CATEGORY	RATING	COMMENTS
1. Quality Assurance/Quality Control - Product/Services of high quality - Proper oversight - Communication	Poor =1 Satisfactory =2 Excellent =3	
2. Record Keeping -Accurate record keeping -Proper invoicing -Testing results complete	Poor =1 Satisfactory =2 Excellent =3	
3. Close-Out Activities - Restoration/Cleanup - Deliverables met - Punch list items addressed	Poor =1 Satisfactory =2 Excellent =3	
4. Customer Service - City Personnel and Residents - Response time - Communication	Poor =1 Satisfactory =2 Excellent =3	
5. Cost Control - Monitoring subcontractors - Change-orders - Meeting budget	Poor =1 Satisfactory =2 Excellent =3	
6. Construction Schedule - Adherence to schedule - Time-extensions - Efficient use of resources	Poor =1 Satisfactory =2 Excellent =3	
SCORE	_____	ADD ABOVE RATINGS/DIVIDE TOTAL BY NUMBER OF CATEGORIES BEING RATED

RATINGS

Poor Performance (1.0 – 1.59): Marginally responsive, effective and/or efficient; delays require significant adjustments to programs; key employees marginally capable; customers somewhat satisfied.

Satisfactory Performance (1.6 – 2.59): Generally responsive, effective and/or efficient; delays are excusable and/or results in minor program adjustments; employees are capable and satisfactorily providing service without intervention; customers indicate satisfaction.

Excellent Performance (2.6 – 3.0): Immediately responsive; highly efficient and/or effective; no delays; key employees are experts and require minimal direction; customers expectations are exceeded.

Please attach any supporting documents to this report to substantiate the ratings that have been provided.

Comments, corrective actions etc., use additional page if necessary:

[illegible]

SUPPLEMENTARY CONDITIONS

1. PERFORMANCE BOND AND PAYMENT BOND

Although this Project is not estimated to cost \$200,000.00 or more, the City will require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. All bonding and insurances are to be included in the Contractors bid cost.

2. RELEVANT PROJECT EXPERIENCE

Bidders shall show specific project experience as a prime contractor for a minimum of two Stormwater municipality projects within the last five years of similar or greater complexity and construction cost greater than \$2,500,000.00. Reference contact information must be furnished for all drainage projects claimed as relevant experience under this requirement including: Project Name and Number, the municipality or government agency for whom the project was done, total project cost, when the project commenced and was completed, project manager with phone number, whether or not there were any changes to the contract cost or time, a complete list of warranty items that required attention after the completion of the project.

3. CHANGE ORDERS

All Change Order request must be accompanied by back up documents supporting the Change Order. The use of Contingency and Allowances must have proper documentation and approval by Owner

4. CLOSE OUT DOCUMENTATION

All close out documents must be hard copy and in digital format. Digital format includes USB or CD. As-build drawings must be in CAD and PDF format.

5. MEETINGS

Contractor must have an assigned project knowledgeable representative at bi-weekly project meetings. Meeting schedule will be determined before the Notice to Proceed is issued. Contractor must provide meeting minutes to the Owner of each progress meeting no later than seven days after the meeting. Contractor must attend at least two community outreach meetings.

6. PAY APPLICATION

Owner may have Contingency line items included in the Schedule of Values. Pay Applications submitted to the Owner for payment must have supporting documents as back up that show the breakdown of the Contingency usage. A progress schedule, Release of Lien, and Contingency Log are required with the Pay Application submissions.

7. AS-BUILDS

As build drawings are to be updated and maintained throughout the project by the Contractor. The Contractor must be able to supply as-build drawings as requested.

8. LAMPING

Lamping of the stormwater system must be completed throughout the project by the Contractor as requested by the Owner.

9. EXISTING UTILITIES

Contractor must pothole ahead of stormwater installation for existing lateral utilities to avoid conflict. Contractor to assume a variance in existing utilities. Contractor to confirm with utility companies prior to digging for any utility conflicts that may not be shown on the plans.

10. MOBILIZATION OF TRAFFIC, HURRICANE, PHASING, STAGING AND SAFETY PLANS.

Contractor to have the Mobilization of Traffic plan approved by Broward County. Contractor to provide a safety, phasing, staging and hurricane plans for approval by the City prior to construction.

11. PERMITS PRIVATE PROPERTY

Portions of the Esquire Lakes Stormwater Improvements involve private property. Contractor must acquire permit signatures from the private property owners involved prior to construction in these areas. Permit fees associated with private property will be reimbursed by the City.

12. COMMUNITY OUTREACH

Contractor must distribute project information flyers prior to construction. Flyers must be distributed a week prior to construction in a given area in order to give the residents proper notification. If temporary parking is needed for residents, the Contractor must give detailed parking information and inform any towing companies and property owners of these temporary parking areas. The Contractor cannot use any private property for construction activities without written consent from the property owner and approval from the City.

13. REPORTS

Contractor to maintain daily progress reports and stormwater pollution reports. Stormwater pollution reports must be submitted to the Owner weekly.

SUPPLEMENTARY CONDITIONS (CONSTRUCTION)

Florida Department of Environmental Protection
State Revolving Fund Program
Supplementary Conditions
for

Formally Advertised
Construction Procurement

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ENVIRONMENTAL PROTECTION
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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS

The intent of the Florida Department of Environmental Protection (FDEP) Supplementary Conditions is to complement and supplement other provisions of the Bidding Documents. However, if there is any conflict between the FDEP Supplementary Conditions and other provisions of the Bidding Documents, the FDEP Supplementary Conditions shall take precedence over the other provisions except when the other provisions are similar to, but more stringent than, the FDEP Supplementary Conditions. When other provisions of the Bidding Documents are similar to, but more stringent than, the FDEP Supplementary Conditions, the more stringent provisions shall apply.

ARTICLE 1 - DEFINITIONS

Wherever used in these Supplementary Conditions (except in the appendices to these Supplementary Conditions), the following terms have the meanings indicated, which are applicable to both the singular and plural thereof.

- 13.1 Addendum - A written or graphic instrument that is issued prior to the opening of bids and that clarifies, corrects, or changes the Bidding Documents.
- 13.2 Agreement or Contract - The written agreement between the Owner and the Contractor covering the Work to be performed and furnished; these Supplementary Conditions and other Contract Documents are attached to the Agreement/Contract and made a part thereof as provided therein.
- 13.3 Bid - The offer or proposal of a bidder submitted on the prescribed form and setting forth the price(s) for the Work to be performed and furnished.
- 13.4 Bidder - Any person, firm, or corporation that submits a bid directly to the Owner.
- 13.5 Bidding Documents - The Advertisement for Bids or the Invitation to Bid, the Instructions to Bidders or the Information for Bidders, the Bid Form, the proposed Contract Documents, and all addenda.
- 13.6 Bond - An instrument of security.
- 13.7 Change Order - A document that is recommended by the Engineer and signed by the Contractor and the Owner; that authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Time; and that is issued on or after the Effective Date of the Agreement/Contract.
- 13.8 Contract Documents - The Agreement/Contract; the Contractor's Bid when attached as an exhibit to the Agreement/Contract; the Performance and Payment Bond(s); the General Conditions; the Supplementary Conditions (including these Supplementary Conditions); the Specifications (written technical descriptions of material, equipment, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto); the Drawings (drawings that show the character and scope of the Work to be performed and furnished); all addenda that pertain to the Contract Documents; and all change orders.
- 13.9 Contract Time - The number of days or the date stated in the Contract Documents for completion of the Work.
- 13.10 Contractor - The person, firm, or corporation with whom or which the Owner enters into the Agreement/Contract.
- 13.11 Effective Date of the Agreement/Contract - The date indicated in the Agreement/Contract on which the Agreement/Contract becomes effective, or if no such date is indicated in the Agreement/Contract, the date on which the Agreement/Contract is signed and delivered by the last of the two parties to sign and deliver the Agreement/Contract.
- 13.12 Engineer - The person, firm, or corporation named as such in the Contract Documents.
- 13.13 Minority Business Enterprise (MBE) - A historically Black college or university or a business that is (a) certified as socially and economically disadvantaged by the Small Business Administration, (b) certified as an MBE by a state or federal agency, or (c) an independent business concern which is at least 51-percent owned and controlled by minority group members. (A minority group member is an individual who is a citizen of the United States and one of the following: [i] Black American; [ii] Hispanic American [with origins from Puerto Rico, Mexico, Cuba, or South or Central America]; [iii] Native American [American Indian, Eskimo, Aleut, or native Hawaiian]; or [iv] Asian-Pacific American

[with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, Taiwan, or the Indian Subcontinent].)

13.14 Notice to Proceed -The written notice given by the Owner to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contractor shall start to perform its obligations under the Contract Documents.

13.15 Owner - The local government (municipality, county, district, or authority; or any agency thereof; or a combination of two or more of the foregoing acting jointly) with which the Florida Department of Environmental Protection (FDEP) may execute, or has executed, a State Revolving Fund loan agreement and for which the Work is to be provided.

13.16 Project - The total construction or facilities described in a State Revolving Fund loan agreement between the FDEP and the Owner, of which the Work to be provided under the Contract Documents may be the whole or a part.

13.17 Sponsor – The recipient of the State Revolving Fund loan agreement that provides funds for the project.

13.18 Subcontract - A direct contract between a subcontractor and the Contractor, or any other subcontractor at any tier, for the furnishing of goods (material and equipment) or the performance of services (including construction) necessary to complete the Work.

13.19 Subcontractor - A person, firm, or corporation having a direct contract with the Contractor, or any other subcontractor at any tier, for the furnishing of goods (material and equipment) or the performance of services (including construction) necessary to complete the Work.

13.20 Successful Bidder - The lowest responsive, responsible bidder to whom or which the Owner intends to award the Agreement/Contract.

13.21 Women's Business Enterprise (WBE) - A business that is (a) certified as a WBE by a state or federal agency or (b) an independent business concern which is at least 51-percent owned and controlled/operated by women. (Determination of whether a business is at least 51-percent owned by women shall be made without regard to community property laws [e.g., an otherwise qualified WBE that is 51-percent owned by a married woman in a community property state will not be disqualified because the married woman's husband has a 50-percent interest in the married woman's share of the business; similarly, a business that is 51-percent owned by a married man and 49-percent owned by women will not become a qualified WBE by virtue of the married man's wife having a 50-percent interest in the married man's share of the business].)

13.22 Work - The entire completed construction or the various separately identifiable parts thereof required to be performed and furnished under the Contract Documents; Work is the result of performing services, furnishing labor, furnishing material and equipment, and incorporating material and equipment into the construction as required by the Contract Documents.

ARTICLE 2 - PRIVACY OF AGREEMENT/CONTRACT

2.1. The Owner expects to finance this Agreement/Contract with assistance from the FDEP, which administers a State Revolving Fund loan program supported in part with funds directly made available by grants from the United States Environmental Protection Agency (USEPA). Neither the State of Florida nor the United States (nor any of their departments, agencies, or employees) will be a party to this Agreement/Contract or any lower-tier subcontract.

ARTICLE 3 - PROCUREMENT REQUIREMENTS

3.1. This Agreement/Contract and the Owner's solicitation and award of this Agreement/Contract are subject to requirements contained in Chapter 62-503 (Revolving Loan Program) and/or Chapter 62-552, Florida Administrative Code as applicable.

ARTICLE 4 - RESOLUTION OF PROTESTS AND CLAIMS/DISPUTES

Resolution of Protests Concerning the Owner's Solicitation and/or Award of this Agreement/Contract:

4.1. Protests concerning the Owner's solicitation and/or award of this Agreement/Contract must be filed in writing with the Owner to be considered.

4.2. All timely written protests concerning the Owner's solicitation and/or award of this Agreement/Contract are to be resolved in accordance with the Owner's dispute resolution process. A copy of the ordinance(s), resolution(s), or written policy (policies) that set forth the Owner's dispute resolution process is included elsewhere in the Bidding Documents or is to be made available by the Owner upon request.

4.3. Neither the (FDEP) nor the USEPA will become a party to, or have any role in resolving, protests concerning the Owner's solicitation and/or award of this Agreement/Contract. Protest decisions made by the Owner cannot be appealed to the FDEP or the USEPA.

Resolution of Claims and Disputes Between the Owner and the Contractor:

4.4. Unless otherwise provided in the Contract Documents, all claims and disputes between the Owner and the Contractor arising out of, or relating to, the Contract Documents or the breach thereof are to be decided by arbitration (if the Owner and the Contractor mutually agree) or in a court of competent jurisdiction within the State of Florida.

4.5. Neither the FDEP nor the USEPA will become a party to, or have any role in resolving, claims and disputes between the Owner and the Contractor.

ARTICLE 5 - CHANGES TO THE BIDDING AND CONTRACT DOCUMENTS

5.1. All changes to the Bidding Documents made subsequent to the FDEP's acceptance of the Bidding Documents and prior to the opening of bids are to be documented via addendum (addenda) to the Bidding Documents; all changes to the Contract Documents made after the opening of bids are to be documented by change order(s) to the Contract Documents. The Owner shall submit all addenda and change orders to the FDEP.

ARTICLE 6 - BONDS AND INSURANCE

Bid Guarantees:

6.1. Each bidder's bid is to be accompanied by a bid guarantee made payable to the Owner in an amount at least equal to five percent of the bidder's maximum bid price and in the form of a certified check or bid bond.

Performance and Payment Bond(s):

6.2. The Contractor shall furnish a combined performance and payment bond in an amount at least equal to 100 percent of the Contract Price (or, if required elsewhere in the Contract Documents, the Contractor shall furnish separate performance and payment bonds, each in an amount at least equal to 100 percent of the Contract Price) as security for the faithful performance and payment of all the Contractor's obligations under the Contract Documents. This(these) bond(s) are to be delivered to the Owner by the Contractor along with the executed Agreement/Contract. The Owner shall forward a copy of this (these) bond(s) to the FDEP.

Insurance:

6.3. The Owner and/or the Contractor (as required elsewhere in the Contract Documents) shall purchase and maintain, during the period of construction, such liability insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims that may arise out of, or result from, the Contractor's performance and furnishing of the Work (whether the Work is to be performed or furnished by the Contractor or any subcontractor at the Work site) and the Contractor's other obligations under the Contract Documents. This insurance is to include workers' compensation insurance, comprehensive general liability insurance, comprehensive automobile liability insurance, and contractual liability insurance applicable to the Contractor's indemnification obligations and is to be written for not less than the limits of liability and coverages determined by the Owner or required by law, whichever is greater.

6.4. The Owner and/or the Contractor (as required elsewhere in the Contract Documents) shall purchase and maintain, during the period of construction, property insurance upon the Work at the Work site in an amount equal to the full replacement cost of the Work or the full insurable value of the Work. This insurance is to include the interests of the Owner, the Contractor, and all subcontractors at the Work site (all of whom are to be listed as insured or additional insured parties); is to insure against the perils of fire and extended coverage; and is to include "all-risk" insurance for physical loss or damage due to theft, vandalism and malicious mischief, collapse, water damage, and/or all other risks against which coverage is obtainable.

6.5. Before any Work at the Work site is started, the Contractor shall deliver to the Owner certificates of insurance that the Contractor is required to purchase and maintain in accordance with Paragraphs 6.3 and 6.4 of this Article and other provisions of the Contract Documents, and the Owner shall deliver to the Contractor certificates of insurance that the Owner is required to purchase and maintain in accordance with Paragraphs 6.3 and 6.4 of this Article and other provisions of the Contract Documents.

ARTICLE 7 - AWARD OF AGREEMENT/CONTRACT

7.1. If this Agreement/Contract is awarded, it is to be awarded to the lowest responsive, responsible bidder. A fixed price (lump sum or unit price or both) agreement/contract is to be used. A clear explanation of the method of evaluating bids and the basis for awarding this Agreement/Contract are included elsewhere in the Bidding Documents. All bids may be rejected when in the best interest of the Owner. After the contract has been awarded, the Owner shall give the Contractor a notice to proceed fixing the date on which the Contract Time will commence to run. The Owner shall forward a copy of this notice to proceed to the FDEP.

ARTICLE 8 - ITEMIZED CONSTRUCTION COST BREAKDOWN; CONSTRUCTION AND PAYMENT SCHEDULES

8.1. The Contractor shall submit to the Owner, within ten calendar days after the Effective Date of this Agreement/Contract, an itemized construction cost breakdown and construction and payment schedules.

8.1.1. The itemized construction cost breakdown, or schedule of values, is to include quantities and prices of items aggregating the Contract Price and is to subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices are to include an appropriate amount of overhead and profit applicable to each item of Work.

8.1.2. The construction, or progress, schedule is to indicate the Contractor's estimated starting and completion dates for the various stages of the Work and is to show both the projected cost of Work completed and the projected percentage of Work completed versus Contract Time.

8.1.3. The payment schedule is to show the Contractor's projected payments cumulatively by month.

ARTICLE 9 – FDEP/USEPA ACCESS TO RECORDS AND PROJECT SITE

9.1. Authorized representatives of the Owner, the FDEP, and the USEPA shall have access to, for the purpose of inspection, the Work site(s), any books, documents, papers, and records of the Contractor that are pertinent to this Agreement/Contract at any reasonable time. The Contractor shall retain all books, documents, papers, and records pertinent to this Agreement/Contract for a period of five years after receiving and accepting final payment under this Agreement/Contract.

NOTE: ARTICLE 10 ONLY APPLIES TO FEDERAL CAP GRANT PROJECTS

ARTICLE 10 - DISADVANTAGED BUSINESS ENTERPRISES

10.1 A goal of five percent of the Contract Price is established for Minority Business Enterprise (MBE) participation in the Work, and a goal of five percent of the Contract Price is established for Women's Business Enterprise (WBE) participation in the Work. If bidders or prospective contractors (including the Contractor) intend to let any lower-tier goods

or services (including construction) subcontracts for any portion of the Work, they shall physically include these percentage goals for MBE and WBE participation in all solicitations for subcontracts and shall take good faith efforts to assure that MBEs and WBEs are utilized, when possible, as sources of goods and services. Good faith efforts are to include the following:

10.1.1. Require Disadvantaged Business Enterprises (DBEs) are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.

10.1.2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

10.1.3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

10.1.4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.

10.1.5. Use the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

10.1.6. If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs 10.1.1 through 10.1.5 of this section.

10.2. Within ten calendar days after being notified of being the apparent Successful Bidder, the apparent Successful Bidder shall submit to the Owner documentation of the affirmative steps it has taken to utilize Minority and Women's Business Enterprises (MBEs and WBEs) in the Work and documentation of its intended use of MBEs and WBEs in the Work. The Owner shall keep this documentation on file and shall forward to the FDEP a copy of the apparent Successful Bidder's documentation concerning its intended use of MBEs and WBEs in the Work.

ARTICLE 11 - DEBARMENT AND SUSPENSION (EXECUTIVE ORDER 12549)

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

11.1. The bidder certifies, by submission of this proposal, that neither the bidder nor its principals, nor the bidder's subcontractors nor their principals, are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

11.2. Where the bidder is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

11.3. The bidder also certifies that it and its principals and the bidder's subcontractors and their principals:

11.3.1. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

11.3.2. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in paragraph 11.3.1 of this certification; and

11.3.3. Have not within a three-year period preceding this proposal had one or more public transactions (federal, state or local) terminated for cause or default. Where the bidder is unable to certify to any of the above, such owner shall attach an explanation to this proposal.

11.3.4. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

11.3.5. The bidder shall incorporate the foregoing requirements 11.1 through 11.3 in all subcontracts.

ARTICLE 12 - EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

12.1. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246). (Applicable to contracts/subcontracts exceeding \$10,000)

12.1.1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

12.1.2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in Florida, are as follows:

Goal for female participation: 6.9 percent statewide

Goal for minority participation: (See Appendix B at FDEP-20 for goals for each county)

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

12.1.3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

12.1.4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the State of Florida.

12.1.5. Contractors shall incorporate the foregoing requirements in all subcontracts.

12.2. Equal Opportunity Clause (Applicable to contracts/subcontracts exceeding \$10,000)

During the performance of this contract, the contractor agrees as follows:

12.2.1. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

12.2.2. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. The notice can be obtained online at http://www.eeoc.gov/employers/upload/eeoc_self_print_poster.pdf. The Contractor shall state that all qualified applicants be considered without regard to race, color, religion, sex or national origin.

12.2.3. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

12.2.4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

12.2.5. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

12.2.6. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

12.2.7. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

12.2.8. The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs 12.2.1 through 12.2.8 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

12.3. The Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

12.3.1. As used in these specifications:

- a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
- b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

12.3.2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

12.3.3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

12.3.4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing construction work in geographical areas where they do not have a federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the FEDERAL REGISTER in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

12.3.5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

12.3.6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

12.3.7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

- a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
- b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

- c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 12.3.7b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

- n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

12.3.8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (12.3.7a through 12.3.7p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

12.3.9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

12.3.10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

12.3.11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12.3.12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

12.3.13. The Contractor, in fulfilling its obligation under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

12.3.14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

12.3.15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

12.4. Pursuant to 41 CFR 60-1.7, if the price of this bid exceeds \$10,000, the bidder, by signing and submitting this proposal, certifies the following:

- 12.4.1. Affirmative action programs pursuant to 41 CFR 60-2 have been developed and are on file;
- 12.4.2. Documentation of a previous contract or subcontract subject to the equal opportunity clause is available;
- 12.4.3. All reports due under the applicable filing requirements have been filed with the Joint Reporting Committee, the Deputy Assistant Secretary or the Equal Employment Opportunity Commission; and
- 12.4.4. Each prospective construction subcontractor that may be awarded a lower-tier construction subcontract with a price exceeding \$10,000 shall meet the above requirements 12.4.1 through 12.4.3.

12.5. Pursuant to 41 CFR 60-1.8, if the price of this bid exceeds \$10,000, the bidder, by signing and submitting this proposal, certifies the following:

- 12.5.1. That he/she does not maintain or provide for his/her employees any segregated facility at any of his/her establishments;
- 12.5.2. That he/she does not permit employees to perform their services at any location, under his/her control, where segregated facilities are maintained;
- 12.5.3. That he/she will not maintain or provide for employees any segregated facilities at any of his/her establishments;
- 12.5.4. That he/she will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained;
- 12.5.5. That a breach of this certification is violation of the Equal Opportunity Clause of this contract; and
- 12.5.6. That he/she will obtain identical certifications from proposed Subcontractors prior to the award of Subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his/her files.

As used in this certification, the term “segregated facilities” means any waiting rooms, work eating areas, time clocks, locker rooms, and other storage or dressing areas, transportation and housing facilities provided for employees which are in fact segregated on the basis of race, color, religion, or otherwise.

12.6. If the price of this Agreement/Contract exceeds \$10,000, the Owner shall give written notice to the Director of the Office of Federal Contract Compliance Programs within ten working days of award of this Agreement/Contract. The notice is to include the name, address, and telephone number of the Contractor; the employer identification number of the Contractor; the dollar amount of this Agreement/Contract; the estimated starting and completion dates of this Agreement/Contract; the number of this Agreement/Contract; and the geographical area in which the Work is to be performed.

12.7. If the price of this Agreement/Contract equals or exceeds \$50,000 and if the Contractor has 50 or more employees, the Contractor shall electronically file Standard Form 100 (EEO-1) online at <https://egov.eeoc.gov/eeo1/eeo1.jsp> within 30 calendar days after the award of this Agreement/Contract, unless the Contractor has submitted such a report within 12 months preceding the date of award of this Agreement/Contract. In addition, the Contractor shall ensure that each construction subcontractor having 50 or more employees and a lower-tier construction subcontract with a price equaling or exceeding \$50,000 also electronically files this form within 30 calendar days after the award to it of the lower-tier construction subcontract, unless the construction subcontractor has submitted such a report within 12 months preceding the date of award of the lower-tier construction subcontract.

ARTICLE 13 - IMMIGRATION REFORM AND CONTROL ACT OF 1986 (STATE OF FLORIDA EXECUTIVE ORDER 11-116)

The Immigration Reform and Control Act of 1986 prohibits employers from knowingly hiring illegal workers. The Contractor shall only employ individuals who may legally work in the United States – either U.S. citizens or foreign citizens who are authorized to work in the U.S. The Contractor shall use the U.S. Department of Homeland Security’s E-Verify Employment Eligibility Verification system (<http://www.uscis.gov/portal/site/uscis>) to verify the employment eligibility of:

- all new employees, during the term of this Agreement, to perform employment duties within Florida; and,
- all new employees (including subcontractors and subrecipients) assigned by the Contractor to perform work pursuant to this Agreement.

The Contractor shall include this provision in all subcontracts/subgrants it enters into for the performance of work under this Agreement.

ARTICLE 14 – ENVIRONMENTAL COMPLIANCE

The Contractor, and all subcontractors at any tier, shall comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857[h]), Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738 (Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans).

ARTICLE 15 – FEDERAL LABOR STANDARDS PROVISION

Contracts being constructed with assistance from the State Revolving Fund Program are currently required to comply with the Federal Labor Standards Provisions as provided in Appendix C. Signing Appendix A certifies compliance with these provisions.

ARTICLE 16 – AMERICAN IRON AND STEEL PROVISION

Contracts being constructed with assistance from the State Revolving Fund Program are currently required to comply with The American Iron and Steel Provision as provided in Appendix D. Signing Appendix A certifies compliance with these provisions.

ARTICLE 17 - PROHIBITED LOCAL GOVERNMENT CONSTRUCTION PREFERENCES

- A. Pursuant to Section 255.0991, F.S., for a competitive solicitation for construction services in which 50 percent or more of the cost will be paid from state-appropriated funds which have been appropriated at the time of the competitive solicitation, a state, college, county, municipality, school district, or other political subdivision of the state may not use a local ordinance or regulation that provides a preference based upon:
1. The contractor’s maintaining an office or place of business within a particular local jurisdiction;
 2. The contractor’s hiring employees or subcontractors from within a particular local jurisdiction; or
 3. The contractor’s prior payment of local taxes, assessments, or duties within a particular local jurisdiction.
- B. For any competitive solicitation that meets the criteria in Paragraph A., a state college, county, municipality, school district, or other political subdivision of the state shall disclose in the solicitation document that any applicable local ordinance or regulation does not include any preference that is prohibited by Paragraph A.

**APPENDIX A TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SUPPLEMENTARY CONDITIONS**

**CERTIFICATION OF COMPLIANCE WITH THE FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS**

This certification relates to a construction contract proposed by _____,
(insert the name of the Owner)

which expects to finance the proposed construction contract with assistance from the Florida Department of Environmental Protection (which administers a State Revolving Fund loan program supported in part with funds directly made available by grants from the United States Environmental Protection Agency). I am the undersigned prospective construction contractor or subcontractor.

I certify that I have read the Florida Department of Environmental Supplementary Conditions and agree to incorporate the following articles into the bid and/or contract:

ARTICLE 11 DEBARMENT AND SUSPENSION (EXECUTIVE ORDER 12549)

ARTICLE 12 EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

ARTICLE 13 IMMIGRATION REFORM AND CONTROL ACT OF (STATE OF FLORIDA EXECUTIVE ORDER 11-116)

ARTICLE 14 ENVIRONMENTAL COMPLIANCE

ARTICLE 15 FEDERAL LABOR STANDARDS PROVISION

ARTICLE 16 AMERICAN IRON AND STEEL PROVISION

I agree that I will obtain identical certifications from prospective lower-tier construction subcontractors prior to the award of any lower-tier construction subcontracts with a price exceeding \$2,000. I also agree that I will retain such certifications in my files.

(Signature of Authorized Official)

(Date)

(Name and Title of Authorized Official [Print or Type])

(Name of Prospective Construction Contractor or Subcontractor [Print or Type])

(Address and Telephone Number of Prospective Construction Contractor or Subcontractor [Print or Type])

(Employer Identification Number of Prospective Construction Contractor or Subcontractor)

APPENDIX B TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS

GOALS AND TIMETABLES FOR MINORITIES AND FEMALES

[Note: These goals and timetables are the goals and timetables referred to in Paragraph 2 of the "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)"; these goals and timetables are to be included in all FDEP assisted construction contracts and subcontracts with a price exceeding \$10,000 and in all solicitations for such contracts and subcontracts.]

The following goals and timetables for female utilization shall be included in all federal and federally assisted construction contracts and subcontracts in excess of \$10,000. The goals are applicable to the contractor's aggregate on-site construction workforce whether or not part of that workforce is performing work on a federal or federally assisted construction contract or subcontract.

Area covered: Goals for Women apply nationwide.

Goals and Timetables

Timetable	Goals (percent)
Indefinite	6.9

Goals for minority utilization can be found in the Department of Labor's Technical Assistance Guide for Federal Construction Contractors (May 2009), available on the internet at <http://www.civilrightsusa.gov/pdf/TAG%20-%20Constuction.pdf>. These goals shall be included for each craft and trade in all federal or federally assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor's total onsite construction workforce, regardless of whether or not part of that workforce is performing work on a federal, federally assisted or non-federally related project, contract or subcontract.

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply with the applicable SMSA or EA goal contained in this Appendix.

APPENDIX C
TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SUPPLEMENTARY CONDITIONS

Davis-Bacon Requirements

FEDERAL LABOR STANDARDS PROVISIONS

(Davis-Bacon Act, Copeland Act, and Contract Works Hours & Safety Standards Act)

The Project to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such federal assistance.

1 Minimum Wages.

(i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act, 29 CFR Part 3, the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR Part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii) (a) The sponsor, on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The FDEP shall approve a request for an additional classification and wage rate and fringe benefits; therefore, only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the sponsor(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the sponsor to the FDEP. The FDEP will transmit the request to the Administrator of the Wage and Hour Division, employment Standards Administration, U. S. Department of Labor. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional

classification action within 30 days of receipt and so advise the FDEP or will notify FEDP within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event that the Contractor, the laborers or mechanics to be employed in the Classification or their representatives, and the sponsor do not agree on the proposed classification and wage rate (including the amount designed for fringe benefits, where appropriate), the FDEP shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of FDEP, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account, assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding.

The sponsor shall, upon written request of the EPA or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, EPA may, after written notice to the contractor, sponsor, applicant, or owners, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017).

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed, a copy of all payrolls to the sponsor. Such documentation shall be available upon request by FDEP. As to each payroll copy received, the sponsor shall provide a certification that the project is in compliance with the requirements of 29 CFR 5.5(a)(1) with each disbursement request. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3)(I), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead, the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current addresses of each covered worker, and shall provide them upon request to the sponsor for transmission to the FDEP or EPA if requested by EPA, the FDEP, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsor. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149).

(b) Each payroll submitted shall be accompanied by a Statement of Compliance, signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR Part 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR Part 5.5 (a)(3)(I), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Option Form WH-347 shall satisfy the requirement for submission of the Statement of Compliance required by paragraph A. 3(ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3(I) of this section available for inspection, copying, or transcription by authorized representatives of the FDEP or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FDEP may, after written notice to the contractor, or sponsor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U. S. Department of Labor, the Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio

of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program, shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with the determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U. S. Department of Labor, the Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program the contract will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

6. Subcontracts.

The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination, Debarment.

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3 and 5 are herein incorporated by referenced in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the sponsor, FDEP, EPA, the U. S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded EPA contracts or participate in EPA programs pursuant to Executive Order 12549.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded EPA contracts or participate in EPA programs pursuant to Executive Order 12549.

(iii) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U. S. C. 1001. Additionally, U. S. Criminal Code, Section 1010, Title 18, U. S. C., Federal Housing Administration transactions, provides in part "Whoever, for the purpose of . . . influencing in any way the action of such Administration . . . makes, utters or publishes any statement, knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both".

11. Complaints, Proceedings, or Testimony by Employees.

A. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this contract are applicable shall be discharged or in any other manner discriminated against by the contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this contract to his employer.

B. Contract Work Hours and Safety Standards Act. The sponsor shall insert the following clauses set forth in paragraphs B.(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by item 3 above or 29 CFR 4.6. As used in the paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. The sponsor, upon written request of the FDEP or an authorized representative of the Department of Labor, may withhold or cause to be withheld, from any moneys payable on

account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contract, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54.83 State 96).

(3) The contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

12. Guidance to Contractor for Compliance with Labor Standards Provisions

a) Contracts with Two Wage Decisions

If the contract includes two wage decisions, the contractor, and each subcontractor who works on the site, must submit either two separate payrolls (one for each wage decision) or one payroll which identifies each worker twice and the hours worked under each wage decision. One single payroll, reflecting each worker once, may be submitted provided the Contractor uses the higher rate in the wage decisions for each identical job classification. However, where a job classification is not listed in a wage decision and is needed for that portion of the work, the classification **must** be added to the wage decision. A worker may not be paid at the rate for a classification using the hourly rate for that same classification in another wage decision. After the additional classification is approved, the contractor may pay the higher of the two rates and submit one payroll, if desired.

b) Complying with Minimum Hourly Amounts

1) The minimum hourly amount due to a worker in each classification is the total of the amounts in the Rates and Fringe Benefits (if any) columns of the applicable wage decision.

2) The contractor may satisfy this minimum hourly amount by any combination of cash and bona fide fringe benefits, regardless of the individual amounts reflected in the Rates and Fringe Benefits columns.

3) A contractor payment for a worker which is required by law is not a fringe benefit in meeting the minimum hourly amount due under the applicable wage decision. For example, contractor payments for FICA or unemployment insurance are not a fringe benefit; however, contractor payments for health insurance or retirement are a fringe benefit. Generally, a fringe benefit is bona fide if (a) it is available to most workers and (b) involves payments to a third party.

4) The hourly value of the fringe benefit is calculated by dividing the contractor's annual cost (excluding any amount contributed by the worker) for the fringe benefit by 2080. Therefore, for workers with overtime, an additional payment may be required to meet the minimum hourly wages since generally fringe benefits have no value for any time worked over 40 hours weekly. (If a worker is paid more than the minimum rates required by the wage decision, this should not be a problem. As long as the total wages received by a worker for straight time equals the hours worked times the minimum hourly rate in the wage decision, the requirement of the Davis-Bacon and Related Acts has been satisfied.)

c) Overtime

For any project work over 40 hours weekly, a worker generally must be paid 150% of the actual hourly cash rate received, not the minimum required by the wage decision. (The Davis-Bacon and Related Acts only establishes minimum rates and does not address overtime. The Contract Work Hours Act contains the overtime requirement and uses basic rate of pay as the base for calculation, not the minimum rates established by the Davis-Bacon and Related Acts.)

d) Deductions

Workers who have deductions, not required by law, from their pay must authorize these deductions in writing. The authorization must identify the purpose of each deduction and the amount, which may be a specific dollar amount or a percentage. A copy of the authorization must be submitted with the first payroll containing the deduction. If deducted amounts increase, another authorization must be submitted. If deducted amounts decrease, no revision to the original authorization is needed. Court-ordered deductions, such as child support, may be identified by the responsible payroll person in a separate document. This document should identify the worker, the amount deducted and the purpose. A copy of the court order should be submitted.

e) Classifications Not Included in the Wage Decision

If a classification not in the wage decision is required, please advise the owner's representative in writing and identify the job classification(s) required. In some instances, the state agency may allow the use of a similar classification in the wage decision.

Otherwise, the contractor and affected workers must agree on a minimum rate, which cannot be lower than the lowest rate for any trade in the wage decision. Laborers (including any subcategory of the laborer classification) and truck drivers are not considered a trade for this purpose. If the classification involves a power equipment operator, the minimum cannot be lower than the lowest rate for any power equipment operator in the wage decision. The owner will provide forms to document agreement on the minimum rate by the affected workers and contractor.

The U.S. Department of Labor (USDOL) must approve the proposed classification and rate. The contractor may pay the proposed rate until the USDOL makes a determination. Should the USDOL require a higher rate, the contractor must make wage restitution to the affected worker(s) for all hours worked under the proposed rate.

f) Supervisory Personnel

Foremen and other supervisory personnel who spend at least 80% of their time supervising workers are not covered by the Davis-Bacon and Related Acts. Therefore, a wage decision will not include such supervisory classifications and their wages are not subject to any minimums under the Davis-Bacon and Related Act or overtime payments under the Contract Work Hours and Safety Standards Act. However, foremen and other supervisory personnel who spend less than 80% of their time engaged in supervisory activities are considered workers/mechanics for the time spent engaged in manual labor and must be paid at least the minimum in the wage decision for the appropriate classification(s) based on the work performed.

g) Sole Proprietorships / Independent Contractors / Leased Workers

The nature of the relationship between a prime contractor and a worker does not affect the requirement to comply with the labor standards provisions of this contract. The applicability of the labor standards provisions is based on the nature of the work performed.

If the work performed is primarily manual in nature, the worker is subject to the labor standards provisions in this contract. For example, if John Smith is the owner of ABC Plumbing and performs all plumbing work himself, then Mr. Smith is subject to the labor standards provisions, including minimum wages and overtime. His status as owner is irrelevant for labor standards purposes.

If a worker meets the IRS standards for being an independent contractor, and is employed as such, this means that the worker must submit a separate payroll as a subcontractor rather than be included on some other payroll. The worker is still subject to the labor standards provisions in this contract, including minimum wages and overtime.

If a contractor or subcontractor leases its workers, they are subject to the labor standards provisions in this contract, including minimum wages and overtime. The leasing firm must submit payrolls and these payrolls must reflect information required to determine compliance with the labor standards provisions of this contract, including a classification for each worker based on the nature of the work performed, number of regular hours worked, and number of overtime hours worked.

h) Apprentices / Helpers

A worker may be classified as an apprentice **only if participating in a federal or state program**. Documentation of participation must be submitted. Generally, the apprentice program specifies that the apprentice will be compensated at a percentage of journeyman rate. For Davis-Bacon Act purposes, the hourly rate cannot be lower than the percentage of the hourly rate for the classification in the applicable wage decision.

If the worker does not participate in a federal or state apprentice program, then the worker must be classified according to duties performed. This procedure may require classification in the trade depending on tools used, or as a laborer if specialized tools of the trade are not used. The contractor may want to consult with the Wage and Hour Division of the U.S. Department of Labor located in most large cities regarding the appropriate classification.

Presently, no worker may be classified as a helper. As with apprentices not participating in a formal apprentice program, the worker must be classified according to duties performed and tools used.

APPENDIX D TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION SUPPLEMENTARY CONDITIONS

American Iron and Steel Requirement

The Contractor acknowledges to and for the benefit of the _____ ("Owner") and the State of Florida (the "State") that it understands that iron and steel products to be installed as a part of this contract must be in compliance with the requirements in H.R. 3547, "Consolidated Appropriations Act, 2014," (Appropriations Act). H.R. 3547 includes the following language in Division G, Title IV, Sec. 436, under the heading, "Use of American Iron and Steel,":

(a) (1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the "Administrator") finds that--

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

For waivers to these requirements based on (2)(b) above, contact Sheryl Parsons at USEPA Region IV. She can be reached by phone at (404) 562-9337.

General Decision Number: FL180150 08/17/2018 FL150

Superseded General Decision Number: FL20170150

State: Florida

Construction Type: Heavy

County: Broward County in Florida.

HEAVY CONSTRUCTION PROJECTS (Including Sewer and Water Lines)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018
1	06/01/2018
2	08/17/2018

ELEC0728-006 03/01/2018

	Rates	Fringes
ELECTRICIAN.....	\$ 31.50	11.82

ENGI0487-014 07/01/2013

	Rates	Fringes
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OPERATOR: Crane
All Tower Cranes Mobile,
Rail, Climbers, Static-
Mount; All Cranes with
Boom Length 150 Feet &
Over (With or without jib)
Friction, Hydraulic,
Electric or Otherwise;
Cranes 150 Tons & Over;
Cranes with 3 Drums (When
3rd drum is rigged for

work); Gantry & Overhead Cranes; Hydraulic Cranes Over 25 Tons but not more than 50 Tons; Hydraulic/Friction Cranes; & All Types of Flying Cranes; Boom Truck.....\$ 29.05	8.80
Cranes with Boom Length Less than 150 Feet (With or without jib); Hydraulic Cranes 25 Tons & Under, & Over 50 Tons (With Oiler); Boom Truck.....\$ 28.32	8.80
OPERATOR: Drill.....\$ 25.80	8.80
OPERATOR: Oiler.....\$ 22.99	8.80

IRON0272-005 10/01/2017

	Rates	Fringes
IRONWORKER, STRUCTURAL.....\$ 24.89		10.10

* LAB01652-004 05/01/2018

	Rates	Fringes
LABORER: Grade Checker.....\$ 22.05		7.27

* PAIN0365-007 08/01/2018

	Rates	Fringes
PAINTER: Brush, Roller and Spray.....\$ 20.21		10.73

SUFL2009-146 06/24/2009

	Rates	Fringes
CARPENTER, Includes Form Work....\$ 17.00		2.51
CEMENT MASON/CONCRETE FINISHER...\$ 15.00		8.64
LABORER: Common or General.....\$ 9.87		3.24
LABORER: Landscape.....\$ 7.25		0.00
LABORER: Pipelayer.....\$ 14.00		2.42
LABORER: Power Tool Operator (Hand Held Drills/Saws, Jackhammer and Power Saws Only).....\$ 10.63		2.20
OPERATOR: Asphalt Paver.....\$ 11.59		0.00
OPERATOR: Backhoe Loader		

Combo.....	\$ 16.10	2.44
OPERATOR: Backhoe/Excavator.....	\$ 18.77	1.87
OPERATOR: Bulldozer.....	\$ 14.95	0.81
OPERATOR: Grader/Blade.....	\$ 16.00	2.84
OPERATOR: Loader.....	\$ 14.00	2.42
OPERATOR: Mechanic.....	\$ 14.32	0.00
OPERATOR: Roller.....	\$ 10.95	0.00
OPERATOR: Scraper.....	\$ 11.00	1.74
OPERATOR: Trackhoe.....	\$ 20.92	5.50
OPERATOR: Tractor.....	\$ 10.54	0.00
TRUCK DRIVER, Includes Dump Truck.....	\$ 9.60	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 12.73	0.00
TRUCK DRIVER: Off the Road Truck.....	\$ 12.21	1.97

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those

classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the

interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 THE REQUIREMENT

- A. The CONTRACTOR shall at all times maintain at the site of the project a record copy of:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other modifications to the Contract.
 - 5. Approved Shop Drawings, Product Data and Samples.
 - 6. Field Test Records.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. All applicable sections of the Specifications.
- B. General conditions.

MAINTENANCE OF DOCUMENTS AND SAMPLES

- C. Store documents and samples in CONTRACTOR'S field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide locked cabinet or secure storage space for storage of samples.
- D. File documents and samples in accordance with CSI format.
- E. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- F. Make documents and samples available at all times for inspection by CITY'S Representatives.

1.3 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color code designated by PROGRAM MANAGER.

1.4 RECORDING

Definition: The Project Record is the updated and revised plans and specifications, including a running account of all known revisions and changes made to the original plans and specifications, complete with copies of any field sketches and clarifications, issued over the course of construction. The Project Record is the responsibility of the CONTRACTOR.

- A. The CONTRACTOR shall label each document, "PROJECT RECORD" in neat large printed letters, or by rubber stamp.
- B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

- C. Drawings: Legibly mark to record actual construction:
 - 1. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by Field Order or by Change Order.
 - 5. Details not on original Contract Drawings.
 - 6. The Record Drawing set shall show benchmark positions and their vertical values. Benchmarks are optional for Plan Views, but required for Profile Views.
- D. Specifications and Addenda; Legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number, and supplier of each produce and item of equipment actually installed.
 - 2. Changes made by field order or by Change Order.

1.5 RECORD DRAWINGS

Definition: The Record Drawings are a revised set of drawing submitted by a contractor upon completion of a project. They reflect all changes made in the specifications and working drawings during the construction process, and show the exact dimensions, geometry, and location of all elements of the work completed under the contract.

- A. The CONTRACTOR shall maintain full size (24"X 36") project record to reflect the "record" items of work as the work progresses. Upon completion of the work, the CONTRACTOR shall prepare a set of record drawings on full-size, reproducible material and an electronic file in (DWG format, AutoCAD, Version 2011 or more recent version OR GIS). The record drawings will, in the greatest possible detail, reproduce the exact final conditions of the entire project. Including, but not limited to, final survey, utilities, architecture, structural, civil conditions, electrical, mechanical, paving, landscaping, irrigation, updating all details and all notes, parking, and any other plans related to a specific project. For the purpose of producing the final record drawings, based on the project record, the CONSULTANT will furnish one set of full size design drawings on reproducible material and an electronic file (DWG format, AutoCAD, Version 2011 or more recent version OR GIS) to the CONTRACTOR on compact disk or any other electronic means.

Definition: Design drawings or construction drawings, are drawings that are subject to clarifications, but are complete with enough information (plan, sections, dimensions, details, and notes, etc.) to enable the depicted item's construction or replication without additional information.

- B. At a minimum the project record shall be reviewed on the 20th working day of every third month, or more often, as deemed necessary by PROGRAM MANAGER, after the month in which the final Notice-to Proceed is given as well as on completion of WORK. Failure to maintain the project record up-to-date shall be grounds for withholding monthly progress payments until such time as the record drawings are brought up-to date.
- C. The project record shall be accessible to the CITY at all times during construction period.
- D. The cost of maintaining record changes, and preparation of the record drawings shall be included in the unit prices bid for the affected items. Upon completion of the WORK, the CONTRACTOR shall furnish the PROGRAM MANAGER the set of record drawings on full-size, reproducible material and an electronic file in (DWG format, AutoCAD, Version

2011 or more recent version OR GIS) Pay request quantities must match this same set of record drawings . The completed Record drawings shall be delivered to the PROGRAM MANAGER at least 48 hours prior to final inspection of the work. The Final Inspection will not be conducted unless the Record Drawings are in the possession of the PROGRAM MANGER.

- E. The completed (or final) record drawings shall be certified by a Professional Land Surveyor, a registered and licensed Architect, a registered and licensed Engineer, a registered and licensed Landscape Architect, registered in the State of Florida. This certification shall consist of the professional discipline official's embossed seal bearing the professional discipline official's registration number, signature and date on each sheet of the drawing set. In addition, the key sheet, cover sheet or first sheet of the plans set shall list the business address and telephone number for all of the professional discipline officials.
- F. Representative items of work that should be shown on the record drawings as verified, changed or added are shown below:
 - 1. All deviations from condition shown in the Construction Documents including Change Orders, Field Orders and other varying conditions.
 - 2. Every utility (gas, telephone, power, water, force main, etc.) encountered and/or crossing drainage, water or sanitary sewer facilities (whether it is a conflict or has sufficient clearances) shall be located, both horizontally and vertically. The clearance between the facilities horizontal and vertical shall be noted. For instance, if a 2-inch gas main crosses over the top of a 6-inch potable water main, the bottom elevation of the gas main shall be noted and the top of the water main shall be noted. The difference between the two facilities will be the clearance between the two facilities. Parallel mains shall note the clearance between the outside of the mains. It shall be the CONTRACTOR's responsibility to note these crossings on a daily basis and insure that this information is reflected on the Record Drawing plan set. Crossings will not require state plane coordinates.
 - 3. Pipelines that are "dead" or have been abandoned shall be located during construction and shall be annotated Record Drawing Plans.
 - 4. As-built survey drawings shall meet applicable minimum technical standards for land surveys as outlined in Section 61G17 of the Florida Administrative Code.

NOTE: For technical information on AutoCAD and GIS, please refer to the "Electronic As Built Requirements" located on the City Engineering Website:
http://pompanobeachfl.gov/assets/docs/pages/engineering/as_built.pdf

PART 2 -PRODUCTS (Not Applicable)

PART 3 -EXECUTION (Not Applicable)

END OF SECTION -01720

COMPLIANCE WITH 2 C.F.R. PART 200, APPENDIX II
(SUPPLEMENTAL PROVISIONS APPLICABLE TO PROCUREMENTS
FUNDED IN WHOLE OR IN PART THROUGH ANY FEDERAL AWARD OR GRANT)

The Successful Contractor shall be required to adhere to the requirements set forth in this Exhibit, which may be incorporated into the Contract resulting from_____ (the "Bid"). References to "MUNICIPALITY" shall refer to the City of Pompano Beach, Florida, and references to "CONTRACTOR" shall refer to the Contractor awarded the Bid.

CONTRACTOR AGREES TO ABIDE BY THE FOLLOWING REQUIREMENTS:

EQUAL EMPLOYMENT OPPORTUNITY

CONTRACTOR must comply with Executive Order 11246 (3 CFR, 1964-1965 Comp., p. 339), "Equal Employment Opportunity," as amended by Executive Order 11375 (3 CFR, 1966-1970 Comp., p. 684), "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR Part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." In accordance with such requirements, during the performance of this Contract, CONTRACTOR agrees as follows:

- A. CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- B. CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- C. CONTRACTOR will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation,

proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with CONTRACTOR's legal duty to furnish information.

D. CONTRACTOR will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of CONTRACTOR's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

E. CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

F. CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

G. In the event of CONTRACTOR's non-compliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and CONTRACTOR may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

H. CONTRACTOR will include the provisions of subparagraphs (a) through (h) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. CONTRACTOR will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (CONTRACTS IN EXCESS OF \$100,000 THAT INVOLVE THE EMPLOYMENT OF MECHANICS OR LABORERS)

A. Overtime requirements. Neither CONTRACTOR or subcontractors contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (A) of this section CONTRACTOR and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, CONTRACTOR and such subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such

District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (A) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (A) of this section.

C. Withholding for unpaid wages and liquidated damages. MUNICIPALITY shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by CONTRACTOR or subcontractor under any such contract or any other Federal contract with the same prime contractor or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of CONTRACTOR or such subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (B) of this section.

D. Subcontracts. CONTRACTOR or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (A) through (D) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (A) through (D) of this section.

COMPLIANCE WITH CLEAN AIR AND CLEAN WATER ACTS

A. CONTRACTOR agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

B. CONTRACTOR agrees to report each violation to MUNICIPALITY and understands and agrees that MUNICIPALITY will, in turn, report each violation as required to assure notification to the Florida Division of Emergency Management, Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.

C. CONTRACTOR agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with federal assistance provided by FEMA.

FEDERAL WATER POLLUTION CONTROL ACT

A. CONTRACTOR agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

B. CONTRACTOR agrees to report each violation to MUNICIPALITY and understands and agrees that MUNICIPALITY will, in turn, report each violation as required to assure notification to the Florida Division of Emergency Management, FEMA, and the appropriate Environmental Protection Agency Regional Office.

C. CONTRACTOR agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with federal assistance provided by FEMA.

ENERGY EFFICIENCY

CONTRACTOR and each subcontractor shall comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201).

SUSPENSION AND DEBARMENT

Federal regulations restrict MUNICIPALITY from contracting with parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. Accordingly, a contract or subcontract must not be made with any parties listed on the System for Award Management (“SAM”) Exclusions list. SAM Exclusions is the list maintained by the General Services Administration that contains the name of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under certain statutory or regulatory authority.

(1) This Contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such CONTRACTOR is required to verify that none of CONTRACTOR, its principals (defined at 2 C.F.R. § 180.995), or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

(2) CONTRACTOR must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C during the term of this Contract and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

(3) CONTRACTOR must verify its status and the status of its principals, affiliates, and subcontractors at www.SAM.gov and complete the Debarment Certification attached hereto. This certification is a material representation of fact relied upon by MUNICIPALITY. If it is later determined that CONTRACTOR failed to comply, in addition to remedies available to the Florida Division of Emergency Management and MUNICIPALITY, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

CERTIFICATION REGARDING LOBBYING (CONTRACTS EXCEEDING \$100,000.00)

Contractor must complete the required Lobbying Certification attached hereto. Each tier must also certify to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

PROCUREMENT OF RECOVERED MATERIALS

(1) In the performance of this Contract, CONTRACTOR shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

- (i) Competitively within a timeframe providing for compliance with the Contract performance schedule;
- (ii) Meeting Contract performance requirements; or

(iii) At a reasonable price.

(2) Information about this requirement is available at EPA's Comprehensive Procurement Guidelines web site, <http://www.epa.gov/cpg/>. The list of EPA-designate items is available at <http://www.epa.gov/cpg/products.htm>.

ACCESS TO RECORDS

The following access to records requirements apply to this Contract:

A. CONTRACTOR agrees to provide MUNICIPALITY, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of CONTRACTOR which are directly pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions.

B. CONTRACTOR agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

C. CONTRACTOR agrees to provide the FEMA Administrator or his authorized representative's access to construction or other work sites pertaining to the work being completed under the Contract.

RETENTION OF RECORDS

CONTRACTOR shall retain all required records for at least five years after MUNICIPALITY makes final payment and all other pending matters are closed.

DHS SEAL, LOGO AND FLAGS

CONTRACTOR shall not use the U.S. Department of Homeland Security (DHS) seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

This is an acknowledgement that FEMA financial assistance will be used to fund some of all of the services required under this Contract. CONTRACTOR will comply with all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.

NO OBLIGATION BY FEDERAL GOVERNMENT

The Federal Government is not a party to this Contract and is not subject to any obligations or liabilities to the MUNICIPALITY, CONTRACTOR, or any other party pertaining to any matter resulting from the Contract.

PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

CONTRACTOR acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to CONTRACTOR's actions pertaining to this Contract.

CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS

(1) Affirmative steps for the prime contractor to take regarding subcontractors must include:

- (a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - (b) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - (c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
 - (d) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
 - (e) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.
- (2) Contractor shall sign the Statement of Compliance - Small and Minority Businesses, Women's Business Enterprises, and Labor Surplus Area Firms.

DAVIS-BACON ACT (PRIME CONSTRUCTION CONTRACTS IN EXCESS OF \$2,000)

Contractor shall comply with the requirements of the Davis-Bacon Act as set forth in 29 C.F.R. §5.5. Contractor shall sign the Statement of Compliance (Davis-Bacon Act) form.

COPELAND ANTI-KICKBACK ACT (PRIME CONSTRUCTION CONTRACTS IN EXCESS OF \$2,000)

- (1) Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
- (2) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts.
The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- (3) Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12."

The undersigned CONTRACTOR hereby swears under penalty of perjury that, during the period covered by the application for payment to which this statement is attached, all mechanics, laborers, and apprentices, employed or working on the site of the Project, have been paid at wage rates, and that the wage rates of payments, contributions, or costs for fringe benefits have not been less than those required by the Davis Bacon Act and the applicable conditions of the Contract.

Contractor

By _____
(Name and Title)

STATE OF ()
) SS.
COUNTY OF ()

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

WITNESS my hand and official seal, this _____ day of _____, 20____.

(NOTARY SEAL)

(Signature of person taking acknowledgment)

(Print Name of officer taking acknowledgment)

(Title or rank)

My commission expires:

(Serial number, if any)

BYRD ANTI LOBBYING CERTIFICATION FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS

To be submitted with each bid or offer exceeding \$100,000.00

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. §3801 *et seq.* apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date _____

STATEMENT OF COMPLIANCE - SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS

The undersigned CONTRACTOR hereby swears under penalty of perjury that CONTRACTOR took the following affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms were used when possible:

- (a) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (b) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (c) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (d) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
- (e) Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

Dated _____, 20____ Contractor _____

By _____
(Signature)

By _____
(Name and Title)

STATE OF ()
) SS.
COUNTY OF ()

The foregoing instrument was acknowledged before me this _____ day of _____, 20 , by _____ who is personally known to me or who has produced _____ as identification and who did/did not take an oath.

WITNESS my hand and official seal, this _____ day of _____, 20_____.

(NOTARY SEAL)

(Signature of person taking acknowledgment)

(Print Name of officer taking acknowledgment)

(Title or rank)

My commission expires:

(Serial number, if any)

SPECIFICATIONS

See Technical Specifications attached.

**CONSTRUCTION CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR
BID NO. E-03-18
CITY OF POMPANO BEACH
ESQUIRE LAKES STORMWATER IMPROVEMENTS**

**CONSTRUCTION CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR**

BID NO. E-03-18

**CITY OF POMPANO BEACH
ESQUIRE LAKES STORMWATERIMPROVEMENTS**



BID SET
SEPTEMBER 2017



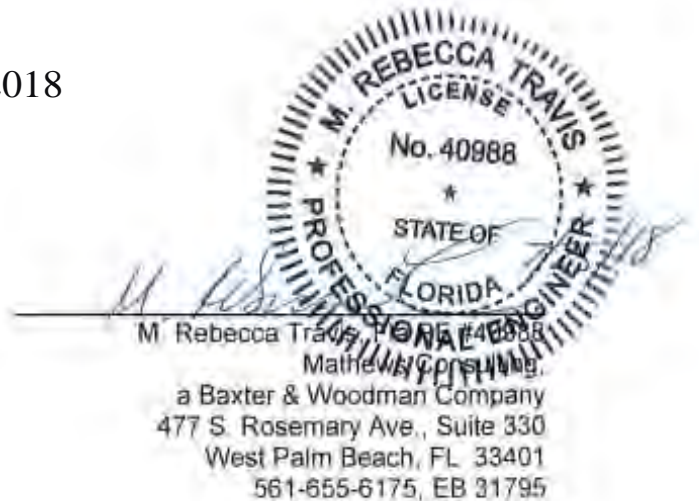
CONTRACT SPECIFICATIONS

FOR

ESQUIRE LAKE NEIGHBORHOOD
STORMWATER IMPROVEMENTS

CITY OF POMPANO BEACH

June 2018



MATHEWS
CONSULTING *rh*
a BAXTER & WOODMAN company

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DIVISION 1

GENERAL REQUIREMENTS

SECTION 01010 SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. All of the work under this contract is located within the rights-of-way and utility easements shown on the Drawings.
- B. Furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- C. Perform the work complete, in place, and ready for continuous service, and include repairs, testing, permits, cleanup, replacements and restoration required as a result of damages caused during this construction.
- D. All materials, equipment, skills, tools and labor which are reasonable and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the CONTRACTOR whether specifically indicated in the Contract Documents or not.
- E. Comply with all Municipal, County, State, Federal, and other codes which are applicable to the proposed construction work.

1.2 GENERAL DESCRIPTION OF WORK

- A. The project consists of furnishing all labor, materials, equipment and all incidentals and appurtenances for the installation of new drainage facilities (piping, catch basins, manholes, exfiltration trench, outfalls, etc.) swale grading and sodding, roadway reconstruction and pavement resurfacing. Construction also includes clearing and grubbing, dewatering, MOT's, pavement markings and signage, complying with permit conditions, testing and all restoration work for a complete and operating system.

1.3 DETAILED DESCRIPTION OF COMPONENTS

- A. Furnish and install storm drainage system and swale regrading as shown on the drawings, including all pipe, fittings, structures, grates, exfiltration trench connections to existing systems and all appurtenances.
- B. Roadway reconstruction or overlay within the project area. Extent of roadway reconstruction or overlay shall be as indicated on the drawings. Replace all traffic markings and signage as applicable.

- C. Provide professional preconstruction video-audio tape of existing conditions along complete length and width of project, including but not limited to the face of the adjacent buildings.
- D. Provide all required survey work for layout, construction and record data. Provide all required record drawings and other record documents.
- E. Complete all permitting requirements as per the Specific Conditions of the Contract Documents.
- F. All other required work whether implied or incidental to the proper completion of the project.

1.4 WORK BY OTHERS

- A. The CONTRACTOR shall cooperate fully with all utility forces of the CITY, or other public or private agencies engaged in the relocation, altering, or otherwise rearranging 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 rearranging of facilities.
- B. The CONTRACTOR's attention is directed to the fact that work may be conducted at the site by other contractors during the performance of the Work under this Contract. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the Work of such other contractors, and shall cooperate fully with such contractors to provide continued safe access to their respective contracts.

1.5 PERMITS

- A. The OWNER has obtained permits for the design and construction of these facilities from the following agencies:
 - 1. South Florida Water Management District- Environmental Resource permit
 - 2. Broward County Environmental Licensing & Building Permitting Division- Surface Water Management License Application
- B. Pursuant to the Public Bid Disclosure Act, the permits and fees which the CONTRACTOR must apply for, obtain and pay prior to or during this project are as follows:
 - 1. Permits as listed in the project Special Instructions.
 - 2. Other permits may also be required for the Work from local, County, State or Federal authorities.

3. All associate permit fees shall be included in Bid Item Number 1, Site Mobilization.

1.6 CONTRACTOR'S USE OF PREMISES

- A. CONTRACTOR shall limit the use of the premises for his Work and for storage to allow for:
 1. Work by other contractors.
 2. OWNER occupancy.
 3. Public use.
- B. Coordinate use of premises with other contractors, the OWNER, and the ENGINEER. All conflicts over the use of the premises shall be resolved without additional cost to the OWNER.
- C. CONTRACTOR shall assume full responsibility for security of all his and his subcontractors materials and equipment stored on the site.
- D. If directed by the OWNER or ENGINEER, move any stored items which interfere with operation of OWNER or other contractors.
- E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

1.7 CONTRACTOR FURNISHED MATERIAL AND EQUIPMENT

- A. All equipment, materials, instruments or devices incorporated in this project shall be new and unused, unless indicated otherwise in the Contract Documents and shall be the products of reliable manufacturers who, unless otherwise specified, have been regularly engaged in the manufacture of such material and equipment for at least five (5) years. Procedures and additional requirements regarding manufacturer's experience and substitutions are included in Section 01300 – Submittals.

1.8 OWNER OCCUPANCY

- A. Coordinate all construction operations with OWNER and ENGINEER to minimize conflict and to facilitate OWNER usage.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01020 ALLOWANCE

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

Include in the Contract Sum the allowance stated in the Contract Documents.

1.2 RELATED REQUIREMENTS

Conditions of the Contract.

1.3 ALLOWANCE

Include in the Contract, lump sum allowances as follows:

1. Furnish Landscape (Tree) Material: Allow the lump sum of \$30,000.00.
2. Permit Fees Allowance: Allow the lump sum of \$5,000.00

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 LANDSCAPE (TREE) MATERIAL ALLOWANCE

- A. The Landscape (Tree) Material Allowance shall be used to pay for the mitigation of the trees removed as listed in the Tree Disposition table on Drawing G-4. The value of each of the replacement trees shall be as determined by the City arborist. Such work to be performed only at the direction and with the authorization of the City.
- B. Do not include any additional amounts for installation in the Landscape (Tree) Material Allowance.
- C. At the closeout of contract, monies remaining in the Allowance will be credited to the Owner by Change Order.

3.2 PERMIT FEES ALLOWANCE

- A. The Permit Fees Allowance shall be used as necessary to pay for regulatory agency permit fees. Such work to be performed only at the direction and with the authorization of the City.
- B. Do not include any additional amounts for overhead or profit in the Allowance.

- C. At the closeout of contract, monies remaining in the Allowance will be credited to the Owner by Change Order.

END OF SECTION

SECTION 01025 MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 EXPLANATION AND DEFINITIONS

- A. The following explanation of the Measurement and Payment for the bid form items is made for information and guidance. The omission of reference to any item in this description shall not, however, alter the intent of the bid form or relieve the Contractor of the necessity of furnishing such as part of the Contract.

1.2 PAYMENT

- A. Payment shall be made for the items listed on the Bid Form on the basis of the work actually performed and completed, such work including but not limited to, the furnishing of all necessary labor, materials, equipment, transportation, clean up, and all other appurtenances to complete the construction and installation of the work to the configuration and extent as shown on the drawings and described in the specifications.
- B. It is intended that all mobilization, insurance, bond, license and other miscellaneous administrative costs, and all other costs to the Contractor not specifically identified in the following item description be distributed among and included in the unit prices stated. No additional payment shall be made for transportation, communications, office maintenance, project signs, and other incidental work or services, and no further payment shall be made for remobilization unless all of the work is suspended by the Engineer for a period in excess of three months and through no fault to the Contractor.
- C. The quantities set forth in the Bid Schedule are approximate and are given to establish uniform basis for the comparison of Bids. The City reserves the right to increase or decrease the quantity of any class or portion of the Work during the progress of the construction in accordance with these Specifications.
- D. Unit prices are used as a means of computing final figures for Work Authorizations. Quantities specified in this Section are approximate, based on reasonable assumptions of work to be performed throughout the duration of this Contract.
- E. All required manufacturer testing and certification shall be included in the unit prices shown in the Proposal and Contract. Density testing required for compacted backfilling, and concrete strength and materials testing required at

the time of construction shall be arranged for by Contractor and paid for by the City.

PART 2 - MATERIALS (NOT USED)

PART 3 - EXECUTION

GENERAL CONDITIONS

3.1 SITE MOBILIZATION/DEMOBILIZATION – Bid Item No. 1

- A. Payment for mobilization/demobilization, scheduling and temporary facilities, utilities, permits (SFWMD dewatering, City permits, etc.) and all other activities necessary will be made at the Contract Lump Sum (LS) price bid for the item, which price shall be full compensation for all materials, labor, equipment, tools, and all other incidentals necessary to complete this item.
- B. This also includes coordination between the Contractor and FPL in regards to any power poles that may need to be temporarily secured during construction. The City shall pay FPL for services on a case by case basis. If however, due to the Contractor's failure to complete the work within the agreed upon period of time, any additional costs for FPL's extended time for their service, including any stand-by time or remobilization shall be paid for by the Contractor.
- C. **Payment item for site mobilization/demobilization shall not exceed five (5%) of the contract price. Should the bid price for mobilization/demobilization exceed 5% of the Contract amount any amount over the 5% will be paid with the Contractor's final pay application.**

3.2 BONDS AND INSURANCE – Bid Item No. 2

- A. Payment for bonds and insurance will be made at the Contract Lump Sum (LS) price bid for the item.
- B. **Payment item for bonds and insurance shall not exceed two percent (2%) of the contract price. Should the bid price for Bonds and Insurance exceed 2% of the Contract amount, any amount over the 2% will be paid with the Contractor's final payment application.**

3.3 MAINTENANCE OF TRAFFIC – Bid Item No. 3

- A. 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 actually constructed and not on the percent of the Contract price completed.
- B. Payment for traffic control shall be made on the basis of a percentage (as determined in 'A' above) of the Lump Sum (LS) Price. 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.
- C. A detailed MOT plan shall be provided by the Contractor.
- D. This item includes maintenance of traffic plan, traffic control, flagman, detour signs, barricades, advance warning arrow panels, temporary signage, **construction and removal of temporary access driveways to residential homes, material for driveway maintenance**, etc. in order to provide safety and traffic access in accordance with local and state requirements.
- E. This item also includes furnishing and installing material (temporary pavement or asphalt millings) for temporary roadways for local resident access and emergency vehicle access during the duration of the construction, and for providing all restoration due to the construction of temporary roadways.
- F. Refer to Specification Section 01570.

3.4 AS-BUILT RECORD DRAWINGS – Bid Item No. 4

- A. Payment for this item shall be on a Lump Sum (LS) Basis. One set of full size design drawings on reproducible material and an electronic file of the design drawings on compact disk will be furnished to the Contractor by the City. The Contractor shall maintain full size (22" x 34") field drawings to reflect the "as-built" items of work as the work progresses.
- B. The signed and sealed As-Built drawings prepared by professional surveyor are required to be submitted with each pay request. Partial payment will be made for this item based upon the percentage of work completed. All survey work shall be performed by an independent third party surveyor, licensed to practice in the State of Florida. The surveyor shall be retained by the Contractor and approved by the Engineer.
- C. Upon completion of the work, the contractor shall submit four (4) sets of "as-built" drawings on full size, reproducible material and an electronic file in

AutoCAD 2013 or latest version. No payment will be made for final "as-built" drawings until both the reproducible and electronic files are received and accepted by the City. **The As-built data shall be in State Plane Coordinates and NAVD 88.**

- D. This item does not include surveying work required for layout and alignment of utility and paving improvements.

3.5 NPDES PERMIT/EROSION CONTROL/TURBIDITY BARRIERS – Bid Item No. 5

- A. Payment for Contractor required NPDES Permit application (Notice of Intent and Notice of Termination), reporting by a person holding a certification as an FDEP NPDES Construction Site Inspector, floating turbidity barriers and associated erosion protection measures including turbidity abatement for dewatering procedures will be made at the Contract Lump Sum (LS) Price Bid 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. Refer to Specification Section 01658.
- C. This item includes all silt fencing required, protection of existing drainage inlets NPDES inspections and reporting per the permit conditions and all erosion and turbidity barriers required.

3.6 PROFESSIONAL VIDEO & CONSTRUCTION PHOTOS – Bid Item No.6

- A. Payment for Professional Audio-Video of the entire project site, including roadways, sidewalk, outside face of houses and buildings (the sides fronting the work), driveways, walls, fences, landscaping, etc. will be made at the Contract Lump Sum (LS) price bid for this item.
- B. **A Professional Video Taping Company must be used for this work.**
- C. This item also includes before and after digital still photos of each home and/or property.
- D. Refer to Specification Section 01381.

ROADWAY

3.7 REMOVE & DISPOSE OF EXISTING ROADWAY PAVEMENT SECTION (VARYING THICKNESS) – Bid Item No. 7

- A. This item shall be paid on a Square Yard basis (SY). The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of all existing roadway pavement section (asphalt pavement and base material - varying thickness), within the limits as indicated on the plans and includes sawcuts and joints at connections to existing pavement. The existing pavement section shall be completely removed and shall be properly disposed of off-site at no additional cost to the Owner. Also included in this item is all restoration work (sod, driveways, etc.) that is required due to removing the pavement section.
- B. **This item also includes the Contractor saw cutting the pavement at each driveway location to avoid damage to the driveway. If Contractor damages any existing driveway that is not shown on the drawings to be restored, the Contractor shall restore in kind all the way to the R-O-W line, (this will be a non-pay item).**

3.8 REMOVE EXISTING PAVEMENT IN ROW SWALES IN FRONT OF HOUSES – Bid Item No. 8

- A. Payment for this item shall be made on a Square Yard (SY) Basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for all pavement section (asphalt pavement and base material – varying thickness) removal necessary between the sidewalk (or right-of-way) and the edge of roadway pavement (in swale areas), furnishing and installing replacement topsoil and sod as indicated on the plans, except for any areas designated to be paid for separately or to be specifically included in the costs of other work under the Contract.
- B. The Contractor shall cut, remove and legally dispose of existing roadway pavement and concrete curbing (this includes removing shellrock and limestone where applicable), or any other facilities to prepare the area within the easements and rights-of-way for construction of the proposed improvements as indicated on the plans. This includes sawcuts and joints at connections to existing pavement.
- C. Also included in this item is all restoration work (top soil, sod, driveways, sidewalk, etc.) that is required due to removing pavement section.

3.9 1 ½" TYPE S-3 ASPHALT (TWO LIFTS) – Bid Item No. 9a and 9b

- A. Payment for installing new 1 ½" Type S-3 asphalt, where indicated on the plans shall be made at the Contractor's unit price per Square Yard (SY) for Type S-3 asphalt and shall include all labor, material, and equipment required to construct 1 ½" Type S-3 asphaltic concrete surface course (two lifts) as shown on the plan view and detail drawings. The unit price shall include compensation for labor, materials, and equipment required to construct the new asphaltic concrete surface course.
- B. This 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, milling, tack coating, compaction, rolling, brooming, backfilling and sodding at edge of pavement, and any other work required to complete the work.
- C. This item also includes installing an asphalt taper around all structures in roadway, if both lifts are not installed within 24 hours of each other.

3.10 8" COMPACTED LIMEROCK BASE – Bid Item No. 10

- A. Payment for installing new 8-inch limerock base (LBR 100) including prime coat where indicated on the plans shall be made at the Contractor's unit price per Square Yard (SY) for limerock base installed and accepted.
- B. The Contract Unit Price shall include compensation for labor, materials, and equipment required to construct the new limerock base, including prime coat in accordance with the plans and specifications.

3.11 12" STABILIZED, COMPACTED SUBGRADE – Bid Item No. 11

- A. The unit price bid per Square Yard (SY) for the stabilized, compacted subgrade (12" thick, LBR 40) shall include all labor, material, and equipment required to construct the subgrade as shown on the detail drawings. The unit price shall include all excavation, line cutting of existing pavement, preparation of subgrade, fine grading, placement of subgrade material, compaction, rolling, 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.

3.12 MILL 1" ASPHALT AND 1" TYPE S-3 ASPHALT OVERLAY – Bid Item No. 12

- A. Payment for milling 1" of existing pavement and installing new 1" Type S-3 asphalt overlay, where indicated on the plans shall be made at the Contractor's

unit price per Square Yard (SY) and shall include all labor, material, and equipment required to mill 1" of existing pavement and construct 1" of Type S-3 asphaltic concrete overlay as shown on the plan view and detail drawings. The unit price shall include compensation for multiple mobilizations, labor, materials and equipment, as necessary. The contract unit price shall also include other miscellaneous work required to complete the work in accordance with FDOT Standard Specifications for Road and Bridge Construction, latest edition.

- B. This item also includes all necessary labor, materials and equipment to adjust the valve boxes, manhole rims, inlets, or other fixtures to final grade; transitions to existing pavement, milling, removal of existing pavement, disposal of existing pavement, tack coat, compaction, rolling, brooming, and any other work required to complete the overlay work.

3.13 CONCRETE SIDEWALK REPLACEMENT – 4 FT. & 5 FT. WIDE (4" THICK) – Bid Items No. 13 and 14

- A. Payment for furnishing and installing concrete sidewalk (4-foot and 5-foot width), 4-inch thick, shall be made at the contract unit price per Linear Feet (LF) of concrete sidewalk installed and accepted. The contract unit price shall include full compensation for all labor, materials, and equipment necessary to install the concrete sidewalk in accordance with FDOT Standards and with the plans and specifications. Also included in this item is all restoration work (sod, driveways, etc.) that is required due to the removal/installation of new sidewalk.
- B. Payment shall be made for concrete sidewalks constructed by authorization of the Engineer. Any sidewalk that is broken incidental to construction shall be replaced at the Contractor's expense.
- C. Refer to "Sidewalk Construction Detail" on Drawing D-1.

3.14 CONCRETE DRIVE APRON REPLACEMENT – Bid Item No. 15

- A. The quantity of concrete drive apron shall be determined by measurement of the units per Square Foot (SF) installed and accepted. Pay item is for drive apron replacement only at the location(s) indicated on the plans. **Any driveway apron that is damaged incidental to construction shall be replaced at the Contractor's expense.** Replacement of concrete driveways shall extend from the edge of pavement to the location shown on the design drawings and shall include a 6-inch thick sidewalk through the driveway as applicable.

- B. Payment for furnishing and installing concrete drive aprons shall be made at the contract unit price per square foot of concrete apron installed and accepted. The contract unit price shall include full compensation for all labor, materials, and equipment necessary to install the drive aprons in accordance with the plans and specifications. This pay item shall include asphalt, limerock base compacted subgrade, etc., in accordance with the plans and specifications.
- C. Concrete driveway apron replacement beyond the limits established by the contract drawings will not be considered for payment.
- D. Refer to “Concrete Driveway Apron Detail” on Drawing D-2.

3.15 ASPHALT DRIVE APRON REPLACEMENT – Bid Item No. 16

- A. The quantity of asphalt drive apron shall be determined by measurement of the units per Square Foot (SF) installed and accepted. Pay item is for drive apron replacement only at the location(s) indicated on the plans. **Any driveway apron that is damaged incidental to construction shall be replaced at the Contractor's expense.** Replacement of asphalt driveways shall extend from the edge of pavement to the right-of-way.
- B. Payment for furnishing and installing asphalt drive aprons shall be made at the contract unit price per square foot of asphalt apron installed and accepted. The contract unit price shall include full compensation for all labor, materials, and equipment necessary to install the drive aprons in accordance with the plans and specifications. This pay item shall include asphalt, limerock base compacted subgrade, etc., in accordance with the plans and specifications.
- C. Asphalt driveway apron replacement beyond the limits established by the contract drawings will not be considered for payment.
- D. Payment for concrete sidewalk replacement extending across an asphalt driveway apron shall be 6-inch thick concrete and the quantity of concrete sidewalk included in Bid Item No. 15.
- E. Refer to “Asphalt Driveway Apron Detail” on Drawing D-1.

3.16 TACTILE SURFACE PER FDOT INDEX 304 – Bid Item No. 17

- A. Payment for this item shall be made on a Unit Price Basis. The Contractor's unit price shall include full compensation for furnishing and installing detectable warning mat, sidewalk ramp, and sidewalk curb at the locations shown on the Drawings.

- B. The detectable warning mat and sidewalk ramp shall be in accordance with FDOT Index 304 and shall be included on the FDOT Qualified Products List.

3.17 PAVEMENT MARKINGS – Bid Item No. 18

- A. The Lump Sum (LS) price bid for pavement markings (striping & RPM's) shall include all labor, material, and equipment required to construct all pavement markings and stop conditions in the project area. All pavement markings shall be thermoplastic. The unit price shall include all materials, equipment, preparation, and other miscellaneous work required to complete the work as shown on the plans in accordance with Florida Department of Transportation, Section 711, the MUTCD, Broward County Traffic Engineering Division and the contract details.
- B. This item also includes providing temporary painted striping during curing periods of asphalt and between the initial and final lifts of asphalt.
- C. Payment for removal and reinstallation of existing traffic signs will be paid for under Bid Item No. 82.

DRAINAGE

3.18 OPEN CUT PAVEMENT TRENCH REPAIR – Bid Item No. 19

- A. Measurement of this item shall be a count of the Linear Feet (LF) of length of pavement removed for installation of the proposed underground utilities. **No measurement of width shall be made for this item.** The contract unit price shall include all labor, materials, and equipment necessary to construct the trench repair in accordance with the plans and specifications. This pay item also includes providing a temporary asphalt concrete patch until replaced with permanent asphalt concrete patch. Also included in this item is all restoration work (sod, driveways, etc.) that is required due to removing the pavement trench section.
- B. Payment shall be made at the Contract unit price for the length of asphalt pavement to be repaired in the section of road that shall be milled and overlaid only. **Payment shall not be made for asphalt restoration on that section of road to be entirely rebuilt.**
- C. The contract unit price shall include all labor, materials, and equipment necessary to prepare the sub-base, install the baserock and asphalt concrete in accordance with the plans and specifications.
- D. Refer to “Trench Backfill/Bedding Details” on Drawing D-6 and “Surface Restoration Detail” on Drawing D-2.

3.19 CORE AND CONNECT TO EXISTING DRAINAGE STRUCTURE (DWG. C-1 & C-5) – Bid Item No. 20

- A. Payment under this item shall be made at the Contractor's Unit Price per each to core and connect drainage pipe to existing drainage structures. The contract unit price shall include all labor, materials, excavation, coring, backfilling, brick and mortar, and equipment necessary to core and connect at the existing drainage structure in accordance with the plans and specifications.

3.20 STORMWATER STRUCTURES W/ CASTING – Bid Items No. 21, 22, 23, 24, 25, 26, 27, 28 and 29

- A. The number of drainage structures (inlets or manholes) shall be determined by the Unit Price count of units (EA) installed and accepted.
- B. The Contract Unit Price shall include compensation for labor, excavation of any type including rock and limestone, excavation and removal of any organic "muck" material and disposal, furnishing and installing imported backfill material if required, complying with the State of Florida Trench Safety Act, dewatering, sheeting, shoring, backfilling, maintaining irrigation system in operation and restoring irrigation and control wiring to original condition, existing utility protection, material and equipment required to install each type of structures, frames, grates, lids, and appurtenances in accordance with the plans and specifications. This item includes all restoration (sod, irrigation repair, etc.) to complete the work.
- C. This item includes all restoration due to installation of the structures except for the restoration specifically included in Bid Item No. 64, Bid Item No. 65 and Bid Item No. 66. Sod shall be St. Augustine where irrigation exists and Bahia where no irrigation exists.
- D. The unit bid price for the Pollution Retardant Baffle (PRB) shall be included in the cost of the drainage structure where indicated and shall include the cost to furnish and install the CMP half-pipe baffle in the drainage structure. Payment shall include full compensation for provision of required materials, cutting, welding, brackets, hardware, neoprene gaskets, and all other necessary activities required to furnish and install a baffle on the interior face of the drainage structure as indicated on the plans and details.
- E. Refer to "Drainage Details" on Drawing D-2, D-3 and D-4.

3.21 REMOVE EXISTING DRAINAGE STRUCTURE – Bid Item No. 30

- A. Payment for this item shall be per Unit Price per Each (EA) drainage structure removed. The Contractor's unit price shall include full compensation for

labor, materials and equipment required for the removal of existing drainage structures (varying type and size). The existing drainage structures, frames, and grate shall be properly disposed of off-site at no additional cost to the Owner.

3.22 REMOVE EXISTING INLET APRON – Bid Item No. 31

- A. Payment for this item shall be per Each (EA) drainage inlet apron removed. The Contractor's unit price shall include full compensation for labor, materials and equipment required for all inlet apron pavement removal necessary as indicated on the plans.
- B. The Contractor shall cut, remove and legally dispose of existing apron pavement (this includes removing shellrock and limestone where applicable) to prepare the area for construction of the proposed improvements as indicated on the plans. This includes sawcuts and joints at connections to existing pavement.

3.23 DRAINAGE STRUCTURE CONCRETE INLET APRON – Bid Item No. 32

- A. Payment for constructing concrete inlet aprons around drainage structures shall be made at the Contractor's Unit Price per each inlet apron installed and accepted. The Contract Unit Price shall include compensation for labor, material, equipment, and cleanup necessary to construct the aprons in accordance with the plans and specifications.
- B. Refer to "Inlet Apron Detail" on Drawing D-2.

3.24 RCP DRAINAGE PIPE – Bid Items No. 33, 34, 35, 36 and 37

- A. The quantity of reinforced concrete pipe (RCP) of various sizes shall be determined by measurement of the units installed and accepted in Linear Feet (LF). Measurement shall be along the centerline of the pipe from center of structure to center of structure or from center of structure to the end of the slotted exfiltration pipe.
- B. Payment for furnishing and installing RCP pipe of the various sizes shall include all necessary labor and materials for furnishing and laying of the pipe, excavation of any type including rock and limestone, excavation and removal of any organic "muck" material and disposal, furnishing and installing imported backfill material if required, complying with the State of Florida Trench Safety Act, dewatering, sheeting, shoring, backfilling, maintaining irrigation system in operation and restoring irrigation and control wiring to original condition, existing utility protection, and appurtenances in accordance with the plans and specifications.

- C. This item shall include the cost of coordination with all utility agencies in the immediate vicinity of the work to be completed. Should any utility need to be relocated, it is the Contractor's responsibility to coordinate the effort. Contractor should use extreme caution when installing stormwater piping to avoid existing utilities if possible. Contractor shall bear all costs associated with repair/replacement of existing utilities harmed due to Contractor's negligence.
- D. The unit price bid per foot shall also include the cost for soft-digs to verify location (horizontal & vertical) of all utility crossings, including paralleling of utilities, prior to construction of the proposed drainage pipe. This includes all coordination with utility companies.
- E. This item includes all restoration due to installation of the piping except for restoration items specifically included in other Bid Items. Sod shall be St. Augustine where irrigation exists and Bahia where no irrigation exists.

3.25 18" SLOTTED RCP W/ 4 FT. X 4 FT. EXFILTRATION TRENCH – Bid Item No. 38

- A. The quantity of 18-inch reinforced concrete slotted pipe (RCP) and 4-foot x 4-foot exfiltration trench envelope shall be determined by measurement of the units in Linear Feet (LF) installed and accepted.
- B. Payment for furnishing and installing the RCP slotted pipe and exfiltration trench shall be made at the Contractor's unit price per Linear Foot (LF) of the exfiltration trench and shall include all necessary labor and materials for furnishing and laying of the exfiltration trench, excavation of any type including rock and limestone, excavation and removal of any organic "muck" material and disposal, hand trimming, furnishing and installing imported backfill material if required, complying with the State of Florida Trench Safety Act, dewatering, sheeting, shoring, backfilling, maintaining irrigation system in operation and restoring irrigation and control wiring to original condition, existing utility protection, and appurtenances in accordance with the plans and specifications.
- C. This item shall include the cost of coordination with all utility agencies in the immediate vicinity of the work to be completed. Should any utility need to be relocated, it is the Contractor's responsibility to coordinate the effort. Contractor should use extreme caution when installing stormwater piping to avoid existing utilities if possible. Contractor shall bear all costs associated with repair/replacement of existing utilities harmed due to Contractor's negligence.
- D. The unit price bid per foot shall also include the cost for soft-digs to verify location (horizontal & vertical) of all utility crossings, including paralleling of

utilities, prior to construction of the proposed drainage pipe. This includes all coordination with utility companies.

- E. This item includes all restoration due to installation of the piping except for restoration items specifically included in other Bid Items. Sod shall be St. Augustine where irrigation exists and Bahia where no irrigation exists.
- F. Refer to “Exfiltration Trench Details” on Drawing D-4.

3.26 42” SLOTTED RCP W/ 5 FT. X 5 FT. EXFILTRATION TRENCH – Bid Item No. 39

- A. The quantity of 42-inch reinforced concrete slotted pipe (RCP) and 5-foot x 5-foot exfiltration trench envelope shall be determined by measurement of the units in linear feet installed and accepted.
- B. Payment for furnishing and installing the RCP and exfiltration trench shall be made at the Contractor's unit price per Linear Foot (LF) of the exfiltration trench and shall include all necessary labor and materials for furnishing and laying of the exfiltration trench, excavation of any type including rock and limestone, excavation and removal of any organic "muck" material and disposal, hand trimming, furnishing and installing imported backfill material if required, complying with the State of Florida Trench Safety Act, dewatering, sheeting, shoring, backfilling, maintaining irrigation system in operation and restoring irrigation and control wiring to original condition, existing utility protection, and appurtenances in accordance with the plans and specifications.
- C. This item shall include the cost of coordination with all utility agencies in the immediate vicinity of the work to be completed. Should any utility need to be relocated, it is the Contractor's responsibility to coordinate the effort. Contractor should use extreme caution when installing stormwater piping to avoid existing utilities if possible. Contractor shall bear all costs associated with repair/replacement of existing utilities harmed due to Contractor's negligence.
- D. The unit price bid per foot shall also include the cost for soft-digs to verify location (horizontal & vertical) of all utility crossings, including paralleling of utilities, prior to construction of the proposed drainage pipe. This includes all coordination with utility companies.
- E. This item includes all restoration due to installation of the piping except for restoration items specifically included in other Bid Items. Sod shall be St. Augustine where irrigation exists and Bahia where no irrigation exists.
- F. Refer to “Exfiltration Trench Details” on Drawing D-4.

3.27 PVC C-905 DRAINAGE PIPE – Bid Items No. 40 and 41

- A. The quantity of PVC C-905 drainage pipe of various sizes shall be determined by measurement of the units installed and accepted in Linear Feet (LF). Measurement shall be along the centerline of the pipe from center of structure to center of structure.
- B. Payment for furnishing and installing PVC C-905 pipe of the various sizes shall be made at the Contractor's unit price per linear foot (LF) of the pipe and shall include all necessary labor and materials for furnishing and laying of the pipe, excavation of any type including rock and limestone, excavation and removal of any organic "muck" material and disposal, hand trimming, furnishing and installing imported backfill material if required, complying with the State of Florida Trench Safety Act, dewatering, sheeting, shoring, backfilling, maintaining irrigation system in operation and restoring irrigation and control wiring to original condition, existing utility protection, and appurtenances in accordance with the plans and specifications.
- C. This item shall include the cost of coordination with all utility agencies in the immediate vicinity of the work to be completed. Should any utility need to be relocated, it is the Contractor's responsibility to coordinate the effort. Contractor should use extreme caution when installing stormwater piping to avoid existing utilities if possible. Contractor shall bear all costs associated with repair/replacement of existing utilities harmed due to Contractor's negligence.
- D. The unit price bid per foot shall also include the cost for soft-digs to verify location (horizontal & vertical) of all utility crossings, including paralleling of utilities, prior to construction of the proposed drainage pipe. This includes all coordination with utility companies.
- E. This item includes all restoration due to installation of the piping except for restoration items specifically included in other Bid Items. Sod shall be St. Augustine where irrigation exists and Bahia where no irrigation exists.

3.28 OUTFALL #4: 42" PVC DRAINAGE PIPE (DWG. C-20); STRUCTURE D-48 TO D-53 – Bid Item No. 42

- A. The quantity of PVC drainage pipe shall be determined by the Linear Feet (LF) of pipe with gasketed joints installed and accepted. Measurement shall be along the centerline of the pipe from Structure D-48 centerline to Structure D-53 centerline, excluding both structures.
- B. Payment for furnishing and installing the PVC drainage pipe shall include all necessary labor, equipment and materials for furnishing and laying of the pipe,

excavation of any type including rock and/or muck, dewatering, sheeting and shoring, backfilling, compacting, protecting existing utilities, structures and accessory structures, overhead and underground utilities, and appurtenances in accordance with the plans and specifications.

- C. This Pay Item does not include clearing, existing drainage pipe removal or grouting, structure D-48 or structure D-53, sod and fence restoration, and tree mitigation which are included under other pay items.

3.29 OUTFALL #4: 42" PVC DRAINAGE PIPE (DWG. C-20); STRUCTURE D-54 TO OUTFALL – Bid Item No. 43

- A. The quantity of PVC drainage pipe shall be determined by the Linear Feet (LF) of pipe with gasketed joints installed and accepted. Measurement shall be along the centerline of the pipe from Structure D-68 centerline to Structure D-85 centerline, excluding both structures.
- B. Payment for furnishing and installing the PVC drainage pipe shall include all necessary labor, equipment and materials for furnishing and laying of the pipe, excavation of any type including rock and/or muck, dewatering, sheeting and shoring, backfilling, compacting, lake bank regrading, protecting existing utilities, structures and accessory structures, overhead and underground utilities, and appurtenances in accordance with the plans and specifications.
- C. This Pay Item does not include clearing, existing drainage pipe removal or grouting, structure D-54, endwall, sod and fence restoration, and tree mitigation which are included under other pay items.

3.30 OUTFALL #4: REMOVE EXISTING 36" HDPE/RCP DRAINAGE PIPE (DWG. C-20) – Bid Item No. 44

- A. Payment for this item shall be paid on a Linear Foot (LF) basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of existing drainage pipe (varying sizes and material) between proposed drainage structure D-48 and the outfall as shown on Drawing C-20. This item includes all saw-cutting, caps, plugs and joints. The existing drainage piping shall be properly disposed of off-site at no additional cost to the Owner.
- B. This pay item does not include the removal of existing drainage pipe included under Bid Item No. 49.
- C. This Pay Item does not include clearing, removal of existing fencing, landscaping, pavement, or restoration within the drainage easement or right-of-way which may be included under other pay items.

3.31 OUTFALL #6: 42" RCP DRAINAGE PIPE (DWG. C-34) – Bid Item No.45

- A. The quantity of circular reinforced concrete pipe shall be determined by the Linear Feet (LF) of pipe with gasketed joints installed and accepted. Measurement shall be along the centerline of the pipe from structure D-85 centerline to face of endwall, excluding structure D-85.
- B. Payment for furnishing and installing reinforced concrete pipe (Class III) shall include all necessary labor, equipment and materials for furnishing and laying of the pipe, excavation of any type including rock and/or muck, dewatering, sheeting and shoring, backfilling, lake bank regrading, compacting, protecting existing utilities, structures and accessory structures, overhead and underground utilities, and appurtenances in accordance with the plans and specifications.
- C. This Pay Item does not include the endwall, existing drainage pipe removal or grouting, structure D-85, or sod restoration, which are included under other pay items.

3.32 OUTFALL #6: 42" PVC DRAINAGE PIPE (DWG. C-34); STRUCTURE D-68 TO D-85 – Bid Item No. 46

- A. The quantity of PVC drainage pipe shall be determined by the Linear Feet (LF) of pipe with gasketed joints installed and accepted. Measurement shall be along the centerline of the pipe from Structure D-68 centerline to Structure D-85 centerline, excluding both structures.
- B. Payment for furnishing and installing the PVC drainage pipe shall include all necessary labor, equipment and materials for furnishing and laying of the pipe, excavation of any type including rock and/or muck, dewatering, sheeting and shoring, backfilling, compacting, protecting existing utilities, structures and accessory structures, overhead and underground utilities, and appurtenances in accordance with the plans and specifications.
- C. This Pay Item does not include clearing, existing drainage pipe removal or grouting, structure D-85 or structure D-68, sod and fence restoration, which are included under other pay items.

3.33 REMOVE EXISTING 24" PVC DRAINAGE PIPE & COMPACT, REGRADE & SOD – Bid Item No. 47

- A. This item shall be paid on a Linear Foot (LF) basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of existing drainage pipe at the lake bank, behind #2360 NW 10th Court, as indicated on Drawing C-34 of the plans. This item includes

all saw-cutting, sheeting, shoring, excavation of any type required to remove the existing drainage pipe. The existing drainage piping shall be properly disposed of offsite at no additional cost to the Owner.

- B. This pay item includes backfilling of trench area following pipe removal, regrading, compaction and Bahia sod restoration of the entire area disturbed during the pipe removal.
- C. This Pay Item does not include restoration for improvements within the drainage easement which may be included under other pay items.

3.34 REMOVE EXISTING DRAINAGE PIPE (12"-36"), PIPE MATERIAL VARIES – Bid Item No. 48, 49, 50, 51, 52, 53, & 54

- A. Payment for this item shall be paid on a Linear Foot (LF) basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of existing drainage pipe (varying sizes and material). This item includes all saw-cutting, caps, plugs and joints at connections to existing drainage systems. The existing drainage piping shall be properly disposed of off-site at no additional cost to the Owner.
- B. This pay item does not include the removal of existing drainage pipe between Structure D-48 to the outfall. Refer to Bid Item No. 44.

3.35 CONNECT TO EXISTING DRAINAGE PIPE W/CONCRETE COLLAR – Bid Item No. 55

- A. The quantity of Connections to existing drainage pipe shall be determined by the Unit Price for each of the connections made and accepted.
- B. Payment for connecting new drainage pipe to existing drainage pipe, of varying diameters, shall include all necessary labor, equipment and materials for furnishing, laying and connecting of the drainage pipes, cutting and fitting of the drainage line, concrete collars, backfilling and associated appurtenances in accordance with the plans, specifications and FDOT Index 280 (latest edition).
- C. Refer to "FDOT Index 280 Concrete Collar Detail" on Drawing D-3.

3.36 ENDWALL ON SINGLE BARREL 42" (PER FDOT INDEX 250) – Bid Item No. 56

- A. The quantity of straight endwalls shall be determined on a Unit Price Basis by the number of endwalls installed and accepted.
- B. Payment for construction of the pipe endwalls shall be made at the contract unit price per endwall and shall include all necessary labor, equipment and

materials for furnishing, layout control, forming, concrete, reinforcement, dewatering, sheeting, shoring, etc. required for the installation of each endwall in the appropriate material quantities and dimensions in accordance with the plans, specifications and FDOT Index 250 (latest edition).

- C. Refer to “FDOT Index 250 Straight Concrete Endwalls” detail on Drawing D-5.

3.37 SWALE GRADING & SOD – Bid Item No. 57

- A. Payment for this item shall be made on a Square Yard (SY) Basis. The Contractor's unit price shall include full compensation for all Swale Grading and Swale Sodding within the road right-of-way as indicated on the plans.
- B. The Contractor's unit price shall constitute full compensation for all labor, equipment, and materials required for excavating, grading, hauling, placing, compacting, and dressing of the surface of the swales in preparation for sodding, in addition to the furnishing and installation of sod. Sod shall be St. Augustine where irrigation exists and Bahia where no irrigation exists. This pay item includes Contractor providing water truck to water the sod until it is established and until final completion is achieved.
- C. Grading and sodding done outside of the limits of work shown on the plans shall be considered a non-pay item.
- D. Refer to “Swale Replacement Detail” on Drawing D-6.

3.38 STORMWATER BYPASS PUMPING - Bid Item No. 58

- A. Payment for this item shall be made at the Lump Sum (LS) basis and shall be paid in increments in proportion to the drainage work completed. The Contractor's Lump Sum (LS) price shall include full compensation for providing all labor, materials and equipment required for the existing drainage system bypass pumping operation for the installation of the proposed storm drainage system. Dewatering pump shall include “Silent Knight” enclosure or equal.
- B. Payment for this item shall be paid in increments in proportion of the drainage bypass work completed. Contractor to provide breakout cost for each item.

MISCELLANEOUS

3.39 CONNECT TO EXISTING WEIR BOX, STRUCURE D-47 (DWG C-20)– Bid Item No. 59

- A. Payment under this item shall be made at the Contractor's Lump Sum price to sawcut and connect drainage pipe to the existing drainage structure D-47 on both the east and west sides of the structure. The contract price shall include all labor, materials, excavation, coring, sawcutting, backfilling, brick and mortar, and equipment necessary to core and connect at the existing drainage structure in accordance with the plans and specifications.

3.40 REMOVE AND DISPOSE OF EXISTING CHAINLINK/WOOD/METAL FENCING – Bid Item No. 60

- A. Payment for this item shall be on a Linear Foot (LF) Basis for removing and properly disposing of wood shadowbox fence, chain link fence, and metal fence as indicated on the plans. Payment includes disposal of the removed fencing, posts, foundations, etc. at no additional cost to the Owner.

3.41 REMOVE AND DISPOSE OF EXISTING CONCRETE BLOCK WALL AND FOOTER - Bid Item No. 61

- A. Payment for this item shall be on a Linear Foot (LF) Basis for removing and properly disposing of concrete block privacy wall as indicated on the plans. Payment includes disposal of the removed wall and foundations, etc. at no additional cost to the Owner.

3.42 PLUG AND GROUT EXISTING DRAINAGE PIPE – Bid Item No. 62 & No. 63

- A. Measurement for payment shall be per Linear Feet (LF) of pipe actually grouted.
- B. The unit price for this item shall be full compensation for abandoning the existing drainage pipe, plugging and grouting the pipe sections as shown the on the drawings and described herein. This item includes, but is not limited to excavation, backfill, compaction, isolation of piping to be abandoned from the remaining system, connections, taps, saddles, cement grout, plugs, pumping, disposal of liquids from piping to be abandoned, cleanup, coordination and all other work and materials required for a complete installation. This includes all restoration to complete the work.

3.43 REMOVE VARIOUS IMPROVEMENTS WITHIN DRAINAGE EASEMENT BETWEEN STRUCTURE D-48 TO D-53. RESTORE SOD, IRRIGATION (DWG. C-20 & C-28) – Bid Item No. 64

This item shall be paid on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of all pavement (all types), fencing, shrubs, trees, plants, sod, irrigation system, etc., within the easement limits of the following location and as shown on the plans between structure D-48 and D-53. The limits extend from the rear property line to the front property line of 641 NW 23rd Avenue, within the width of the platted drainage easement.

- A. Existing improvements within the drainage easement location shall be included in the pre-construction video.
- B. This item includes pavement saw-cutting, capping and protection of existing irrigation systems. The removed material shall be properly disposed of offsite at no additional cost to the Owner.
- C. Also included in this item is restoration work specifically including regrading, sod, irrigation system within the limits of the drainage easement. Shrubs and landscaping (with the exception of sod) shall NOT be replaced. Refer to the Tree Disposition table on Drawing G-4 regarding specific tree replacement.
- D. The resident shall be given the opportunity to relocate landscape material and other decorative improvements onto his own property (outside the drainage easement) prior to start of construction. If the resident fails to remove the landscape material in a timely manner, the Contractor shall be required to remove and dispose of the material.
- E. Contractor shall protect existing buildings, accessory structures, foundations, overhead wires, power poles, underground utilities and other permanent improvements and shall not be reimbursed by the Owner for damaging these facilities.
- F. Payment for removal of the existing drainage pipe is included in another bid item.

3.44 REMOVE VARIOUS IMPROVEMENTS WITHIN DRAINAGE EASEMENT BETWEEN STRUCTURE D-54 TO OUTFALL. RESTORE SOD, IRRIGATION & 4' CHAIN LINK FENCING (DWG. C-20) – Bid Item No. 65

This item shall be paid on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of all pavement (all types), fencing, shrubs, plants, trees, sod, irrigation system, etc., within the limits of the following location and as shown on the plans for Outfall #4

(structure D-54 to endwall). The limits extend from the front property line to the endwall of the proposed drainage outfall pipe and the width of the platted drainage easement.

- A. Existing improvements within the drainage easement location shall be included in the pre-construction video.
- B. This item includes pavement saw-cutting, capping and protection of existing irrigation systems. The removed material shall be properly disposed of offsite at no additional cost to the Owner.
- C. Also included in this item is restoration work specifically including regrading, sod, irrigation system, and 4' tall chain link fencing within the limits of the drainage easement and extending to connect to the fence at the rear of 620 NW 23th Avenue. Shrubs and landscaping (with the exception of sod) shall NOT be replaced. Refer to the Tree Disposition table on Drawing G-4 regarding specific tree replacement.
- D. The resident shall be given the opportunity to relocate landscape material and other decorative improvements onto his own property (outside the drainage easement) prior to start of construction. If the resident fails to remove the landscape material in a timely manner, the Contractor shall be required to removed and dispose of the material.
- E. Contractor shall protect existing buildings, accessory structures, foundations, overhead wires, power poles, underground utilities and other permanent improvements and shall not be reimbursed by the Owner for damaging these facilities.
- F. Payment for removal of the existing headwall is included in Bid Item No. 75.
- G. Payment for removal of the existing drainage pipe is included in another bid item.

3.45 REMOVE VARIOUS IMPROVEMENTS WITHIN DRAINAGE EASEMENT BETWEEN STRUCTURE D-68 AND OUTFALL. RESTORE SOD, IRRIGATION & 4' CHAIN LINK FENCING (DWG. C-34) – Bid Item No. 66

This item shall be paid on a Lump Sum (LS) basis. The Contractor's unit price shall include full compensation for labor, materials and equipment required for removal of all pavement (all types), fencing, shrubs, plants, trees, sod, irrigation system, etc., within the limits of the following location and as shown on the plans for Outfall #6 (structure D-68 to endwall). The limits extend from the front property line to the endwall of the proposed drainage outfall pipe and the width of the platted drainage easement.

- A. Existing improvements within the drainage easement location shall be included in the pre-construction video.
- B. This item includes pavement saw-cutting, capping and protection of existing irrigation systems. The removed material shall be properly disposed of offsite at no additional cost to the Owner.
- C. Also included in this item is restoration work specifically including regrading, sod, irrigation system, and 4' tall chain link fencing within the limits of the drainage easement. Shrubs and landscaping (with the exception of sod) shall NOT be replaced. Refer to the Tree Disposition table on Drawing G-4 regarding specific tree replacement.
- D. The resident shall be given the opportunity to relocate landscape material and other decorative improvements onto his own property (outside the drainage easement) prior to start of construction. If the resident fails to remove the landscape material in a timely manner, the Contractor shall be required to removed and dispose of the material.
- E. Contractor shall protect existing buildings, accessory structures, foundations, overhead wires, power poles, underground utilities and other permanent improvements and shall not be reimbursed by the Owner for damaging these facilities.
- F. Payment for removal of the existing drainage pipe is included in another bid item.

3.46 FURNISH AND INSTALL FENCING - Bid Item No. 67, 68, 69

- A. Payment for these items shall be on a Linear Foot (LF) Basis for replacing fencing as indicated in the table on Drawing G-4 Fencing to Be Removed and Replaced. Payment includes furnishing and installing new fencing, posts, connections to existing fencing, gates, braces, hardware, etc. of the type and fence height indicated on the table on Drawing G-4.
- B. The new fence shall be installed immediately upon completion of the construction work and shall be located on the property line or on private property, immediately outside the right-of-wayline.

3.47 FURNISH AND INSTALL CONCRETE BLOCK WALL - Bid Item No. 70

- A. Payment for this item shall be on a Linear Foot (LF) Basis for replacing concrete block privacy wall as indicated in the table on Drawing G-4 Fencing to Be Removed and Replaced. Payment includes furnishing and installing new concrete block wall, columns, footer, connections to existing fencing,

gates, reinforcement, hardware, etc. of the type and height indicated on the table on Drawing G-4.

- B. The new wall shall be installed immediately upon completion of the construction work and shall be located on the property line or on private property, immediately outside the right-of-wayline.

3.48 REALIGN EXISTING WM AROUND STRUCTURE – Bid Item No. 71, 72, 73, and 74

- A. Payment for realigning existing water main around proposed structures shall be made at the Contractor's Lump Sum price for removing and realigning the water main. The Contractor's unit price shall include full compensation for providing all excavation, dewatering, backfilling, thrust restraints, all fittings and restraining devices, **line stops**, water required for testing and other appurtenances required to complete construction of removing and realigning water main, including all resident notification of interrupted service and density testing and not included in other bid items.
- B. Refer to Drawing C-20, C-30, C-34 and C-40 for locations.

3.49 REMOVE EXISTING HEADWALL (DWG. C-20) – Bid Item No. 75

- A. Payment for this item shall be per Lump Sum Price per each headwall removed. The Contractor's price shall include full compensation for labor, materials and equipment required for the removal of existing headwall including sheeting, shoring, dewatering, etc.
- B. The existing headwall material shall be properly disposed of off-site at no additional cost to the Owner.

3.50 REMOVE & REINSTALL GUARDRAIL– Bid Item No. 76

- A. Payment for this item shall be on a Linear Foot (LF) Basis for removing and reinstalling the guardrail in accordance with FDOT Index 400. Payment includes disposal of the removed guardrail posts and hardware etc. at no additional cost to the Owner, furnishing and installation of new posts, connections, anchors, hardware, etc. and reinstallation of the existing guard rail and end assemblies on the new posts once construction has been completed.

3.51 TREE PROTECTION - Bid Item No. 77

- A. Payment for this item shall be made on a Lump Sum(LS) Basis for the protection of existing trees adjacent to the construction work.

- B. Refer to the Tree Protection Detail on Drawing D-10.

3.52 FURNISH LANDSCAPE (TREE) MATERIAL - Bid Item No.78

- A. Any funds requested to be used under this Allowance (AL) Pay Item shall require written justification and Owner approval as to why they are a valid cost for tree mitigation for both tree selection and cost. Back-up documentation for the total cost shall be submitted before the work is undertaken. Any unused monies is retained by the City and is not payable to the Contractor.
- B. Payment under this item shall be made as stipulated in Specifications Section 01020 - Allowances

3.53 LANDSCAPE (TREE) INSTALLATION W/BUBBLER INCL MAINTENANCE - Bid Item No. 79

- A. Payment for this item shall be on a Unit Cost Basis for Each (EA) tree delivered to the site and installed as indicated on the plans and as coordinated with the City. The Contractor's unit price shall include all labor and equipment for the transportation of the tree from the nursery to the site, installation, bracing, tree protection, tapping of adjacent irrigation system and provision of a bubbler for the tree, and maintenance of the tree until established and through the term of the construction contract.
- B. Payment for furnishing of the trees is included under Bid Item No. 78.

3.54 REMOVE & DISPOSE OF TREES – Bid Item No. 80

- A. Payment for this item shall be made on a Unit Price Basis. The Contractor's unit price shall include full compensation for removal and disposal offsite of the existing trees (all trunk diameters) within the road right-of-way and easements, as identified on the plans and listed in the *Tree Disposition* table on Drawing G-4.
- B. The Contractor's Unit price shall include compensation for labor, materials and equipment required to remove all the identified trees and grub to a minimum depth of 24-inches below final proposed grade in accordance with the drawings and specifications.

3.55 ROOT PRUNE 24" OAK (DWG. C-26) – Bid Item No. 81

- A. Measurement of this item shall be on a Lump Sum Basis for root pruning the existing oak tree as required along the proposed pipe trench. The Contractor

shall root prune as required (and as recommended by the arborist) along the proposed pipe trench, remove the roots 2" diameter and greater to a depth of the trench (approximately 8 feet), dispose of the roots in preparation of the drainage pipe installation.

- B. The contract unit price shall include all labor, materials, and equipment necessary to perform the root pruning, cutting, removing and disposal of the root material, in accordance with the plans and specifications.
- C. The root pruning work shall be under the direction of an arborist with certification from the International Society of Arboriculture (ISA).

3.56 REMOVE & REINSTALL EXISTING TRAFFIC SIGN – Bid Item No. 82

- A. Payment for removal and reinstallation of existing roadway signage shall be made on a Unit Price Basis for Each (EA). The Contractor's unit price shall include full compensation for removing the existing sign and sign post and re-installation as indicated on the plans.
- B. The Contractor's unit price shall include compensation for labor, materials and equipment required to remove and re-install the signage and existing sign post, in accordance with the drawings and specifications. If the sign post and/or sign are damaged due to negligence of the Contractor, the Contractor shall be responsible for replacement of the sign post and sign at no additional cost to the Owner.

3.57 REMOVE SHRUBS – Bid Item No. 83

- A. Payment for this item shall be on a Per Unit Basis for removal and disposal of the shrubs as shown on the drawings.
- B. This item does not include removal of shrubs specifically included in Bid Item No. 64, Bid Item No. 65 and Bid Item No. 66.

3.58 VIBRATION MONITORING D-48 TO D-53; D-54 TO OUTFALL & D-68 TO OUTFALL – Bid Item No. 84

- A. Payment for this item shall be on a Lump Sum (LS) Basis for vibration monitoring and reporting when the drainage pipe is being removed and new pipe installed between the houses at the outfall locations.
- B. An independent, professional vibration monitoring company shall be used for this work. Contractor shall submit qualifications of the firm to the Owner for approval.

- C. Refer to Specification Section 02018 “Vibration Monitoring”.

3.59 REPLACE SANITARY SEWER LATERALS – Bid Item No. 85

- A. This item shall include the cost of replacement any Sanitary Sewer laterals that are found to be in conflict with the proposed piping as indicated on the plans. If the Contractor identifies additional potential conflicts other than those shown on the plans, he shall notify the City prior to replacement of the sanitary sewer lateral.
- B. Payment of the Unit Price per Each (EA) shall provide full compensation for all necessary and required work to replace the sewer lateral from joint of the wye at the main to the clean out at property line, including a new wye at main (if required) and reconnecting to existing service. Payment shall include, but not limited to, excavation, furnishing and installing all materials including 6” SDR 35 PVC lateral pipe; Fernco couplings; cutting pipe; clean-out; pipe joint material; pipe bedding; repair sleeves; flexible banded couplings and adapters; rigid sleeves with compression joints; embedment materials; reconnection of service laterals; flow isolation; by-pass pumping; backfill; compaction, complying with the State of Florida Trench Safety Act; dewatering; sheeting and shoring if necessary; testing; cleanup; and all incidentals related to achieving a repaired segment of sewer lateral in place, tested, and ready for use.
- C. This item also includes all restoration including, but not limited to, roadways, sod, irrigation, and all other items required to restore the site to existing or better condition.
- D. Payment will be made at the Contract Unit Price for sewer laterals that are repaired and/or reconstructed with the authorization of the City only.
- E. Refer to "Service Lateral" details on Drawing D-7.

3.60 FLOWABLE FILL – Bid Item No. 86

- A. Payment for this item shall be made at the contract unit price per Cubic Yard (CY) of 100 psi FDOT diggable, flowable fill installed and accepted and shall include compensation for all labor, materials, and equipment required to complete the work as indicated on the plans.
- B. This pay item is only for placing flowable fill between piping that does not meet separation requirements. It is not intended for use in trench repair or for backfill, etc.

3.61 PERMIT FEES ALLOWANCE – BID ITEM No. 87

- A. Any funds requested to be used under this Allowance (AL) Pay Item shall require written justification and Owner approval as to why they are a valid requirement for fees to be paid. Back-up documentation for the total cost shall be submitted before the payment is authorized. Any unused monies is retained by the City and is not payable to the Contractor.
- B. Payment under this item shall be made as stipulated in Specifications Section 01020 - Allowances.

END OF SECTION

SECTION 01027

APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Administrative and procedural requirements governing the Contractor's Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule.
 - b. Application for Payment forms, including Continuation Sheets.
 - c. Final list of subcontractors.
 - d. Schedule of allowances.
 - e. Schedule of alternates.
 - f. List of products.
 - g. List of principal suppliers and fabricators.
 - h. Schedule of submittals.
 - 2. Submit the Schedule of Values to the Engineer at the earliest possible date but no later than 7 days before the date scheduled for submittal of the initial Applications for Payment.
 - 3. Subschedules: Where Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of the Engineer.

- c. Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value of both labor and materials.
3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into several line items.
4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site. Include requirements for insurance and bonded warehousing, if required.
6. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Unit-Cost Allowances: Show the line-item value of unit-cost allowances, as a product of the unit cost, multiplied by the measured quantity. Estimate quantities from the best indication in the Contract Documents.
8. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and paid for by the Owner. The initial

Application for Payment and the final Application for Payment involve additional requirements.

- B. Payment-Application Times: Each progress-payment date is indicated in the Agreement. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment-Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days prior to the date for each progress payment.
- D. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment. Percent of work complete indicated on the Application for Payment shall be consistent with the work indicated on the Record Documents as complete as of the date of the application. AIA Forms are included at the end of this Section.
- E. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Engineer will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- F. Transmittal: Submit 4 signed and notarized original copies of each Application for Payment to the Engineer by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.
- G. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics liens from subcontractors, sub-subcontractors and suppliers for the construction period covered by the previous application.
 - 1. Submit partial waivers on each item for the amount requested, prior to deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers for such items.
 - 3. Waiver Forms: Submit executed waivers of lien on forms in conformance with Florida Statute FS 713.20.
 - 4. Waiver Forms: Submit waivers of lien on forms which comply with State statutes, and executed in a manner, acceptable to the Owner.

- H. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
1. Final list of subcontractors.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.
 4. Contractor's Construction Schedule (preliminary if not final).
 5. Schedule of principal products.
 6. Schedule of unit prices.
 7. Submittal Schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits.
 11. Copies of authorizations and licenses from governing authorities for performance of the Work.
 12. Initial progress report.
 13. Report of preconstruction meeting.
 14. Certificates of insurance and insurance policies.
 15. Performance and payment bonds.
 16. Record Documents.
 17. Data needed to acquire the Owner's insurance.
 18. Initial settlement survey and damage report, if required.
- I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
1. Completion of Project closeout requirements.
 2. Completion of items specified for completion after Final Project Inspection.
 3. Ensure that unsettled claims will be settled.
 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 5. Transmittal of required Project construction records to the Owner.
 6. Proof that taxes, fees, and similar obligations were paid.
 7. Removal of temporary facilities and services.

8. Removal of surplus materials, rubbish, and similar elements.
9. Record Documents - Drawings and Specifications with Contractor's Endorsement.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01045 CUTTING AND PATCHING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Contractor shall be responsible for all cutting, fitting and patching, including related excavation and backfill, required to complete the Work or to:
 - 1. Make its several parts fit together properly.
 - 2. Uncover portions of the Work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to requirement of Contract Documents.
 - 5. Remove samples of installed work as specified for testing.
 - 6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

1.2 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work
- B. Section 02220: Trenching, Backfilling and Compacting
- C. Section 02720: Stormwater System

1.3 SUBMITTALS

- A. Submit a written request to Engineer well in advance of executing and cutting or alteration which affects:
 - 1. Work of the Owner or any separate contractor.
 - 2. Structural value or integrity of any element of the project.
 - 3. Integrity or effectiveness of weather-exposed or moisture-resistant element or systems.
 - 4. Efficiency, operational life, maintenance or safety of operationalelements.
 - 5. Visual qualities of sight-exposed elements.

- B. Request shall include:
1. Identification of the Project.
 2. Description of affected work.
 3. The necessity for cutting, alteration or excavation.
 4. Effect on work of Owner or any separate contractor, or on structural or weatherproof integrity of Project.
 5. Description of proposed work:
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Trades who will execute the work.
 - c. Products proposed to be used.
 - d. Extent of refinishing to be done.
 6. Alternative to cutting and patching.
 7. Cost proposal, when applicable.
 8. Written permission of any separate contractor whose work will be affected.
- C. Submit written notice to Engineer designating the date and the time the Work will be uncovered.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with specifications and standards for each specific product involved.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of Products, or performance of work.

- C. Report unsatisfactory or questionable conditions to Engineer in writing; do not proceed with work until Engineer has provided further instructions.

3.2 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of work.
- B. Provide devices and methods to protect other portions of Project from damage.
- C. Provide protection from elements for that portion of the Project which may be exposed by cutting and patching work, and maintain excavations free from water.

3.3 PERFORMANCE

- A. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- C. Employ original Installer or Fabricator to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- D. Execute fittings and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of Contract documents.
- F. Fit work airtight to pipes, sleeves, ducts, conduit or other penetrations through surfaces.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes;
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01050 FIELD ENGINEERING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This section covers all work required for the verification of preconstruction conditions, layout of proposed utility improvements, quality control and data gathering for the preparation of post-construction record drawings.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01720 – Project Record Documents.

1.3 SUBMITTALS

- A. Submit name, address and telephone number of Florida Registered Land Surveyor before starting work.
- B. Submit copies of all post-construction record drawings and certificate signed by the approved Florida Registered Land Surveyor indicating that the elevations and locations of the work are as the work was constructed.

1.4 DEFINITIONS

- A. Location: "As-Built" location station, offset distance and direction relative to the existing construction baseline.
- B. Elevation: "As-Built" elevation relative to the National Geodetic Vertical Datum of 1988 (NGVD).
- C. Major Deflection: Change in horizontal or vertical alignment greater than 12-inches accomplished without the use of fittings.

1.5 QUALITY ASSURANCE

- A. Land surveyor employed shall be registered in the State of Florida and acceptable to the ENGINEER.
- B. Where applicable, employ a professional engineer of the discipline required for specific source on project, licensed in the State of Florida.

1.6 PROJECT RECORD DOCUMENTS DATA

- A. Maintain a complete and accurate log of control and survey data for project record documents as project progresses.
- B. Upon completion of the project or other intervals as requested by ENGINEER, submit certified "as-built" site survey data of the project improvements. Scale shall be same as ENGINEER's drawings and may be used as a base for surveyor's field data (redline markups).
- C. The following data (as applicable to project) shall be provided as a minimum:
 - 1. Location and elevation of all pressure pipe fittings and valves.
 - 2. Locations and elevations as required to define major horizontal/vertical pipe deflections/conflicts. Data shall include beginning and end of deflection/conflicts, all changes in elevations and alignment and the location and elevation of subject conflict item.
 - 3. Locations of all fire hydrant assemblies, valves and single and double water services. When locating fire hydrant assemblies, locate centerline of the hydrant tee and center of fire hydrant unless assembly differs from that shown in standard details, then define completely, as if installation were a water main.
 - 4. Location and elevation of all connections to existing systems.
 - 5. Locations and elevations at appropriate intervals along centerline of pressure pipe to limit distance between data points to no more than 100 feet.
 - 6. Locations, invert(s) and rim/grate elevations of all new storm sewer catch basins. Location to be center of catch basin. Length and diameter of storm pipe between catch basins.
 - 7. Locations, invert(s) and rim elevations of all new sanitary sewer manholes. Location to be center of manhole. Indicate whether manhole is a drop manhole.
 - 8. Locations of all single and double sanitary laterals and cleanouts.
 - 9. Cross sections of all repaved roadways at maximum 100 foot intervals.
 - 10. Locations and elevations as required to describe all other improvements.
- D. Submit final record drawings prior to final pay application at completion of project as specified in Section 01700 – Contract Closeout.
- E. Record Drawings shall be prepared and submitted as specified in Section 01720 – Project Record Documents.
- F. Provide in tabular form, based on the obtained applicable field data, the final "As-Built" quantities for the project. "As-Built" quantities shall be referenced to the

bid items and their units of measure as indicated in the CONTRACTOR's Bid Proposal.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify locations of survey control points prior to starting work. Promptly notify ENGINEER of any discrepancies discovered.

3.2 SURVEY REFERENCE POINTS

- A. Protect survey control points prior to starting site work; preserve permanent reference points during construction. Make no changes without prior written notice to ENGINEER.
- B. Promptly report to ENGINEER the loss or destruction of any reference point or relocation required because of changes in grades or other reasons. Replace dislocated survey control points based on original survey control.
- C. Provide affidavit from approved Florida Registered Surveyor that all survey control points were re-established following completion of construction.

3.3 SURVEY REQUIREMENTS

- A. ENGINEER will furnish CONTRACTOR with horizontal and vertical control information. Responsibility for construction of the Work to correct dimensions, alignment and grade shall be CONTRACTOR's. Additional control points, as applicable, shall be provided for and established by surveyor.
- B. Establish and define all baselines. Provide necessary stationing along baseline. All ends and intersections of baselines shall be tied to a minimum of two permanent features.
- C. Establish locations of right-of-way lines and property lines as applicable and locations and elevations of proposed improvements. Locate and lay out by instrumentation and similar appropriate means:
 - 1. All utility improvements including locations and elevation.
 - 2. Major pipeline deflections/conflicts.
 - 3. The locations and elevations as applicable to fire hydrants, manholes, inlets, valves, fitting, services and connections to existing utilities.

4. Alignment and cross section of roadway, driveway and sidewalk restorations. As applicable, roadways, driveways and sidewalks shall be reconstructed to existing horizontal and vertical dimensions, unless shown otherwise.
- D. Periodically verify layouts by same means indicated above.
- E. In the event that pipe or other mechanical feature cannot be left exposed for surveyor to obtain "as-built" information, CONTRACTOR shall place PVC pipe at 100 foot intervals, at all major changes in horizontal or vertical alignment and at all locations required that will be buried. PVC pipe shall be of a diameter suitable for the insertion of a surveyor's rod and shall extend from finish grade to the top center of pipe, fitting, location, etc.
- F. PVC pipe for survey data shall be removed by CONTRACTOR after survey data has been obtained.
- G. As-built information of all utilities installed within the limits of pavement must be obtained prior to initial backfilling of trench.

3.4 SURVEYS FOR MEASUREMENT AND PAYMENT

- A. Final project record drawings with "as-built" information of the installed utility systems and all bid quantities shall be submitted and approved by ENGINEER prior to application for final payment.
- B. "As-Built" quantity data shall be presented in tabular form and reference the individual bid items and their respective units of measure as given in the CONTRACTOR's Bid Proposal.
- C. "As-Built" information shall be used by CONTRACTOR to prepare his final statement of accounts as specified in Section 01700 – Contract Closeout.
- D. Current "as-built" information shall be available for ENGINEER's use for evaluation of partial pay requests.

END OF SECTION

SECTION 01090 REFERENCE STANDARDS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Abbreviations and acronyms used in Contract Documents to identify reference standards.

1.2 QUALITY ASSURANCE

- A. Application: When a standard is specified by reference, comply with requirements and recommendations stated in that standard, except when requirements are modified by the Contract Documents, or applicable codes establish stricter standards.
- B. Publication Date: The publication in effect on the date of issue of the Contract Documents, except when a specified publication date is specified.

1.3 ABBREVIATIONS, NAMES AND ADDRESSES OF ORGANIZATIONS

- A. Obtain copies of referenced standards direct from the publication source when needed for proper performance of the Work, or when required for submittal by the Contract Documents.

AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, D.C. 20001
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ACI	American Concrete Institute Box 19150 Redford Station Detroit, MI 48219
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AISC	American Institute of Steel Construction 1221 Avenue of the Americas New York, N.Y. 10020
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AISI	American Iron and Steel Institute 1000 16th Street, N.W. Washington, D.C. 20036
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ANSI	American National Standards Institute 1430 Broadway New York, N.Y. 10018
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, N.Y. 10017
ASTM	American Society of Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWWA	American Water Works Association 6666 W. Quincy Avenue Denver, CO 80235
AWS	American Welding Society 2501 N.W. 7th Street Miami, FL 33125
CRSI	Concrete Reinforcing Steel Institute 180 North LaSalle Street, Suite #2110 Chicago, IL 60601
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197 Washington, D.C. 20407
MIL	Military Specification Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120
NEMA	National Electrical Manufacturer's Association 2101 "L" Street, N.W. Washington, D.C. 20037
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 20076

PCI	Prestressed Concrete Institute 20 North Wacker Drive Chicago, IL 60606
PS	Product Standard U.S. Department of Commerce Washington, D.C. 20203
UL	Underwriter's Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062

- B. When no reference is made to a code, standard, or specification, the standard specifications of the ASTM, the ANSI, the ASME, the IEEE, or the NEMA shall govern.
- C. Contractor shall, when required, furnish evidence satisfactory to the Engineer that materials and methods are in accordance with such standards where so specified.
- D. In the event any questions arise as to the application of these standards or codes, copies shall be supplied on site by the Contractor.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01153 CHANGE ORDER PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Promptly implement change order procedures.
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on time and material/force account basis.
 - 3. Provide full documentation to Engineer on request.
- B. Designate in writing the member of Contractor's organization:
 - 1. Who is authorized to accept changes in the Work.
 - 2. Who is responsible for informing others in the Contractor's employ of the authorization of changes in the Work.
- C. Owner will designate in writing the person who is authorized to execute Change Orders.

1.2 RELATED REQUIREMENTS

- A. Agreement: The amounts of established unit prices.
- B. General conditions and Supplementary Conditions.
- C. Conditions of the Contract:
 - 1. Methods of determining cost or credit to Owner resulting from changes in Work made on a time and material basis.
 - 2. Contractor's claims for the additional cost.
- D. Section 01020: Allowances.
- E. Section 01027: Application for Payment.
- F. Section 01310: Construction Schedules.
- G. Section 01630: Substitutions and Product Options.
- H. Section 01700: Project Closeout.

1.3 DEFINITIONS

- A. Change Order: See General Conditions and Supplementary Conditions.
- B. Construction Change Authorization: A written order to the Contractor, signed by Owner and Engineer, which amends the Contract Documents as described, and authorizes Contractor to proceed with a change which affects the Contract Sum or the Contract Time, for inclusion in a subsequent Change Order.
- C. Field Order: A written order, instructions, or interpretations, signed by Engineer making minor changes in the Work not involving a change in Contract Sum or Contract Time.

1.4 PRELIMINARY PROCEDURES

- A. Owner or Engineer may initiate changes by submitting a Proposal Request to Contractor. Request will include:
 - 1. Detailed description of the Change, products, and location of the change in the Project.
 - 2. Supplementary or revised Drawings and Specifications.
 - 3. The projected time span for making the change, and a specific statement as to whether overtime work is, or is not, authorized.
 - 4. A specific period of time during which the requested price will be considered valid.
 - 5. Such request is for information only, and is not an instruction to execute the changes, nor to stop Work in progress.
- B. Contractor may initiate changes by submitting a written notice to Engineer, containing:
 - 1. Description of the proposed changes.
 - 2. Statement of the reason for making the changes.
 - 3. Statement of the effect on the Contract Sum and the Contract Time.
 - 4. Statement of the effect on the work of separate contractors.
 - 5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

1.5 CONSTRUCTION-CHANGE AUTHORIZATION

- A. In lieu of Proposal Request, Engineer may issue a construction change authorization for Contractor to proceed with a change for subsequent inclusion in a Change Order.

- B. Authorization will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change, and will designate the method of determining any change in the Contract Sum and any change in Contract Time.
- C. Owner and Engineer will sign and date the Construction Change Authorization as authorization for the Contractor to proceed with the changes.
- D. Contractor shall sign and date the Construction Change Authorization to indicate agreement with the terms therein.

1.6 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump-sum proposal, and for each unit price which has not previously been established, with sufficient substantiating data to allow Engineer to evaluate the quotation.
- B. On request provide additional data to support time and cost computations:
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Products required.
 - a. Recommended sources of purchase and unit cost.
 - b. Quantities required.
 - 4. Taxes, insurance and bonds.
 - 5. Credit for work deleted from Contract, similarly documented.
 - 6. Overhead and profit.
 - 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs, and for work done on a time-and-material/force account basis, with documentation as required for a lump-sum proposal, plus additional information:
 - 1. Name of Owner's authorized agent who ordered the work, and date of the order.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time record, summary of hours worked, and hourly rates paid.
 - 4. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing of quantities.
 - c. Subcontractors.
- D. Document requests for substitutions for Products as specified in Section 01630.

1.7 PREPARATION OF CHANGE ORDERS

- A. Engineer will prepare each Change Order.
- B. Owner's Form, per example provided by the Engineer.
- C. Change Order will describe changes in the Work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.
- D. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

1.8 LUMP-SUM/FIXED PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either;
 - 1. Engineer's Proposal Request and Contractor's responsive Proposal as mutually agreed between Owner and Contractor.
 - 2. Contractor's Proposal for a change, as recommended by Engineer.
- B. Owner and Engineer will sign and date the Change Order as authorization for the Contractor to proceed with the changes.
- C. Contractor shall sign and date the Change Order to indicate agreement with the terms therein.

1.9 UNIT PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either:
 - 1. Engineer's definition of the scope of the required changes.
 - 2. Contractor's Proposal for a change, as recommended by Engineer.
 - 3. Survey of completed work.
- B. The amounts of the unit prices to be:
 - 1. Those stated in the Agreement.
 - 2. Those mutually agreed upon between Owner and Contractor.
- C. When quantities of each of the items affected by the Change Order can be determined prior to start of the work:
 - 1. Owner and Engineer will sign and date the Change Order as authorization for Contractor to proceed with the changes.

2. Contractor shall sign and date the Change Order to indicate agreement with the terms herein.
- D. When quantities of the items cannot be determined prior to start of the work:
1. Engineer or Owner will issue a construction change authorization directing Contractor to proceed with the change on the basis of unit prices, and will cite the applicable unit prices.
 2. At completion of the change, Engineer will determine the cost of such work based on the unit process and quantities used.
 - a. Contractor shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.
 3. Engineer will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
 4. Owner and Contractor will sign and date the Change Order to indicate their agreement with the terms therein.

1.10 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/ CONSTRUCTION CHANGE AUTHORIZATION

- A. Engineer and Owner will issue a Construction Change Authorization directing Contractor to proceed with the changes.
- B. At completion of the change, Contractor shall submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this Section.
- C. Engineer will determine the allowable cost for such work, as provided in General Conditions and Supplementary Conditions.
- D. Engineer will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
- E. Owner and Contractor will sign and date the Change Order to indicate their agreement therewith.

1.11 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of Work, and to record the adjusted Contract sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time.

1. Revise subschedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01200 PROJECT MEETINGS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The ENGINEER shall schedule and administer preconstruction meeting, periodic progress meetings, and specially called meetings throughout progress of the Work. ENGINEER shall also:
 - 1. Prepare agenda for meetings.
 - 2. Make physical arrangements for meetings.
 - 3. Preside at meetings.
 - 4. Prepare and distribute minutes of meeting.
- B. Representatives of contractors, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.
- C. The CONTRACTOR shall attend meetings to ascertain that work is expedited consistent with Contract Documents and construction schedules.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01050: Field Engineering.
- B. Section 01720: Project Record Documents.

1.3 PRE-CONSTRUCTION MEETING

- A. Schedule a preconstruction meeting within 20 days after effective date of the agreement.
- B. Location: A central site, convenient for all parties, designated by the ENGINEER.
- C. Attendance:
 - 1. Owner's Representative.
 - 2. Engineer and his professional consultants.
 - 3. Resident Project Representative.

4. Contractor's Superintendent.
5. Major Subcontractors.
6. Major Suppliers
7. Utilities
8. Others as Appropriate and approved by the Owner.

D. Suggested Agenda:

1. Distribution and discussion of:
 - a. List of major subcontractors and suppliers.
 - b. Projected Construction Schedules.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. Project Coordination.
 - a. Designation of responsible personnel.
5. Procedures and processing of:
 - a. Field orders.
 - b. Requests for Information (RFI).
 - c. Requests for Proposal (RFP).
 - d. Submittals
 - e. Change Orders.
 - f. Applications for Payment.
6. Adequacy of distribution of Contract Documents.
7. Procedures for maintaining Record Documents.
8. Use of premises.
 - a. Office, work and storage areas.
 - b. Owner's requirements.
9. Construction facilities and controls. Refer to Section 01505.
10. Temporary utilities.
11. Safety and first-aid procedures.
12. Security procedures.

13. Housekeeping procedures.
14. Miscellaneous.

1.4 PROGRESS MEETINGS

- A. ENGINEER will schedule and administer Project meetings throughout progress of the Work at maximum bi-weekly intervals, specially called meetings and pre-installation conferences.
- B. ENGINEER will make physical arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within two days to Owner, participants, and those affected by decisions made at meetings.
- C. Location of the meetings: Project field office of the Contractor or other site directed by the Engineer.
- D. Attendance:
 1. Engineer, and his professional consultants as needed.
 2. Subcontractors as appropriate to the agenda.
 3. Suppliers as appropriate to the agenda.
 4. Others as appropriate.
- E. Suggested Agenda:
 1. Review, approval of minutes of previous meeting.
 2. Review of Work progress since previous meeting.
 3. Field observations, problems, conflicts.
 4. Problems which impede Construction Schedule.
 5. Review of off-site fabrication, delivery schedules.
 6. Corrective measures and procedures to regain projected schedule.
 7. Revisions to Construction Schedule.
 8. Progress, schedule, during succeeding work period.
 9. Coordination of schedules.
 10. Review of submittal schedules; expedite as required.
 11. Maintenance of quality standards.

12. Pending changes and substitutions.
 13. Review proposed changes for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts relating to the project.
 14. Review of record drawings.
 15. Construction Schedule
 16. Other business.
- F. The CONTRACTOR is to attend progress meetings and is to study previous meeting minutes and current agenda items, in order to be prepared to discuss pertinent topics such as deliveries of materials and equipment, progress of the work, etc.
- G. The CONTRACTOR is to provide a current submittal log at each progress meeting in accordance with the General Conditions.
- H. The CONTRACTOR shall provide an updated project schedule at each progress meeting in accordance with the General Conditions and Section 01300 – Submittals.

1.5 PRE-INSTALLATION CONFERENCES

- A. When required in individual Specification Section, a pre-installation conference will be arranged prior to commencing work of the Section.
- B. Require attendance of entities directly affecting, or affected by, work of the Section.
- C. Review conditions of installation, preparation and installation procedures, and coordination with related work.

1.6 MONTHLY PAY APPLICATION MEETING

- A. Monthly site meeting will be held to verify the quantities requested for payment on the CONTRACTOR's current pay request.
- B. A monthly date for this meeting shall be determined at the preconstruction conference. This date may be revised from time to time as requested and approved by all parties.

- C. Representatives of CONTRACTOR, OWNER and ENGINEER shall attend. Representatives shall be qualified and authorized to act on behalf of the entity represented.
- D. At the meeting, the CONTRACTOR shall present for ENGINEER's review current record drawings prepared as specified in Section 01050 – Field Engineering. Application for payment shall reflect quantities as indicated on record drawings.
- E. Applications for payment presented with incomplete record drawings will not be accepted.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01300 SUBMITTALS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This section covers the work required to prepare and submit construction progress schedules, proposed products list, shop drawings, product data, samples, manufacturers' instructions and manufacturers; certificates, complete, all in accordance with the Contract Documents.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. GENERAL CONDITIONS
- B. Special Conditions.
- C. Section 01700 – Project Closeout.
- D. Section 01720 – Project Record Documents.
- E. Individual Specification Sections: Additional specific requirements for submitted data.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each submittal with ENGINEER accepted form.
- B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- C. Identify Project, CONTRACTOR, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.
- D. Drawings and schedules shall be checked and coordinated with the work of all trades involved, before they are submitted for review by the ENGINEER and shall bear the CONTRACTOR's stamp of approval as evidence of such checking and coordination. Drawings or schedules submitted without this stamp of approval shall be returned to the CONTRACTOR for resubmission.
- E. Schedule submittals to expedite the Project, and deliver to ENGINEER at Mathews Consulting, 477 S. Rosemary Ave., Suite 330, West Palm Beach, FL 33401 and allow 7-14 working days for review.

- F. If drawings show variations from Contract requirements because of standard shop practice or for other reasons, describe such variations in the letter of transmittal. If acceptable, proper adjustment in the Contract shall be implemented where appropriate. Failure to describe such variations does not relieve the CONTRACTOR of the responsibility for executing the work in accordance with the Contract, even though such drawings have been reviewed.
- G. Each Shop Drawing shall have a blank area 3-1/2 inches by 3-1/2 inches, located adjacent to the title block. The title block shall display the following:
 - 1. Number and title of drawing.
 - 2. Date of drawing or revision.
 - 3. Name of project building or facility.
 - 4. Name of CONTRACTOR and subcontractor submitting drawing.
 - 5. Clear identification of contents and location of the work.
 - 6. Specification title and number.
 - 7. Specification Section.
 - 8. Applicable Drawing Number.
- H. Revise and resubmit submittals as required; identify all changes made since previous submittal.
- I. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- J. Requirements in this Section are in addition to any specific requirements for submittals specified in other Divisions and Sections of these Contract Documents.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial progress schedule in triplicate within 15 days after date established in the Notice to Proceed for ENGINEER review.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit computer generated network analysis diagram using the critical path method, generally as outlined in Associated General Contractors of America (AGC) publication "The Use of CPM in Construction – A Manual for General Contractors and the Construction Industry".
- E. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.

- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by OWNER and under Allowances.

1.5 PROPOSED PRODUCTS LIST

- A. Within 30 days after date established in the Notice to Proceed, submit a complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.6 SHOP DRAWINGS

- A. Submit the number of opaque reproductions which CONTRACTOR requires, plus three copies, which will be retained by ENGINEER (maximum of eight).
- B. After review, distribute in accordance with Article on Procedures above and for Record Documents described in Section 01720 – Project Record Documents.
- C. When used in the Contract Documents, the term "Shop Drawings" shall be considered to mean, in addition to the definition in Section 00700 – GENERAL CONDITIONS, CONTRACTOR's drawing plans for material and equipment which become an integral part of the Project. These drawings shall be complete and detailed. Shop Drawings shall consist of fabrication, erection and setting drawings and schedule drawings, manufacturer's scale drawings, and wiring and control diagrams. Cuts, catalogs, pamphlets, descriptive literature, and performance and test data, shall be considered only as supportive to required Shop Drawings as defined above.
- D. Data on materials and equipment include, without limitation, materials and equipment lists, catalog data sheets, cuts, performance curves, diagrams, materials of construction and similar descriptive material. Materials and equipment lists shall give, for each item thereon, the name and location of the supplier or manufacturer, trade name, catalog reference, size finish and all other pertinent data.
- E. For all mechanical and electrical equipment furnished, provide a list including the equipment name, address, telephone number of the manufacturer's representative and service company so that service and/or spare parts can be readily obtained.
- F. All manufacturers or equipment suppliers who proposed to furnish equipment or products shall submit an installation list to the ENGINEER along with the

required shop drawings. The installation list shall include at least five installations where identical equipment has been installed and has been in operation for a period of at least one (1) year.

G. Only the ENGINEER will utilize the color "red" in marking Shop Drawing submittals. The Contractor shall utilize the color "green".

H. After two (2) reviews of the same shop drawing, the Contractor shall be subject to reimbursement of Engineering Fees for additional review time.

1.7 PRODUCT DATA

- A. Submit eight (8) copies of each shop drawing submittal.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.
- C. After review, distribute in accordance with Article on Procedures above and provide copies for Record Documents described in Section 01720 - Project Record Documents.

1.8 SAMPLES

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- B. Submit samples of finishes in custom colors selected, textures, and patterns for ENGINEER's selection.
- C. Include identification on each sample, with full Project information.
- D. Submit the number or samples specified in individual specification Section; one of which will be retained by ENGINEER.
- E. Samples not destroyed in testing shall be sent to the ENGINEER or stored at the site of the work. Accepted samples of the hardware in good condition will be marked for identification and may be used in the work. Materials and equipment incorporated in the work shall match the accepted samples. Samples which failed testing or are not accepted will be returned to the CONTRACTOR at his expense, if so requested at time of submission.

1.9 MANUFACTURE'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturer's instructions and Contract Documents.

1.10 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturer's certificate to ENGINEER for review, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to ENGINEER.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01310

CPM CONSTRUCTION SCHEDULE REQUIREMENTS

PART 1 - GENERAL

1.1 GENERAL

- A. This section covers the requirements for submittal of a critical path method (CPM) construction schedule and an associated schedule of values.
- B. Development of the schedule, the cost loading of the schedule, monthly payment requisitions, and project status reporting requirements of the contract shall employ computerized CPM scheduling. The CPM schedule shall be cost loaded based on the schedule of values or unit bid prices or combination thereof.

1.2 INITIAL SCHEDULE SUBMITTALS

- A. Submit two short-term schedule documents at the preconstruction conference and as described in the subsection on "Submittals" which shall serve as the Contractor's plan of operation for the initial 60-day period of the contract time and to identify the manner in which the Contractor intends to complete all work within the contract time. Submit (1) a 60-day narrative plan of operation, describing in detail narrative how contract operations will be conducted, and (2) a project overview bar-chart type plan for all work as indicated below.
 - 1. 60-Day Narrative Plan of Operation: During the initial 60 days of the contract time, conduct contract operations in accordance with the 60-day detail narrative and bar chart plan of operation. The bar chart shall show the accomplishment of the Contractor's early activities (mobilization items, permits, submittals necessary for early material and equipment procurement, submittals necessary for long lead equipment procurement, CPM submittals, initial site work, and other submittals and activities required in the first 60 days).
 - 2. Comprehensive Project Overview Bar Chart: The comprehensive overview bar chart shall indicate the major components of the project work and the sequence relations between major components and subdivisions of major components. The overview bar chart shall indicate the relationships and time frames in which the various components of the work will be substantially complete and placed into service in order to meet the project milestones. Sufficient detail shall be included for the identification of subdivisions of major components into such activities as potholing, excavation, bedding and pipe installation, backfilling, surface restoration, tunneling, structures, relocations, improvements, and other important work for each major facility within the overall project scope. Indicate planned durations and start dates for each work item subdivision.

Plot each major component and subdivision component on time scale sheets not to exceed 24 inches by 36 inches in size. Do not use more than four sheets to represent this overview information.

- B. The Owner's Representative and the Contractor shall meet to review and discuss the narrative 60-day plan of operations and project overview bar chart within 5 days after they have been submitted to the Owner's Representative. The Owner's Representative's review and comment on the schedules shall be limited to contract conformance (with the sequencing and interim duration requirements). Make corrections to the schedules necessary to comply with the contract requirements, and adjust the schedules to incorporate any missing information requested by the Owner's Representative.
- C. Satisfactory incorporation of the Owner's Representative's comments shall be a condition for progress payments.

1.3 CPM PROGRAM

- A. Use PRIMAVERA (R) P-3 or 4, or an equivalent computer software for the CPM schedule, as approved by the Owner's Representative. If software other than one of the programs named above is used, provide licensed copy and training to Owner's Representative.

1.4 SUBMITTALS

- A. Within three calendar days of the Notice to Proceed, submit a written statement of CPM capability, verifying that the Contractor has qualified in-house personnel capable of using the CPM technique or that the Contractor employs a qualified CPM consultant. The statement shall identify the individuals who will perform the CPM scheduling and provide those individuals' detailed resumes. Capability shall be verified by detailed description of construction projects and references on which the individuals have successfully applied computerized CPM and shall include at least three projects of similar nature, scope, and value not less than one-half the total bid price of this project. The statement shall also provide the contact persons for the referenced projects with current telephone and address information.
- B. Submit an initial schedule within ten days of the date of Notice to Proceed. If revisions are required to this initially submitted schedule, resubmit a revised schedule within five calendar days after the Contractor receives the returned copy.
- C. Submit graphic network diagram and tabulated schedules within 30 days of the Notice to Proceed.
- D. Within 10 days after the conclusion of Owner's Representative's review, revise the network diagram and resubmit the network diagram and a tabulated schedule produced therefrom. The revised network diagram and tabulated schedule will be

reviewed and accepted or rejected by Owner's Representative within 15 days after receipt. The network diagram and tabulated schedule when accepted by Owner's Representative shall constitute the project work schedule unless a revised schedule is required due to substantial changes in the work or a change in contract time, delinquency by Contractor requiring a recovery schedule, or as otherwise provided herein below. Activities not occurring as scheduled are delinquent if they begin after early start or they finish after early finish.

- E. Submit a copy of the schedule, clearly showing progress made and actual "S" curves, on a monthly basis along with the Application for Payment.
- F. Schedule submittals to the Owner's Representative shall include eight hard copies and one electronic copy of a CPM-type construction schedule, generally as outlined in the Associated General Contractors publication The Use of CPM in Construction.
- G. Submit a preliminary schedule of values for the major components of the work within three days of the Notice to Proceed.
- H. Prepare and submit a detailed schedule of values to the Owner's Representative within 30 days from the date of Notice to Proceed.

1.5 PROJECT INFORMATION

- A. Each network diagram and report tabulation shall be prefaced with the following summary data:
 - 1. Project name.
 - 2. Contractor.
 - 3. Type of tabulation (initial or updated).
 - 4. Project duration.
 - 5. Project contract completion date.
 - 6. Projected completion date.
 - 7. Variance analysis per activity.

1.6 GRAPHIC NETWORK DIAGRAM AND TABULATED SCHEDULES

- A. The completed schedule shall include a graphic network and tabulated schedules with the graphic network displayed on a sheet with a minimum size of 11 inches by 17 inches and a maximum size of 24 inches by 36 inches. The graphic network shall be the precedence diagram method (PDM). It may be divided into two or more sheets, if necessary, provided that all sheets are properly referenced. Notation on each activity arrow shall include a brief work description and an estimate of the time duration of the work. Show a calendar along the full length of

each sheet. Plot each activity so that the beginning and completion dates can be readily determined by comparison to the calendar scale. Show activities using symbols and/or color that clearly designate whether it is a critical path or noncritical activity. Noncritical path activities shall show estimated work time and free float time.

B. Float Time:

1. Definition: Unless otherwise provided herein, float as referenced in these documents is total float. Total float is the period of time measured by the number of working days each noncritical path activity may be delayed before it and its succeeding activities become part of the critical path. If a noncritical path activity is delayed beyond its float period, that activity then becomes part of the critical path and controls the end date of the project. Thus, the delay of the noncritical path activity beyond its float period will cause delay to the project itself.
2. Float Ownership: Neither the Owner nor the Contractor owns the float time. The project owns the float time. As such, liability for delay of the project completion date rests with the party actually causing delay to the project completion date. For example, if Party A uses some but not all of the float time and Party B later uses the remainder of the float time as well as additional time beyond the float time, Party B shall be liable for the costs associated with the time that represents a delay to the project's completion date. Party A would not be responsible for any costs since it did not consume all of the float time and additional float time remained; therefore, the project's completion date was unaffected.

C. Display time at the top of the schedule, reading left to right, with no greater than weekly divisions.

D. The schedule shall indicate dates for important activities including:

1. A logical succession of work from start to finish. This logical succession, when accepted, is the Contractor's work plan and is only designated as early start to accommodate standard computerized systems.
2. Detailed definition of each activity.
3. A logical flow of work crews/equipment (crews are to be defined by labor category and labor hours; equipment by type and hours).
4. Shop drawing submittals and reviews.
5. Decisions.
6. Product procurement and delivery.
7. Beginning and completion of each element of construction.
8. Critical coordination dates.
9. Submittal of record drawings and equipment manuals.

10. Cleanup, final inspection, etc.
 11. Any project milestones or phases of work that affect important dates, such as other parallel contracts.
- E. Submit:
1. Activity sort by early start, organized by related elements.
 2. Activity sort by float, organized by related elements.
 3. Activity sort by predecessor/successor.
 4. Narrative description of the logic and reasoning of the schedule.
 5. Resource allocation by activity.
 6. List of cost-loaded activities that identifies specific cost amount for each activity in the CPM schedule.
- F. Show constraints between interrelated activities.
- G. The initial schedule shall include the following minimum data for each activity:
1. Activity numbers.
 2. Estimated duration.
 3. Activity description.
 4. Early start date (calendar dated).
 5. Early finish date (calendar dated).
 6. Status (whether critical).
 7. Float.
 8. Cost of activity.
 9. Other resources including equipment hours by type, labor by craft or crew, and materials by units.
- H. Where float time exists in activities, show the activities with early start/early finish times.
- I. The schedule shall include a title block with the project title, the Contractor's business name, the date of submittal or revision, and the signature of the Contractor's authorized representative attesting to his review and accuracy of the submittal.
- J. The duration indicated for each activity shall be in calendar days and shall represent the single best time considering the scope of the work and resources planned for the activity including time for inclement weather. Except for certain nonlabor activities, such as curing concrete or delivering materials, activity

durations shall not exceed 14 days, be less than one day, or exceed \$50,000 in value unless otherwise accepted by the Owner's Representative.

1.7 CONSTRUCTION SCHEDULE PROGRESS

- A. If the Contractor's progress has fallen behind the accepted construction schedule, the Contractor shall take such steps as may be required, including increasing the number of personnel, shifts, overtime operations, days of work, and amount of construction equipment until such time as the work is back on schedule. Increased costs of any accelerated work program shall be paid for by the Contractor. Submit such recovery schedule within 10 days upon written request by Owner's Representative.

1.8 ACCEPTANCE

- A. The finalized schedule will be acceptable to the Owner's Representative when it provides an orderly progression of the Work to completion in accordance with the contract requirements, adequately defines the Contractor's work plan, provides a workable arrangement for processing the submittals in accordance with the project specification requirements, and properly allocates resources (labor, equipment, and costs) to each activity (free of unbalances in resources). When the network diagram and tabulated schedule have been accepted, submit to Owner's Representative eight copies of the timescaled network diagram; eight copies of a computerized, tabulated schedule in which the activities have been sequenced by activity numbers; and eight copies of all reports required by this specification.
- B. Also submit a 700MB CD that contains all of the schedule submittal information. The disk shall contain data compatible with the specified CPM program to generate network diagrams and schedule reports identical to the hard copies submitted.
- C. Review of the Contractor's project schedule is for conformance to the requirements of the contract documents only. Review by the Owner's Representative of the Contractor's project schedule does not relieve the Contractor of any of its responsibility whatsoever for the accuracy or feasibility of the project schedule, or of the Contractor's ability to meet the interim milestone date(s) and the contract completion date, nor does such review and acceptance imply or expressly warrant, acknowledge, or admit the reasonableness of the logic, durations, labor, or equipment loading of the Contractor's project schedule.

1.9 REVISIONS OR UPDATES TO CONSTRUCTION SCHEDULE

- A. Submit a revised or updated construction schedule by the third working day of each month. The data date shall be the 25th of the preceding month. Revise or update the schedule upon the occurrence of any of the following:

1. When delay in completion of any activity or group of activities indicates an overrun of the contract time or control point requirement by 10 working days or 10% of the remaining duration, whichever is less.
 2. Delays in submittals, deliveries, or work stoppage are encountered which make replanning or rescheduling of the work necessary.
 3. The schedule does not represent the actual prosecution and progress of the project as being performed in the field and progress for any activity is five working days behind the current schedule.
 4. The Contractor will be performing work at an earlier date than is shown on the schedule and the work will require additional inspection and/or testing personnel.
- B. In the event of any change to the contract, submit a time analysis of the effect on the critical path. If the Contractor maintains there is no impact, submit a statement to that effect.
- C. The cost of revisions to the construction schedule resulting from Owner-initiated contract changes shall be included in the cost for the change in the work and shall be paid as part of the total cost of the change through the contract allowable percentages for changed work.
- D. The cost of revisions to the construction schedule not resulting from authorized changes in the work shall be the responsibility of the Contractor.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 01370 SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Submit to the Engineer a Schedule of Values allocated to the various portions of the Work, within ten days after award of contract.
- B. Upon the request of the Engineer, support the values with data which will substantiate their correctness.
- C. The Schedule of Values, unless objected to by the Engineer, shall be used only as the basis for the Contractor's Applications for Payment.
- D. Related Requirements in Other Parts of the Contract Documents.
 - 1. Agreement
 - 2. General Conditions
 - 3. Supplementary Conditions

1.2 RELATED REQUIREMENTS

- A. Section 01020: Allowances
- B. Section 01027: Applications for Payment
- C. Section 01600: Materials, Equipment and Products

1.3 FORM AND CONTENT OF SCHEDULE OF VALUES

- A. Type schedule on 8-1/2-inch X 11-inch white paper; Contractor's standard forms and automated printout will be considered for approval by Engineer upon Contractors request. Identify schedule with:
 - 1. Title of Project, location and (City, County, Owner) Project Number.
 - 2. Engineer and Engineer's Project number.
 - 3. Name and Address of Contractor.
 - 4. Date of Submission.
- B. Schedule shall list the installed value of the component parts of the Work, in sufficient detail to serve as a basis for computing values for progress payments during construction.

- C. Follow the table of contents of these Specifications as the format for listing component items.
 - 1. Identify each line item with the number and title of the respective major section of the specifications.
- D. For each major line item list sub-values of:
 - 1. Major products or operations under the item.
 - 2. Contract conditions, such as: bonds, insurance premiums, job mobilization, construction facilities and temporary controls.
- E. For the various portions of the Work:
 - 1. Each item shall include a directly proportional amount of the Contractor's overhead and profit.
 - 2. For items on which progress payments will be requested for stored materials, break down the value into:
 - a. The cost of the materials, delivered and unloaded, with taxes paid.
 - b. The total installed value.
- F. The sum of all values listed in the schedule shall equal the total Contract Sum.

1.4 SUBSCHEDULE OF UNIT MATERIAL VALUES

- A. Submit a subschedule of unit costs and quantities for:
 - 1. Products specified under a unit cost allowance in Section 01020.
 - 2. Products on which progress payments will be requested for stored products.
- B. The form of submittal shall parallel that of the Schedule of Values, with each item identified the same as the line item it the Schedule of Values.
- C. The unit quantity for bulk materials shall include an allowance for normal waste.
- D. The unit values for the materials shall be broken down into:
 - 1. Cost of the material, delivered and unloaded at the site, with taxes paid.
 - 2. Installation costs, including Contractor's overhead and profit.
- E. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01381

AUDIO/VIDEO PRECONSTRUCTION RECORD

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. The Contractor shall provide a continuous color audio/video CD of the entire length of the proposed project prior to construction. The Contractor shall furnish to the Engineer and the Owner two (2) copies each of the CD, which becomes a project record document.

1.2 RELATED REQUIREMENTS

- A. None

1.3 SCHEDULE REQUIRED

- A. Video recordings shall not be made more than 30 days prior to construction. No construction shall begin prior to review and approval of the CD's by the Engineer and the Owner. CD's not conforming to the Specifications shall be resubmitted at no additional charge.

1.4 PROFESSIONAL VIDEOGRAPHERS

- A. The Contractor shall engage the services of a professional videographer. The color audio-visual tapes shall be prepared by a responsible commercial firm known to be skilled and regularly engaged in the business of pre-construction color audio-visual tape documentation.

PART 2 - PRODUCTS

- A. The finished product shall be a bright, sharp, clear picture free of distortion.
- B. The video shall be of the CD format. CD's shall be color and compatible with any standard compact disc player.

PART 3 - EXECUTION

- A. The video recording shall show all surface features located within the construction zone. These features shall include, but not be limited to, roadways, sidewalks, **outside of houses (front & sides), driveways**, culverts, walls, fences and landscaping.
- B. CD's shall be labeled and identified by project title and project number.
- C. **Coverage shall begin at the lowest station number and be continuous until the highest station number is reached.**

END OF SECTION

SECTION 01400 QUALITY CONTROL

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This section covers the work as required to provide and/or coordinate:
 - 1. Quality assurance and control of installation.
 - 2. References
 - 3. Field samples.
 - 4. Inspection and testing laboratory services.
 - 5. Manufacturers' field services and reports.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. GENERAL CONDITIONS

1.3 REFERENCES

- A. Conform to reference standard by date of current issue on date for receiving bids.
- B. Should specified reference standards conflict with Contract Documents, request clarification from ENGINEER before proceeding.
- C. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturer's instruction conflict with Contract Documents, request clarification from ENGINEER before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

- E. Perform work by Professional Audio/Visual Company qualified to produce workmanship of specified quality.
- F. Secure Product in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.5 FIELD SAMPLES

- A. Install field samples at the site as required by individual specification Sections for review.
- B. Acceptable samples represent a quality level for the Work.
- C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by ENGINEER.

1.6 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment and place equipment into operation as applicable, and to initiate instructions when necessary.
- B. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- C. Submit report in triplicate within 30 days of observation to ENGINEER for review.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01410 TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The Owner will employ the services of an independent Testing Laboratory to perform specified testing. The Owner shall pay the costs of all testing laboratory services.
 - 1. The Contractor shall cooperate with the laboratory to facilitate the execution of its required services.

1.2 RELATED REQUIREMENTS

- A. Section 02140: Dewatering
- B. Section 02220: Trenching, Backfilling and Compacting
- C. Section 02235: Limerock Base, Primed
- D. Section 02574: Pavement Removal and Replacement
- E. Section 02661: Water Main and Appurtenances
- F. Section 02720: Storm Water System
- G. Section 02730: Sanitary Sewer System

1.3 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

- A. The Laboratory is not authorized to:
 - 1. Release, revoke alter or enlarge on requirements of the Contract Documents.
 - 2. Approve or accept any portion of the Work.
 - 3. Perform any duties of the Contractor.

1.4 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel and/or the Engineer. Provide access to the Work or manufacturer's operations.

- B. Secure and deliver to the laboratory adequate quantities of representative samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix to be used for concrete and other mixes which require control by the testing laboratory.
- D. Furnish copies of test reports as required.
- E. Furnish incidental labor and facilities:
 - 1. To provide access to Work to be tested.
 - 2. To obtain and handle samples at the project site to be tested.
 - 3. To facilitate inspections and tests.
 - 4. For storage and curing of test samples.
- F. Notify the laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests:
 - 1. When tests or inspections cannot be performed after such notice, reimburse the Owner for laboratory personnel and travel expenses incurred due to the Contractor's negligence.
- G. Make arrangements with the laboratory and pay for additional samples and tests required for the Contractor's convenience.
- H. Immediately cease dewatering efforts if instructed to do so by the Owner.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.1 PAYMENT

- A. Testing of materials and products will be performed by an independent testing laboratory appointed and paid for by the Owner. Testing will be performed to least encumber the performance of the Work.
- B. Owner will authorize the cost of one (1) series of tests, only on the area or item being evaluated. The Contractor shall pay for the costs of additional testing as required due to improper performance of the Work.
- C. When the Work of this Contract or portions thereof is completed, notify the Engineer so that arrangements can be made with the laboratory to perform or witness the tests. Do not proceed with additional portions of Work until test results have been verified.

END OF SECTION

SECTION 01500 CONSTRUCTION CONSIDERATIONS

PART 1 - GENERAL

1.1 HYDRAULIC UPLIFT ON STRUCTURES

- A. The Contractor shall be completely responsible for any pipelines, valve vaults, or similar structures that may become buoyant during the construction operations due to the ground water or floods and before the structure is put into operation. Should there be any possibility of buoyance of a structure, the Contractor shall take the necessary steps to prevent its buoyance. Damage to any structures due to floating or flooding shall be repaired or the structures replaced at the Contractor's expense.

1.2 RELOCATIONS

- A. The Contractor shall be responsible for the relocation of structures, including but not limited to, light poles, sign poles, fences, piping, conduits and drains that interfere with the positioning of the Work as set out on the Drawings. The cost of all such relocations shall be included in the bid for the project and shall not result in any additional cost to the Owner.

1.3 SUBSURFACE INVESTIGATIONS

- A. The Contractor shall be responsible for having determined to his satisfaction, prior to his bid, the nature and location of the work, 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 condition, the character of equipment and facilities required preliminary to and during the performance of the work, the general and local conditions and all other matters which can in any way affect the work under this Contract. The prices established for the work to be done shall reflect all costs pertaining to the work. Any claims for extras based on the substrata or groundwater table conditions will be disallowed.

1.4 OBSTRUCTIONS

- A. All water pipes, storm drains, sanitary sewers, force mains, gas, or other pipe, telephone or power cables or conduits and all other obstructions, whether or not shown, shall be temporarily supported across utility line excavations. The Contractor shall be responsible for any damage to any such pipes, conduits, or structures. Approximate locations of known water, sanitary, raw water, drainage,

power and telephone installations along route of sanitary sewer, storm and water main pipeline or in the vicinity of new work are shown, but must be verified in the field by the Contractor before beginning any excavation. The Contractor shall uncover these pipes, ducts, cables, etc., carefully, by hand if necessary, prior to installing new pipeline. Any discrepancies or differences found shall be brought to the attention of the Engineer in order that necessary changes may be made to permit installation of new work. These conditions are supplemental to general requirements elsewhere in the Contract Documents.

1.5 SITE CONDITIONS

- A. The Contractor acknowledges that he has investigated prior to bidding and satisfied himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, canal stages, tides, water tables or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the work. The Contractor further acknowledges that he has satisfied himself as to the character, quality of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, or any contiguous site, as well as from information presented by the Drawings and Specifications made a part of this Contract, or any other information made available to him prior to receipt of Bids. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Owner.

1.6 PROTECTION OF PROPERTY

- A. The Contractor shall protect all property that may be affected by his work or operations. The location and extent of underground and covered facilities are not guaranteed and the Contractor is cautioned to proceed with care in order to prevent the undermining or damage to existing structures, piping, or facilities.
- B. When City water is being used, the supply source shall be protected against contamination in accordance with existing codes and regulations. **All City water used by Contractor shall be metered and paid for by the Contractor.**
- C. In the event any of the Contractor's activities were to disrupt or endanger any facilities, he shall at his own expense make all necessary repairs or replacements necessary to correct the situation to the satisfaction of the Engineer. Such work shall progress continuously to completion on a 24-hour per day, seven workday

basis. The Contractor shall be responsible for the services of repair crews on call 24 hours per day for emergencies that arise involving work under this Contract.

1.7 WORK ADJACENT TO FLORIDA POWER AND LIGHT CORPORATION (FP&L) FACILITIES

- A. The attention of the Contractor is drawn to existing FP&L overhead and underground facilities are located in the construction area. The Contractor shall protect all existing power transmission and distribution facilities throughout the period of construction and shall contact the offices of FP&L at least 72 hours prior to the start of any construction.
- B. It is full and complete responsibility of the Contractor to determine the exact location of all overhead and underground power transmission and distribution facilities in the area of the Works whether or not they are indicated on the Drawings.

1.8 WORK ADJACENT TO BELLSOUTH TELEPHONE COMPANY OR AT&T TELECOMMUNICATIONS FACILITIES

- A. The attention of the Contractor is drawn to the existing overhead and underground telecommunications facilities are located in the construction area. The Contractor shall protect all existing telecommunications facilities throughout the construction of the project and shall contact the appropriate telecommunications offices at least 72 hours prior to the start of construction.
- B. It is full and complete responsibility of the Contractor to determine the exact location of all overhead and underground telecommunications facilities in the area of the Works whether or not they are indicated on the Drawings.

1.9 WORK ADJACENT TO TECO GAS COMPANY FACILITIES

- A. The attention of the Contractor is drawn to the existing underground natural gas lines are located in the construction area. The Contractor shall protect all existing natural gas pipelines throughout the construction of the project and shall contact the appropriate natural gas offices at least 72 hours prior to the start of construction.
- B. It is full and complete responsibility of the Contractor to determine the exact location of all underground natural gas lines in the area of the Works whether or not they are indicated on the Drawings.

1.10 WORK ADJACENT TO CABLE TV (CATV) FACILITIES

- A. The attention of the Contractor is drawn to the existing overhead and buried CATV lines are located in the construction area. The Contractor shall protect all existing overhead and buried CATV throughout the construction of the project and shall contact the appropriate cable TV offices at least 72 hours prior to the start of construction.
- B. It is full and complete responsibility of the Contractor to determine the exact location of all overhead and underground CATV in the area of the Works whether or not they are indicated on the Drawings.

1.11 RESIDENT NOTIFICATIONS

- A. The Contractor will be responsible for preparation and distribution of informational flyers to affected residents on a periodic basis. The flyers shall include notification of construction schedules with regards to road closures or detours, utility service interruptions, etc.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01505 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.
- B. Temporary Controls: Enclosures and fencing, protection of the Work, road closings, traffic control, temporary bypass sanitary pumping, confined space entry requirements and water control.
- C. Construction Facilities: Access roads, parking, progress cleaning, and temporary buildings.
- D. Some of the items specified herein are not specifically required for the project. However, these items may be provided as required for the convenience of the CONTRACTOR or as required for proper completion of the Work.

1.2 TEMPORARY ELECTRICITY (AS APPLICABLE)

- A. Temporary electrical power service for bypass pumping and general construction purposes, as required, will be available at or near the site. Determine the type and amount available and arrange for obtaining temporary electric power service from the local electric utility company and pay for all costs for services and for power used.
- B. Install circuit and branch wiring, with area distribution boxes located so that power is available throughout the construction area by the use of construction-type power cords.
- C. Temporary electric power installations shall meet construction safety requirements of OSHA, State and other governing agencies.

1.3 TEMPORARY LIGHTING (AS APPLICABLE)

- A. Provide and maintain 1 watt/sq ft lighting to exterior staging and storage areas after dark for security purposes.
- B. Maintain lighting and provide routine repairs.

1.4 TEMPORARY VENTILATION

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.5 CONFINED SPACE ENTRY REQUIREMENTS

- A. CONTRACTOR shall obtain all entry permits and provide all equipment and procedures as required to meet confined space entry requirements in accordance with the following legal authorities:
 - 1. Occupational Safety and Health Act (OSHA), Title 29 CFR 1910.146 "Permit Required Confined Spaces".
 - 2. Florida Statute - Chapter 38 T-20 Section .035. "Hazardous Atmospheres in Confined Spaces".

1.6 TEMPORARY WATER SERVICE (AS APPLICABLE)

- A. Provide and maintain suitable quality water service, as required, for construction operations.
- B. All CITY water used must be metered by the CITY, and the CONTRACTOR will be charged for the water usage and any applicable deposits or fee based on the fee schedule from the City's website www.myboca.us/pdf/userfees.pdf.
- C. Extend branch piping with outlets located so water is available by hoses with threaded connections.
- D. The CONTRACTOR shall contact the City of Pompano Beach Public Works Department for instruction on how to obtain a temporary hydrant water service.

1.7 TEMPORARY SANITARY FACILITIES

- A. Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed in a fiberglass or other approved non-absorbent shell.

1.8 TEMPORARY CONSTRUCTION FENCING

- A. Construction Fence: Commercial grade chain link fence or bright orange-colored, high density, polyethylene safety fence. Minimum fence height shall be 4 feet.
- B. Provide construction fence to secure entire construction area at all times when CONTRACTOR's personnel are not present.

1.9 WATER/EROSION CONTROL

- A. Grade sites to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment, as applicable.
- B. Protect sites from puddling or running water. Provide water barriers as required to protect sites from soil erosion.

1.10 SILTATION CONTROL

- A. Provisions shall be made for the prevention of siltation of the canal waterways where affected by the Work.
- B. The CONTRACTOR shall take all necessary precautions including but not limited to silt barriers and screens.

1.11 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification Sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
- C. Prohibit traffic from landscaped areas.

1.12 ACCESS ROADS

- A. Temporary rock access drives or roadways shall be provided for all residences that are affected by the work for a period greater than 8 hours.
- B. Temporary rock access drives or roadways shall be provided for all businesses affected by the work unless other written arrangements are made with business owner.
- C. Provide copy of all written arrangements to ENGINEER.
- D. Construct and maintain temporary roads accessing public thoroughfares to serve construction areas, as applicable.
- E. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.
- F. Provide and maintain access to fire hydrants, free of obstructions.

1.13 CONSTRUCTION/EXCAVATION DEWATERING

- A. CONTRACTOR shall investigate and provide adequate dewatering systems as required to dewater his excavations for pipe laying and similar operations.
- B. CONTRACTOR shall be responsible for providing all equipment and accessories including but not limited to: well points, pumps, header and discharge piping, drainage gravel, floating silt barriers, erosion control and point jetting equipment.
- C. Where required, CONTRACTOR shall pre-dig excavations for placement of drainage gravel and use of portable trash pumps.
- D. As required, CONTRACTOR shall contact all applicable regulatory authorities to determine permitting requirements, if any, related to construction dewatering. CONTRACTOR shall apply for and obtain all required permits.
- E. All dewatering plans shall be submitted to ENGINEER in accordance with Section 01300 - Submittals. Plans must be approved by ENGINEER minimum of two (2) weeks prior to implementation.
- F. All costs associated with dewatering shall be appropriately apportioned in the bid.
- G. **Provide adequate noise attenuation enclosure around all engine generator pumping equipment and comply with City's Noise Ordinance.**

1.14 FIRE EXTINGUISHERS

- A. Provide portable UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide portable UL- rated Class ABC dry chemical extinguishers or a combination of NFPA recommended Classes for the exposure. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

1.15 PROTECTION OF EXISTING STRUCTURES

- A. CONTRACTOR shall provide screens or other such means to prevent splatter of concrete, paint or other such substance from staining or damaging the nearby existing structures, equipment or vehicles.
- B. CONTRACTOR shall be responsible for cleaning and repairing all damages caused by overspray.

1.16 FUEL STORAGE

- A. All fuel or other such regulated substances stored on site by CONTRACTOR shall be done so in accordance with the rules and regulations of the City of Pompano Beach.

1.17 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain sites in a clean and orderly condition.
- B. Remove waste materials, debris, and rubbish from sites weekly and dispose of at an approved site.

1.18 REMOVAL OF TEMPORARY UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Final Inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 - PRODUCTS (NOT USED).

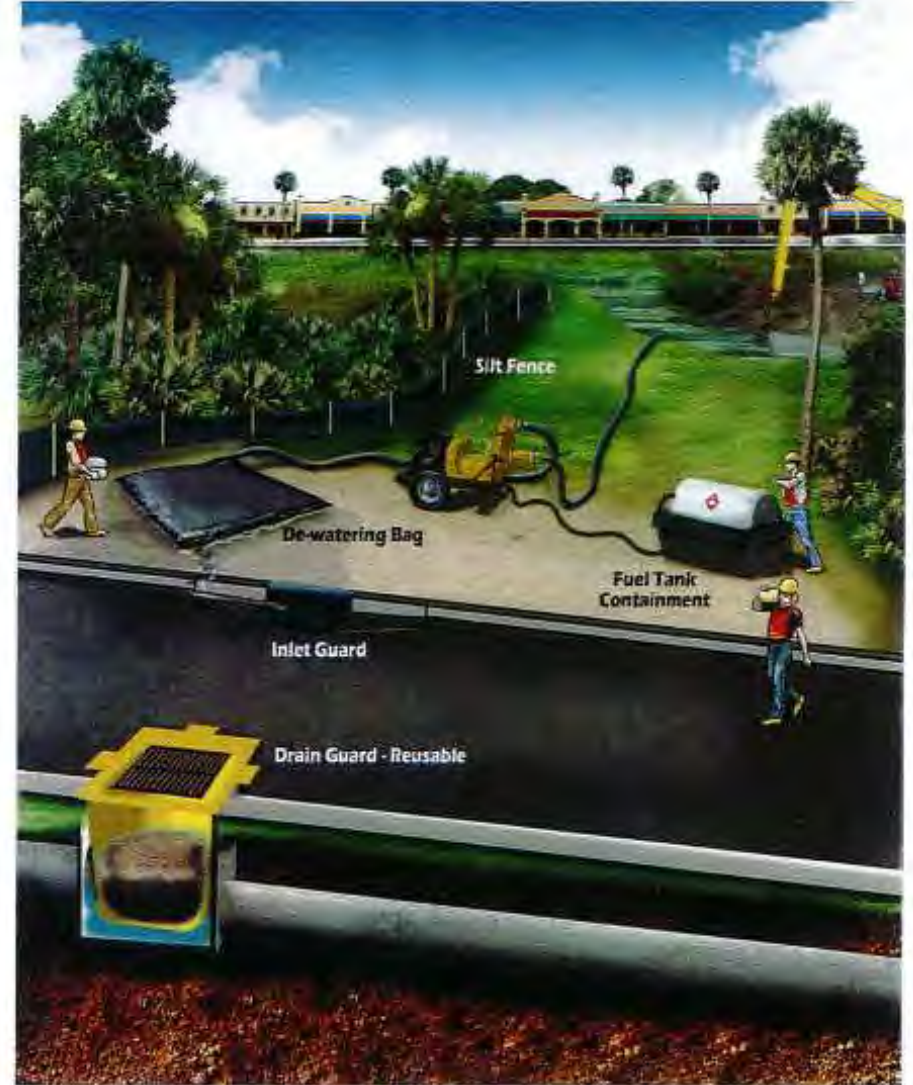
PART 3 - EXECUTION

3.1 NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION SITES

- A. The Contractor shall comply with Stormwater Discharge Regulations and Amendments to the Clean Water Act (33 USC 1251 et seq). On September 16, 1992, the State of Florida certified the general permit for stormwater discharges from construction sites for use in Florida. Under these regulations, construction projects that disturb more than one acre must have and comply with a stormwater pollution prevention plan. For this project, this plan is comprised of this Section, Section 02220 Trenching, Backfilling and Compacting and the Florida Department of Environmental Protection.
- B. The contractor shall ensure that all employees and subcontractors implement the specified erosion control practices to properly manage stormwater.
- C. Comply with the City of Pompano *Site Operator Reference Guide*, copy included following this section.

END OF SECTION

Construction Site Best Management Practices (BMPs)



Site Operator
Reference Guide

Construction Site

Best Management Practices (BMPs)

Stormwater pollution is a major detriment to water quality and fish habitat. When stormwater runoff is mixed with contaminants and litter becomes sediment laden, it creates stormwater pollution.



It costs money and takes time to replace vegetation, clean sediment-clogged storm drains, replace poorly installed BMPs, and mitigate damage to wetlands, downstream property, or to natural resources.

Noncompliance with City, State, and Federal regulations could result in a stop work order until deficiencies or noncompliant activities on site are corrected; resulting in project delays and extra incurred costs for rescheduling work. Damage to wetlands, turbidity violations, and other activities resulting in environmental damages could result in fines and further project delays. It benefits the site operator to ensure that the site complies with all regulations to protect our waterways.

Preventing soil erosion, sedimentation, and runoff of other pollutants like concrete wastes, paint wash water and trash is an important responsibility of all construction sites.

How do Construction Activities Affect You the Site Operator (Contractor)?

The City of Pompano Beach Stormwater Permit requires the City to implement a construction runoff program to ensure that pollution controls are in place on construction sites.

Pompano Beach Municipal Code § 53.16 (Discharges into the Municipal Stormwater Management System Ordinance) prohibits discharges at work sites from flowing into storm drains and polluting neighborhood lakes, canals, and the ocean. To stay in compliance with the law and to keep your project on schedule, make sure the appropriate BMPs are in place and functioning. Sites must be inspected and BMPs maintained with inspection reports filed on site.

Stormwater Pollution Prevention Plan (SWPPP)

A stormwater pollution prevention plan (SWPPP) is an essential requirement for the Florida Department of Environmental Protection (FDEP) Generic Permit for Stormwater discharge from Large and Small Construction Activities. A SWPPP identifies all possible sources of pollution which may reasonably be expected to affect the quality of stormwater discharges to the City's stormwater system or to surface waters of the State from the construction site.

Your construction site is required to have a completed and approved SWPPP from the City of Pompano Beach before construction begins. Prior to clearing and grading, the site operator (contractor) should ensure that all subcontractors have reviewed the SWPPP and understand the site conditions before construction begins.

After the SWPPP is approved and construction commences, operators (contractor) need to ensure the plan continues to be in place. Inspections of the site and stormwater BMPs should occur, at a minimum, weekly by the site operator and within 24 hours after EACH rain event of .50" or greater.

Stormwater Pollution Prevention Plans (SWPPPs) can provide guidance to field activities, but even the best plans cannot compensate for field personnel who don't know the basics of controlling stormwater pollution. SWPPPs and field activities to control erosion, sedimentation, and other runoff pollutants should focus on the following common sense principles:

- Ensure that the Generic Permit Notice of Intent (NOI) is signed and posted at the construction site.
- The list of contractor and subcontractors responsible for implementation of the erosion control measures is filed with the SWPPP.
- Fit the project to the site by retaining the existing drainage system (if it is stable), minimizing clearing and grading, and maximizing infiltration of precipitation.
- Minimize the amount of bare soil exposed and the duration of exposure by phasing the project, limiting clearing and grading to what can be handled during a three week period, and seeding or mulching promptly.
- Before clearing and grading begins, install silt fences, storm drain inlet protection, sediment traps/basins, and other BMPs. Construct to final grade quickly, then seed or mulch.
- Maintain BMPs until the grass is established and the ditches are stable. Address ruts and washouts immediately. Keep potential pollutants from the elements, clean up spills promptly, be diligent about allowing only stormwater to enter the storm drainage system.

Tips for SWPPP Compliance

The creation of a site map is a crucial element to preparing an effective SWPPP. The site map is an assessment process that serves as a guide for selecting appropriate and effective Best Management Practices (BMPs). An evaluation of the drainage patterns on site should be conducted, noting the slope after major grading deficiencies. To ensure that sediment and erosion control devices are effective, areas of soil disturbances should be noted on the site map.

Areas such as wetlands that should not be disturbed should be labeled on the site map with an outline surrounding the perimeter. The locations of all structural and non-structural controls should also be clearly labeled on the map. Soil disturbances or other areas on site that require stabilization practices should be indicated on the site map.

The locations of all wetlands and surface waters are necessary and should be appropriately labeled. Any locations on the construction site where there is a potential stormwater discharge to the MS4 or surface water needs to be noted on the map. There are other elements of site assessment that are useful to include on the site map, however, the above items are the **minimum requirements that must be included**.

The SWPPP is not a static document and may require amendment. If there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for discharge, the SWPPP should be amended to reflect the proper BMPs to prevent noncompliance.

If during weekly inspections or as a result of an inspection after a rain event a deficiency in the plan is noted, the SWPPP should be modified with a description of the activities completed to correct the problem. If a BMP was modified or a new BMP installed the amended SWPPP should include this information.

New contractors to the site, who are responsible for implementing a part of the SWPPP should be included in the plan via an amendment. An amendment to the plan should be accompanied by a signed and dated notation and filed on site with the original SWPPP.

Construction Sites A Threat to Water Quality Examples of What Not to Do...

Construction BMPs can pose a threat to water quality when improperly installed or maintenance is neglected. Turbidity violations can result in low dissolved oxygen which can cause fish kills. Sedimentation runoff into water ways can smother vegetation negatively affecting aquatic habitat. Uncontained spills can enter surface waters and pose a threat to human health. The following photos are results of failed construction BMPs that can adversely impact water quality.



Never hose down dirty pavement or surfaces where materials have spilled. Use dry cleanup methods (absorbent materials such as kitty litter, sawdust, or cornmeal sweep) whenever possible. Do not use the street to stockpile dirt, sand, and other construction materials that can contribute to stormwater pollution. Do not wash paint brushes and spray guns into storm drain or street. They should be cleaned over a drum and the drum disposed of properly.



Best Management Practices (BMPs) for Construction Sites! ***DON'Ts***



- Do not leave storm drain inlets unprotected at any time.
 - Drain guards, gutter buckets and other inlet protection should be inspected weekly to insure proper fit.
 - The site operator is responsible to insure **all** contractors are aware of storm drain locations to help prevent pollutant from entering the MS4 system.
- Do not wash out concrete chutes into the streets or storm drains.
- Do not throw trash or food waste on the ground, dispose in a trash can with cover.
- Don't allow vehicles exiting construction sites to track dirt and mud onto the street.
- Never clean trash receptacles by hosing it down on site.
- Do not erect construction BMPs without implementing daily inspections and periodic maintenance to ensure they are operating correctly. Inspection reports should be kept on site.

Best Management Practices (BMPs) for Construction Site DO's

- Acceptable perimeter controls include gravel bags, silt fences, and straw wattles (weighted down) and must be used to surround the entire site.
 - Differentiate perimeter controls between wetlands and uplands by installing yellow staked turbidity barriers at wetland lines and black silt fences at upland areas.
- Building Materials/Staging Areas must be stored on site at all times and should be covered when not in use to prevent runoff from wind and rain.
- Dumpsters should be covered with a rollback tarp.
 - Perimeter controls around dumpster areas should be provided if pollutants are leaking or discharging from the dumpster.
- Clean up leaks and spills immediately. This prevents contaminated soil or residue on paved surfaces from blowing or washing off into storm drains.
- Paint and stucco stored on site must be covered and contained.
- Dirt and Grading
 - Mounds of dirt or gravel should be stored on site and sprayed daily with water to prevent excess dust and be covered to prevent runoff during a storm.
 - Sites must have adequate tracking control to prevent transport from the site.



For more information about BMPs for construction activities or additional brochures, call:



Florida's Warmest Welcome

City of Pompano Beach
Building Inspections Department
(954) 786-4670

- To Report a Clogged Catch Basin
(954) 786-4637
- To Report Illegal Dumping or an Illicit Discharge
(954) 786-4724 or (954) 519-1499
- City of Pompano Engineering Division
Stormwater Inspections
(954) 786-4506

100 West Atlantic Blvd
Pompano Beach, FL 33060

www.pompanobeachfl.gov

Certification of Compliance with Minimum Requirements

The following is intended as an attachment for construction and grading plans and represents, the minimum standards of good housekeeping which must be implemented on all construction sites regardless of size.

- Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.
- Stockpiles of earth and other construction materials must be prevented from being transported off site by wind or water.
- Fuels, oils, solvents and other toxic materials must be stored in accordance with manufacturer specifications and are not to contaminate soil or surface waters. Spills must be cleaned immediately and disposed of properly. Spills may not be washed off site into storm drain system.
- Non-stormwater runoff from equipment and vehicle wash outs and any other activity shall be contained on site.
- Excess or waste concrete should never be washed in a manner that allows for materials to leave the site.
- Trash and all construction waste must be deposited into covered receptacles to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked off site by construction traffic. The entrance roadways must be stabilized to inhibit sediments from being deposited into the public right of ways. Depositions must be swept immediately and not be allowed into the storm drain system or surface waters.

Other:

As the project owner or authorized agent of owner, I have read and understand that the requirements listed above are necessary to preserve permit compliance and to control stormwater pollution from negatively affecting waterways, and I certify that the site will comply with these requirements.

Print Name

Company

Signature

Date

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Print Name

Company

Signature

Date

Contractor's Certification

As a Contractor, Site Superintendent, Owner or Operator of this Construction Site, I certify that I have received and reviewed the Construction Best Management Practices (BMPs) and agree to implement all site controls applicable to this construction site to effectively minimize the negative impacts of this project's stormwater runoff.

Print Name

Company Name

Signature

Phone Number

Date

City of Pompano Beach

Building Permit # _____

SECTION 01530 PROTECTION OF EXISTING FACILITIES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The Contractor shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. The Contractor shall verify the exact locations and depths of all utilities shown, and the Contractor shall make exploratory excavations of all utilities that may interfere with the Work.
- C. All such exploratory excavations shall be performed as soon as practicable after award of the Contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the Contractor's work.
- D. When such exploratory excavations show the utility location as shown to be in error, the Contractor shall so notify the Engineer.
- E. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.2 RIGHTS-OF-WAY

- A. The Contractor shall not do any Work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the Contractor enter upon the rights-of-way involved until notified by the Engineer that the Owner has secured authority therefor from the proper party.
- B. After authority has been obtained, the Contractor shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support, or otherwise protect such pipeline, transmission line, ditch, fence, or structure, or replace the same.
- C. When two or more contracts are being executed at one time on the same or adjacent land in such manner that work on one Contract may interfere with that on another, the Owner shall determine the sequence and order of the Work.

- D. When the limits of one Contract are the necessary or convenient means of access for the execution of another Contract, such privilege of access or any other reasonable privilege may be granted by the Owner to the Contractor so desiring, to the extent, amount, in the manner, and at the times permitted.
- E. No such decision as to the method or time of conducting the Work or the use of territory shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the Work.

1.3 PROTECTION OF STREET OR ROADWAY MARKERS

- A. The Contractor shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization.
- B. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced.
- C. All survey markers or points disturbed by the Contractor shall be accurately replaced after all street or roadway re-surfacing has been completed.

1.4 RESTORATION OF PAVEMENT

- A. General:
 - 1. All paved areas including asphaltic concrete cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific re-surfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit.
 - 2. All temporary and permanent pavement shall conform to the requirements of the affected pavement owner.
 - 3. All pavements subject to partial removal shall be neatly saw-cut in straight lines.
- B. Temporary Re-surfacing:
 - 1. Wherever required by the public authorities having jurisdiction, the Contractor shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with final restoration.
- C. Permanent Re-surfacing:

1. To obtain a satisfactory junction with adjacent surfaces, the Contractor shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement.
2. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines.
3. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.

D. Restoration of Sidewalks or Private Driveways:

1. Wherever sidewalks or private roads have been removed for purposes of construction, the Contractor shall place suitable temporary sidewalks or roadways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or, if no such period of time is so fixed, the Contractor shall maintain said temporary sidewalks or roadways until the final restoration thereof has been made.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

A. General:

1. The Contractor shall protect all underground utilities and other improvements that may be impaired during construction operations.
2. It shall be the Contractor's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations.
3. The Contractor shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be deemed necessary.

B. Utilities to be Moved:

1. In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the Contractor, be notified by the Owner to move such property within a specified reasonable time.

2. When utility lines that are to be removed are encountered within the area of operations, the Contractor shall notify the Engineer a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Temporary Removal and/or Relocation:
1. Where the proper completion of the Work requires the temporary removal and/or relocation of an existing utility or other improvement which is indicated, the Contractor shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Engineer and the owner of the facility.
 2. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the Contractor in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.
- D. The right is reserved to the Owner and to the owners of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work of this Contract.
- E. Existing utility lines that are indicated or the locations of which are made known to the Contractor prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, **the City shall be notified immediately** and the utility line shall be immediately repaired or replaced by the Contractor.
- F. Underground Utilities Not Indicated:
1. In the event that the Contractor damages any existing utility lines that are not indicated or the locations of which are not made known to the Contractor prior to excavation, **the City shall be notified immediately** and a written report thereof shall be made immediately to the Engineer.
 2. If directed by the Engineer, repairs shall be made by the Contractor under the provisions for changes and extra work contained in the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the Contractor to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the work interrupted or idled by removal or relocation of such utility facilities, and which was necessarily

idled during such work will be paid for as extra work in accordance with the provisions for changes and extra work contained in the General Conditions.

- H. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement owner before being concealed by backfill.
- I. Maintaining Service:
 - 1. All oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas mains, water mains, irrigation lines, sewer lines, storm drainage, poles, and overhead power and communication wires and cables encountered along the line of the Work shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the Engineer are made with the owner(s) of said pipelines, ducts, main, irrigation lines, sewers, storm drains, poles, wires or cables.
 - 2. The Contractor shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.
 - 3. Contractor shall replace all damaged irrigation piping, heads and control lines in kind. Zones to be capped off at construction line. If this results in discontinuance of service on private property, the contractor shall provide for irrigation service to this area(s). Refer to Specification Section 02661, Part 10 for additional information and requirements.

1.6 TREES WITHIN ROAD RIGHTS-OF-WAY AND PROJECT LIMITS

- A. General:
 - 1. The Contractor shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or Owner.
 - 2. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the Contractor or a certified tree company under permit from the jurisdictional agency and/or the Owner.
- B. Trimming:
 - 1. Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch.

2. Spikes shall not be used for climbing live trees.
3. All cuts over 1-1/2" in diameter shall be coated with an asphaltic emulsion material.

C. Replacement:

1. The Contractor shall immediately notify the jurisdictional agency and/or the Owner if any tree is damaged by the Contractor's operations.
2. If, in the opinion of said agency or the Owner, the damage is such that replacement is necessary, the Contractor shall replace the tree at its own expense.
3. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the Contractor shall pay to the owner of said tree a compensatory payment acceptable to the tree owner, subject to the approval of the jurisdictional agency or Owner.
4. The size of the trees shall be not less than 1-inch diameter, nor less than six feet high.

1.7 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the Contractor shall notify the respective authorities representing the owners or agencies responsible for such facilities not less than three days nor more than seven days prior to excavation so that a representative of said owners or agencies can be present during such work if they so desire.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01570 TRAFFIC CONTROL

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Provide, operate and maintain equipment, services and personnel, with traffic control and protective devices, as required to expedite vehicular traffic flow around the construction area.
- B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions.

1.2 REFERENCES

Traffic regulation shall be in accordance with F.D.O.T. Roadway and Traffic Design Standards Series 600, latest Edition, Manual on Uniform Traffic Control Devices, latest Ed., and FDOT Standard Specifications, latest Ed.

1.3 TRAFFIC CONTROL PLAN

- A. The Contractor is to prepare a traffic control plan and/or policy statement for each phase of construction. This plan is to be presented to the City Engineer at or before the pre-construction meeting.
- B. All proposed traffic control plans and policy statements shall be complete and in compliance with Section 1.02.

1.4 TRAFFIC SIGNALS AND SIGNS

- A. Provide and operate traffic control and directional signals required to direct and maintain an orderly flow of traffic in all areas under Contractor's control, or affected by Contractor's operations.
- B. Provide traffic control and direction signs, post mounted, at all areas required by Section 1.02.
- C. Traffic Signals - Construction requiring traffic signal modification shall be reported to the City Engineer at least 72 hours prior to the commencement of such activities. All excavation work within 30 feet of any traffic signal shall be reported to the City Engineer at least 72 hours prior to its commencement.

- D. All existing traffic signs shall remain visible throughout construction activities unless superseded by required construction signing.

1.5 FLAGMEN

Provide qualified and suitably equipped flagmen when construction operations encroach on traffic lanes, as required for regulation of traffic (See Section 1.02).

1.6 FLARES AND LIGHTS

- A. Provide lights as required by Section 1.02.
 - 1. To clearly delineate traffic lanes and to guide traffic as required in Section 1.02
 - 2. For use by flagmen in directing traffic.
- B. Provide illumination of critical traffic and parking areas as required in Section 1.02.

1.7 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations, or construction operations.
- B. Monitor parking of construction personnel's private vehicles.
 - 1. Maintain free vehicular access to and through parking areas and driveways.
 - 2. Prohibit parking on or adjacent to access roads, or in non-designated areas.

1.8 CONSTRUCTION VEHICLES

- A. All slow moving construction vehicles shall have a slow moving sign visible from the rear of the vehicle.
- B. All vehicles used for construction activities shall have audible back-up warning devices.

1.9 ROAD CLOSINGS AND TRAFFIC CONTROL

- A. CONTRACTOR shall be responsible for preparation of FDOT traffic control plans. A minimum of six (6) copies of all traffic plans shall be submitted to ENGINEER in accordance with the General Conditions. All traffic plans shall contain the following information:
 - 1. All applicable street names.
 - 2. All detour routes.

3. All required construction and detour signage, including Variable Message Boards and Specialty Signage.
 4. All flag man locations.
 5. Locations of all street and lane closings.
 6. As applicable, time, day and date street or lane will be closed and time, day and date street or lane will be reopened to traffic.
 7. The following statement shall be included on all traffic plans: "This plan meets all applicable requirements of the Manual of Uniform Traffic Control Devices".
- B. Traffic plans must be approved by ENGINEER a minimum of two (2) weeks prior to beginning of work in area covered by Traffic Plan. Traffic plans must also be approved by City of Pompano Beach Traffic Engineer, two (2) weeks prior to beginning work in affected areas, where applicable.
- C. All businesses and homeowners affected by road closures shall be notified a minimum of one (1) week in advance of closing. CONTRACTOR to submit notification flyers for approval of format.
- D. Provisions must always be maintained for local residential and business traffic. Specifically, but not limited to:
1. **Access shall be provided to each residence at the end of the day. In areas of construction within deep trench, a temporary compacted rock driveway access can be provided to groupings of residences in order to provide access at the end of the day.**
- E. Approved maintenance of traffic plans shall be submitted to Local, Police, Fire Department and Emergency Medical Services (EMS) by OWNER.

PART 2 - PRODUCTS

- A. All traffic control devices shall meet or exceed FDOT certification standards and the Manual of Uniform Traffic Control Devices.
- B. All traffic signs shall have high intensity face material.

PART 3 - EXECUTION

- A. Upon notification by the owner either verbally or in writing, the contractor shall correct any noted deficiencies within one hour.

- B. Inspection of all traffic control items shall be accomplished at least twice per day.
One of these inspections shall be at the end of the work day or at night.

END OF SECTION

SECTION 01600

MATERIAL EQUIPMENT AND PRODUCTS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Workmanship.
- B. Manufacturer's Instructions.
- C. Transportation and Handling.
- D. Storage and Protection.
- E. Substitutions and Product Options.

1.2 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work.
- B. Section 01700: Project Close-out.

1.3 SUBMITTALS

- A. The Contractor shall submit the following:
 - 1. Assembly instructions for parts shipped unassembled.
 - 2. Manufacturer's instructions for unloading, handling, storage, and protection prior to installation, with each shipment of each product type.
 - 3. Copy of manufacturer's notice of shipment for products critical to the project schedule.
 - 4. Documentation of products in storage, submitted with each progress payment request.
 - 5. Written agreement with property owner or lessee for storage of products, if offsite storage is necessary.

1.4 MATERIAL, EQUIPMENT AND PRODUCTS

- A. Comply with these Specifications and referenced standards as a minimum.

- B. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.
- C. To the greatest extent possible for each unit of work, the contractor shall provide products, materials, or equipment of a singular generic kind from a single source.

1.5 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances of specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of the specified quality.
- C. Secure in places with positive anchorage devices designed and sized to withstand stresses, vibration and racking.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. When work is specified to comply with manufacturer's instructions, submit copies as specified in Section 01300. Distribute copies to subcontractors involved and maintain one (1) set in the field office.
- B. Perform work in accordance with details of instructions and specified requirements. Should a conflict exist between the Specifications and the instructions, consult with the Engineer.

1.7 PREPARATION FOR SHIPMENT

- A. When practical, products shall be factory assembled.
 - 1. Furnish assembly instructions for parts and products that are shipped unassembled.
 - 2. Mark or tag the separate parts and assemblies for field assembly.
 - 3. Cover machined and unpainted parts that may be damaged by the elements with a strippable protective coating.
- B. Package or crate products to provide protection from damage during shipping, handling, and storage.
 - 1. Mark or tag the outside of each package or crate to indicate its purchase order number, bill of lading number, contents by name, name of project and Contractor, equipment number, and approximate weight.

- C. Mark spare parts and special tools to identify the associated products by name, equipment, and part number.
- D. Package parts for protection against damage from the elements during shipping, handling, and storage.
- E. Ship in boxes or containers marked to indicate the contents as stated above.
- F. Deliver spare parts and special tools before the associated equipment is scheduled for the initial test run.
- G. The Contractor shall request a minimum 7-day advance notice of shipment from manufacturer's.
- H. Where specified for specific products, factory test results shall be reviewed and accepted before such products are shipped.

1.8 TRANSPORTATION AND HANDLING

- A. Provide equipment and personnel necessary to handle products by methods to prevent soiling or damage to products or packaging.
- B. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.
- C. Handle products by methods to prevent bending or stressing.
- D. Lift heavy components only at designated lifting points.

1.9 RECEIVING, INSPECTION AND UNLOADING

- A. All Owner furnished items, if applicable, will be picked up by the Contractor at the locations specified by the Owner, and unloaded at the job site.
- B. The Contractor shall record the receipt of products at the jobsite.
- C. Upon receipt of products at the jobsite, the Contractor shall inspect for completeness and evidence of damage during shipment.
 - 1. The Owner, Engineer and manufacturer's representative may be present for inspection.
 - 2. Should there appear to be any damage, notify the Engineer immediately and inform the manufacturer and the transportation company.
 - 3. Expedite replacement of damaged, incomplete, or lost items.

- D. After completion of inspection, unload products per the manufacturer's instructions.
- E. Do not unload damaged or incomplete products to be returned to the manufacturer for replacement, except as necessary to expedite return shipment.
- F. The Contractor shall certify that the materials and quantity received are suitable for installation in accordance with these Contract Documents.
- G. The Contractor shall assume full responsibility for the storage and control of all Owner supplied materials.

1.10 STORAGE, PROTECTION AND MAINTENANCE

- A. Store in accordance with the manufacturer's instructions, with seals and labels intact and legible.
- B. For exterior storage of fabricated products and equipment, place on supports above ground.
- C. Cover products and equipment subject to deterioration with impervious sheet covering and provide adequate ventilation to avoid condensation.
- D. Store loose granular materials on solid surfaces in a well-drained area. Prevent mixing with foreign matter.
- E. Store items subject to damage by the elements, vandalism, or theft in secure areas.
- F. Provide environmentally controlled storage facilities for items requiring environmental control for protection.
- G. Arrange storage to provide access for inspection and inventory control by the Engineer. Periodically inspect to assure products, equipment and materials are undamaged and are maintained under the manufacturer's recommended conditions.
- H. After installation, provide coverings to protect products and equipment from damage, traffic and construction operations. Remove when no longer needed.
- I. During such periods of time as are designated by the U.S. Weather Bureau as being a hurricane warning or hurricane alert, construction materials or equipment shall be secured against displacement by wind forces.
- J. Materials found unfit for use shall not be incorporated in the Work and shall be immediately removed from the construction or storage site.

- K. Delivered materials shall be stored in a manner acceptable to the Engineer before any payment for same will be made.
- L. The Contractor shall document products in storage to facilitate inspection and to estimate progress payments for products delivered but not installed in the work.

END OF SECTION

SECTION 01630

SUBSTITUTIONS AND PRODUCT OPTIONS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

Furnish and install Products specified, under options and conditions for substitutions stated in this Section.

1.2 RELATED REQUIREMENTS

- A. Information for Bidders and General Conditions.
- B. Section 01300: Submittals.
- C. Section 01700: Contract Closeout.

1.3 PRODUCTS LIST

- A. Within 30 days after award of Contract, submit to Engineer five copies of complete list of major Products which are proposed for installation.
- B. Tabulate Products by specification section number and title.
- C. For products specified only by reference standards, list for each such Product:
 - 1. Name and address of manufacturer.
 - 2. Trade Name.
 - 3. Model or catalog designation.
 - 4. Manufacturer's data:
 - a. Reference standards.
 - b. Performance test data.

1.4 CONTRACTOR'S OPTIONS

- A. For Products specified only by reference standard, select product meeting that standard, by any manufacturer.
- B. For products specified by naming several products or manufacturers, select any one or those products and manufacturers names which complies with Specifications or submit a request for substitution for any product or manufacturer that is not specifically named.

- C. For products specified by naming only one or more products or manufacturers and stating "or equal", submit a request as for substitutions, for any product or manufacturer which is not specifically named.
- D. Approval will only be provided for one specific manufacturer of a particular product. No mixed shipments of materials with different manufacturer's will be allowed.
- E. **Equivalent Products**
If and wherever in the specifications a brand name, make, name of manufacturer, trade name, or vendor catalog number is mentioned, it is the purpose of establishing a grade, quality, or other specification of material only. Since the City does not wish to rule out other competition and equal brands or makes, the phrase or approved equal is added.

1.5 SUBSTITUTIONS

- A. Within a period of 30 days after award of Contract, Engineer will consider formal requests from the Contractor for substitution of products in place of those specified:

After the end of that period, the request will be considered only in case of product unavailability or other conditions beyond the control of the Contractor.
- B. Submit a separate request for each substitution. Support each request with:
 - 1. Complete data substantiating compliance of the proposed substitution with requirements stated in the Contract Documents:
 - a. Product identification, including manufacturer's name and address.
 - b. Manufacturer's literature; identify:
 - 1) Product description.
 - 2) Reference standards.
 - 3) Performance and test data.
 - c. Samples, as applicable.
 - d. Name and address of similar projects on which product has been used, and the date of each installation
 - 2. Itemized comparison of the proposed substitution with product specified; List significant variations.
 - 3. Data relating to changes in the construction schedule.
 - 4. Any effect of the substitution on separate contracts.
 - 5. List of changes required in other work or products.
 - 6. Accurate cost data comparing proposed substitution with product specified.
 - 7. Designation of required license fees or royalties.
 - 8. Designation of availability of maintenance services, and sources of replacement materials.

- C. Substitutions will not be considered for acceptance when:
 - 1. They are indicated or implied on Shop Drawings or product data submittals without a formal request from Contractor.
 - 2. They are requested directly by a subcontractor or supplier.
 - 3. Acceptance will require substantial revision of Contract Documents.
- D. Substitute products shall not be ordered or installed without written acceptance of Engineer.
- E. Engineer will determine the acceptability of proposed substitutions.

1.6 CONTRACTOR'S REPRESENTATION

- A. In making formal request for substitution Contractor represents that:
 - 1. He has investigated proposed product and has determined that it is equal to or superior in all respects to that specified.
 - 2. He will provide the same warranties or bonds for substitution as for product specified.
 - 3. He will coordinate installation of accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.
 - 4. He waives claims for additional costs caused by substitution which may subsequently become apparent.
 - 5. Cost data is complete and includes related costs under his Contract, but not:
 - a. Costs under separate contracts.
 - b. Engineer's costs of redesign or revision of Contract Documents.

1.7 ENGINEER DUTIES

- A. Review Contractor's requests for substitutions with reasonable promptness.
- B. Notify Contractor, in writing, of decision to accept or reject requested substitution.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01658

TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Provide erosion control measures on the project and in areas outside the right-of-way where work is accomplished in conjunction with the project, so as to prevent pollution of water, detrimental effects to public or private property adjacent to the project right-of-way and damage to work on the project. Construct and maintain temporary erosion control features or, where practical, construct and maintain permanent erosion control features as shown in the plans or as may be directed by the Owner.

1.2 GENERAL

- A. Coordinate the installation of temporary erosion control features with the construction of the permanent erosion control features to the extent necessary to ensure economical, effective, and continuous control of erosion and water pollution throughout the life of the Contract.
- B. Contractor or his subcontractor must employ a person who holds a certification as a Florida Department of Environmental Protection NPDES Construction Site Inspector.
- C. Due to unanticipated conditions, the Owner may direct the use of control features or methods other than those included in the original Contract.

1.3 CONTROL OF CONTRACTOR'S OPERATIONS WHICH MAY RESULT IN WATER POLLUTION.

- A. Prevent pollution of streams, canals, lakes, reservoirs, and other water impoundments with fuels, oils, bitumens, calcium chloride, or other harmful materials. Also, conduct and schedule operations to avoid or otherwise minimize pollution or siltation of such water impoundments, and to avoid interference with movement of migratory fish. Do not dump any residue from dust collectors or washers into any live stream.
- B. Restrict construction operations in rivers, streams, lakes, tidal waters, reservoirs, canals, and other water impoundments to those areas where it is necessary to perform filling or excavation to accomplish the work shown in the plans and to those areas which must be entered to construct temporary or permanent structures.

As soon as conditions permit, promptly clear rivers, streams, and impoundments of all obstructions placed therein or caused by construction operations.

- C. Except as necessary for construction, do not deposit excavated material in rivers, streams, canals, or impoundments, or in a position close enough thereto, to be washed away by high water or runoff.
- D. Where pumps are used to remove highly turbid waters from enclosed construction areas such as cofferdams or forms, treat the water by one or more of the following methods prior to discharge into State waters: pumping into grassed swales or appropriate vegetated areas or sediment basins, or confined by an appropriate enclosure such as turbidity barriers when other methods are not considered appropriate.
- E. Do not disturb lands or waters outside the limits of construction as staked, except as authorized by the Owner.
- F. Obtain the Owner's approval for the location of, and method of operation in, borrow pits, material pits, and disposal areas furnished for waste material from the project (other than commercially operated sources) such that erosion during and after completion of the work will not result in probability of detrimental siltation or water pollution.

PART 2 - PRODUCTS

2.1 MATERIALS FOR TEMPORARY EROSION CONTROL.

- A. The Owner will not require testing of materials used in construction of temporary erosion control features other than as provided for geotextile fabric in 985-3 unless such material is to be incorporated into the completed project. When no testing is required, the Owner will base acceptance on visual inspection.
- B. The Contractor may use new or used materials for the construction of temporary silt fence, staked turbidity barriers, and floating turbidity barrier not to be incorporated into the completed project, subject to the approval of the Owner.

2.2 PRECONSTRUCTION REQUIREMENTS.

- A. At the Preconstruction Conference, provide to the Owner an Erosion Control Plan meeting the requirements or special conditions of all permits authorizing project construction. If no permits are required or the approved permits do not contain special conditions or specifically address erosion and water pollution, the project Erosion Control Plan will be governed by Section 3.02 herein, and FDOT Section 104.

- B. Ensure the Erosion Control Plan includes procedures to control off-site tracking of soil by vehicles and construction equipment and a procedure for cleanup and reporting of non-storm water discharges, such as contaminated groundwater or accidental spills. Do not begin any soil disturbing activities until Owner's direction.
- C. Failure to sign any required documents or certification statements will be considered a default of the Contract. Any soil disturbing activities performed without the required signed documents or certification statements may be considered a violation of the DEP Generic Permit.
- D. When the SWPPP is required, prepare the Erosion Control Plan in accordance with the planned sequence of operations and present in a format acceptable to the Owner. The Erosion Control Plan shall describe, but not be limited to, the following items or activities:
 - 1. For each phase of construction operations or activities, supply the following information:
 - a. Locations of all erosion control devices
 - b. Types of all erosion control devices
 - c. Estimated time erosion control devices will be in operation
 - d. Monitoring schedules for maintenance of erosion control devices
 - e. Methods of maintaining erosion control devices
 - f. Containment or removal methods for pollutants or hazardous wastes
 - 2. The name and telephone number of the person responsible for monitoring and maintaining the erosion control devices.
 - 3. Do not begin construction activities until after the Owner has received the Erosion Control Plan.
- E. Comply with the approved Erosion Control Plan.
- F. Contractor shall be required to sign the City's *Site Operator Reference Guide* for construction best management practices at the time of the preconstruction meeting. A copy may be found in Specification Section 01505.

PART 3 - EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

- A. **Limitation of Exposure of Erodible Earth:** The Owner may limit the surface areas of unprotected erodible earth exposed by the construction operation and may direct the Contractor to provide erosion or pollution control measures to prevent contamination of any river, stream, lake, tidal waters, reservoir, canal, or other water impoundments or to prevent detrimental effects on property outside the project right-of-way or damage to the project. Limit the area in which excavation and filling operations are being performed so that it does not exceed the capacity to keep the finish grading, grassing, sodding, and other such permanent erosion control measures current in accordance with the accepted schedule.

Do not allow the surface area of erodible earth that clearing and grubbing operations or excavation and filling operations expose to exceed 750,000 sq ft without specific prior approval by the Engineer. This limitation applies separately to clearing and grubbing operations and excavation and filling operations.

The Engineer may increase or decrease the amount of surface area the Contractor may expose at any one time.

- B. **Incorporation of Erosion Control Features:** Incorporate permanent erosion control features into the project at the earliest practical time. Use approved temporary erosion control features to correct conditions that develop during construction which were not foreseen at the time of design, to control erosion prior to the time it is practical to construct permanent control features, or to provide immediate temporary control of erosion that develops during normal construction operations, which are not associated with permanent erosion control features on the project. The Owner may authorize temporary erosion control features when Topsoil is specified in the Contract and the limited availability of that material from the grading operations will prevent scheduled progress of the work or damage the permanent erosion control features.
- C. **Scheduling of Successive Operations:** Schedule operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operations, and the duration of exposure of uncompleted construction to the elements is as short as practicable.

Schedule and perform clearing and grubbing so that grading operations can follow immediately thereafter. Schedule and perform grading operations so that permanent

erosion control features can follow immediately thereafter if conditions on the project permit.

D. Details for Temporary Erosion Control Features:

1. **General:** Use temporary erosion and water pollution control features that consist of, but are not limited to, temporary grassing, temporary sodding, temporary mulching, sandbagging, slope drains, sediment basins, sediment checks, berms, baled hay or straw, floating turbidity barrier, staked turbidity barrier and silt fence. For design details for some of these items, refer to the Water Quality Section of the FDOT Design Standards.
2. **Temporary Grassing:** The Owner may designate certain areas of grassing constructed in accordance with Section 570 as temporary erosion control features. The Owner may direct the Contractor to omit permanent type grass seed from grassing and reduce the specified rate of spread for fertilizer used in conjunction with grassing operations when such work is designated as a temporary erosion control feature.
3. **Temporary Sod:** Furnish and place sod in accordance with Section 575 within areas designated by the Owner to temporarily control erosion. If the Owner determines that the sod will be of a temporary nature, he may not require fertilizer and lime. Keep the sod in a moist condition in order to ensure growth. The Contractor will pay for all required watering.
4. **Temporary Mulching:** Furnish and apply a 2 to 4 inch thick blanket of straw or hay mulch to designated areas, then mix or force the mulch into the top 2 inches of the soil in order to temporarily control erosion. Use only undecayed straw or hay which can readily be cut into the soil and which otherwise complies with 981-3. The Contractor may substitute other measures for temporary erosion control, such as hydromulching, chemical adhesive soil stabilizers, etc., for mulching with straw or hay, if approved by the Owner. When beginning permanent grassing operations, plow under temporary mulch materials in conjunction with preparation of the ground.
5. **Sandbagging:** Furnish and place sandbags in configurations to control erosion and siltation.
6. **Slope Drains:** Construct slope drains in accordance with the details shown in the plans, the Design Standards, or as may be approved as suitable to adequately perform the intended function.
7. **Sediment Basins:** Construct sediment basins in accordance with the details shown in the plans, the Design Standards, or as may be approved as suitable to adequately perform the intended function. Clean out sediment basins as necessary in accordance with the plans or as directed.

8. **Berms:** Construct temporary earth berms to divert the flow of water from an erodible surface.
9. **Baled Hay or Straw:** Provide bales having minimum dimensions of 14 by 18 by 36 inches at the time of placement. Construct Baled Hay or Straw dams according to details shown in the plans, as directed by the Owner or as shown in the FDOT Design Standards to protect against downstream accumulations of sediment.

Use natural baled hay or straw meeting the requirements of 981-3 or synthetic hay bales may be used as an alternative to natural baled hay or straw. Synthetic hay bales should be interlocking, have pre-made stake holes, are made of synthetic fibers (polypropylene, nylon, polyester) that meet the Environmental Protection Agency's TCLP standards, and produced into a filter medium with needle-punched fibers. Use synthetic hay bales listed on the Qualified Products List. Wash out and remove sediment deposits when the deposits reach 1/2 the height of the reusable synthetic hay bale or as directed by the Owner. Dispose of the washout in accordance with 104-3 or in an area approved by the Owner. Synthetic hay bales that have had sediment deposits removed may be reinstalled on the project as approved by the Owner.

10. **Temporary Silt Fences:**
 - a. **General:** Furnish, install, maintain, and remove temporary silt fences, in accordance with the manufacturer's directions, these Specifications, the details as shown on the plans, and the FDOT Design Standards.
 - b. **Materials and Installation:** Use a geotextile fabric made from woven or nonwoven fabric, meeting the physical requirements of Section 985 according to those applications for erosion control.

Choose the type and size of posts, wire mesh reinforcement (if required), and method of installation. Do not use products which have a separate layer of plastic mesh or netting. Provide a durable and effective temporary silt fence that controls sediment comparable to the Design Standards, Index No. 102.

Install all sediment control devices in a timely manner to ensure the control of sediment and the protection of lakes, streams, gulf or ocean waters, or any wetlands associated therewith and to any adjacent property outside the right-of-way as required.

At sites where exposure to such sensitive areas is prevalent, complete the installation of any sediment control device prior to the commencement of any earthwork.

After installation of sediment control devices, repair portions of any devices damaged at no expense to the Owner.

Erect temporary silt fence at upland locations across ditchlines and at temporary locations shown on the plans or approved by the Engineer where continuous construction activities change the natural contour and drainage runoff. Do not attach temporary silt fence to existing trees unless approved by the Owner.

- c. **Inspection and Maintenance:** Inspect all temporary silt fences immediately after each rainfall and at least daily during prolonged rainfall. Immediately correct any deficiencies. In addition, make a daily review of the location of silt fences in areas where construction activities have changed the natural contour and drainage runoff to ensure that the silt fences are properly located for effectiveness. Where deficiencies exist, install additional silt fences as directed by the Engineer.

Remove sediment deposits when the deposit reaches approximately 1/2 of the volume capacity of the temporary silt fence or as directed by the Engineer. Dress any sediment deposits remaining in place after the temporary silt fence is no longer required to conform with the finished grade, and prepare and seed them in accordance with Section 570.

- 11. **Floating Turbidity Barriers and Staked Turbidity Barriers:** Install, maintain, and remove turbidity barriers to contain turbidity that may occur as the result of dredging, filling, or other construction activities which may cause turbidity to occur in the waters of the State. The Contractor may need to deploy turbidity barriers around isolated areas of concern such as seagrass beds, coral communities, etc. both within as well as outside the right-of-way limits. The Owner will identify such areas. Place the barriers prior to the commencement of any work that could impact the area of concern. Install the barriers in accordance with the details shown in the plans or as approved by the Owner. Ensure that the type barrier used and the deployment and maintenance of the barrier will minimize dispersion of turbid waters from the construction site. The Owner may approve alternate methods or materials.

Operate turbidity barriers in such a manner to avoid or minimize the degradation of the water quality of the surrounding waters.

- 12. **Rock Bags:** Furnish and place rock bags to control erosion and siltation. Place the bags as shown in the plans, the FDOT Design Standards or as directed by the Owner. Use a fabric material with openings that are clearly visible to minimize clogging yet small enough to prevent rock loss. Use material of sufficient strength to allow removing and relocating bags

without breakage. The bag size when filled with rocks shall be approximately 12 by 12 by 4 inch. Use No. 4 or No. 5 coarse aggregate rock.

13. Artificial Coverings:

a General: Install artificial coverings in locations where temporary protection from erosion is needed. Two situations occur that require artificial coverings. The two situations have differing material requirements, which are described below.

1) Use artificial coverings composed of natural or synthetic fiber mats, plastic sheeting, or netting as protection against erosion, when directed by the Owner, during temporary pauses in construction caused by inclement weather or other circumstances. Remove the material when construction resumes.

2) Use artificial coverings as erosion control blankets, at locations shown in the plans, to facilitate plant growth while permanent grassing is being established. For the purpose described, use non-toxic, biodegradable, natural or synthetic woven fiber mats. Install in accordance with 571-3 as for plastic erosion mat. Install erosion control blankets capable of sustaining a maximum design velocity of 6.5 ft/sec as determined from tests performed by Utah State University, Texas Transportation Institute or an independent testing laboratory approved by the Owner. Furnish to the Owner, two certified copies of manufacturers test reports showing that the erosion control blankets meet the requirements of this Specification. Certification must be attested, by a person having legal authority to bind the manufacturing company. Also, furnish two 4 by 8 inch samples for product identification. The manufacturers test records shall be made available to the Owner upon request. Leave the material in place, as installed, to biodegrade.

E. **Removal of Temporary Erosion Control Features:** In general, remove or incorporate into the soil any temporary erosion control features existing at the time of construction of the permanent erosion control features in an area of the project in such a manner that no detrimental effect will result. The Engineer may direct that temporary features be left in place.

3.2 INSPECTIONS AND REPORTING

A. The Contractor's certified NPDES Construction Site Inspector shall complete the required NPDES construction site inspection reports and provide them to the Owner. Reports shall be done on a weekly basis, at a minimum.

3.3 MAINTENANCE OF EROSION CONTROL FEATURES.

- A. **General:** Provide routine maintenance of permanent and temporary erosion control features, at no expense to the Owner, until the project is complete and accepted. If reconstruction of such erosion control features is necessary due to the Contractor's negligence or carelessness or, in the case of temporary erosion control features, failure by the Contractor to install permanent erosion control features as scheduled, the Contractor shall replace such erosion control features at no expense to the Owner.
- B. Inspect all erosion control features at least once every seven calendar days and within 24 hours of the end of a storm of 0.50 inch or greater. Maintain all erosion control features as required in the Stormwater Pollution Prevention Plan, Contractor's Erosion Control plan and as specified in the State of Florida Department of Environmental Protection Generic Permit for Stormwater Discharge from Large and Small Construction Activities.
- C. **Mowing:** The Owner may direct mowing of areas within the limits of the project, in addition to and apart from those areas specified in Section 580. Mow these designated areas within seven days of receiving such order. Remove and properly dispose of all litter and debris prior to the mowing operation. Use conventional and specialized equipment along with hand labor to mow the entire area including slopes, wet areas, intersections, overpasses and around all appurtenances. Mow all areas to obtain a uniform height of 6 inches, unless directed otherwise by the Owner.

3.4 PROTECTION DURING SUSPENSION OF CONTRACT TIME.

- A. If it is necessary to suspend the construction operations for any appreciable length of time, shape the top of the earthwork in such a manner to permit runoff of rainwater, and construct earth berms along the top edges of embankments to intercept runoff water. Provide temporary slope drains to carry runoff from cuts and embankments that are in the vicinity of rivers, streams, canals, lakes, and impoundments. Locate slope drains at intervals of approximately 500 feet, and stabilize them by paving or by covering with waterproof materials. Should such preventive measures fail, immediately take such other action as necessary to effectively prevent erosion and siltation. The Owner may direct the Contractor to perform, during such suspensions of operations, any other erosion control work deemed necessary.

END OF SECTION

SECTION 01700 PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Closeout procedures, final cleaning, project record documents, system demonstration, warranties and bonds.
- B. Closeout includes the general requirements near the end of the Contract Time in preparation for final acceptance, final payment, normal termination of the Contract, beneficial use by the Owner, and similar actions evidencing completion of the Work.

1.2 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work.
- B. Section 01050: Field Engineering.
- C. Section 01505: Construction Facilities and Temporary Controls.

1.3 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in the General Conditions of the Contract Documents for issuance of the Certificate of Substantial Completion and the Certificate of Final Completion.
- B. When the Contractor considers that the Work has reached final completion, submit written certification that the Contract Documents have been reviewed, the Work has been thoroughly inspected, and that the Work is considered to be completed in accordance with the Contract Documents and is ready for inspection by the Engineer.
- C. In addition to submittals required by the conditions of the Contract, provide all other submittals required by the Owner, other governing authorities or regulatory agencies, and submit to the Engineer a final statement of accounting giving the total adjusted Contract Sum, previous payments, and the sum remaining due.
- D. The Engineer will issue a final change order reflecting approved adjustments to the Contract Sum not previously made by Change Order.

1.4 SUBSTANTIAL COMPLETION

- A. When the Contractor considers the Work to be substantially complete, it will submit to the Engineer, or the Owner, as applicable:
 - 1. A written notice that the Work, or a designated portion thereof, is substantially complete.
 - 2. Special guarantees, warranties, workmanship bonds, maintenance agreements and similar documents.
 - 3. Occupancy permits, operating certificates, test certificates and similar releases enabling the Owner's full and unrestricted use of the work and access to services and utilities.
 - 4. Record drawings, maintenance manuals, project photographs, property survey and similar record information.
 - 5. Tools, spare parts, extra stocks of materials and similar physical items to the Owner.
 - 6. Certification that all site temporary facilities and services, along with construction equipment, mock-ups and similar elements have been removed from the site and that all repairs, touch-ups and restorations of marred exposed finishes have been completed.
- B. Within a reasonable time after receipt of such notice, the Engineer will make an inspection to determine the status of completion.
- C. Should the Engineer determine that the Work is not substantially complete:
 - 1. The Engineer will promptly notify the Contractor in writing, giving the reasons therefor.
 - 2. The Contractor will remedy the deficiencies in the Work, and send a second written notice of substantial completion to the Engineer.
 - 3. The Engineer will then re-inspect the Work.
- D. When the Engineer finds that the Work is substantially complete, it will:
 - 1. Prepare and deliver to the Owner a tentative Certificate of Substantial Completion, with a tentative list of items to be completed or corrected before final payment.
 - 2. After consideration of any objections made by the Owner as provided in the General Conditions, and when the Engineer considers the Work substantially complete, it will execute and deliver to the Owner and the

Contractor a definite Certificate of Substantial Completion with a revised tentative list of items to be completed or corrected.

1.5 FINAL SUBMITTALS

- A. The following submittals, as applicable, are required prior to finalizing the Contract:
 - 1. Final shop drawings.
 - 2. Record drawings.
- B. All guarantees, bonds, certifications, licenses, and affidavits required for work and equipment must be filed with the Engineer.

1.6 RELEASE OF LIENS OR CLAIMS

- A. Satisfactory evidence of release or waiver of all liens or claims must be submitted to the Owner prior to finalizing the Contract.

1.7 FINAL INSPECTION

- A. When the Contractor considers the Work complete, it will submit written certification that:
 - 1. The Contract Documents have been reviewed.
 - 2. The Work has been inspected for compliance with the Contract Document.
 - 3. The Work has been completed in accordance with the Contract Documents.
 - 4. The Work is in every way completed and ready for final inspection.
- B. The Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should the Engineer consider that the Work is incomplete or defective:
 - 1. The Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
 - 2. The Contractor will take immediate steps to remedy the stated deficiencies, and send a second written certification to the Engineer that the Work is complete.
 - 3. The Engineer will re-inspect the work.

4. When the Engineer finds that the Work is acceptable under the Contract Documents, it shall request the Contractor to make close-out submittals.

1.8 REINSPECTION FEES

- A. Should the Engineer perform re-inspections due to the failure of the Work to comply with the claims of status of completion made by the Contractor:
 1. The Owner will compensate the Engineer for such additional services.
 2. The Owner will deduct the costs of such additional compensation from the final payment to the Contractor.

1.9 CONTRACTOR'S CLOSE-OUT SUBMITTALS TO THE ENGINEER

- A. Project record drawings in accordance with Section 01720.
- B. Contractor's affidavit of payment of debts and claims:
 1. Contractor's release or waiver of liens.
- C. Separate releases or waivers of liens for subcontractors, suppliers and others that have filed lien rights against property of the Owner in accordance with Section 713.06 Florida Statutes, together with a list of those parties.
- D. Final payment request with Consent of Surety for Final Payment and the Contractor's Certification of Final Completion.
- E. Certified copy of the Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.

1.10 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to the Engineer. The statement will reflect all approved adjustments to the Contract Sum, including:
 1. The original Contract Sum.
 2. Additions and deductions resulting from:
 - a. Approved Change Orders.
 - b. Allowances.
 - c. Unit Prices.
 - d. Deductions for uncorrected Work.
 - e. Deductions for liquidated damages.
 - f. Deductions for re-inspection payments.

- g. Deductions for re-testing due to failed tests.
 - h. Other adjustments.
- 3. Total Contract Sum, as adjusted.
- 4. Previous payments.
- 5. Sum remaining due.
- B. The Engineer will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Order.

1.11 FINAL CLEANING

- A. Perform prior to final inspection.
- B. Clean the site, sweep paved areas, rake clean other surfaces.
- C. Remove waste and surplus materials, rubbish and construction facilities from the project site and dispose of in a lawful manner.
- D. Remove stains, petrochemical spills and other foreign deposits.
- E. Except as otherwise indicated or requested by the Owner, remove temporary protection devices and facilities installed during the course of the Work to protect previously completed Work during the remainder of the construction period.
- F. Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at the site or bury debris or excess materials, or discharge volatile or other harmful or dangerous materials into the environment.
- G. Where extra materials of value remain after completion of the Work, dispose of or store such materials for use by the Owner as indicated in these Specifications.

1.12 PROJECT RECORD DOCUMENTS

- A. Store documents separate from those used for construction.
- B. Keep documents current. Do not permanently conceal any work until required information has been recorded.
- C. At Contract closeout, submit documents with transmittal letter containing date, project title, Contractor's name and address, list of documents and signature of Contractor.
- D. Drawings legibly marked to record actual construction and showing:

1. Horizontal and vertical locations of underground utilities and appurtenances.
 2. Field changes of dimension and detail.
 3. Changes made by approved Field Order or by approved Change Order.
 4. Details not shown on original Contract Drawings.
- E. Specifications and Addenda with each Section legibly marked to record:
1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment furnished and installed.
 2. Changes made by approved Field Order or by approved Change Order.

1.13 WARRANTIES AND BONDS

- A. Provide duplicate, signed, notarized originals. Execute Contractor's submittals and assemble documents executed by subcontractors, suppliers and manufacturers. Provide table of contents and assemble in binder with durable plastic cover.
- B. Submit material prior to final application for payment. For equipment put into use with Owner's permission during construction, submit within 10 days after first operation. For items of Work delayed materially beyond the date of Substantial Completion, provide updated submittals within 10 days after acceptance, listing the date of acceptance as the start of the warranty period.

1.14 FINAL APPLICATION FOR PAYMENT

- A. A. The Contractor will submit the Final Application for Payment in accordance with the procedures and requirements stated in the General Conditions.

1.15 FINAL CERTIFICATE FOR PAYMENT

- A. The Engineer will process the Final Application for Payment in accordance with the provisions of the General Conditions.

1.16 POST-CONSTRUCTION INSPECTION

- A. Prior to expiration of one year from the date of Substantial Completion, the Engineer will make a visual inspection of the Project in company with the Owner and the Contractor to determine whether correction of Work is required, in accordance with the provisions of the General Conditions.

- B. The Engineer will promptly notify the Contractor, in writing, of any observed defects or deficiencies in the work.
- C. The Contractor shall immediately undertake all work required to remedy defects and repair the work to the satisfaction of the Engineer and the Owner.

PART 2 - PRODUCTS

2.1 ACCESSORIES

- A. Furnish to the Owner, upon acceptance of equipment, all accessories required to place each item of equipment in full operation.
- B. Accessory items include, but are not limited to, adequate oil and grease as required for first lubrication of equipment (after field testing), light bulbs, fuses, hydrant wrenches, valve keys, handwheels, chain operators, special tools, and other items as required for initial operation.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01720 PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Maintain at the site of the OWNER a record copy of:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other modifications to the Contract.
 - 5. Approved Shop Drawings, Product Data and Samples.
 - 6. Field Test Records.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store documents and samples in CONTRACTOR's field office apart from documents used for construction.
 - 1. Provide files and racks for storage of documents.
 - 2. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with CSI format.
- C. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by OWNER's Representative.

1.4 MARKING DEVICES

- A. Provide felt tip marking pens for recording information in the color code designated by OWNER's Representative.

1.5 RECORDING

- A. Label each document, "PROJECT RECORD" in neat large printed letters, or by rubber stamp.
- B. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.
- C. Drawings: Legibly mark to record actual construction (hard copy):
 - 1. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structures.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by Field Order or by Change Order.
 - 5. Details not on original Contract Drawings.
- D. Specifications and Addenda; legibly mark each Section to record:
 - 1. Manufacturer, trade name, catalog number, and supplier of each produce and item of equipment actually installed.
 - 2. Changes made by Field Order or by Change Order.

1.6 AS-BUILT PLANS (RECORD DRAWINGS)

- A. The CONTRACTOR shall maintain full size (22"x34") 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 ACAD 2012 Format or Latest Version. One set of full size design drawings on reproducible material will be furnished to the CONTRACTOR by the design ENGINEER at the current square foot price. An electronic file of the design drawings on a compact disk will be furnished to the CONTRACTOR by the design ENGINEER at no additional cost. No additional payment will be made for those "as-built" drawings.

- B. The cost of maintaining record changes, and preparation of the Record Drawings shall be included in the unit prices bid for the affected items. Upon completion of the work the CONTRACTOR shall furnish the ENGINEER the reproducible “as-built” Drawings and the electronic files. The completed Record drawings shall be delivered to the Engineer at least 48 hours prior to final inspection of the work. **The Final inspection will not be conducted unless the Record Drawings are in the possession of the ENGINEER.**
- C. The completed (or final) record drawings shall be certified by a Professional Land surveyor registered in the State of Florida. This certification shall consist of the surveyor’s embossed seal bearing his registration number, the surveyor’s signature and date on each sheet of the drawing set. In addition, the key sheet, cover sheet or first sheet of the plans set shall list the business address and telephone number of the surveyor.
- D. Representative items of work that should be shown on the record drawings as verified, changed or added are shown below:
1. Plans:
 - a. Structure types, location with grade of rim and flow-line elevations.
 - b. Storm and sanitary sewer type, length, size and elevations.
 - c. Utility type, length, size and elevation in conflict structures.
 - d. All maintenance access structures, valves and hydrants within right-of way.
 - e. Spot (critical) elevations at plateaued intersections, P.C., P.T., midpoint of all intersections, pavement highs and lows.
 - f. Sewer laterals shall be stationed between maintenance access structures.
 - g. Drainage structure location & type with grate and invert elevation.
 2. Pavement Marking and Signing Plans: Sign location where installed if different from plans.
 3. Water and Sewer Plans: Location (horizontal and vertical) of all pipe lines, structures, fittings, valves and appurtenances and water/sanitary/storm sewer pipe crossings.
- E. The CONTRACTOR shall submit three sets of progress record drawings with each application for payment. These drawings shall accurately depict the work completed and for which payment is being requested.
- F. As-built drawings shall include the following criteria at a minimum.

1. As-builts of water lines shall include the following information:
 - a. Top of pipe elevations and horizontal location every 100 lf.
 - b. Locations and elevations of all fittings including bends, tees, gate valves, double detector check valves, fire hydrant, etc.
 - c. All tie-ins to existing lines shall be as-built.
 - d. The ends of all water services at the buildings or homes shall be as-built or where the water service terminates.
2. As-builts of all gravity sanitary sewer lines include the following information:
 - a. Rims, inverts and length of piping between structures as well as slopes.
 - b. The stub ends of all sewer laterals shall be located and if there are any cleanouts installed on the sewer laterals then the invert elevation of these cleanouts need to be obtained.
 - c. Lift station as-builts shall consist of top of wet well elevation, invert elevation of the incoming line, bottom of the wet well and as-builts of the compound area.
3. Force main as-builts shall be prepared the same as the water line as-builts.
4. As-builts of all drainage lines shall include the following information:
 - a. Rims, inverts and length of piping between structures and weir elevations if applicable.
 - b. The size of the piping shall be verified by the survey crew at the time of as-built.
5. All as-builts for parking lot, roadways and swales areas shall consist of the following:
 - a. Pavement elevations at all high and low points, and at enough intermediate point's to confirm slope consistency and every 50' for roadways.
 - b. Pavement as-builts shall be taken at all locations where there is a finish grade elevation shown on the design plans.
 - c. All catch basin and manhole rim elevations shall be shown.
 - d. Elevations around island areas will also be required.
 - e. As-builts shall be taken on all paved and unpaved swales prior to placement of asphalt and/or topsoil/sod, at enough intermediate points to confirm slope consistency and conformance to the plan details.

6. Lake and canal bank as-builts shall include a key sheet of the lake for the location of cross sections. Lake and canal bank cross sections shall be plotted at a minimum of every 100 lf, unless otherwise specified. As builts shall consist of the location and elevation of the top of bank, edge of water and the deep cut line, with the distance between each shown on the drawing.
7. Retention area as-built elevations shall be taken at the bottom of the retention area and at the top of bank. If there are contours indicated on the design plans, then they shall be as-built as well
8. If a change is made via field order or deviation to any structure, pipeline, etc., a new location shall be noted on the as-builts. The ENGINEER may request additional as-built information to verify horizontal or vertical locations.

1.7 SUBMITTAL

- A. At Contract closeout, deliver Record Documents to OWNER's Representative, or presentation to the OWNER.
- B. Four (4) complete sets, full size (signed and sealed) "As-Built" Drawings, along with a CD containing the AutoCadd files and drawings in .pdf format, shall be prepared and delivered to the OWNER's Representative for the OWNER. Work shall be performed by a Registered Professional Land Surveyor and shall include, but not be limited to the following:
 1. Valve boxes, splice boxes, pull boxes, al underground utilities-waterlines, electrical runs, irrigation system, storm drainage pipe and structures, finished necessary grades, benches, curbs, fences walls signs, light fixtures and other items as necessary.
- C. Accompany submittal with transmittal letter in duplicate, containing:
 1. Date
 2. Project title and number
 3. CONTRACTOR's name and address
 4. Title and number of each Record Document
 5. Signature of CONTRACTOR or his authorized representative

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01740 WARRANTIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.2 DEFINITIONS

- A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.3 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, Contractor shall reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner

has benefited from use of the Work through a portion of its anticipated useful service life.

- D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- F. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.4 SUBMITTALS

- A. Submit written warranties to the Engineer prior to the date certified for Final Completion. The Engineer's Certificate of Final Completion designates a commencement date for warranties for the Work. Submit written warranties upon request of the Engineer.
- B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Engineer, for approval prior to final execution.
- C. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence.
- D. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 ½ x 11-inch paper.
- E. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.

- F. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION

DIVISION 2

SITE WORK

SECTION 02010

SUBSURFACE INVESTIGATION

PART 1 - GENERAL

1.1 RESPONSIBILITY

- A. Subsurface explorations have been made and copies of the results are included herein for information only. Data on indicated subsurface conditions is not intended as representative or a warranty of accuracy or continuity between soil borings. It is expressly understood that Owner and Engineer will not be responsible for interpretations or conclusions drawn by Contractor from the soils investigation report. Data is made available only for convenience of Contractor. No claim for extra compensation or for extension of time will be allowed on account of subsurface conditions inconsistent with the data shown. Additional test borings and other exploratory operations may be performed by Contractor, at the Contractor's option; however, no change in the Contract Sum will be authorized for such additional exploration.

- B. Data in the soft-dig reports was used for the basis of design and is available to the Contractor for information only. Conditions are not intended as representations or warranties of accuracy or continuity of pot-hole locations. The Owner and Engineer will not be responsible for interpretations or conclusions drawn from this data by Contractor. The Contractor is required to provide pot-holing in order to field verify location of all utility crossings, including paralleling of utilities, prior to construction of the proposed work.

PART 2 - PRODUCTS

2.1 SOIL BORINGS

- A. Copies of the following are included herein:
 - 1. Soil boring data.

2.2 SOFT DIG REPORTS

- A. Copies of the following are included herein:
 - 1. Test hole reports.

PART 3 - EXECUTION (NOT USED)

END OF SECTION

GEOTECHNICAL REPORT

Geotechnical Engineering Report

ESQUIRE LAKE NEIGHBORHOOD DRAINAGE IMPROVEMENTS

City of Pompano Beach, Florida

August 7, 2014

Project No. HD145055



Source: Google Earth Pro

Prepared for:

Mathews Consulting, Inc.
477 S. Rosemary Avenue, Suite 330
West Palm Beach, Florida 33401

Prepared by:

Dunkelberger Engineering & Testing, Inc.
A Terracon Company
West Palm Beach, Florida

DUNKELBERGER
engineering & testing, inc.

A Terracon COMPANY

August 7, 2014

Mathews Consulting, Inc.
477 S. Rosemary Avenue, Suite 330
West Palm Beach, FL 33401

Attn: Mr. Dave Mathews, P.E.
Email: DMathews@mathewsconsultinginc.com

Re: Geotechnical Engineering Report
Esquire Lake Neighborhood Drainage Improvements
City of Pompano Beach, Florida
MC Job No. 1763

Dear Mr. Mathews:

Dunkelberger Engineering & Testing, Inc. A Terracon Company (Dunkelberger) has completed geotechnical engineering services for the above referenced project. This study was performed in accordance with our Subconsultant Agreement for Professional Services dated July 11, 2014.

This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning the proposed drainage improvements.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Dunkelberger Engineering & Testing, Inc.
A Terracon Company

Jaime Velez, P.E.
Project Engineer
FL Registration No. 66416

Kevin E. Aubry, P.E.
Geotechnical Services Manager
FL Registration No. 38175

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APPENDICES

APPENDIX A	Sheet 1 – Soil Boring Location Map
	Sheets 1A through 1E –Boring Location Plans
	Sheets 2A through 2B - Subsurface Profiles
	Sheets 3A through 3E – Field Permeability Test Results
	Table 1 – Boring Locations

Geotechnical Engineering Report

Esquire Lake Neighborhood Drainage Improvements • Pompano Beach, FL
August 7, 2014 • Project No. HD145055

EXECUTIVE SUMMARY

This Geotechnical Engineering Report was performed in accordance with our Subconsultant Agreement for Professional Services dated July 11, 2014. The attached report includes the results of Standard Penetration Test (SPT) borings drilled at the site and percolation tests completed in accordance with the South Florida Water Management District Usual Open Hole Test Method. The borings disclosed the subsoils to consist of very loose to medium dense sands to 15 feet below existing surface grades.

Groundwater levels were measured in the boreholes upon completion of drilling activities. The measured depths to the groundwater level ranged between approximately 3 and 4.5 feet below the ground surface. Utilizing data obtained from the Topographic Survey and the measured depths to the groundwater surface, we estimate the groundwater elevation generally ranged between approximately +6 and +8 feet NAVD on the dates of field exploration (July 21 to 25, 2014). An exception to this was found at the location of Boring SPT-1, where the groundwater surface was estimated to be +9.3 feet NAVD.

Usual Open Hole permeability tests were performed at the locations shown in the following table. The depth to groundwater was measured in boreholes associated with the field permeability testing on the dates that the field work was accomplished, which was July 21 and 23, 2014. A summary of the test results is provided in the following table.

Test No.	Location	Depth to Groundwater (feet)	K Value (cfs/sf-ft)
PERC-1	81' E & 26.5' N of SW corner of property (2401 NW 13 ST)	4.3	3.8×10^{-4}
PERC-2	Sta. 24+95, 14' RT, NW 9 th Court	4.6	9.5×10^{-4}
PERC-3	Sta. 41+50, 15' RT, NW 9 th Street	4.1	6.2×10^{-4}
PERC-4	Sta. 116+40, 15' LT, NW 24 th Avenue	4.5	4.9×10^{-4}
PERC-5	45' S & 8.5' E of NE corner of property (1211 NW 23 AVE)	4.0	5.2×10^{-4}

Results of this study confirm that the site is suitable for the planned construction when viewed from a geotechnical engineering perspective. The very loose to medium dense sandy soils should provide suitable support to the proposed pipelines. Depending on the depths of the new pipelines, dewatering of the excavations may be required to control seepage and to allow for densification of backfill soils.

GEOTECHNICAL ENGINEERING REPORT

ESQUIRE LAKE NEIGHBORHOOD DRAINAGE IMPROVEMENTS

CITY OF POMPANO BEACH, FLORIDA

Project No. HD145055

August 5, 2014

1.0 INTRODUCTION

This geotechnical engineering report has been prepared for the drainage improvements that are planned at the above referenced site. This report describes the methods of study and key findings from the subsurface exploration and provides geotechnical engineering recommendations for the proposed construction.

2.0 PROJECT CONSIDERATIONS

The project will consist of the design and construction of drainage improvements within the Esquire Lake Neighborhood of the City of Pompano Beach, Florida. Based upon discussions with Mathews Consulting, Inc. personnel, we understand that the design of the project is currently in the conceptual phase. The type, size and depth of embedment of new drainage conduits has not been established at this time. We anticipate however, that the drainage improvements project will consist of new inlet structures, pipelines, outfalls, exfiltration trench and regrading of swale areas. For purposes of geotechnical evaluation we have assumed that the new pipelines will bear no more than 10 feet below grade.

A Topographic Survey was prepared for the site by Compass Point Surveyors. The survey covers only the western portion of the project. The top of pavement elevation within the surveyed area typically ranges from about +10 to +12 feet with respect to the North American Vertical Datum of 1988 (NAVD).

3.0 SUBSURFACE CONDITIONS

3.1 Soil Survey Maps

The U.S. Department of Agriculture – Soil Conservation Service (SCS) (now NRCS) Soil Survey of Broward County, Florida, dated 1976, was reviewed for the project area. The maps indicated the site is underlain by the Immokalee-Urban land complex. This complex consists of Immokalee fine sand and urban land. The Immokalee fine sand is a nearly level poorly drained sandy soil that extends to at least 80 inches belowgrade according to the typical pedon.

3.2 Field Exploration

The subsurface conditions along the proposed drainage pipeline alignments were explored with nine Standard Penetration Test (SPT) borings drilled at the locations shown on Sheet 1, and on Sheets 1A through 1E. The borings were drilled in or adjacent to the existing swales along the edge of the roadways.

The SPT borings were drilled utilizing Central Mine Equipment Model 55 (CME 55) and Model 45B (CME 45B) drilling rigs and employing mud rotary techniques. To limit the potential for impacts to shallow utilities a hand auger was used to initiate the excavation to 4 feet below grade at the locations of Borings SPT-2 and SPT-7. The soil density and shear strength within 4 feet of the ground surface were assessed using a Brainard-Kilman Model S-214 hand-held cone penetrometer at these locations. The SPT soil samples were recovered from the borings using a standard split-barrel driven with a 140-pound hammer falling 30 inches (the SPT after ASTM D 1586). The borings were backfilled with sand and gravel. Those borings located within the pavement (Borings SPT-4 and SPT-9) were finished with 6 inches of asphalt cold patch to match the surrounding pavement grades.

Samples of the subsurface materials recovered from the borings were returned to our laboratory where they were visually examined using the Visual-Manual Method (ASTM D 2488), and classified using the Unified Soil Classification System (ASTM D 2487). Profiles of the borings, including their locations, ground surface elevations, soil types and SPT data are shown on Sheets 2A through 2B. These sheets also include the subsurface profiles found at the locations of the field permeability tests (described later in Section 4). Borings located within the area of the Topographic Survey (western portion of project) have their locations and elevations (which are approximate) referenced to the baseline and topographic data shown on the survey (dated June 2014). The locations of SPT borings within the eastern portion of the project (i.e. SPT #1, #2, #7, and #8) are referenced to the nearest property address. That information is provided on Table 1.

For those borings drilled in areas for which the topographic survey does not cover, we researched the U.S. Geological Survey quadrangle maps for the project area. Topographic data shown on the maps is not conclusive with respect to the ground surface elevation for the boring locations. For this reason, we assumed an average ground surface elevation of +11 feet NAVD for these boring and percolation test locations that fall outside the range of the Compass Point topographic survey.

Geotechnical Engineering Report

Esquire Lake Neighborhood Drainage Improvements • Pompano Beach, FL
August 7, 2014 • Project No. HD145055

3.3 Pavement Section

The existing pavement section was determined at the two boring locations drilled within asphalt pavement (SPT - 4 and SPT - 9). Of these, SPT- 4 was drilled within an asphalt surface swale while Boring SPT -9 was drilled within the roadway. Materials found at these locations are summarized in the following table.

Location			Thickness (inches)	
No.	Station	Offset	Asphalt	Base Course
SPT - 4	36+30 (NW 9 th Street)	15' RT	1	6 (Limerock)
SPT - 9	113+75 (NW 24 th Ave.)	10' LT	2	8 (Limerock)

Note: Station – Offset information refers to Baseline shown on the Topographical Survey.

3.4 Stratigraphy

Soils found below the pavement section consist of relatively clean sands and/or sands with gravel (i.e. fill) that extend to depths in the range of 0.3 to 2.5 feet below the existing ground surface. The surficial fill is underlain by relatively clean to slightly silty sands, shelly sands and organic stained sands to the maximum depth of exploration, which was 15 feet below grade. More specific descriptions for the strata found in the borings are provided in the table below.

Stratum No.	Relative Density	Soil Description
AC	--	Asphaltic Concrete (Pavement)
TS	--	Gray to black fine SAND with some fine roots and organic material (Topsoil)
BC	--	Limerock Base Course
1	Loose to Medium Dense	Gray to brown fine SAND with trace limerock gravel (SP) (Fill)
2	Loose	Light gray, light brown to brown fine to medium SAND (SP)
3	Very Loose to Loose	Black to dark brown slightly silty, fine to medium SAND, trace to some organic staining (SP-SM)
4	Loose	Light gray to light brown fine to medium slightly silty SAND, with trace to some shell fragments and cemented sand nodules (SP-SM)
5	Medium Dense	Light gray to brown fine to medium SAND (SP)

Note: Subsurface profile is variable. Refer to Sheets 2A and 2B for strata boundaries for each boring.

The SPT data indicate that the sands are very loose to medium dense in terms of relative density.

3.5 Groundwater

Groundwater levels were measured in the boreholes upon completion of drilling activities. The measured depths to the groundwater level ranged between approximately 3 and 4.5 feet below the ground surface. Utilizing data obtained from the Topographic Survey and the measured depths to the groundwater surface, we estimate the groundwater elevation generally ranged between approximately +6 and +8 feet NAVD on the dates of field exploration (July 21 to 25, 2014). An exception to this was found at the location of Boring SPT-1, where the groundwater surface was estimated to be +9.3 feet NAVD. According to the Average Wet Season Water Table Map of Broward County (prepared by the Broward County Office of Environmental Services Water Management Division dated February 2000) the average wet season water table elevation for the site is about +7 to +8 feet NGVD (i.e. about +5.5 to +6.5 ft NAVD).

4.0 FIELD PERMEABILITY TEST RESULTS

Field permeability testing was performed at the subject site to evaluate the hydraulic conductivity characteristics of the surficial soils. Five field permeability tests were conducted in 6-inch diameter by 10-foot deep boreholes whose sidewalls were stabilized with a 2-inch diameter No. 20 slot perforated well screen and 6/20 silica sand. Usual Open Hole, constant head test methodology was utilized for the hydraulic conductivity determination in accordance with procedures and nomenclature provided by the South Florida Water Management District (SFWMD).

The Usual Open Hole permeability tests were performed at the locations shown in the following table and on Sheets 1A through 1E. The depth to groundwater was measured in boreholes associated with the field permeability testing on the dates that the field work was accomplished, which was July 21 and 23, 2014. The groundwater depth ranged between 4.0 and 4.6 feet below the surface grade. The results of the field permeability testing are presented on Sheets 3A through 3E along with the pertinent stratigraphic, geometric and hydraulic conditions existing at the site. A summary of the test results is provided in the following table.

Test No.	Location	Depth to Groundwater (feet)	K Value (cfs/sf-ft)
PERC-1	81' E & 26.5' N of SW corner of property (2401 NW 13 ST)	4.3	3.8×10^{-4}
PERC-2	Sta. 24+95, 14' RT, NW 9 th Court	4.6	9.5×10^{-4}
PERC-3	Sta. 41+50, 15' RT, NW 9 th Street	4.1	6.2×10^{-4}
PERC-4	Sta. 116+40, 15' LT, NW 24 th Avenue	4.5	4.9×10^{-4}
PERC-5	45' S & 8.5' E of NE corner of property (1211 NW 23 AVE)	4.0	5.2×10^{-4}

Note: Stations shown are in accordance with a Topographic Survey of the site prepared by Compass Point Surveyors. Tests performed in areas not surveyed (i.e. PERC-1 and PERC-5) are referenced to the nearest property address.

5.0 DISCUSSION AND RECOMMENDATIONS

Results of this study confirm that the site is suitable for the planned construction when viewed from a geotechnical engineering perspective. The very loose to medium dense sandy soils should provide suitable support to the proposed pipelines. Depending on the depths of the new pipelines, dewatering of the excavations may be required to control seepage and to allow for densification of backfill soils. Geotechnical engineering recommendations for earthwork procedures for the pipelines and roadway trench repair are presented in the following section.

6.0 PIPELINES

Excavations - Below grade excavations should be made in accordance with all applicable State and Federal requirements. Per the Occupational Safety and Health Administration (OSHA) 29 CFR Part 1926, Sub-part P- "Excavations," the subsoils throughout the project area fall within the Type C criteria. As such, temporary excavation slopes should be stable when adequately dewatered and constructed no steeper than 1.5:1 (horizontal:vertical). In areas of space limitation where open cut is not practical, the excavations may require sheeting or shoring. Further, we recommend that the contractor exercise extreme caution in any decision to place men and equipment in unbraced excavations.

Groundwater levels should be maintained at least 24 inches below the excavation bottom. Dewatering may require a combination of methods including pumping from sumps, wells or wellpoints. The method chosen for dewatering should be the responsibility of the contractor.

The results of the borings indicate that the excavations may generally be performed using heavy track-mounted backhoe equipment. Excavated materials consisting of sands and gravels with particle sizes of less than 1 inch in diameter and no more than 10 percent fines (particles passing through the U.S. Number 200 Sieve) may be stockpiled and re-used for backfill.

Ground Support – Based upon the results of the borings the pipelines should bottom within granular soils. The granular soils will provide adequate foundation support for the piping.

Groundwater levels should be maintained at least 24 inches below the excavation bottom during tamping of the bedding soil and placing of the pipe. During backfilling, groundwater should be maintained a minimum of 24 inches below the working height of the fill.

Pipe bedding and backfill materials should consist of sands and/or sand and gravel (ASTM D 2487) that contain no particle sizes larger than 1 inch, less than 10% fines, and no more than 2% organic matter. The backfill should be placed in the dry up to 12 inches above the crown of the pipe in maximum 6-inch thick lifts, and be compacted to at least 98% density as determined by AASHTO T-180. Above that level, the backfill should be compacted to 98 and 95% density (AASHTO T-180) in roadway and non-roadway areas, respectively. We recommend the use of only relatively light, hand-held compaction equipment to limit the potential for damage to the pipelines, as well as to limit the potential for vibration impacts to the adjacent residential buildings.

7.0 ROADWAY TRENCH REPAIR

Since portions of the new pipelines may be installed beneath sections of existing roadways, trench repair will be required. The base course should meet the minimum requirements of FDOT Standard Specifications for Road and Bridge Construction, latest edition, Section 911 or 913A, and have a minimum Limerock Bearing Ratio (LBR) of 100. The upper 12 inches of the roadway subgrade should be stabilized to a minimum LBR of 40 and be compacted to not less than 98 percent of the AASHTO T-180 maximum dry density.

8.0 LIMITATIONS

The geotechnical engineering design criteria and recommendations in this report have been prepared for Mathews Consulting, Inc. to aid in the planning and design of the project. DUNKELBERGER warrants that the recommendations in this report are based on recognized geotechnical engineering practices. No other warranties are expressed or implied.

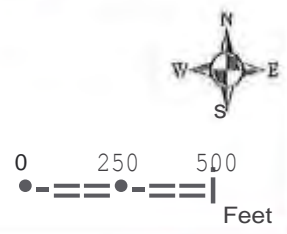
The recommendations in this report related to construction dewatering were provided for Mathews Consulting, Inc. for design purposes only. We recommend that contractors bidding this project align themselves with an experienced hydrogeologist for design of the construction dewatering means and methods. Such work is beyond the scope of our contract with Mathews Consulting, Inc.

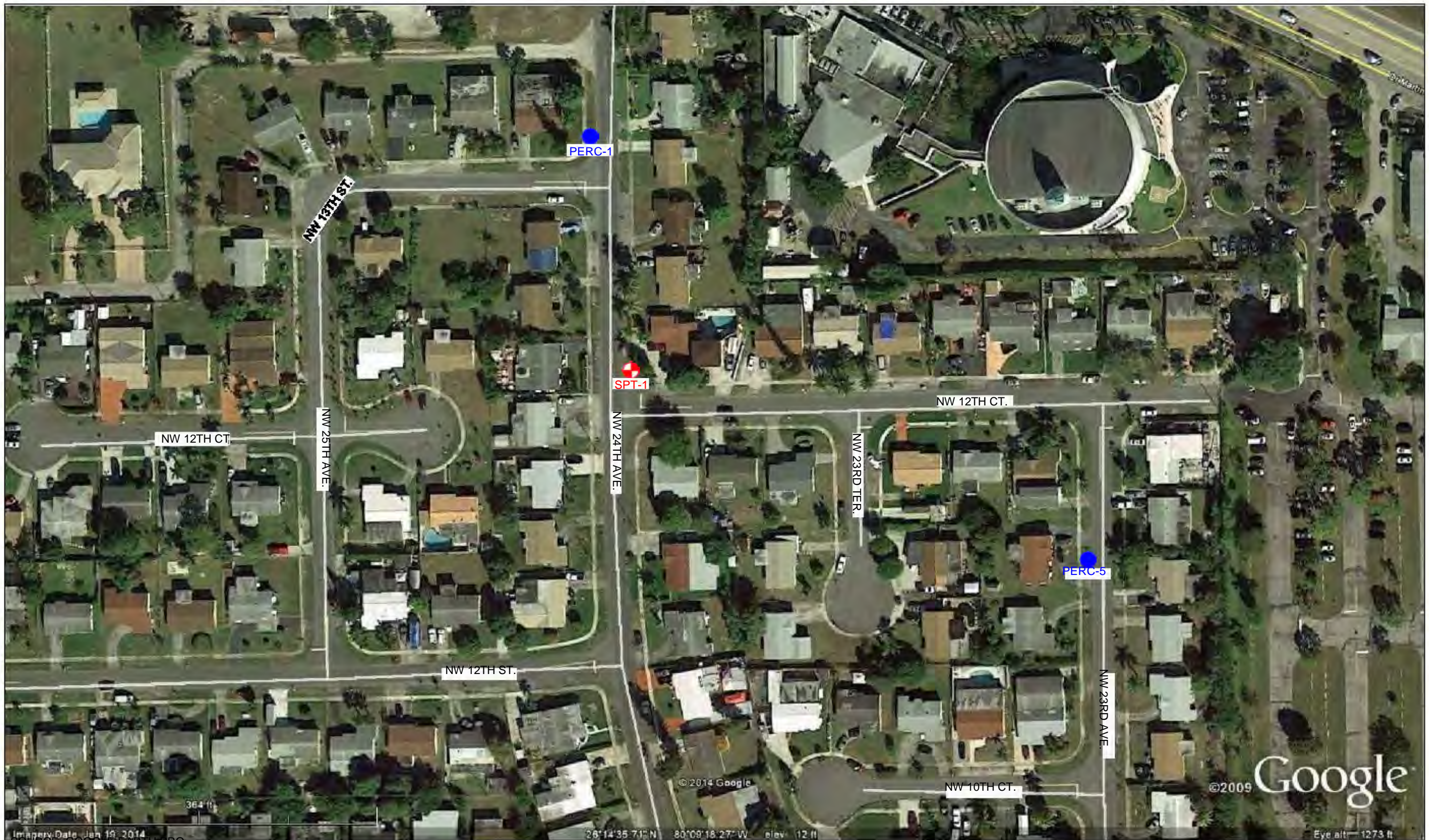
APPENDIX A
SHEET 1 – SOIL BORING LOCATION MAP
SHEETS 1A through 1E – BORING LOCATION PLANs
SHEETS 2A through 2B - SUBSURFACE PROFILES
SHEETS 3A through 3E – FIELD PERMEABILITY TEST
RESULTS
TABLE 1 – BORING & PERCOLATION TEST LOCATIONS



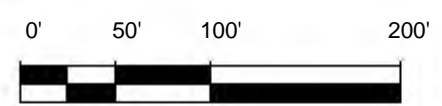
p...mpano
beach.
Awf:11 w ul'3kc:1

Esquire Lake Neighborhood Soil Boring Location Map







Imagery Date: Jan 19, 2014
SOURCE: GOOGLE EARTH PRO



LEGEND

 SPT-1

STANDARD PENETRATION TEST
BORING LOCATION AND NUMBER

 PERC-1

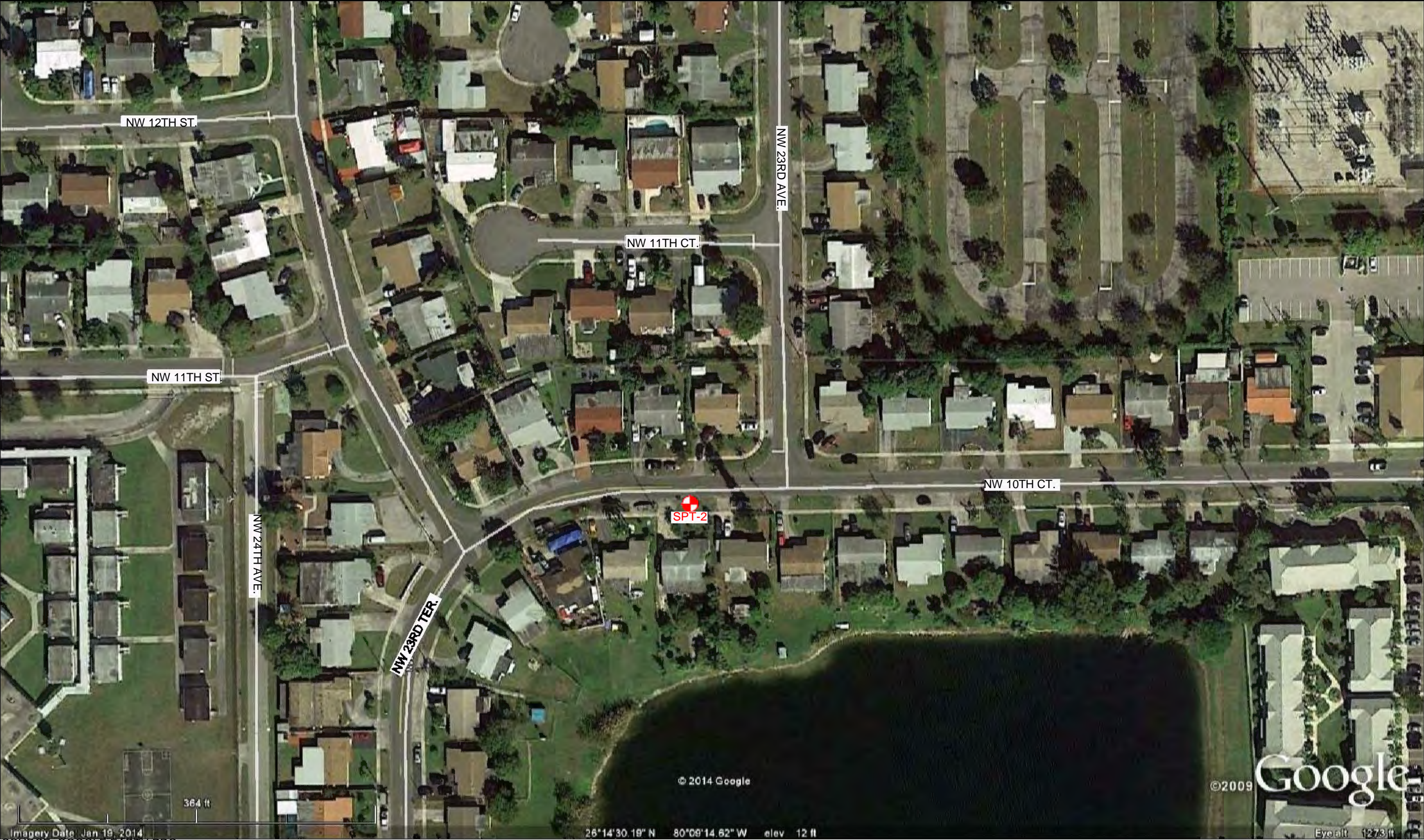
PERCOLATION TEST LOCATION
AND NUMBER

Locations are approximate.

DRAWN	JJ
CHECKED	JV
APPROVED	KA
SCALE	SEE SCALE BAR
REVISION	

BORING LOCATION PLAN			
ESQUIRE LAKE			
PALM BEACH, FLORIDA			
DUNKELBERGER engineering & testing, inc. <small>A Terracon COMPANY</small>			
DATE	8-1-14	PROJ. NO.	HD145055
		SHEET	1A





SOURCE: GOOGLE EARTH PRO



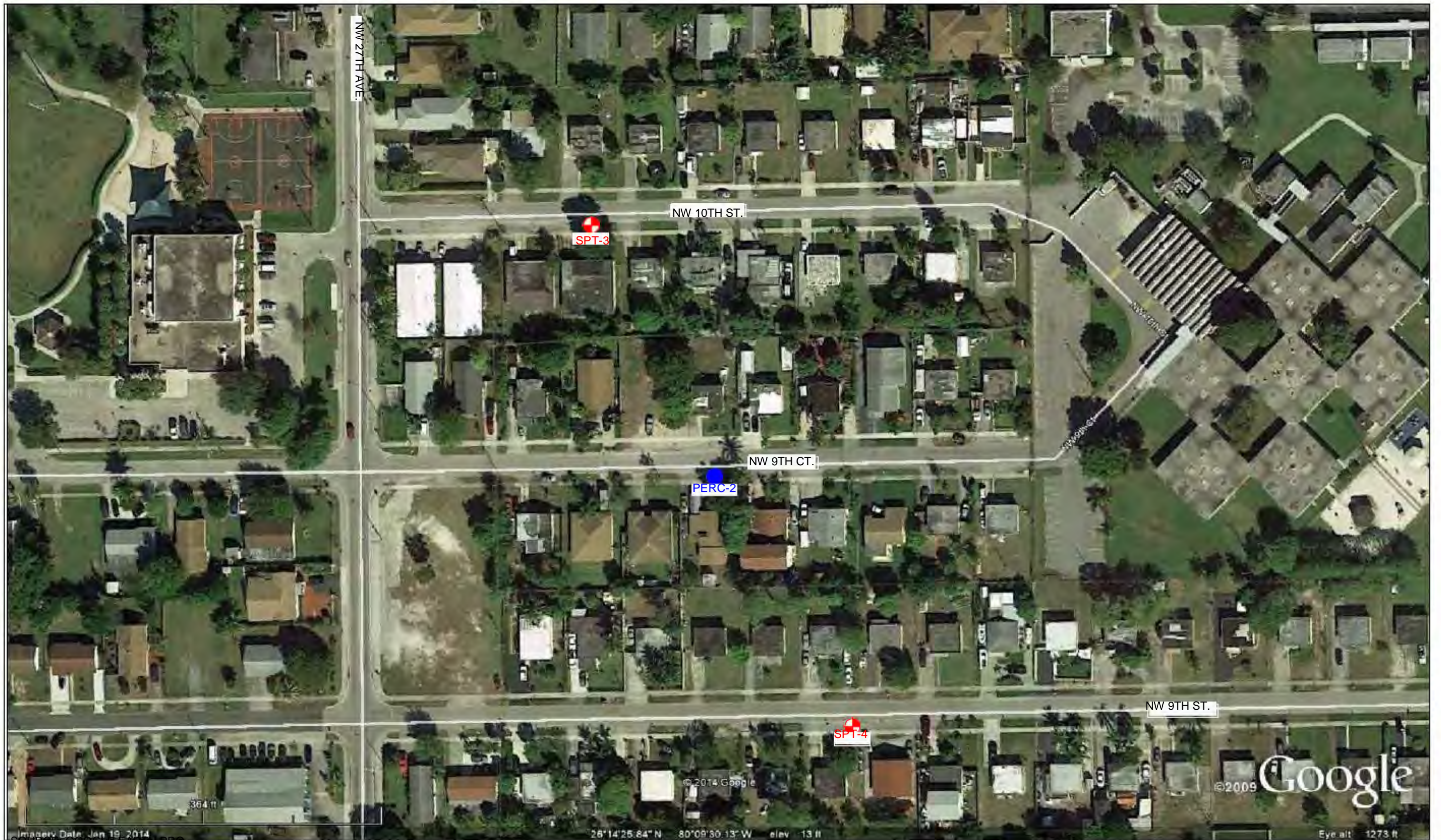
LEGEND

 STANDARD PENETRATION TEST
BORING LOCATION AND NUMBER

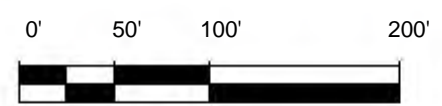
Locations are approximate.

DRAWN	JJ
CHECKED	JV
APPROVED	KA
SCALE	SEE SCALE BAR
REVISED	


BORING LOCATION PLAN		
ESQUIRE LAKE		
PALM BEACH COUNTY, FLORIDA		
DUNKELBERGER engineering & testing, inc. <small>A Terracon COMPANY</small>		
DATE	8-1-14	PROJ. NO. HD145055
		SHEET 1B




Imagery Date: Jan 19, 2014
SOURCE: GOOGLE EARTH PRO



LEGEND

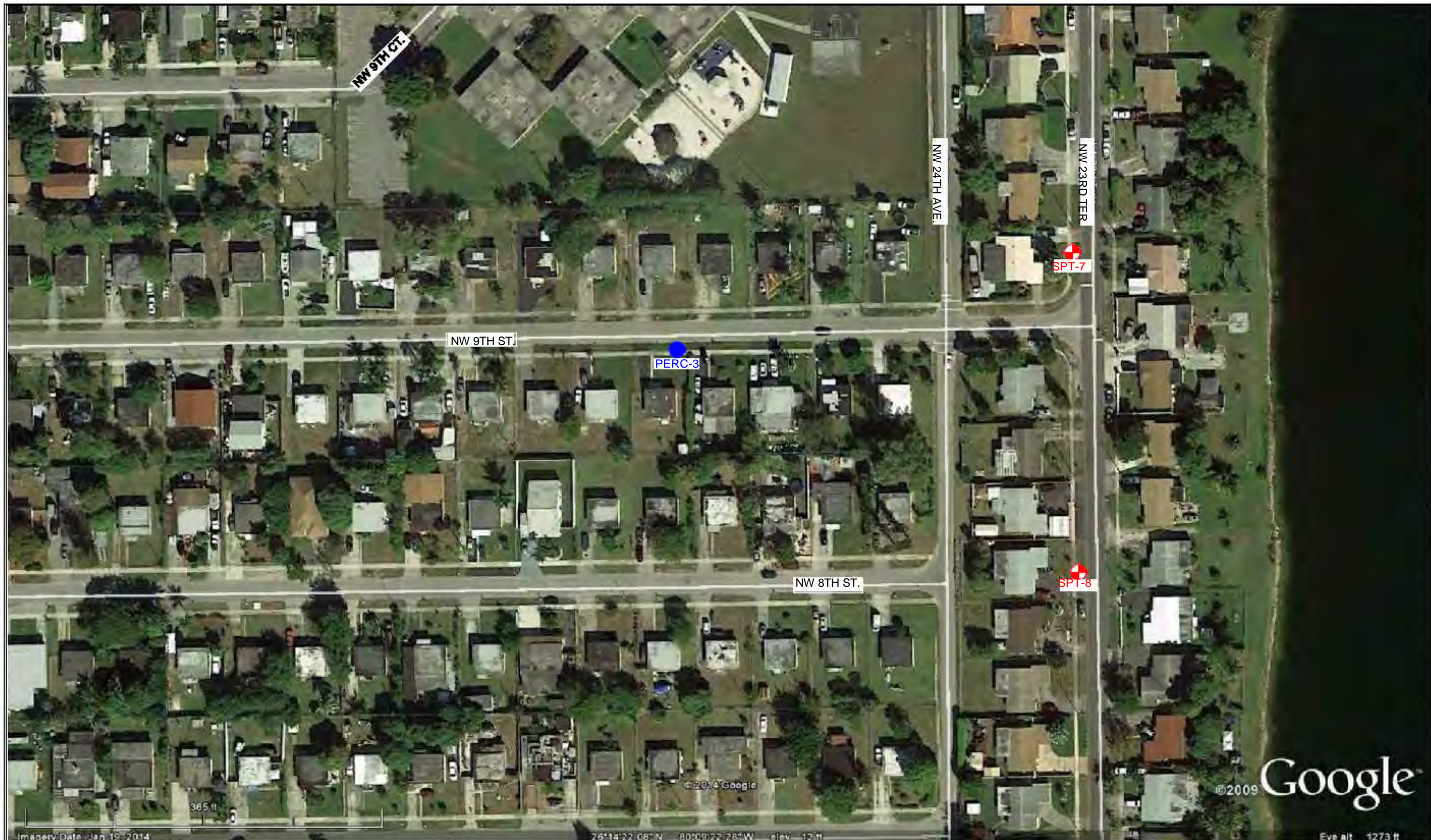
 **SPT-3** - STANDARD PENETRATION TEST BORING LOCATION AND NUMBER

 **PERC-2** - PERCOLATION TEST LOCATION AND NUMBER

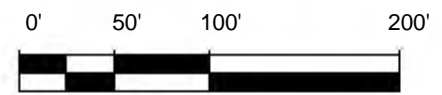
Locations are approximate.

DRAWN	JJ
CHECKED	JV
APPROVED	KA
SCALE	SEE SCALE BAR
REVISED	

BORING LOCATION PLAN		
ESQUIRE LAKE		
PALM BEACH COUNTY, FLORIDA		
DUNKELBERGER engineering & testing, inc. <small>A Terracon COMPANY</small>		
DATE	8-1-14	PROJ. NO.
		HD145055
SHEET	TC	



Imagery Date: Jan 19, 2014
SOURCE: GOOGLE EARTH PRO



LEGEND

STANDARD PENETRATION TEST
BORING LOCATION AND NUMBER

PERCOLATION TEST LOCATION
AND NUMBER

Locations are approximate.

DRAWN	JJ
CHECKED	JV
APPROVED	KA
SCALE	SEE SCALE BAR
REVISED	

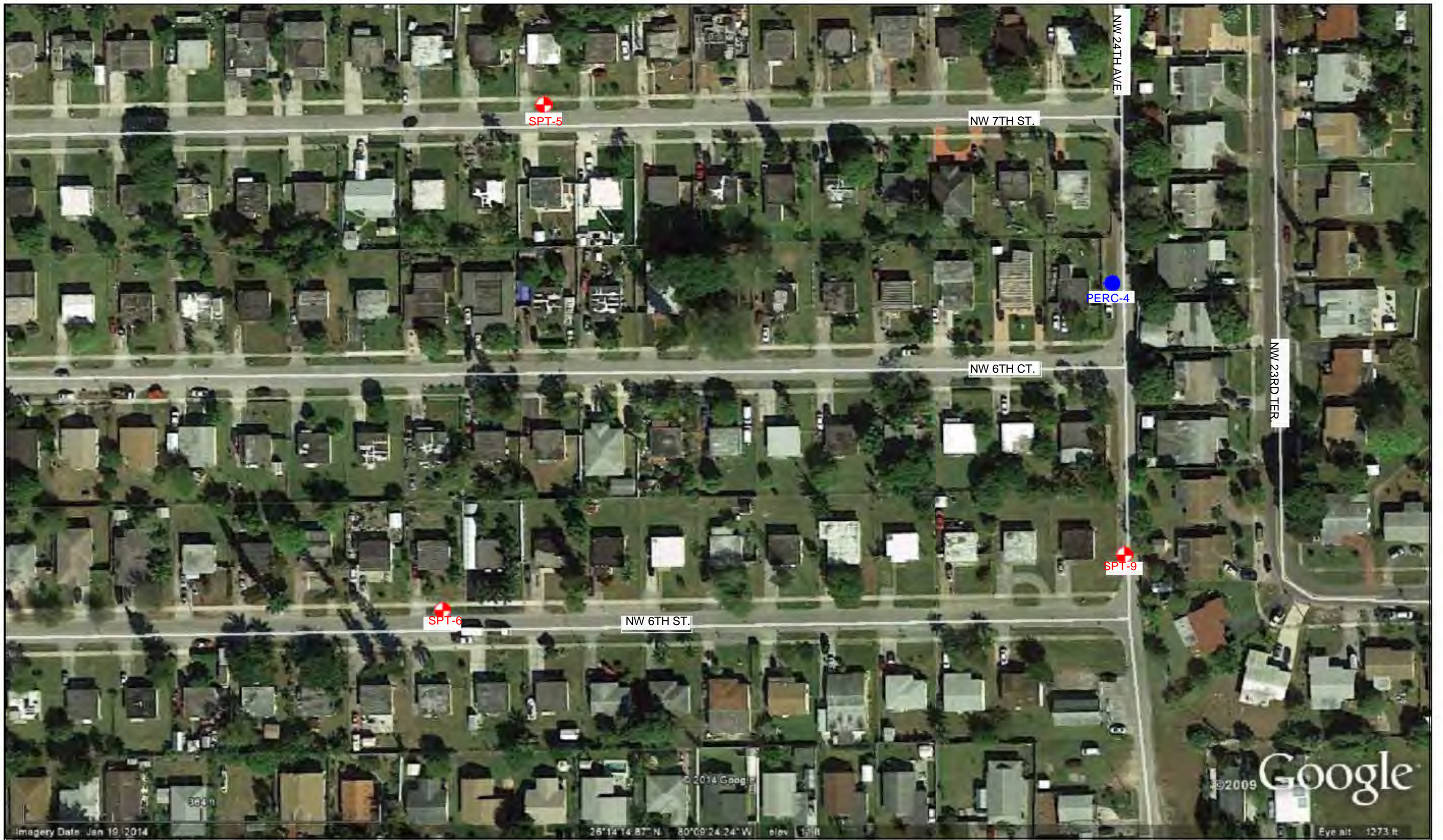
BORING LOCATION PLAN

ESQUIRE LAKE

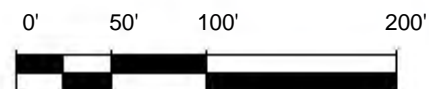
PALM BEACH COUNTY, FLORIDA

DUNKELBERGER
engineering & testing, inc.
A Terracon COMPANY



DATE	8-1-14	PROJ. NO.	HD145055	SHEET	1D
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SOURCE: GOOGLE EARTH PRO



LEGEND

-  SPT-5 STANDARD PENETRATION TEST BORING LOCATION AND NUMBER
-  PERC-4 PERCOLATION TEST LOCATION AND NUMBER

Locations are approximate.

DRAWN	JJ
CHECKED	JV
APPROVED	KA
SCALE	SEE SCALE BAR
REVISED	

BORING LOCATION PLAN

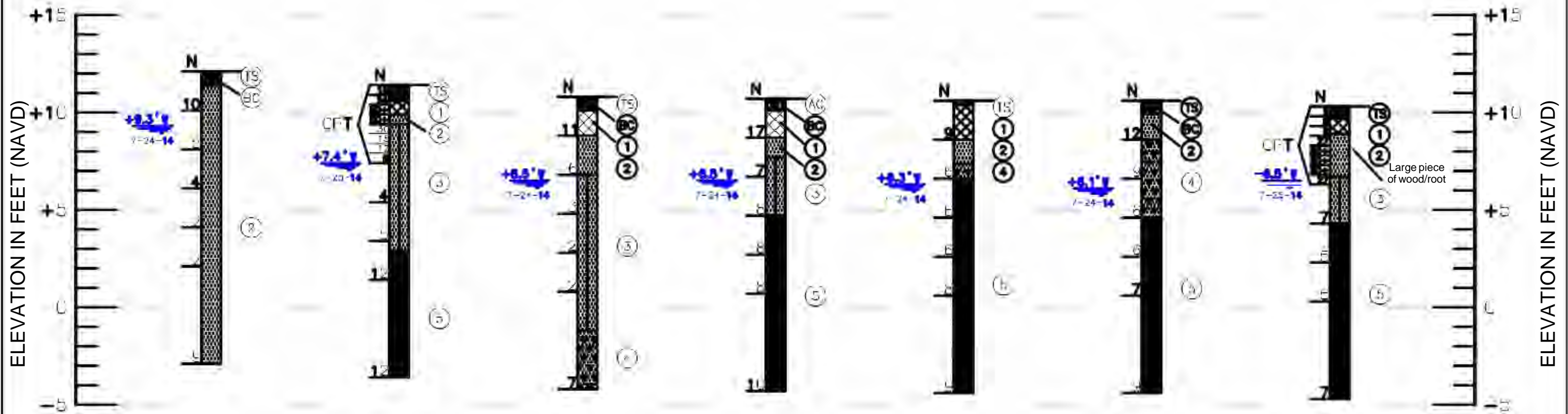
ESQUIRE LAKE

PALM BEACH, FLORIDA

DUNKELBERGER
engineering & testing, inc.
A Terracon COMPANY

DATE	8-1-14	PROJ. NO.	HD145055	SHEET	1E
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BORING NO.	SPT-1	SPT-2	SPT-3	SPT-4	SPT-5	SPT-6	SPT-7
STATION:	-	-	12+60	36+30	78+55	97+40	-
OFFSET:	-	-	16' R	15' R	14' L	15' L	-
ELEVATION:	+12.1'	+11.4'	+10.8'	+10.7'	+10.6'	+10.6'	+10.3'



LEGEND

	(AC)	Asphalt Concrete (PAVEMENT)
	(TS)	Gray and black fine SAND with some fine roots and organic material (TOPSOIL)
	(BC)	Limerock Base Course
	(1)	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
	(2)	Light gray, light brown to brown fine to medium SAND (SP)
	(3)	Black to dark brown slightly silty, fine to medium SAND, trace to some organic staining (SP-SM)
	(4)	Light gray to light brown fine to medium slightly silty SAND, with trace to some shell fragments and cemented sand nodules (SP-SM)
	(5)	Light gray to brown fine to medium SAND (SP)

SP	Unified Soil Classification System Group Symbol (ASTM D 2487)
CPT	Indicates the resistance in tsf to the advance of a Brainard-Kilman Model S-214 hand-held cone penetrometer
N	Indicates the number of blows of a 140 pound hammer, freely falling a distance of 30 inches, required to drive a 2-inch diameter sampler 12 inches (ASTM D 1586)
SPT-1	Standard Penetration Test (SPT) boring and number

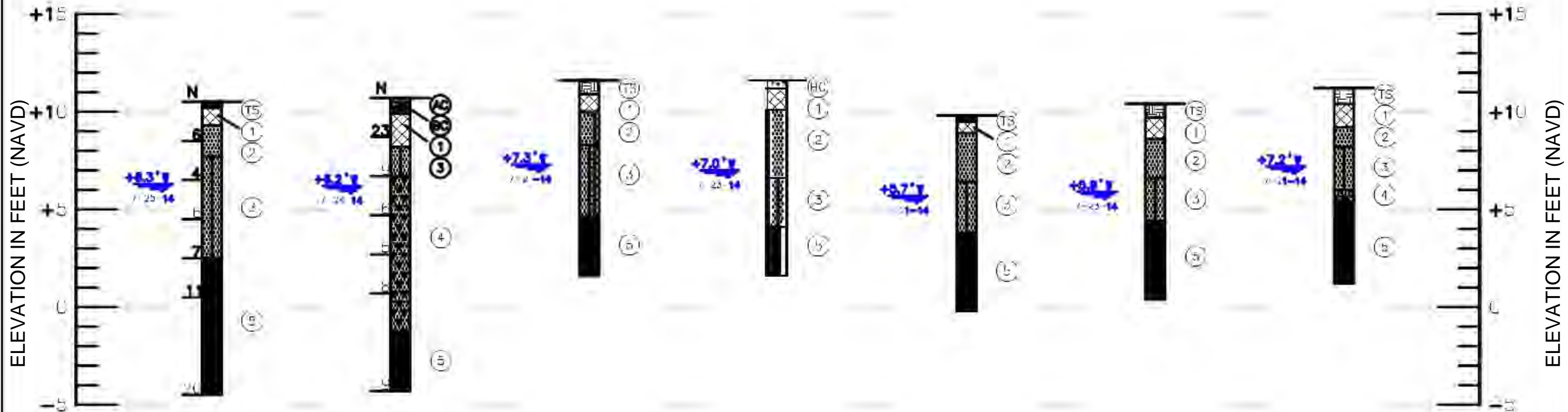
Elevation of groundwater (feet-NAVD) & date measured

NOTES

- Borings were drilled from July 21 to 25, 2014 using either a Central Mine Equipment Model 55 (CME 55) or a CME 45B drilling rig.
- Strata boundaries are approximate and represent soil strata at each test hole location only. Soil transitions may be more gradual than implied.
- Groundwater elevations shown on the subsurface profiles represent groundwater surfaces on the dates shown. Groundwater level fluctuations should be anticipated throughout the year.
- Station, Offset, and Elevation data shown for Borings PERC-2 through PERC-4, SPT-3 through SPT-6, and SPT-9 are approximate and were obtained from the Topographic Survey provided by Compass Point Surveyors, dated June 30, 2014. Other boring locations are referenced to specific property corners as detailed in Table 1. Elevations for those other borings were provided to us by Mathews Consulting, Inc.

DRAWN	JJ	SUBSURFACE PROFILES					
CHECKED	JV	ESQUIRE LAKE					
APPROVED	KA	POMPANO BEACH, FLORIDA					
SCALE	1" = 5'	DUNKELBERGER engineering & testing, inc a Tarrant County Company					
REVISED		DATE	8-5-14	PRJ NO	HD145055	SHEET	2A

BORING NO.	SPT-8	SPT-9	PERC-1	PERC-2	PERC-3	PERC-4	PERC-5
STATION:	-	113+75	-	24+95	41+50	116+40	-
OFFSET:	-	10' L	-	14' R	15' R	15' L	-
ELEVATION:	+10.5'	+10.7'	+11.6'	+11.6'	+9.8'	+10.4'	+11.2'



LEGEND

	(AC)	Asphalt Concrete (PAVEMENT)
	(TS)	Gray and black fine SAND with some fine roots and organic material (TOPSOIL)
	(HC)	Limerock Base Course
	(1)	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
	(2)	Light gray, light brown to brown fine to medium SAND (SP)
	(3)	Black to dark brown slightly silty, fine to medium SAND, trace to some organic staining (SP-SM)
	(4)	Light gray to light brown fine to medium slightly silty SAND, with trace to some shell fragments and cemented sand nodules (SP-SM)
	(5)	Light gray to brown fine to medium SAND (SP)

SP	Unified Soil Classification System Group Symbol (ASTM D 2487)
N	Indicates the number of blows of a 140 pound hammer, freely falling a distance of 30 inches, required to drive a 2-inch diameter sampler 12 inches (ASTM D 1586)

PERC-1	Borehole Permeability Test and number
	Standard Penetration Test (SPT)
SPT-1	boring and number

+7.0'	Elevation of groundwater (feet-NAVD) & date measured
7-25-14	

NOTES

- Borings were drilled from July 21 to 25, 2014 using either a Central Mine Equipment Model 55 (CME 55) or a CME 45B drilling rig.
- Strata boundaries are approximate and represent soil strata at each test hole location only. Soil transitions may be more gradual than implied.
- Groundwater elevations shown on the subsurface profiles represent groundwater surfaces on the dates shown. Groundwater level fluctuations should be anticipated throughout the year.
- Station, Offset, and Elevation data shown for Borings PERC-2 through PERC-4, SPT-3 through SPT-6, and SPT-9 are approximate and were obtained from the Topographic Survey provided by Compass Point Surveyors, dated June 30, 2014. Other boring locations are referenced to specific property corners as detailed in Table 1. Elevations for those other borings were provided to us by Mathews Consulting, Inc.

UPAWN	JJ	SUBSURFACE PROFILES					
CHECKED	JV	ESQUIRE LAKE					
APPROVED	KA	POMPANO BEACH, FLORIDA					
SCALE	1" = 5'	DUNKELBERGER engineering & testing, inc a Matheson subsidiary					
REVISED		DATE	8-5-14	PRJ NO	HD145055	SHEET	2B

Project Name: Esquire Lake Neighborhood Drainage
Improvements Project

Project No. HD145055

TEST NUMBER: PERC-1
TEST LOCATION: 81' E & 26.5' N of SW corner of property
(2401 NW 13 ST)

SUBSURFACE PROFILE

Depth (feet)	Soil Description
0.0 – 0.7	Gray and black fine SAND with some fine roots and organic material (TOPSOIL)
0.7 – 1.6	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
1.6 – 3.3	Brown fine to medium SAND (SP)
3.3 – 7.0	Brown slightly silty fine to medium SAND, trace to some organic staining (SP-SM)
7.0 – 10.0	Light gray to brown fine to medium SAND (SP)

Water Table Depth: 4.3 feet below ground surface on July 21, 2014

Constant Head Maintained at: Ground Surface

PERMEABILITY RESULTS

Uncased (U) or Cased (C): C
Casing Depth (ft): 6.0
Casing Stick-up (ft): 0
Perforated length (ft): 10.0

Constant Head			Falling Head		
Start	Stop	Volume Used (gallons)	Start	Stop	Drop (Ft)
0 sec.	15 min.	136.6	--	--	--

*K, Hydraulic Conductivity (CFS/Ft² - Ft Head)

=

3.8 x 10⁻⁴

*(Reference: South Florida Water Management District Usual Open Hole Test Method)

SHEET 3A

Project Name: Esquire Lake Neighborhood Drainage
Improvements Project

Project No. HD145055

TEST NUMBER: PERC-2
TEST LOCATION: Sta. 24+95, 14' RT, NW 9th Court

SUBSURFACE PROFILE

Depth (feet)	Soil Description
0.0 – 0.5	Limerock Base Course
0.5 – 1.5	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
1.5 – 5.0	Brown fine to medium SAND (SP)
5.0 – 7.5	Brown slightly silty fine to medium SAND, trace to some organic staining (SP-SM)
7.5 – 10.0	Light gray to brown fine to medium SAND (SP)

Water Table Depth: 4.6 feet below ground surface on July 23, 2014
Constant Head Maintained at: Ground Surface

PERMEABILITY RESULTS

Uncased (U) or Cased (C): C
Casing Depth (ft): 6.0
Casing Stick-up (ft): 0
Perforated length (ft): 10.0

Constant Head			Falling Head		
Start	Stop	Volume Used (gallons)	Start	Stop	Drop (Ft)
0 sec.	10 min.	240	--	--	--

*K, Hydraulic Conductivity (CFS/Ft² - Ft Head)

$$= \boxed{9.5 \times 10^{-4}}$$

*(Reference: South Florida Water Management District Usual Open Hole Test Method)

Project Name: Esquire Lake Neighborhood Drainage
Improvements Project

Project No. HD145055

TEST NUMBER: PERC-3
TEST LOCATION: Sta. 41+50, 15' RT, NW 9th Street

SUBSURFACE PROFILE

Depth (feet)	Soil Description
0.0 – 0.3	Gray and black fine SAND with some fine roots and organic material (TOPSOIL)
0.3 – 0.9	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
0.9 – 3.4	Brown fine to medium SAND (SP)
3.4 – 6.0	Brown slightly silty fine to medium SAND, trace to some organic staining (SP-SM)
6.0 – 10.0	Light gray to brown fine to medium SAND (SP)

Water Table Depth: 4.1 feet below ground surface on July 21, 2014
Constant Head Maintained at: Ground Surface

PERMEABILITY RESULTS

Uncased (U) or Cased (C): C
Casing Depth (ft): 6.0
Casing Stick-up (ft): 0
Perforated length (ft): 10.0

Constant Head			Falling Head		
Start	Stop	Volume Used (gallons)	Start	Stop	Drop (Ft)
0 sec.	15 min.	215.5	--	--	--

*K, Hydraulic Conductivity (CFS/Ft² - Ft Head)

= 6.2 x 10⁻⁴

*(Reference: South Florida Water Management District Usual Open Hole Test Method)

SHEET 3C

Project Name: Esquire Lake Neighborhood Drainage
Improvements Project

Project No. HD145055

TEST NUMBER: PERC-4
TEST LOCATION: Sta. 116+40, 15' LT, NW 24th Avenue

SUBSURFACE PROFILE

Depth (feet)	Soil Description
0.0 – 0.7	Gray and black fine SAND with some fine roots and organic material (TOPSOIL)
0.7 – 1.8	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
1.8 – 3.8	Brown fine to medium SAND (SP)
3.8 – 6.0	Brown slightly silty fine to medium SAND, trace to some organic staining (SP-SM)
6.0 – 10.0	Light gray to brown fine to medium SAND (SP)

Water Table Depth: 4.5 feet below ground surface on July 23, 2014
Constant Head Maintained at: Ground Surface

PERMEABILITY RESULTS

Uncased (U) or Cased (C): C
Casing Depth (ft): 6.0
Casing Stick-up (ft): 0
Perforated length (ft): 10.0

Constant Head			Falling Head		
Start	Stop	Volume Used (gallons)	Start	Stop	Drop (Ft)
0 sec.	15 min.	183.2	--	--	--

*K, Hydraulic Conductivity (CFS/Ft² - Ft Head)

= 4.9 x 10⁻⁴

*(Reference: South Florida Water Management District Usual Open Hole Test Method)

SHEET 3D

Project Name: Esquire Lake Neighborhood Drainage
Improvements Project

Project No. HD145055

TEST NUMBER: PERC-5
TEST LOCATION: 45' S & 8.5' E of NE corner of property (1211
NW 23 AVE)

SUBSURFACE PROFILE

Depth (feet)	Soil Description
0.0 – 0.8	Gray and black fine SAND with some fine roots and organic material (TOPSOIL)
0.8 – 2.0	Gray to brown fine to medium SAND with trace limerock gravel (SP) (FILL)
2.0 – 3.0	Brown fine to medium SAND (SP)
3.0 – 5.2	Brown slightly silty fine to medium SAND, trace to some organic staining (SP-SM)
5.2 – 5.8	Brown fine to medium slightly silty SAND, with trace to some shell fragments and cemented sand nodules (SP-SM)
5.8 – 10.0	Light gray to brown fine to medium SAND (SP)

Water Table Depth: 4.0 feet below ground surface on July 21, 2014
Constant Head Maintained at: Ground Surface

PERMEABILITY RESULTS

Uncased (U) or Cased (C): C
Casing Depth (ft): 6.0
Casing Stick-up (ft): 0
Perforated length (ft): 10.0

Constant Head			Falling Head		
Start	Stop	Volume Used (gallons)	Start	Stop	Drop (Ft)
0 sec.	15 min.	179	--	--	--

*K, Hydraulic Conductivity (CFS/Ft² - Ft Head)

= 5.2 x 10⁻⁴

*(Reference: South Florida Water Management District Usual Open Hole Test Method)

SHEET 3E

Table 1 – Boring and Percolation Test Locations

Boring/Percolation Test No.	Location
SPT #1	60' S & 5'W from NW corner of property (1280 NW 24 AVE)
SPT #2	20' W & 12' N of NE corner of property (2320 NW 10 CT)
SPT #7	30' S & 8.5' E of NE corner of property (901 NW 23 TER)
SPT #8	20' S & 8.5' E of NE corner of property (801 NW 23 TER)
PERC #1	81' E & 26.5' N of SW corner of property (2401 NW 13 ST)
PERC #5	45' S & 8.5' E of NE corner of property (1211 NW 23 AVE)

Note: this table only includes locations for borings and percolation tests outside the limits of the Topographical Survey provided by Compass Point Surveyors, dated June 30, 2014.

SOFT DIG DATA



UTILITY INFRASTRUCTURE SURVEYING AND MAPPING AND LOCATING

December 2, 2015

IMC PF04215

Esquire Lake Drainage, PDR
Multiple Streets in Pompano Beach

Test Hole Forms (67)
Test Hole Inventory
Utility Sheet/s
Survey Data provided by Compass Point Surveyors

CD Containing:

Test Hole Forms (67)
Test Hole Inventory
Utility Sheet/s

AutoCadd and Microstation Files with Test Holes Plotted
Survey Data provided by Compass Point Surveyors

Prepared for Mathews Consulting, Inc.
477 South Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401

1860 Old Okeechobee Road, Suite 201, West Palm Beach, Florida 33409
(561) 586-0790 1-800-314-8856

TEST HOLE INVENTORY

PROJECT: ESQUIRE LAKE DRAINAGE
CLIENT: MATHEWS CONSULTING, INC.

PROJECT MANAGER: KELSEY FLANIGAN
PROJECT NO.: PF04215

DATE: 12-02-2015

* SURVEY DATA PROVIDED BY COMPASS POINT. HORIZONTAL DATUM= NAO 1983, VERTICAL DATUM= NAVO 1988
* SPECIFIC TEST HOLE NOTES FOLLOWING INVENTORY

NOTE: INDIVIDUAL TEST HOLE MARKERS INCLUDE: PK NAIL, HUB & TACK, CHIS "X", STEEL PIN OR SPIKE.									
THESE ARE SET OVER THE CROWN OR EDGE OF THE UTILITY FOUND. (SEE COLUMN LABELED TEST HOLE MARKER OR NOTES.)									
LEGEND		HIT	HUB & TACK TEST HOLE MARKER						
		PK	PK NAIL TEST HOLE MARKER						
		X	CHIS "X" TEST HOLES MARKER						
		DBC	DIRECT BURIED CABLE						
		RCP	REINFORCED CONCRETE PIPE						
		SPK	SPIKE TEST HOLE MARKER						
		STLPN	STEEL PIN TEST HOLE MARKER						
UTILITY COMPANIES		WATER	CITY OF POMPANO BEACH WATER/ SEWER						
		SANITARY	CITY OF POMPANO BEACH WATER/ SEWER						
		GAS	TECO						
		TELEPHONE	ATT						
TH#	TYPE OF UTILITY	SIZE& MATERIAL	QTY.	UTILITY DIRECTION	COVER	TOP OF UTIL ELEV	NORTHING& EASTING	SURVEY PIN ELEV	TEST HOLE MARKER
1	WATER	6" CAST IRON	1	E/W	4.02	6.90	694192.29 / 931717.10	10.92	SEE NOTE
2	WATER	6" PVC (WHITE)	1	E/W	4.05	7.12	694196.81 / 931858.57	11.17	PK CROWN
3	SANITARY	6" CLAY	1	N/S	3.70	7.50	694216.72 / 931939.95	11.20	SEE NOTE
4	SANITARY	6" CLAY	1	N/S	3.60	7.24	694223.37 / 932176.31	10.84	PK CROWN
5	WATER	6" PVC (WHITE)	1	E/W	3.33	7.62	694205.93 / 932220.80	10.95	H/TCROWN
6	SANITARY	6" CLAY	1	N/S	3.60	7.30	693699.15 / 931832.65	10.90	PK CROWN
7	WATER	6" PVC (WHITE)	1	E/W	3.05	7.85	693683.90 / 931883.82	10.90	H/TCROWN
8	SANITARY	6" CLAY	1	N/S	3.44	7.39	693710.31 / 932309.67	10.83	PK CROWN
9	WATER	6" PVC (WHITE)	1	E/W	4.31	6.58	693692.92 / 932284.45	10.89	H/TCROWN
10	SANITARY	6" CLAY	1	N/S	3.19	7.28	693713.91 / 932431.18	10.47	PK CROWN
11	WATER	6" PVC (WHITE)	1	E/W	3.22	7.05	693700.93 / 932643.70	10.27	H/TCROWN
12	GAS	2" WRAPPED STEEL	1	NW/SE	2.13	7.57	693692.29 / 933119.85	9.70	PK CROWN
13	WATER	6" CAST IRON	1	N/S	1.69	8.04	693765.47 / 933157.15	9.73	PK CROWN
14	GAS	2" WRAPPED STEEL	1	N/S	3.13	7.07	693786.40 / 933122.57	10.20	H/TCROWN
14A	GAS	2" WRAPPED STEEL	1	N/S	3.07	6.51	693741.11 / 933105.16	9.58	PK CROWN
15	GAS	2" WRAPPED STEEL	1	N/S	1.82	8.47	693761.29 / 933166.12	10.29	H/TCROWN
16	GAS	2" WRAPPED STEEL	1	N/S	2.85	8.94	693582.43 / 933022.59	11.79	SEE NOTE
17	TELEPHONE	4" STEEL	1	N/S	1.46	10.04	692928.08 / 931711.37	11.50	PK CROWN

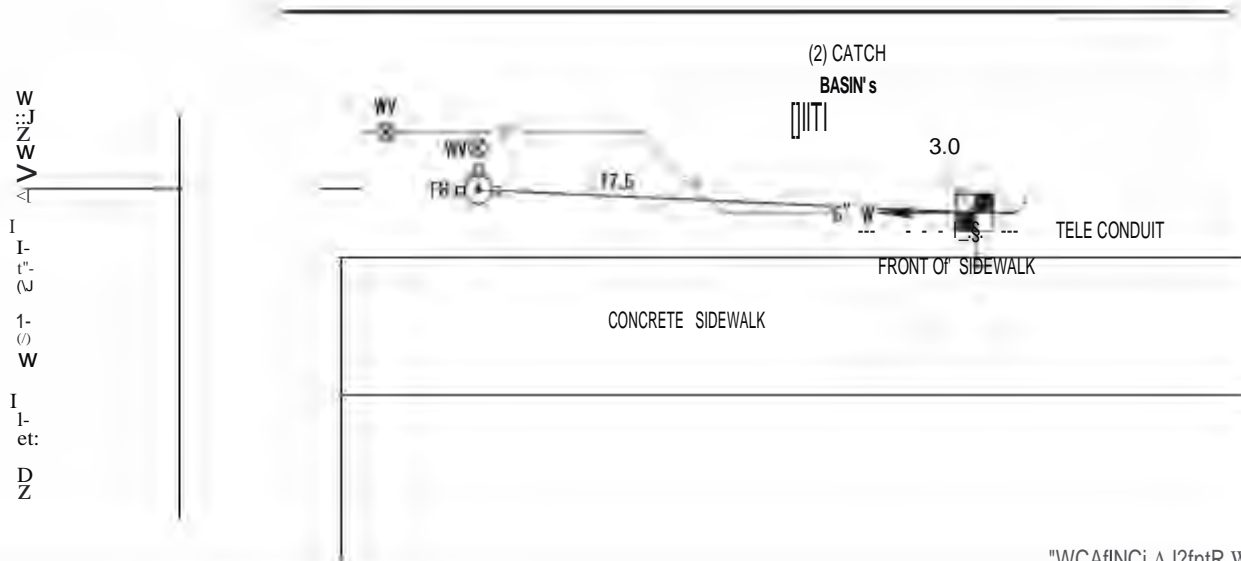
TH#	TYPE OF UTILITY	SIZE & MATERIAL	QTY.	UTILITY DIRECTION	COVER	TOP OF UTIL ELEV	NORTHING & EASTING	SURVEY PIN ELEV	TEST HOLE MARKER
18	WATER	10" CAST IRON	1	N/S	3.04	8.45	692928.12 / 931712.67	11.49	PK CROWN
19	SANITARY	6" PVC (GREEN)	1	N/S	4.03	8.05	692928.60 / 931843.33	12.08	PK CROWN
20	WATER	6" PVC (WHITE)	1	E/W	3.69	8.51	692916.58 / 931945.94	12.20	HIT CROWN
21	NUMBER NOT USED								
22	WATER	6" PVC (WHITE)	1	E/W	3.56	7.46	692926.23 / 932353.00	11.02	HIT CROWN
23	SANITARY	6" PVC (GREEN)	1	N/S	4.22	6.67	692943.60 / 932441.79	10.89	PK CROWN
24	SANITARY	6" CLAY	1	N/S	3.74	6.86	692948.66 / 932683.06	10.60	PK CROWN
25	WATER	6" PVC (WHITE)	1	E/W	3.86	6.46	692934.42 / 932792.56	10.32	H/TCROWN
26	WATER	6" PVC (WHITE)	1	E/W	2.81	7.21	692936.85 / 932952.70	10.02	HIT CROWN
27	WATER	6" PVC (WHITE)	1	N/S	3.30	7.83	692930.59 / 933005.92	11.13	PK CROWN
28	GAS	2" WRAPPED STEEL	1	N/S	2.29	9.03	692961.56 / 933034.90	11.32	SEE NOTE
29	WATER	6" CAST IRON	1	N/S	2.74	6.71	693010.27 / 933170.95	9.45	PK CROWN
30	GAS	2" WRAPPED STEEL	1	N/S	2.60	7.97	692984.17 / 933188.72	10.57	H/TCROWN
31	WATER	6" PVC (WHITE)	1	N/S	2.77	8.15	692715.82 / 933010.90	10.92	PK CROWN
32	UTILITY NOT IN REQUESTED AREA								
33	GAS	2" WRAPPED STEEL	1	E/W	1.70	9.25	693087.28 / 933007.58	10.95	PK CROWN
34	UTILITY NOT IN REQUESTED AREA								
35	WATER	6" CAST IRON	1	N/S	3.74	7.16	693357.16 / 933169.21	10.90	H/TCROWN
36	GAS	2" WRAPPED STEEL	1	N/S	2.50	8.62	693355.09 / 933177.09	11.12	HIT CROWN
37	GAS	2" WRAPPED STEEL	1	N/S	2.86	7.84	693492.44 / 933129.03	10.70	HIT CROWN
38	GAS	2" WRAPPED STEEL	1	N/S	2.85	7.72	693600.82 / 933126.96	10.57	HIT CROWN
39	GAS	2" WRAPPED STEEL	1	N/S	2.67	7.62	693843.19 / 933124.06	10.29	HIT CROWN
40	GAS	2" WRAPPED STEEL	1	N/S	2.03	8.51	693889.91 / 933115.63	10.54	XCROWN
41	WATER	6" CAST IRON	1	N/S	2.69	7.73	693871.55 / 933152.56	10.42	HIT CROWN
42	GAS	2" WRAPPED STEEL	1	NE/SW	1.60	8.55	694200.60 / 933112.52	10.15	XCROWN
43	GAS	2" WRAPPED STEEL	1	NE/SW	1.90	8.13	694287.08 / 933148.15	10.03	XCROWN
44	WATER	6" CAST IRON	1	NE/SW	2.81	7.35	694263.41 / 933182.36	10.16	HIT CROWN
45	WATER	6" CAST IRON	1	NE/SW	1.94	7.56	694322.84 / 933236.63	9.50	HIT CROWN
46	WATER	6" CAST IRON	1	NW/SE	2.60	7.25	694330.82 / 933198.58	9.85	PK CROWN
47	GAS	2" WRAPPED STEEL	1	NE/SW	1.51	7.96	694350.26 / 933206.55	9.47	SEE NOTE
48	GAS	2" WRAPPED STEEL	1	NE/SW	2.65	8.41	694401.74 / 933328.27	11.06	H/TCROWN
49	GAS	1" WRAPPED STEEL	1	NE/SW	2.05	8.17	694415.70 / 933500.46	10.22	HIT CROWN
50	WATER	6" CAST IRON	1	E/W	3.27	6.59	694366.84 / 933532.37	9.86	HIT CROWN
51	GAS	2" WRAPPED STEEL	1	E/W	2.12	8.38	694411.74 / 933503.58	10.50	HIT CROWN
52	UTILITY NOT IN REQUESTED AREA								
53	GAS	2" WRAPPED STEEL	1	NW/SE	1.62	8.40	694573.88 / 933045.72	10.02	HIT CROWN
54	SANITARY	6" CLAY	1	E/W	4.87	5.26	694615.33 / 933043.15	10.13	PK CROWN
55	GAS	2" WRAPPED STEEL	1	N/S	3.42	7.27	694798.75 / 932997.24	10.69	SEE NOTE
56	GAS	1.5" WRAPPED STEEL	1	E/W	2.00	8.50	694895.83 / 933004.65	10.50	PK CROWN
57	SANITARY	6" PVC (GREEN)	1	E/W	3.82	6.76	694853.94 / 933006.15	10.58	PK CROWN
58	GAS	2" WRAPPED STEEL	1	N/S	2.66	8.04	695017.19 / 932994.20	10.70	PK CROWN
59	GAS	1" WRAPPED STEEL	1	E/W	2.59	8.22	695040.97 / 933042.59	10.81	HIT CROWN
60	TELEPHONE	4" CAST IRON	1	N/S	1.86	8.68	695033.41 / 933032.75	10.54	PK CROWN

[illegible]

VACUUM TEST HOLE REPORT NO.:

NOT TO SCALE

NDRTH'v/ EST 10TH STREET



PN: PF04215

VACUUM TEST HOLE REPORT NO.: 2

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: WATER	SHEET #: 5 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: WATER	FORM BY: Kr	ASSISTED BY: Hr CC # OF HOLES:
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: FAIR	DATE DUG: 10-27-15
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: GOOD
<p>ELEV SURVEY PIN 11.17</p> <p>EXIST. GRADE 0.2 ASPHALT</p> <p>COVER (TOP) 4.05</p> <p>COVER (BOTTOM) N/A</p> <p>ELEV. (BOTTOM) 0</p> <p>INSTALLER: PK AT: CROWN OF UTILITY. MARKING TAPE: BLUE</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <p>NORTH 694196.81 EAST 931858.57 ELEV. 11.17</p> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAD 1988.</p> <p>NOTES:</p>		

NOT TO SCALE

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27TH A VENUE

NDR TH./E ST 10TH STREET

43.7



"LOC/INC/A I?E:11R WAY"
1-80 0 -UNI?ER If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 3

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: SANITARY	SHEET#: 5 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: SANITARY (SEE NOTE)	FORM BY: KF	ASSISTED BY: HFCC # OF HOLES:
MATERIAL AS FOUND: CLAY	PAVING CONDITION: GOOD	DATE DUG: 10-27-15
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT WET SAND ROCKY	
	UTILITY CONDITION: GOOD	

ELEV SURVEY PIN

11.20

0.4 ASPHALT

EXIST. CROWN

COVER (TOP): 3.70

ELEV. (TOP): 7.50

COVER (BOTTOM): N/A

ELEV. (BOTTOM): N/A

WIDTH

FACING NORTH

INSTALLLED PK AT: CROWN OF UTILITY. MARKING TAPE: GREEN

SURVEY PIN LOCATED BY: COMPASS POINT

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (Fm).

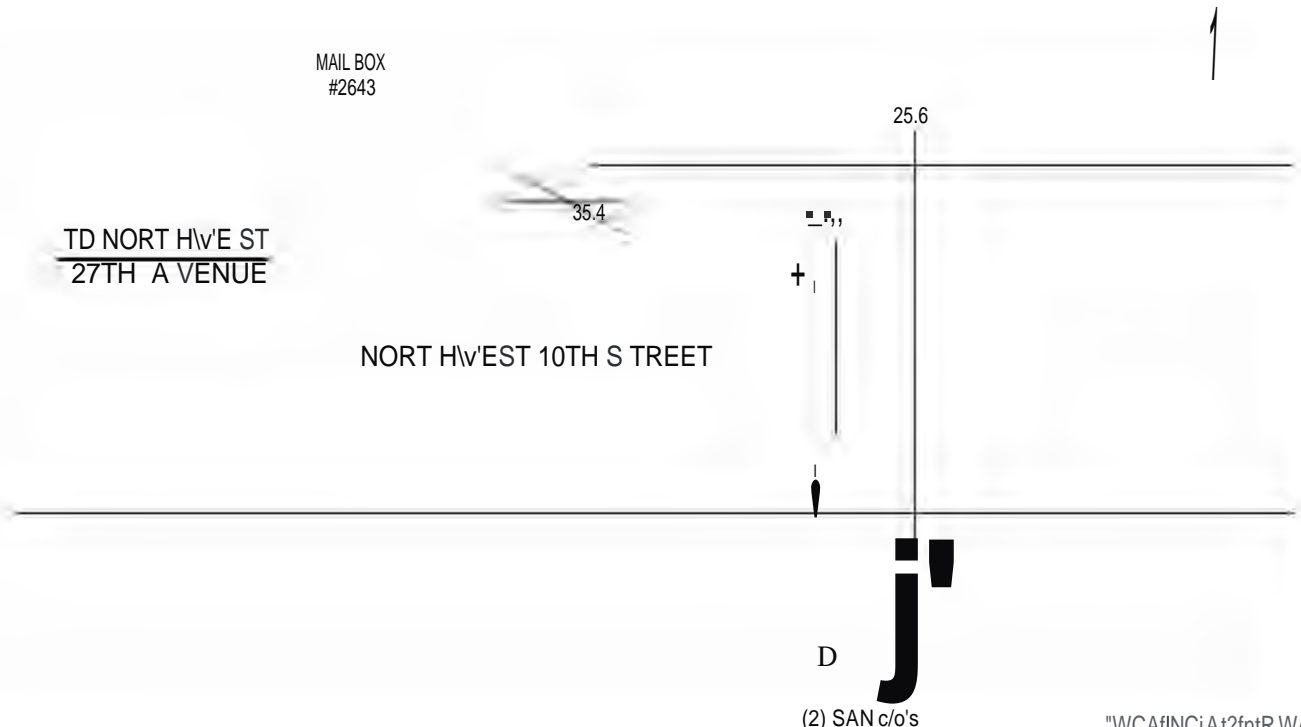
NORTH	EAST	ELEV.
694216.72	931939.95	11.20

HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.

NOTES: TEST HOLE ALSO REVEALED A 1" STEEL UNKNOWN, RUNNING NORTH-SOUTH, 0.50' WEST OF PK. COVER = 1.95. PK SET OVER CROWN OF 6" SANITARY.

(2) J

NOT TO SCALE



(2) SAN c/o's

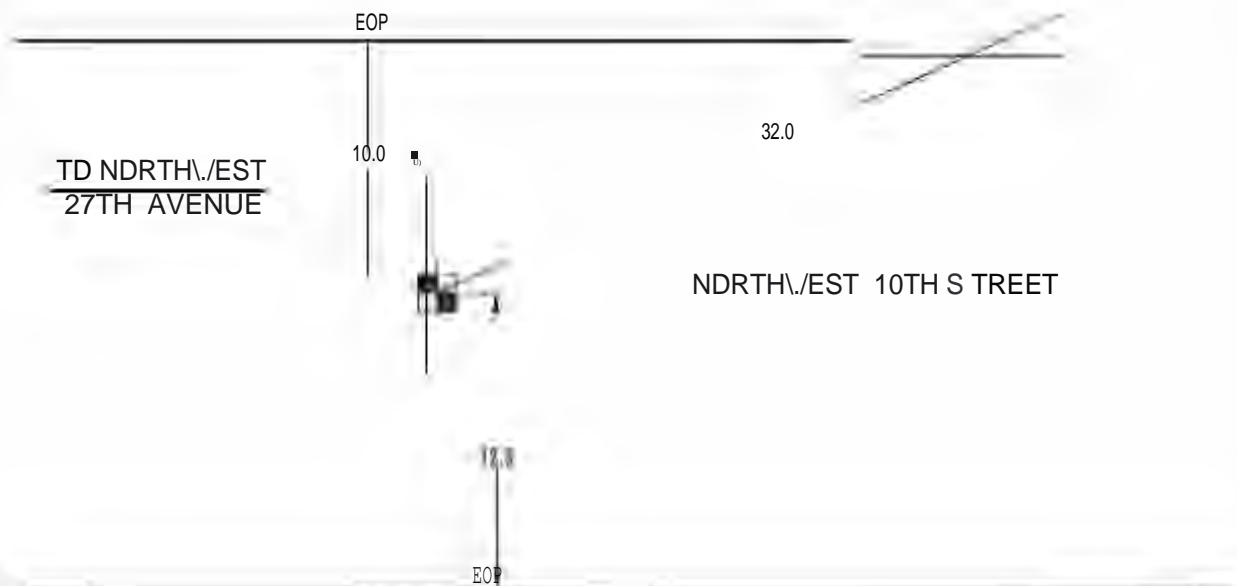
"WCAfINCiAt?fntR WAY"
1-800-UNIT?FR If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 4

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: SANITARY	SHEET#: 6 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: SANITARY	FORM BY: BP	ASSISTED BY: ML ER # OF HOLES:						
MATERIAL AS FOUND: CLAY	PAVING CONDITION: GOOD	DATE DUG: 10-26-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT MOIST SAND	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 10.84	INSTALLED: PK AT: CROWN OF UTILITY. MARKING TAPE: GREEN							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694223.37</td> <td>932176.31</td> <td>10.84</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694223.37	932176.31	10.84
NORTH	EAST	ELEV.						
694223.37	932176.31	10.84						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								

NOT TO SCALE

MAIL BOX
#2613



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 5

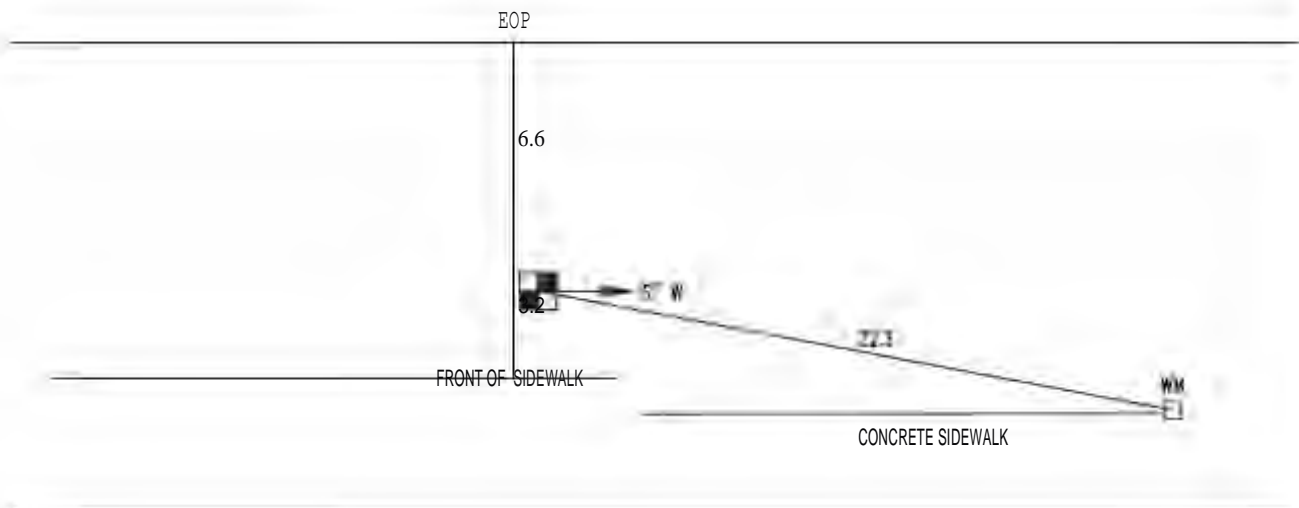
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 6 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: MLER # OF HOLES:						
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: N/A	DATE DUG: 10-26-15						
SIZE AS FOUND: 6"	SOIL CONDITION: S	SOFT MOIST SAND						
ELEV SURVEY PIN 10.95	UTILTY CONDITION: GOOD							
INSTALLED: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE								
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694205.93</td> <td>932220.80</td> <td>10.95</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694205.93	932220.80	10.95
NORTH	EAST	ELEV.						
694205.93	932220.80	10.95						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								

NOT TO SCALE

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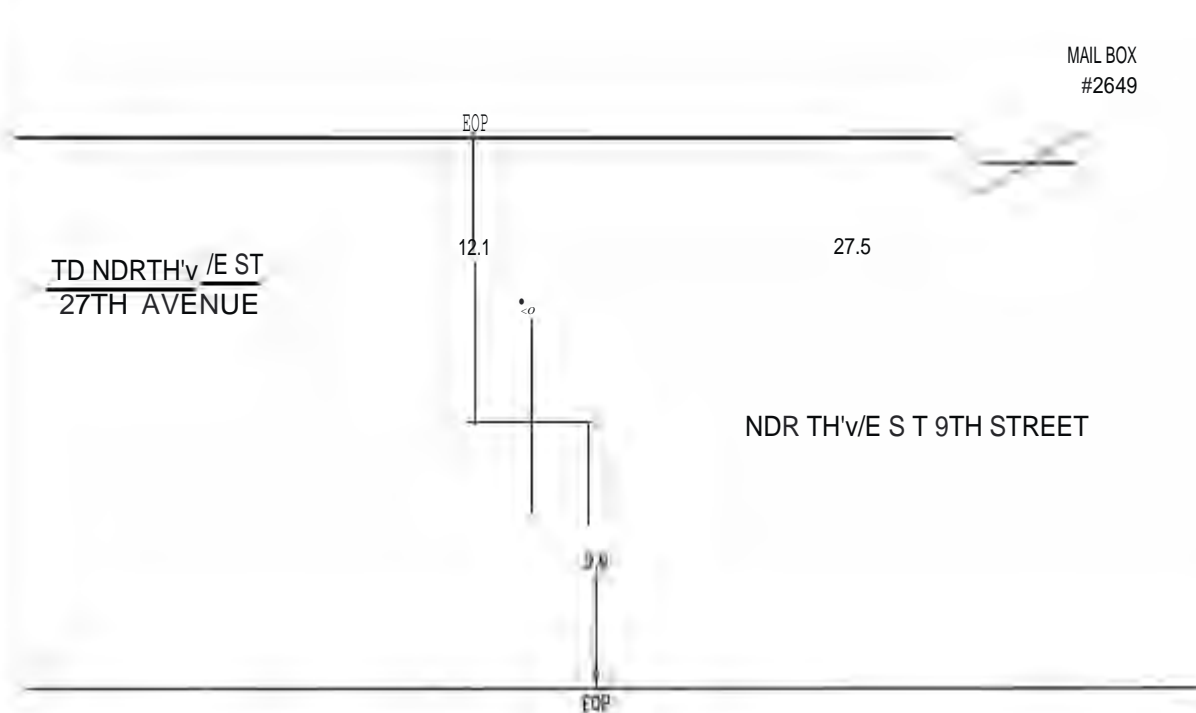


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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 6

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: SANITARY	SHEET #: 9 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: SANITARY	FORM BY: BP	ASSISTED BY: ML DL JD # OF HOLES:						
MATERIAL AS FOUND: CLAY	PAVING CONDITION: GOOD	DATE DUG: 10-27-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
ELEV. SURVEY PIN: 10.90		UTILITY CONDITION: GOOD						
		AT: CROWN OF UTILITY. MARKING TAPE: GREEN						
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>693699.15</td> <td>931832.65</td> <td>10.90</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	693699.15	931832.65	10.90
NORTH	EAST	ELEV.						
693699.15	931832.65	10.90						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES								

NOT TO SCALE



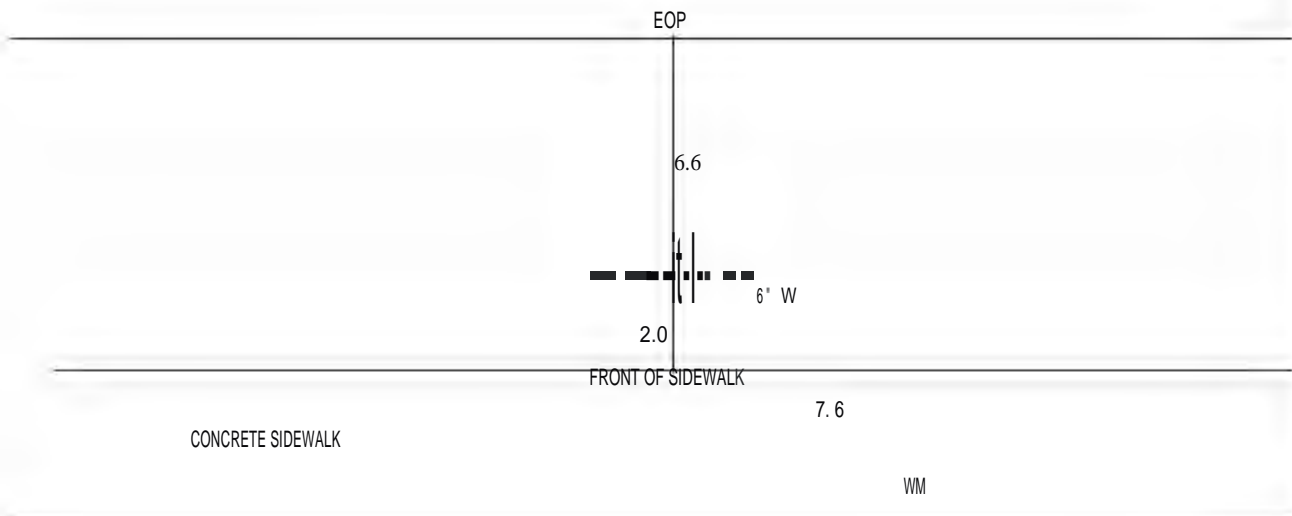
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 7

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: WATER	SHEET #: 9 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: ML DL JD # OF HOLES:
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: N/A	DATE DUG: 10-25
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND ROCKY	UTILITY CONDITION: GOOD
ELEV SURVEY PIN: 10.90	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE	
	SURVEY PIN LOCATED BY: COMPASS POINT	
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). NORTH EAST ELEV. 693683.90 931883.82 10.90 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.		
NOTES:		

NOT TO SCALE

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NDRTH EST 9TH STREET

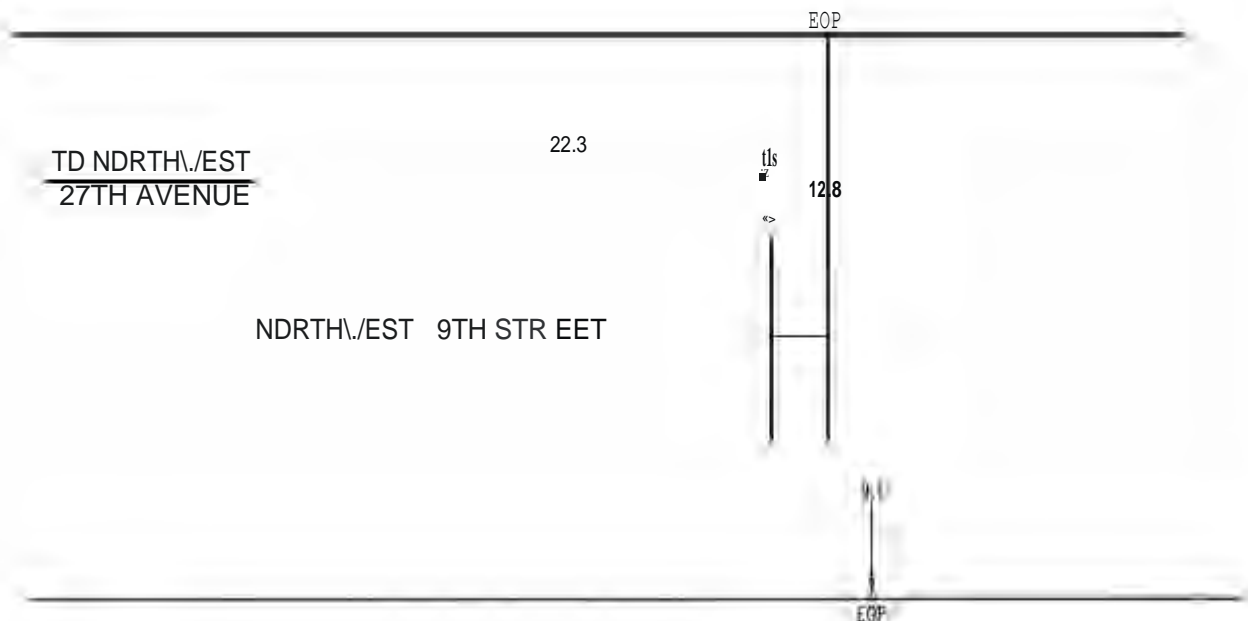


PN: PF04215 VACUUM TEST HOLE REPORT NO.: 8

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: SANITARY	SHEET #: 10 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: SANITARY	FORM BY: BP	ASSISTED BY: ML DL JD # OF HOLES						
MATERIAL AS FOUND: CLAY	PAVING CONDITION: GOOD	DATE DUG: 10-27-15						
SIZE AS FOUND 6"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
UTILITY CONDITION: GOOD								
<p>ELEV SURVEY PIN 10.83</p> <p>----- EXST GRADE -----</p> <p>----- 0.6 ASPHALT -----</p> <p>COVER (TOP) 5.44</p> <p>7.39</p> <p>ELEV. (TOP)</p> <p>COVER (BOTTOM) N/A</p> <p>N/A</p> <p>ELEV. (BOTTOM)</p> <p>INSTALL: PK AT: CROWN OF UTILITY. MARKING TAPE: GREEN</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>1 ----- 1</p> <p>SURVEY INFO: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>693710.31</td> <td>932309.67</td> <td>10.83</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES:</p>			NORTH	EAST	ELEV.	693710.31	932309.67	10.83
NORTH	EAST	ELEV.						
693710.31	932309.67	10.83						

NOT TO SCALE

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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 9

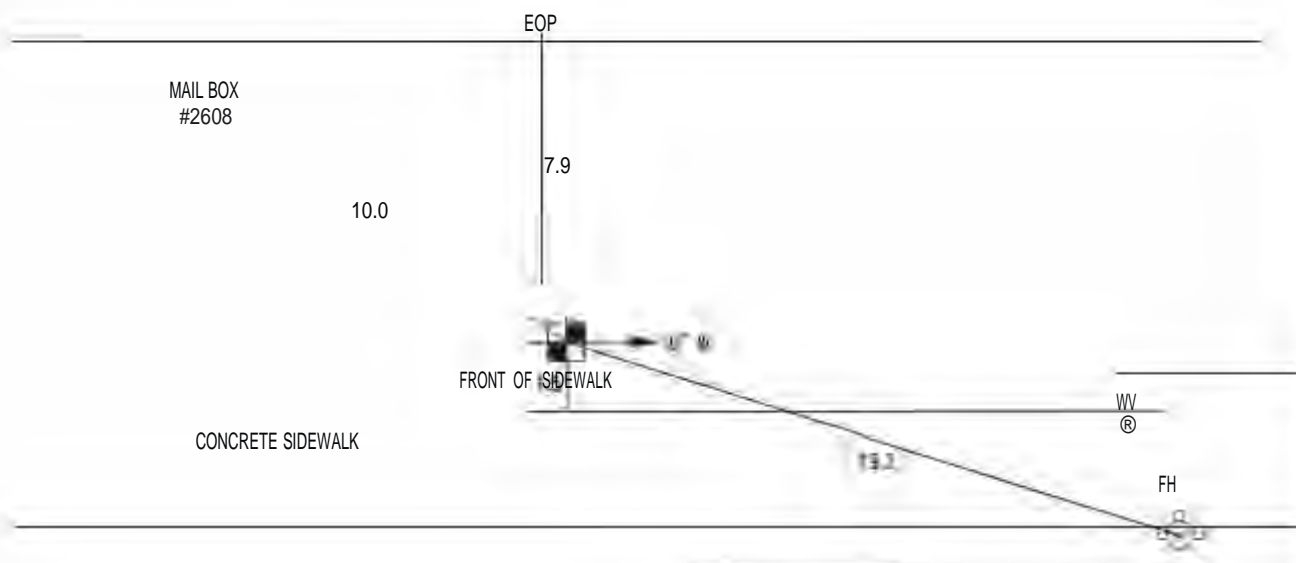
PROJECT NAME: ESQUIRE LAKE DRAINAGE		CLIENT JOB#	N/A	WORK ORDER#	N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.		PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA			
UTILITY REQUESTED	WATER	SHEET #:	10 OF N/A	PROPOSED:	DRAINAGE
UTILITY FOUND:	WATER	FORM BY:	BP	ASSISTED BY:	ML DL JD # OF HOLES:
MATERIAL AS FOUND	PVC (WHITE)	PAVING CONDITION:	N/A	DATE DUG:	10-27-15
SIZE AS FOUND:	6"	SOIL CONDITIONS:	SOFT MOIST SAND ROCKY		
ELEV SURVEY PIN		UTILITY CONDITION:			
10.89		GOOD			
		SURVEY PIN LOCATED BY: COMPASS POINT			
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).					
		NORTH	EAST	ELEV.	
		693692.92	932284.45	10.89	
HORIZONTAL DATUM = NAD 83 / 1990, VERTICAL DATUM = NAVD 88.					
		NOTES:			

NOT TO SCALE

~~TD NDRTH VEST~~
~~27TH AVENUE~~

NDRTHVEST 9TH STREET

1



"WCAfINCi A l?ffffl::R WAY"
1-80 0-UNT?fR If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 10

NOT TO SCALE



"W CAfINw A Clfffr WAY"
I-800 -UNI?fr If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 11

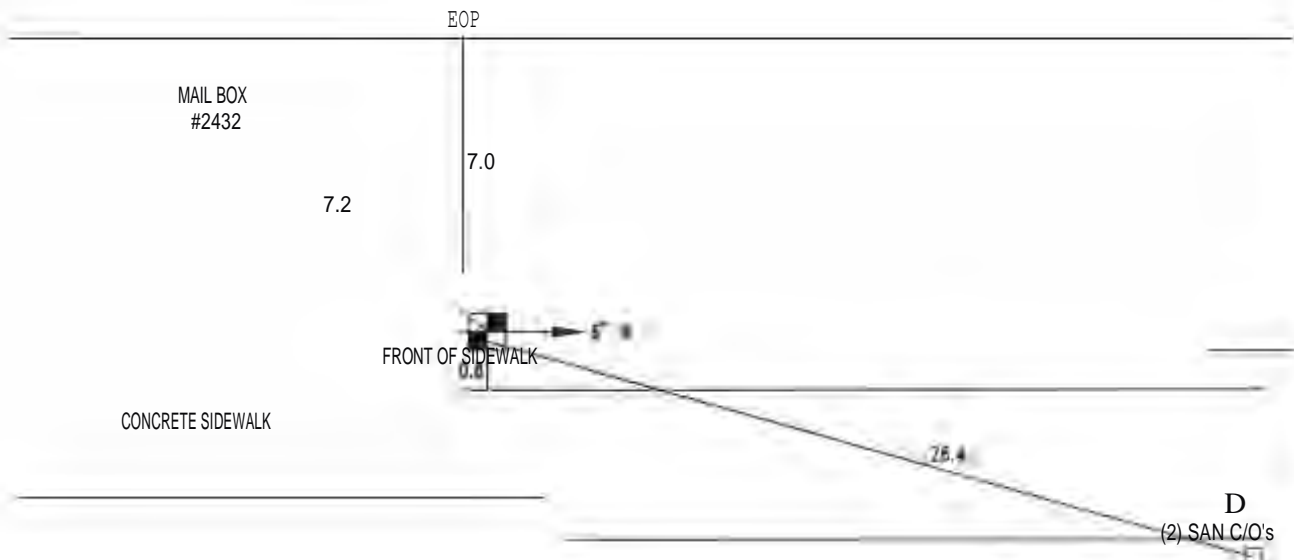
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 11 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: ML DL JD # OF HOLES:						
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: N/A	DATE DUG: 10-27-15						
SIZE AS FOUND: 6"	SOIL CONDITION: S	SOFT MOIST SAND ROCK Y						
ELEV SURVEY PIN	UTILITY CONDITION: GOOD							
10.27	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>693700.93</td> <td>932643.70</td> <td>10.27</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	693700.93	932643.70	10.27
NORTH	EAST	ELEV.						
693700.93	932643.70	10.27						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								

NOT TO SCALE

TO NORTH VEST
27TH AVENUE

NORTH VEST 9TH STREET

1



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 12

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB#: N/A	WORK ORDER#: N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 12 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: HF ML DL # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 10-28-15
SIZE AS FOUND: 2"	SOIL CONDITION: S	SOFT MOIST SAND ROCKY
UTILITY CONDITION: GOOD		
<p>ELEV SURVEY PIN</p> <p>9.70</p> <p>INSTALLED: PK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (fm).</p> <p>NORTH EAST ELEV.</p> <p>693692.29 933119.85 9.70</p> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAD 1988.</p> <p>NOTES</p>		

NOT TO SCALE

NORTH VEST 9TH STREET

CATCH BASIN

10.4

CONCRETE SIDEWALK

WOOD UTILITY/LIGHT POLE

W

U

1

0

W

1

1

0

W

3

1

0

D

Z

"WC!fINC! A Bff!f:R WAY"

1 200 11M2D 1F

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 13

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: WATER	SHEET: 12 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: HF ML DL # OF HOLES:
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: GOOD	DATE DUG: 10-28-15
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND ROCKY	
UTILITY CONDITION: POOR		

ELEV SURVEY PIN
9.73

EXIST. GRADE ----- T" -----
0.4 ASPHALT

COVER (TOP)

1.69

9.04

ELEV. (TOP)

COVER (BOTTOM)

N/A

N/A

ELEV. (BOTTOM)

FACING NORTH

WIDTH

PK AT: CROWN OF UTILITY. MARKING TAPE: BLUE

SURVEY PIN LOCATED BY: COMPASS POINT

1

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

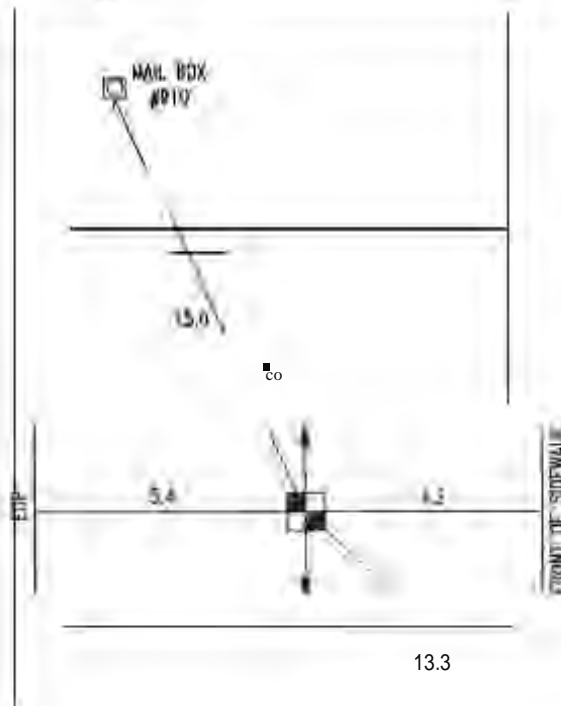
NORTH	EAST	ELEV.
693765.47	933157.15	9.73

HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVO 1988.

NOTES:

NOT TO SCALE

NORTH/E ST
9TH STREET



WM

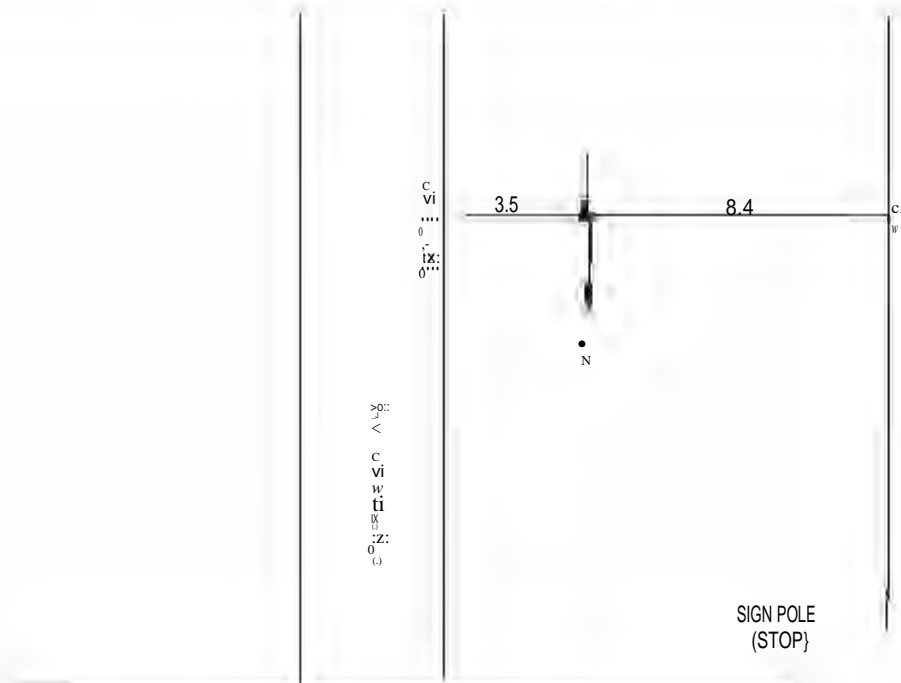
"WCArINCi A Bff11:R WAY"
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 14

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED GAS	SHEET #: 12 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND GAS	FORM BY: BP	ASSISTED BY: HF ML DL # OF HOLES:						
MATERIAL AS FOUND WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 10-28-15						
SIZE AS FOUND 2"	SOIL CONDITIONS SOFT MOIST SAND ROCKY							
ELEV SURVEY PIN 10.20	UTILITY CONDITION GOOD							
<p>EXIST. GRADE N/A</p> <p>COVER (TOP) 8.13</p> <p>7.07</p> <p>COVER (BOTTOM) N/A</p> <p>N/A</p> <p>ELEV. (BOTTOM)</p> <p>INSTALL: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <tr> <td>NORTH</td> <td>EAST</td> <td>ELEV.</td> </tr> <tr> <td>693786.40</td> <td>933122.57</td> <td>10.20</td> </tr> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES:</p>			NORTH	EAST	ELEV.	693786.40	933122.57	10.20
NORTH	EAST	ELEV.						
693786.40	933122.57	10.20						

NOT TO SCALE

1



NDRTH EST 9TH STREET

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 14A

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: t4THEWS CONSULTING INC.	PROJECT LOCATION POL4PANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 12 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: HF t4LDL # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 10-28-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT t401ST SAND	
ELEV SURVEY PIN: 9.58	UTILITY CONDITION: GOOD	
INSTALL	PK AT: CROWN	OF UTILITY. MARKING TAPE: YELLOW
EXIST GRADE	SURVEY PIN LOCATED BY: COL4PASS POINT	
0.3 ASPHALT	SURVEY INFO.: ALL t4EASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).	
COVER (TOP): 3.07	NORTH: 693741.11	EAST: 933105.16
ELEV. (TOP): 6.51	ELEV.: 9.58	
COVER (BOTTOM): N/A	HORIZONTAL DATUM: NAD 1983 / 1990, VERTICAL DATUM: NAVD 1988.	
ELEV. (BOTTOM): N/A	NOTES:	
WIDTH	FACING NORTH	

NOT TO SCALE

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NDRTHVEST 9TH STREET

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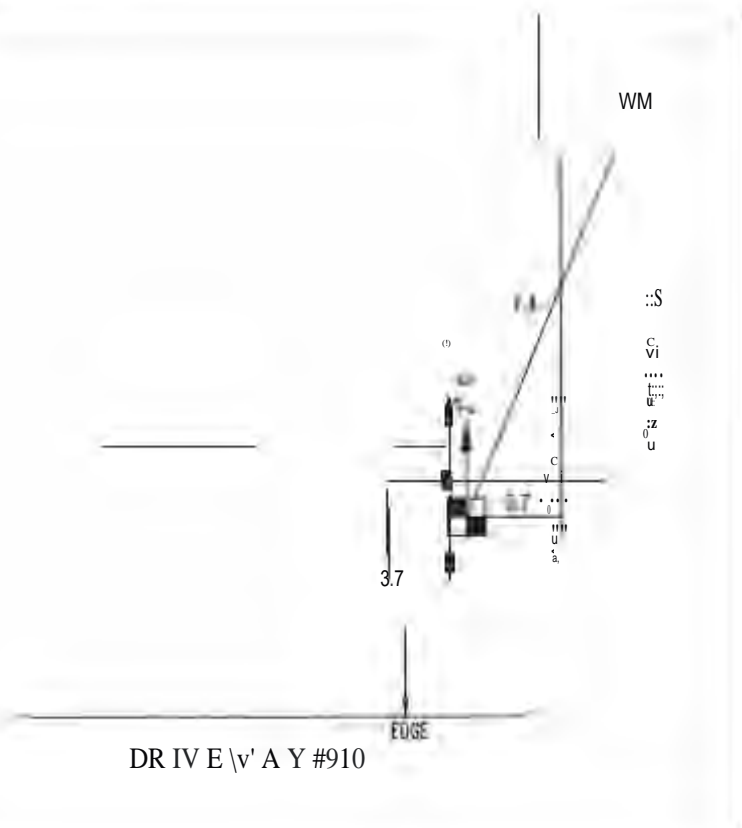
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 15

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 12A OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: ER JD # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG 11-12-15						
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND							
ELEV. SURVEY PIN 10.29	UTILITY CONDITION: GOOD							
<p>INSTALLED HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE YELLOW</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>693761.29</td> <td>933166.12</td> <td>10.29</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES</p>			NORTH	EAST	ELEV.	693761.29	933166.12	10.29
NORTH	EAST	ELEV.						
693761.29	933166.12	10.29						

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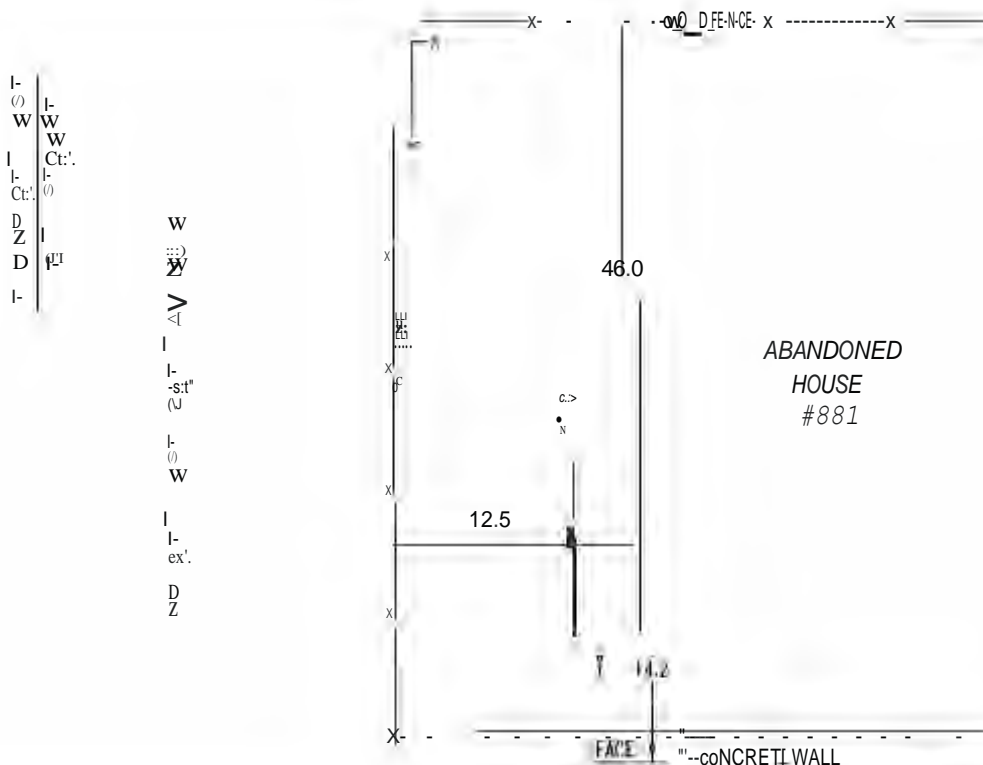
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 16

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET#: 16 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: JD # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-14-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND	
ELEV SURVEY PIN: 11.79	UTILITY CONDITION: GOOD	
HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). NORTH EAST ELEV. 693582.43 933022.59 11.79 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988. NOTES: TEST HOLE MOVED 130'± NORTH OF REQUESTED AREA. HUB SET OVER CROWN OF 2" GAS.		

NOT TO SCALE

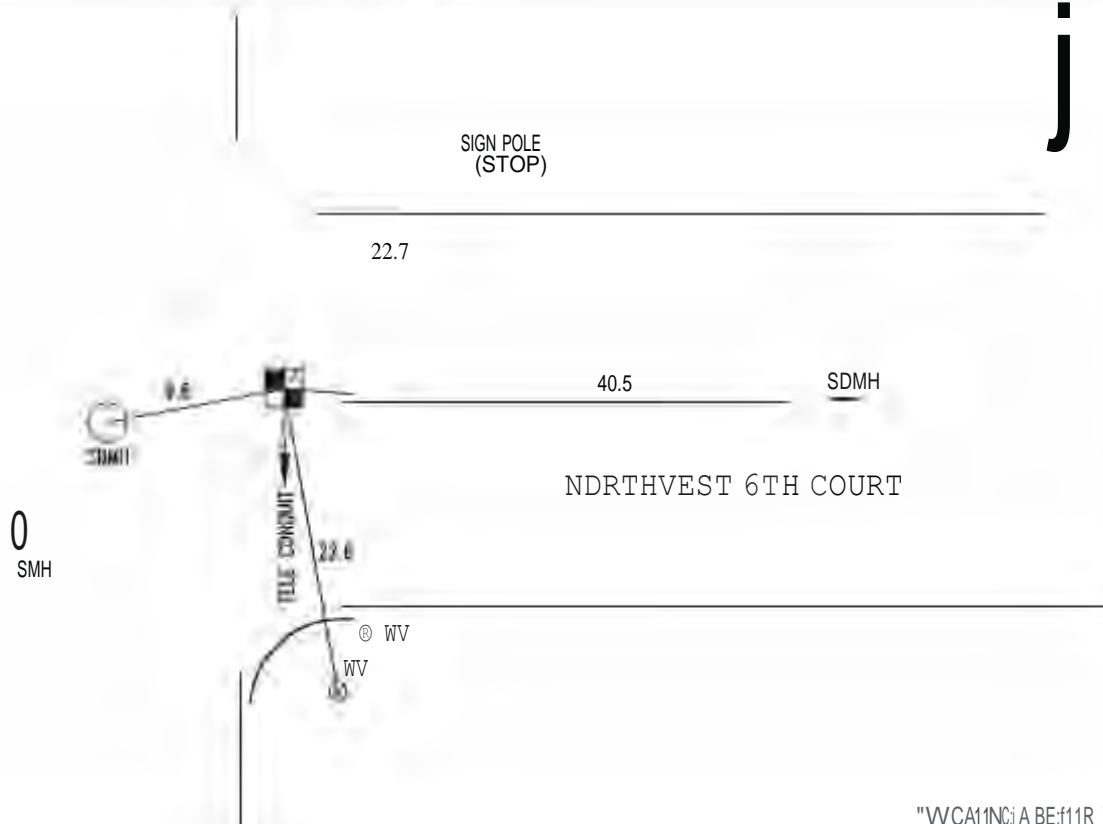


PN: PF04215 VACUUM TEST HOLE REPORT NO.: 17

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: TELEPHONE	SHEET #: 21 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: TELEPHONE	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:
MATERIAL AS FOUND: STEEL CONDUIT	PAVING CONDITION GOOD	DATE DUG 11-10-15
SIZE AS FOUND: 4"	SOIL CONDITIONS: SOFT DRY SAND ROCKY	
ELEV. SURVEY PIN 11.50	UTILITY CONDITION: GOOD	
	AT: CROWN OF UTILITY. MARKING TAPE ORANGE SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). NORTH EAST ELEV. 692928.08 931711.37 11.50 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	
NOTES:		

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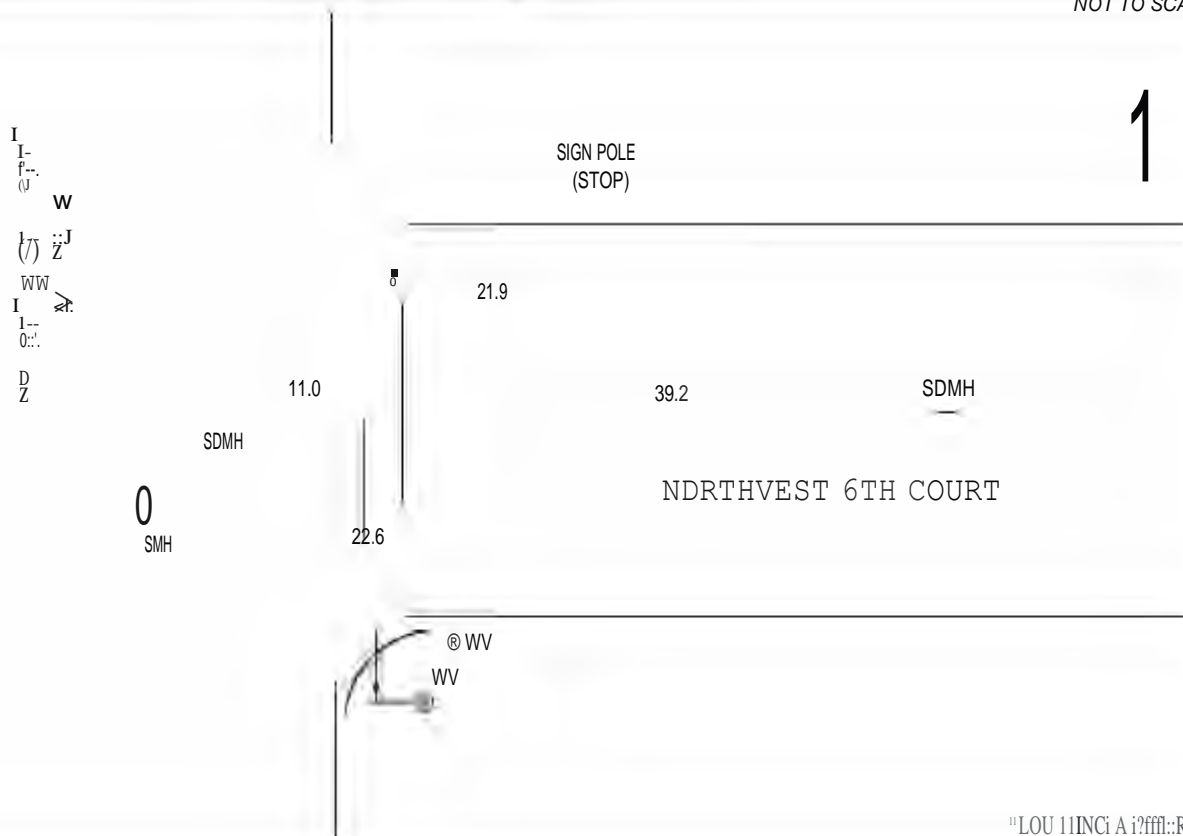
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PN: PF04215

VACUUM TEST HOLE REPORT NO.: 18

PROJECT NAME:	ESQUIRE LAKE DRAINAGE	CLIENT JOB#	N/A	WORK ORDER#	N/A						
LOCATE REQUESTED BY:	MATHEWS CONSULTING INC.	PROJECT LOCATION:	POMPANO BEACH, BROWARD COUNTY, FLORIDA								
UTILITY REQUESTED:	WATER	SHEET #:	21	OF	N/A						
UTILITY FOUND	WATER	PROPOSED:	DRAINAGE								
MATERIAL AS FOUND	CAST IRON	FORM BY:	BP	ASSISTED BY:	ML ER JD						
SIZE AS FOUND	10"	# OF HOLES:									
		PAVING CONDITION:	GOOD	DATE DUG:	11-10-15						
		SOIL CONDITIONS	SOFT DRY SAND ROCKY								
		UTILITY CONDITION	GOOD								
ELEV SURVEY PIN	11.49	INSTALLED	PK	AT: CROWN	OF UTILITY. MARKING TAPE BLUE						
		<p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692928.12</td> <td>931712.67</td> <td>11.49</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES:</p>				NORTH	EAST	ELEV.	692928.12	931712.67	11.49
NORTH	EAST	ELEV.									
692928.12	931712.67	11.49									

NOT TO SCALE



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 19

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: SANITARY	SHEET #: 21 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: SANITARY	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:
MATERIAL AS FOUND PVC (GREEN)	PAVING CONDITION: GOOD	DATE DUG: 11-10-15
SIZE AS FOUND: 6"	SOIL CONDITION: S	HARD DRY SAND ROCKY
	UTILITY CONDITION: GOOD	

ELEV. SURVEY PIN
12.08

SURVEY PIN LOCATED BY: COMPASS POINT

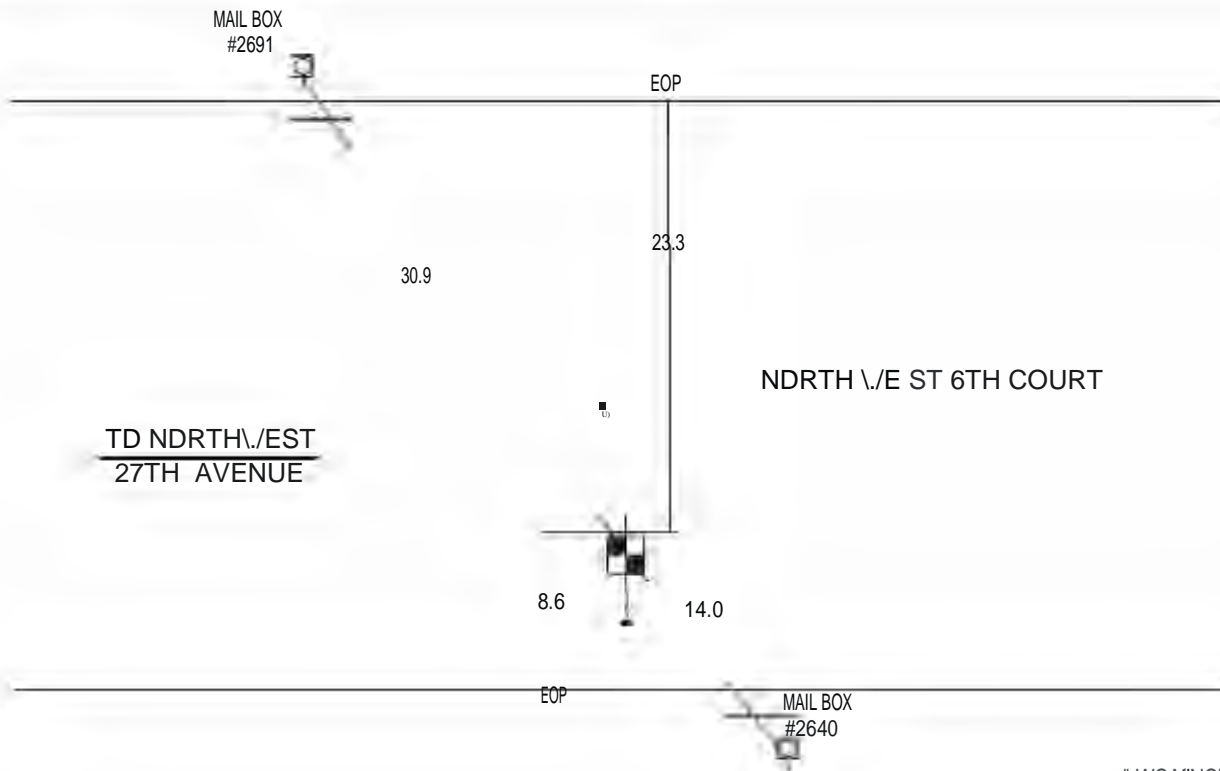
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (rm).

NORTH	EAST	ELEV.
692928.60	931843.33	12.08

HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.

NOTES

NOT TO SCALE



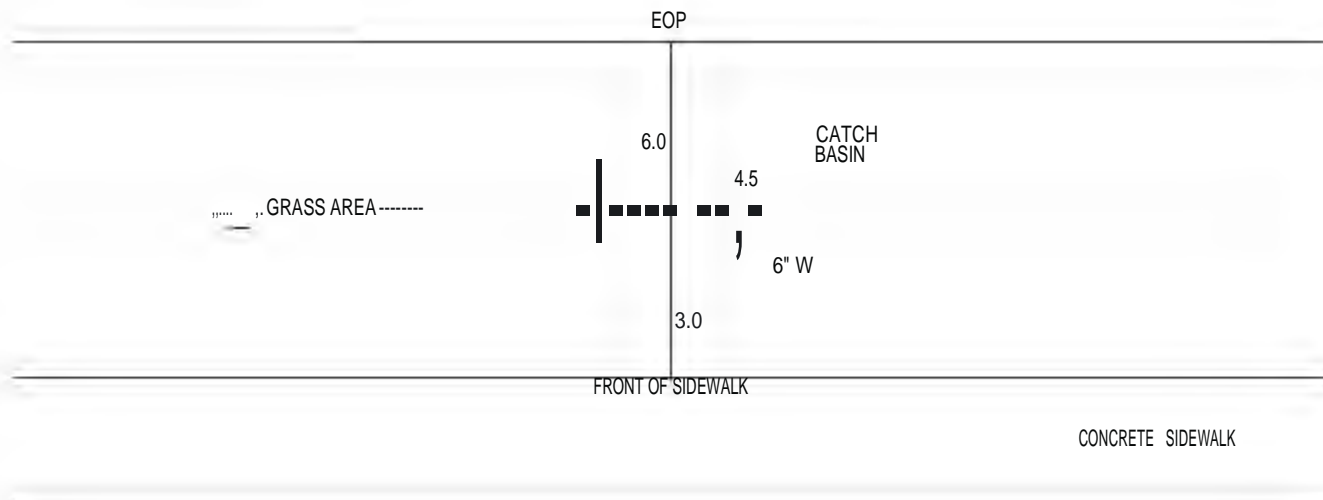
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 20

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 21 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:						
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION N/A	DATE DUG: 11-10-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND ROCKY							
ELEV SURVEY PIN 12.20	UTILITY CONDITION: GOOD							
COVER (TOP) 3.09	HUB & TACK AT: CROWN							
ELEV. (TOP) 6.51	OF UTILITY. MARKING TAPE BLUE							
COVER (BOTTOM) N/A	SURVEY PIN LOCATED BY: COMPASS POINT							
ELEV. (BOTTOM) N/A	SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).							
	<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692916.58</td> <td>931945.94</td> <td>12.20</td> </tr> </tbody> </table>		NORTH	EAST	ELEV.	692916.58	931945.94	12.20
NORTH	EAST	ELEV.						
692916.58	931945.94	12.20						
	HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.							
	NOTES:							

NOT TO SCALE

NDRTH EST 6TH COURT

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27TH AVENUE



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 22

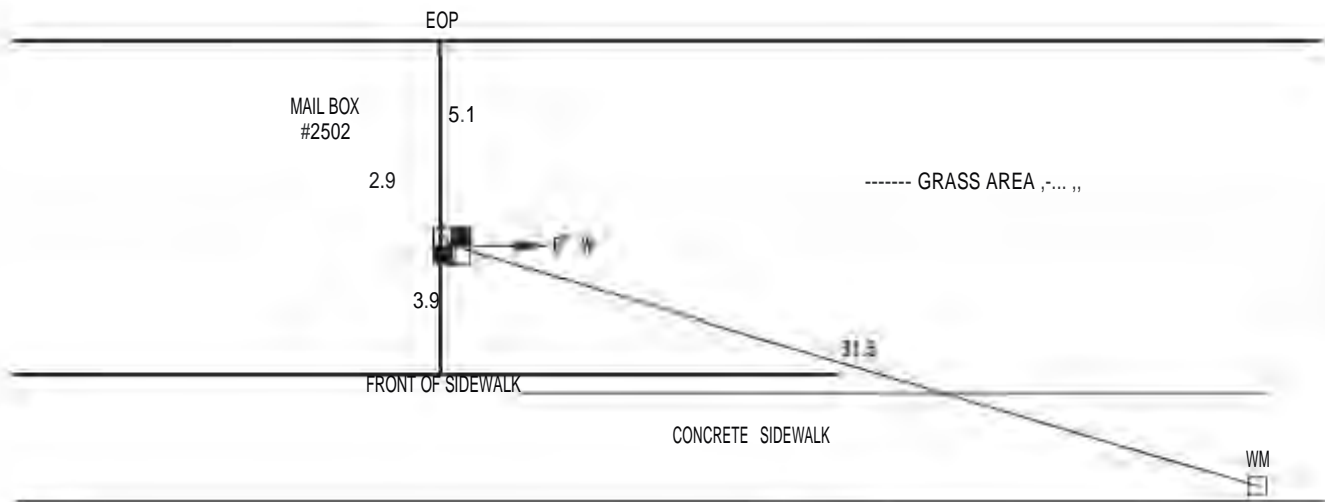
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET#: 22 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:						
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: N/A	DATE DUG: 11-10-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: HARD DRY SAND ROCKY							
ELEV. SURVEY PIN: 11.02	UTILITY CONDITION: GOOD							
INSTALLED: HUB & TACKAT: CROWN OF UTILITY. MARKING TAPE: BLUE SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692926.23</td> <td>932353.00</td> <td>11.02</td> </tr> </tbody> </table> HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.			NORTH	EAST	ELEV.	692926.23	932353.00	11.02
NORTH	EAST	ELEV.						
692926.23	932353.00	11.02						
NOTES								

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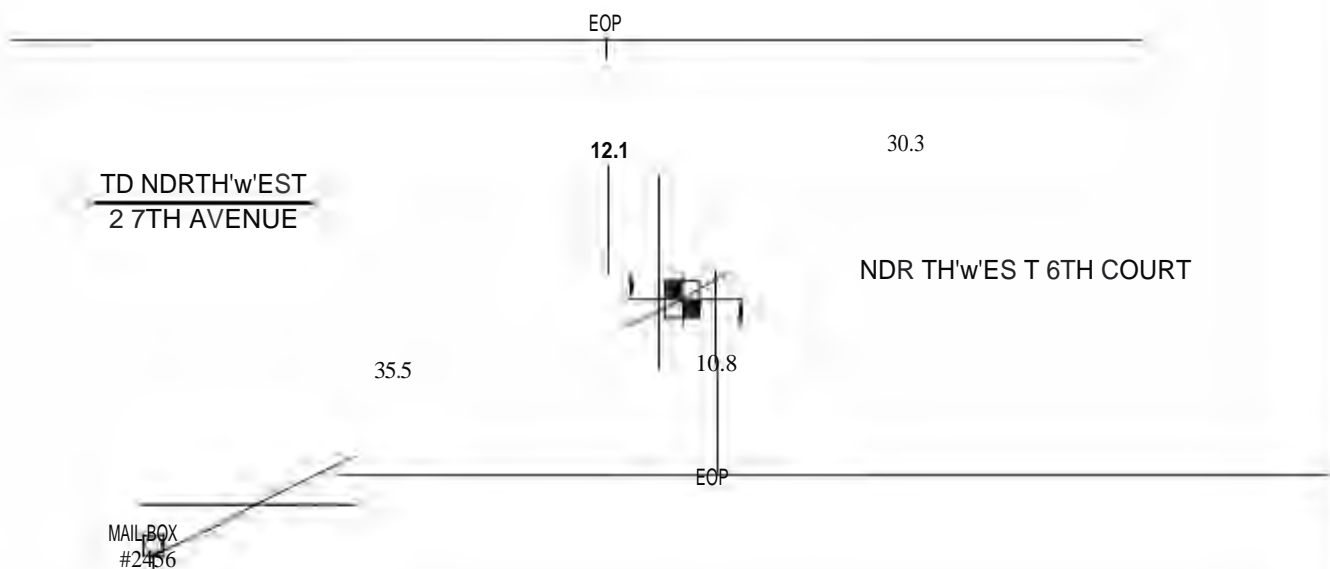


PN: PF04215 VACUUM TEST HOLE REPORT NO.: 23

PROJECT NAME: ESQUIRE LAKE DRAINAGE		CLIENT JOB# N/A		WORK ORDER# N/A	
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.		PROJECT LOCATION: POMPAÑO BEACH, BROWARD COUNTY, FLORIDA			
UTILITY REQUESTED: SANITARY		SHEET #: 22 OF N/A		PROPOSED DRAINAGE	
UTILITY FOUND: SANITARY		FORM BY: BP		ASSISTED BY: MLER JD # OF HOLES:	
MATERIAL AS FOUND: PVC (GREEN)		PAVING CONDITION: GOOD		DATE DUG: 11-10-15	
SIZE AS FOUND: 6"		SOIL CONDITIONS: SOFT DRY SAND ROCKY		UTILITY CONDITION: GOOD	
ELEV. SURVEY PIN: 10.89		INSTALLED PK AT: CROWN OF UTILITY. MARKING TAPE: GREEN			
		SURVEY PIN LOCATED BY: COMPASS POINT			
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).					
NORTH		EAST		ELEV.	
692943.60		932441.79		10.89	
HORIZONTAL DATUM ::: NAD 1983 / 1990, VERTICAL DATUM ::: NAVD 1988.					
NOTES					

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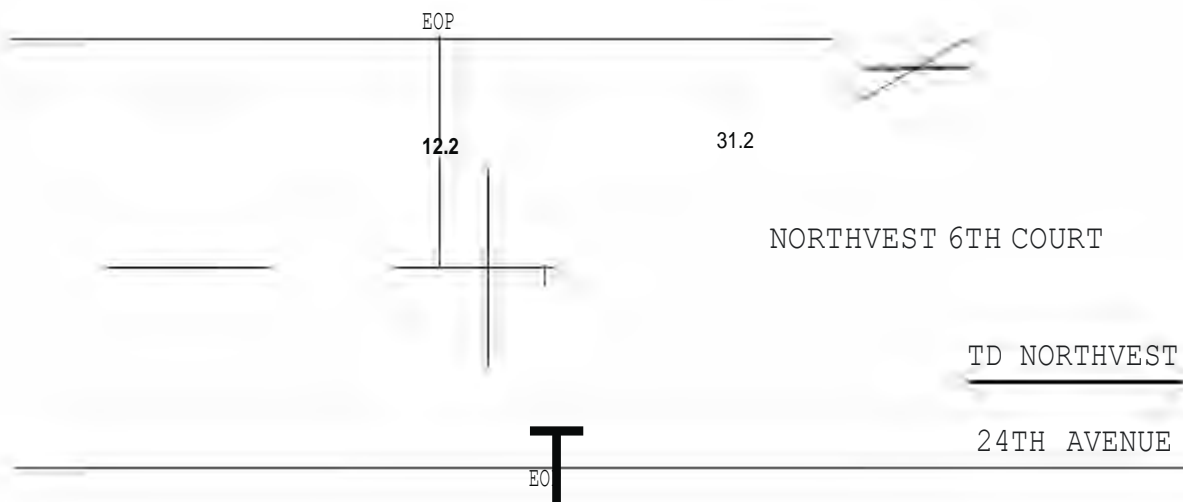
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 24

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: SANITARY	SHEET#: 23 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: SANITARY	FORM BY: BP	ASSISTED BY: ER JD # OF HOLES:						
MATERIAL AS FOUND: CLAY	PAVING CONDITION: GOOD	DATE DUG: 11-12-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 10.60	INSTALLED: PK	AT: CROWN OF UTILITY. MARKING TAPE: GREEN						
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692948.66</td> <td>932683.06</td> <td>10.60</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	692948.66	932683.06	10.60
NORTH	EAST	ELEV.						
692948.66	932683.06	10.60						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
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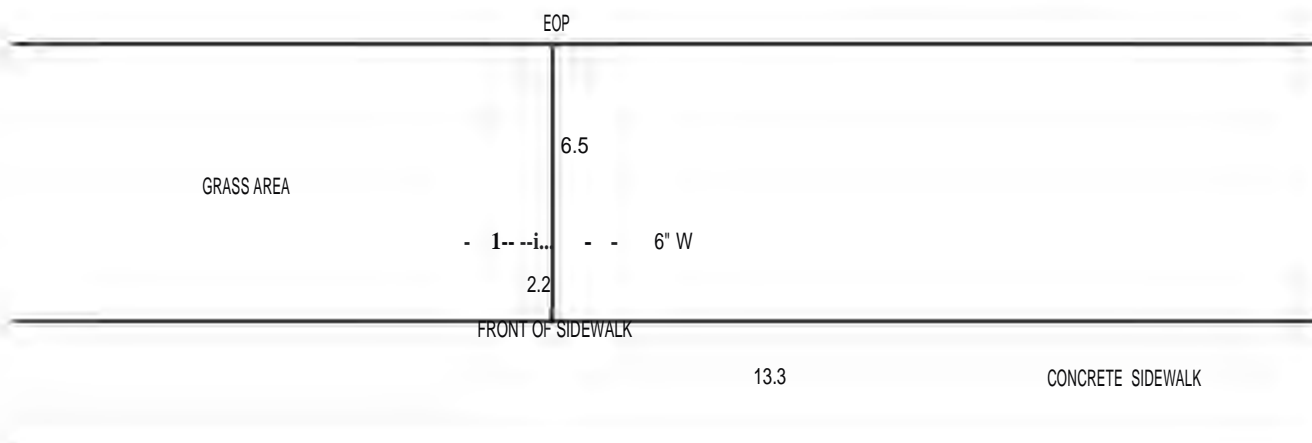
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 25

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED WATER	SHEET #: 23 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: ER JD						
MATERIAL AS FOUND PVC (WHITE)	PAVING CONDITION N/A	DATE DUG 11-12-15						
SIZE AS FOUND 6"	SOIL CONDITIONS SOFT DRY SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV. SURVEY PIN 10.32	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET)								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692934.42</td> <td>932792.56</td> <td>10.32</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	692934.42	932792.56	10.32
NORTH	EAST	ELEV.						
692934.42	932792.56	10.32						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
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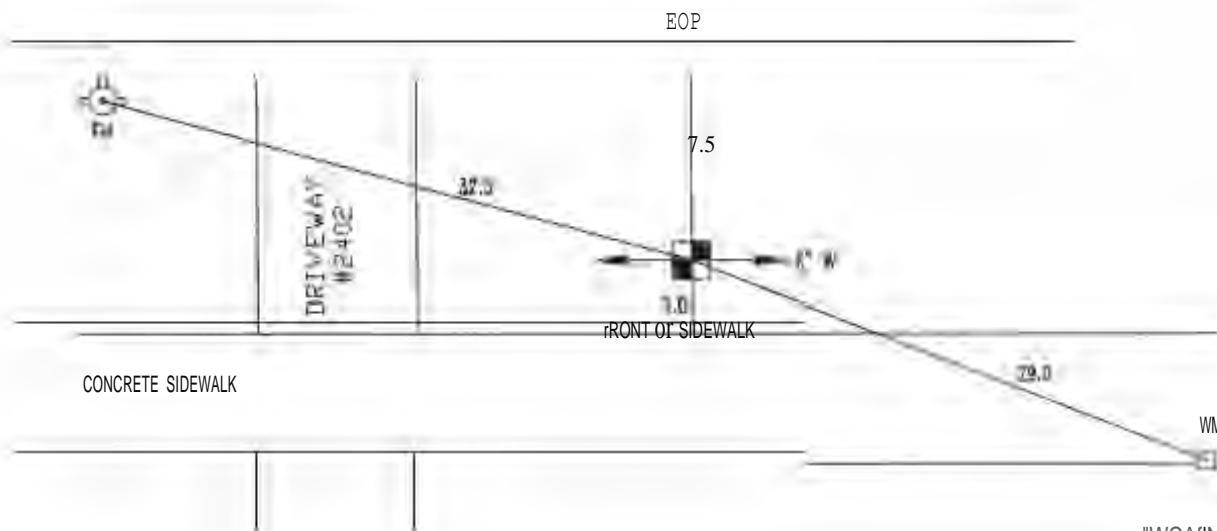
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 26

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: WATER	SHEET #: 24 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION N/A	DATE DUG 11-11-15
SIZE AS FOUND 6"	SOIL CONDITION: S	SOFT DRY SAND
ELEV SURVEY PIN 10.02	UTILITY CONDITION: GOOD	
	SURVEY PIN LOCATED BY: COMPASS POINT	
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET) NORTH EAST ELEV. 692936.85 932952.70 10.02 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.		
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 27

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 24 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:						
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: GOOD	DATE DUG: 11-11-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND							
ELEV SURVEY PIN: 11.13	UTILITY CONDITION: GOOD							
<p>--- INSTALLED PK AT: CROWN OF UTILITY. MARKING TAPE: BLUE</p>								
SURVEY PIN LOCATED BY: COMPASS POINT								
<p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692930.59</td> <td>933005.92</td> <td>11.13</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p>			NORTH	EAST	ELEV.	692930.59	933005.92	11.13
NORTH	EAST	ELEV.						
692930.59	933005.92	11.13						
<p>NOTES</p>								

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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 28

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPAN0 BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED GAS	SHEET #: 24 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: JD # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-14-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND	
UTILITY CONDITION: GOOD		

ELEV SURVEY PIN
11.32

EXIST. GRADE

COVER (TOP)
2.29

COVER (BOTTOM)
N/A

ELEV. (TOP)
3.03

ELEV. (BOTTOM)
N/A

WIDTH

FACING NORTH

--- - INSTALLED: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW

SURVEY PIN LOCATED BY: COMPASS POINT

SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

NORTH	EAST	ELEV.
692961.56	933034.90	11.32

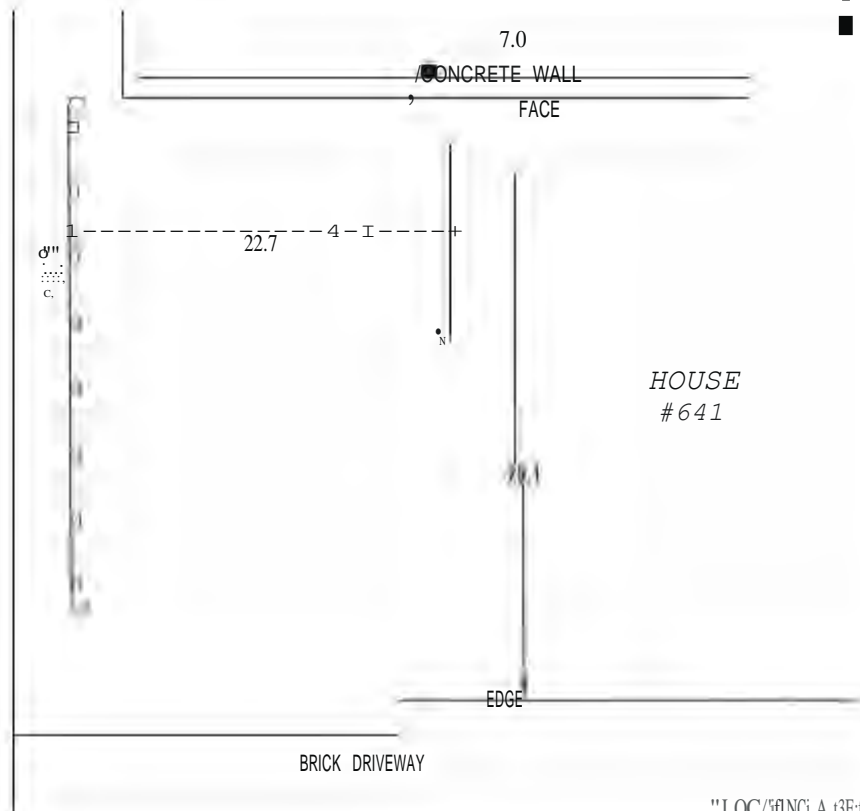
HORIZONTAL DATUM :: NAD 1983 / 1990, VERTICAL DATUM :: NAVO 1988.

NOTES: TEST HOLE MOVED 8± SOUTH OF REQUESTED AREA DUE TO CONCRETE WALL HUB SET OVER CROWN OF 2" GAS.

NOT TO SCALE

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"LOCATING A BEHIND WAY"
1-800-UNDERR

PN: PF04215

VACUUM TEST HOLE REPORT NO.: 29

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPAÑO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: WATER	SHEET #: 34 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: WATER	FORM BY: KF	ASSISTED BY: ML # OF HOLES:
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: FAIR	DATE DUG: 11-14-15
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT WET SANDY ROCKY	
ELEV SURVEY PIN 9.45	UTILITY CONDITION: FAIR	
	AT: CROWN OF UTILITY. MARKING TAPE BLUE SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). NORTH EAST ELEV. 693010.27 933170.95 9.45 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	
NOTES:		

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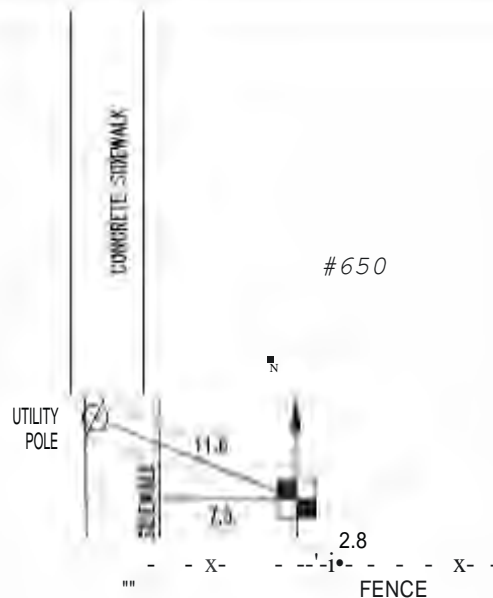
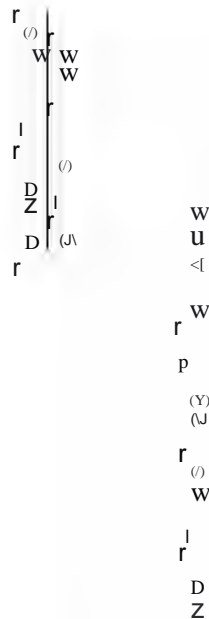
UTILITY
POLE

"LOCALITY A BffffR WAY"
1-800-UNI?IR If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 30

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET#: 34 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: ML # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-14-15						
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
ELEV SURVEY PIN 10.57		UTILITY CONDITION: GOOD						
		SURVEY PIN LOCATED BY: COMPASS POINT						
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> <tr> <td>692984.17</td> <td>933188.72</td> <td>10.57</td> </tr> </table>			NORTH	EAST	ELEV.	692984.17	933188.72	10.57
NORTH	EAST	ELEV.						
692984.17	933188.72	10.57						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								

NOT TO SCALE



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 31

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET#: 28 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: ERJD # OF HOLES:						
MATERIAL AS FOUND: PVC (WHITE)	PAVING CONDITION: GOOD	DATE DUG: 11-12-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND ROCKY							
ELEV SURVEY PIN 10.92	UTILTY CONDITION: GOOD							
INSTALLED: PK	AT: CROWN	OF UTILITY. MARKING TAPE: BLUE						
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (rm).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>692715.82</td> <td>933010.90</td> <td>10.92</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	692715.82	933010.90	10.92
NORTH	EAST	ELEV.						
692715.82	933010.90	10.92						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVO 1988.								
NOTES								

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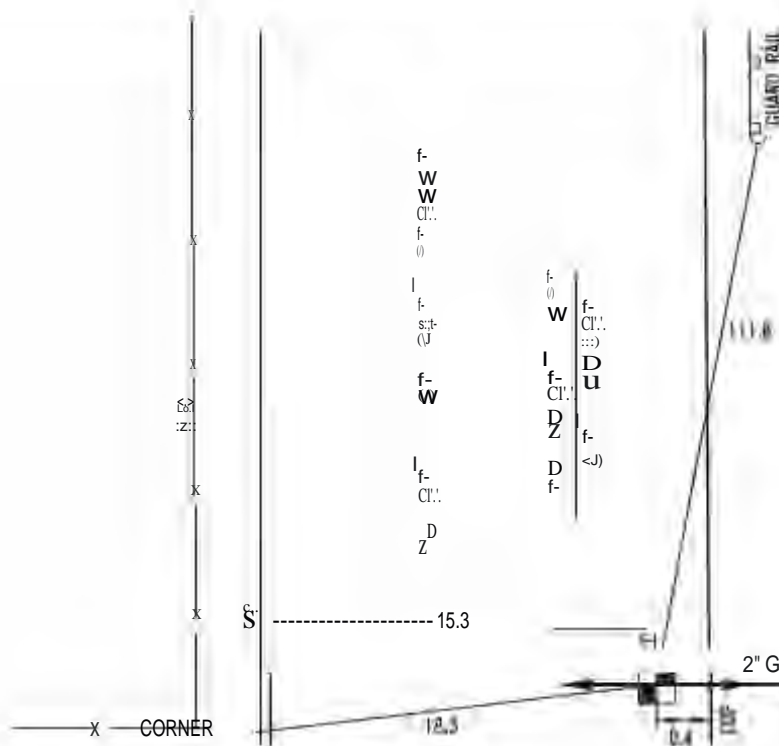
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 33

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB/ N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET / : 30 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: ER JD
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 11-12-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: HARD DRY SAND ROCKY	UTILITY CONDITION: GOOD
ELEV SURVEY PIN 10.95	INSTALLED PK AT: CROWN	MARKING TAPE: YELLOW
EXIST. GRADE	SURVEY PIN LOCATED BY: COMPASS POINT	
COVER (TOP) 1.70	SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).	
4.25	NORTH	EAST
ELEV. (TOP)	693087.28	933007.58
COVER (BOTTOM) N/A	ELEV. 10.95	
N/A	HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	
ELEV. (BOTTOM)	NOTES:	

NOT TO SCALE



"LOCATING A (??)11R WAY"
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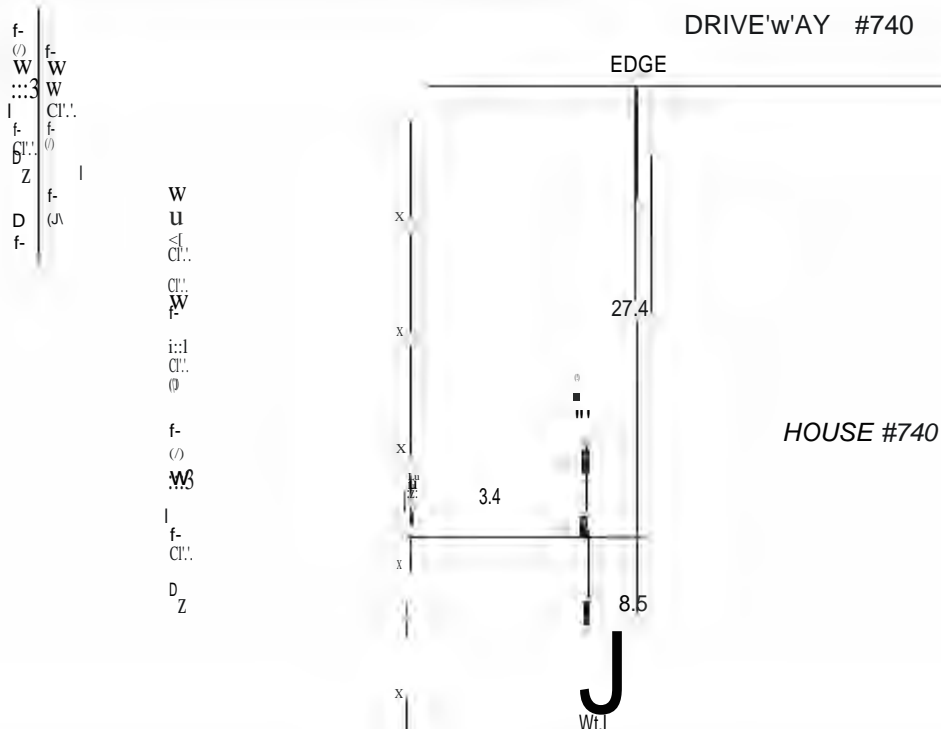
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 35

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 33 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: JD # OF HOLES:						
MATERIAL AS FOUND CAST IRON	PAVING CONDITION: N/A	DATE DUG: 11-14-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND							
	UTILITY CONDITION: GOOD							
ELEV SURVEY PIN	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE							
10.90	SURVEY PIN LOCATED BY: COMPASS POINT							
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="0"> <tr> <td>NORTH</td> <td>EAST</td> <td>ELEV.</td> </tr> <tr> <td>693357.16</td> <td>933169.21</td> <td>10.90</td> </tr> </table>			NORTH	EAST	ELEV.	693357.16	933169.21	10.90
NORTH	EAST	ELEV.						
693357.16	933169.21	10.90						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								

[illegible]

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 33 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: JD # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-14-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND	
ELEV SURVEY PIN 11.12	UTILITY CONDITION: GOOD	
	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE YELLOW	
SURVEY PIN LOCATED BY: COMPASS POINT		
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).		
NORTH	EAST	ELEV.
693355.09	933177.09	11.12
HORIZONTAL DATUM :: NAD 83 / 1990, VERTICAL DATUM :: NAVD 88.		
NOTES		

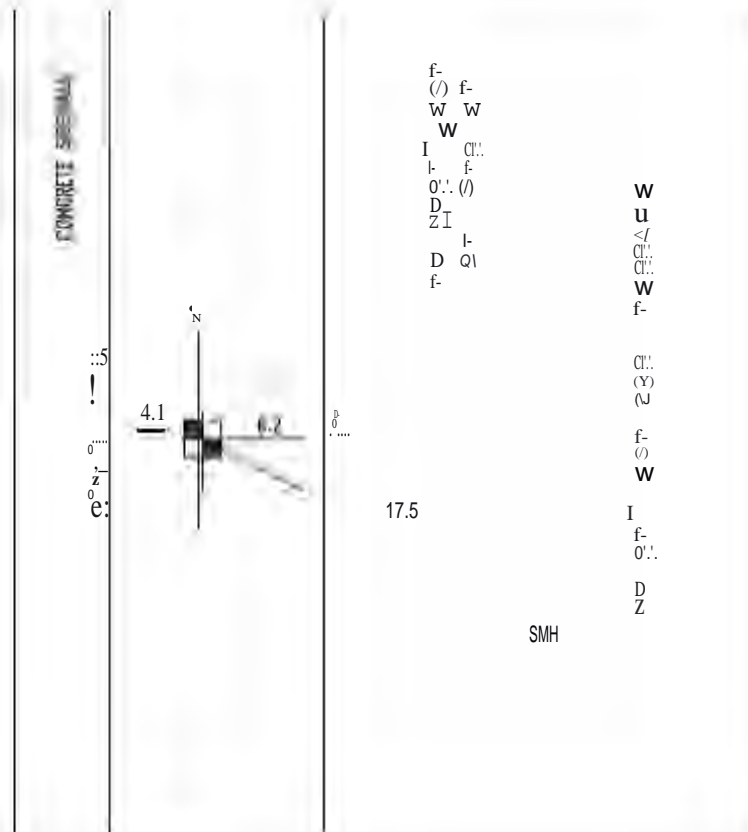
NOT TO SCALE



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 37

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET#: 33 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: ML # OF HOLES:						
MATERIAL AS FOUND WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-14-15						
SIZE AS FOUND 2	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
ELEV SURVEY PIN 10.70	UTILITY CONDITION: GOOD							
	INSTALLED: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>693492.44</td> <td>933129.03</td> <td>10.70</td> </tr> </tbody> </table> HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.		NORTH	EAST	ELEV.	693492.44	933129.03	10.70
NORTH	EAST	ELEV.						
693492.44	933129.03	10.70						
NOTES:								

NOT TO SCALE

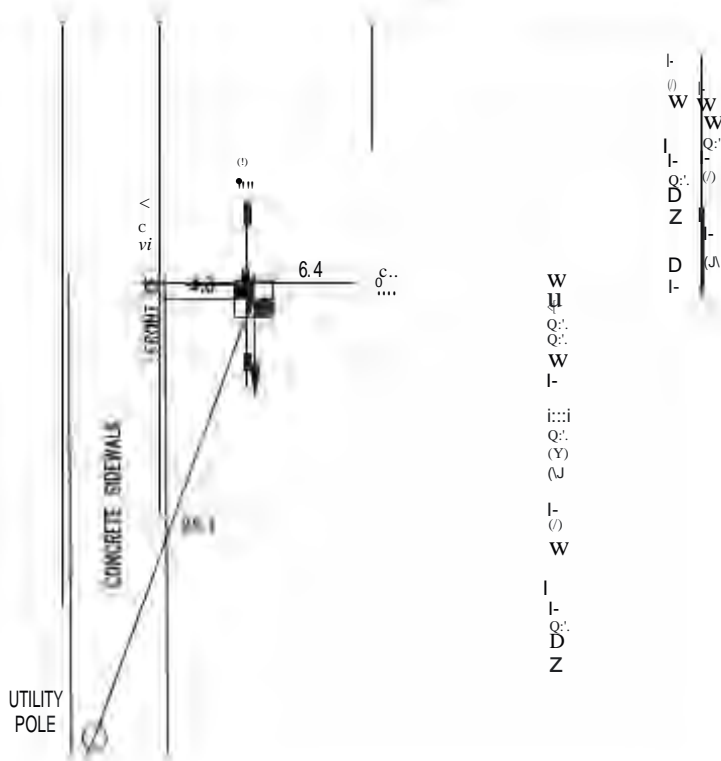


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"LOCATING A BE: f11: R WAY"
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PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 33 OF N/A	PROPOSED DRANAGE
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: ML # OF HOLES:
MATERIAL AS FOUND WRAPPED STEEL	PAVING CONDITION N/A	DATE DUG 11-14-15
SIZE AS FOUND 2"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY	
ELEV SURVEY PIN 10.57	UTILITY CONDITION GOOD	
	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW	
	SURVEY PIN LOCATED BY: COMPASS POINT	
	SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).	
	NORTH	EAST
	693600.82	933126.96
	ELEV. 10.57	
	HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	
	NOTES:	

NOT TO SCALE

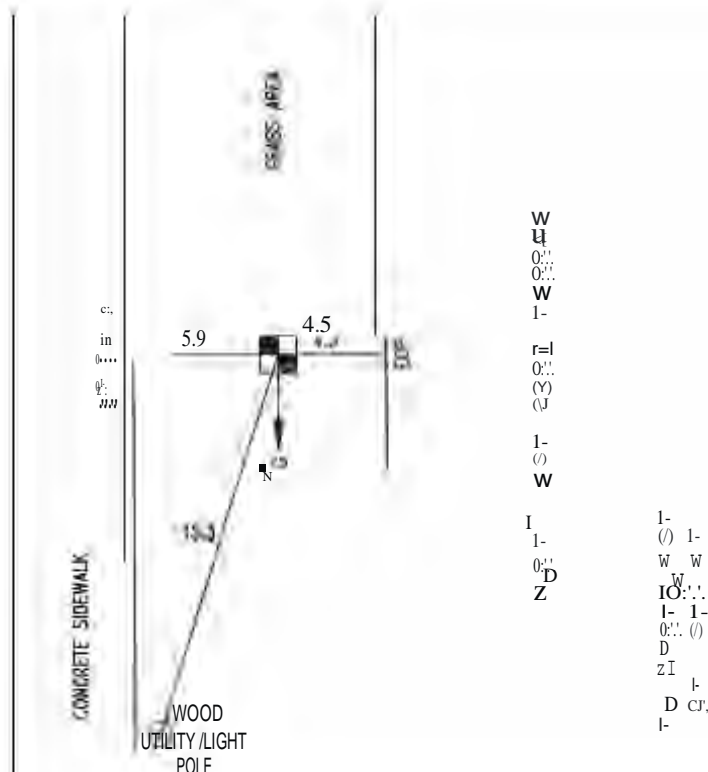


" WCAfINCi A Bff11R WAY"
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 39

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 34 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: MLERJD # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-11-15						
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND							
	UTILITY CONDITION: GOOD							
ELEV SURVEY PIN 10.29	HUB & TACK AT: CROWN OF UTILITY.	MARKING TAPE: YELLOW						
	SURVEY PIN LOCATED BY: COMPASS POINT							
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="0"> <tr> <td>NORTH</td> <td>EAST</td> <td>ELEV.</td> </tr> <tr> <td>693843.19</td> <td>933124.06</td> <td>10.29</td> </tr> </table>			NORTH	EAST	ELEV.	693843.19	933124.06	10.29
NORTH	EAST	ELEV.						
693843.19	933124.06	10.29						
HORIZONTAL DATUM = NAD 1983 / 1990 VERTICAL DATUM = NAVD 1988								
NOTES:								

NOT TO SCALE



"WCA-rINCi A rxmR WAY"
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 40

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CONCRETE SIDEWALK

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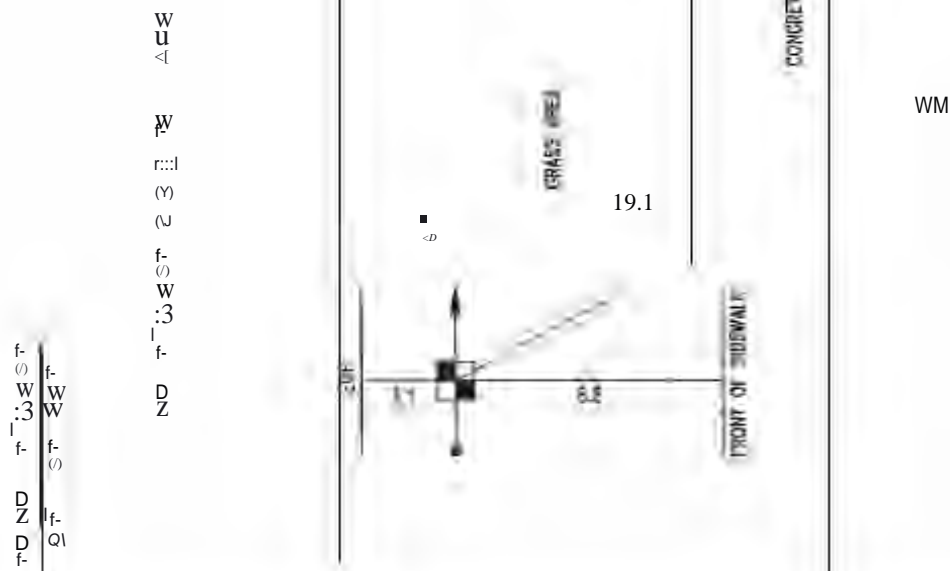
THIS FORM DESIGN AND COITTENIS ARE PROTECTED UNDER U.S. COPYRIGHT LAW, 1994

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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 41

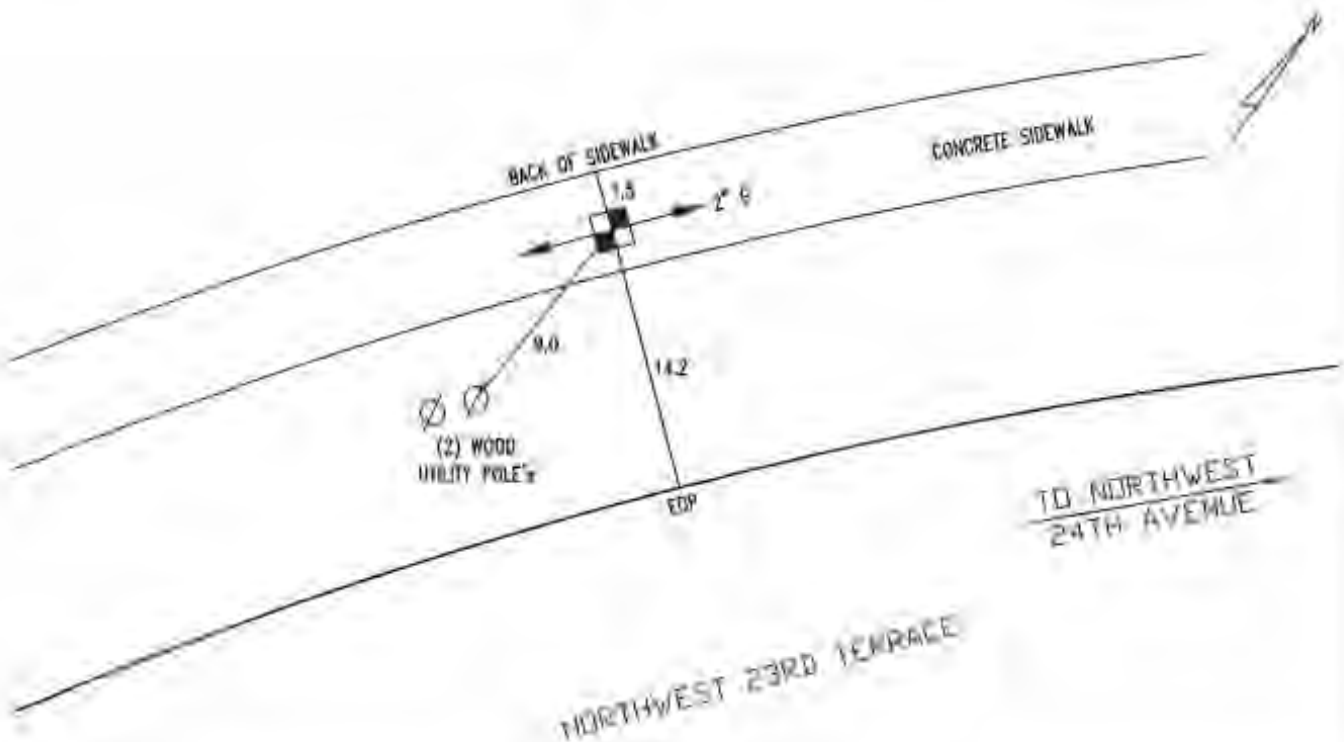
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPAÑO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 34 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: MLER JD # OF HOLES:						
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: N/A	DATE DUG: 11-11-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT DRY SAND							
ELEV SURVEY PIN: 10.42	UTILITY CONDITION: GOOD							
<div> <div> <div>COVER (TOP)</div> <div>2.68</div> <div>7.73</div> <div>ELEV. (TOP)</div> </div> <div> <div>COVER (BOTTOM)</div> <div>N/A</div> <div>N/A</div> <div>ELEV. (BOTTOM)</div> </div> </div> <div> <div>EXIST. GRADE</div> <div>N/A</div> <div>FACING</div> <div>WIDTH</div> </div>								
<div> <div> <div>INSTALLED: HUB&TACK AT: CROWN OF UTILITY.</div> <div>MARKING TAPE: BLUE</div> </div> <div> <div>SURVEY PIN LOCATED BY: COMPASS POINT</div> <div> <div>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</div> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>693871.55</td> <td>933152.56</td> <td>10.42</td> </tr> </tbody> </table> <div>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</div> </div> </div> </div>			NORTH	EAST	ELEV.	693871.55	933152.56	10.42
NORTH	EAST	ELEV.						
693871.55	933152.56	10.42						
NOTES:								

NOT TO SCALE



PROJECT NAME:	ESQUIRE LAKE DRAINAGE	CLIENT JOB#	N/A	WORK ORDER#	N/A
LOCATE REQUESTED BY:	MATHEWS CONSULTING INC.	PROJECT LOCATION:	POMPANO BEACH, BROWARD COUNTY, FLORIDA		
UTILITY REQUESTED	GAS	SHEET #:	35 OF N/A	PROPOSED	DRAINAGE
UTILITY FOUND:	GAS	FORM BY:	KF	ASSISTED BY:	HF CC DL # OF HOLES:
MATERIAL AS FOUND	WRAPPED STEEL	PAVING CONDITION	FAIR	DATE DUG:	11-11-15
SIZE AS FOUND	2"	SOIL CONDITIONS:	SOFT WET SAND ROCKY		
		UTILITY CONDITION	GOOD		
ELEV SURVEY PIN		CHIS "X" AT: CROWN OF UTILITY. MARKING TAPE: YELLOW			
10.15					
COVER (TOP)					
1.60					
COVER (BOTTOM)					
8.58					
ELEV. (TOP)					
ELEV. (BOTTOM)					
N/A					
N/A					
FACING		EAST			
WIDTH		2"			
SURVEY PIN LOCATED BY:		COMPASS POINT			
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).					
NORTH		EAST		ELEV.	
694200.60		933112.52		10.15	
HORIZONTAL DATUM = NAO 1983 / 1990, VERTICAL DATUM = NAVO 1988 .					
NOTES					

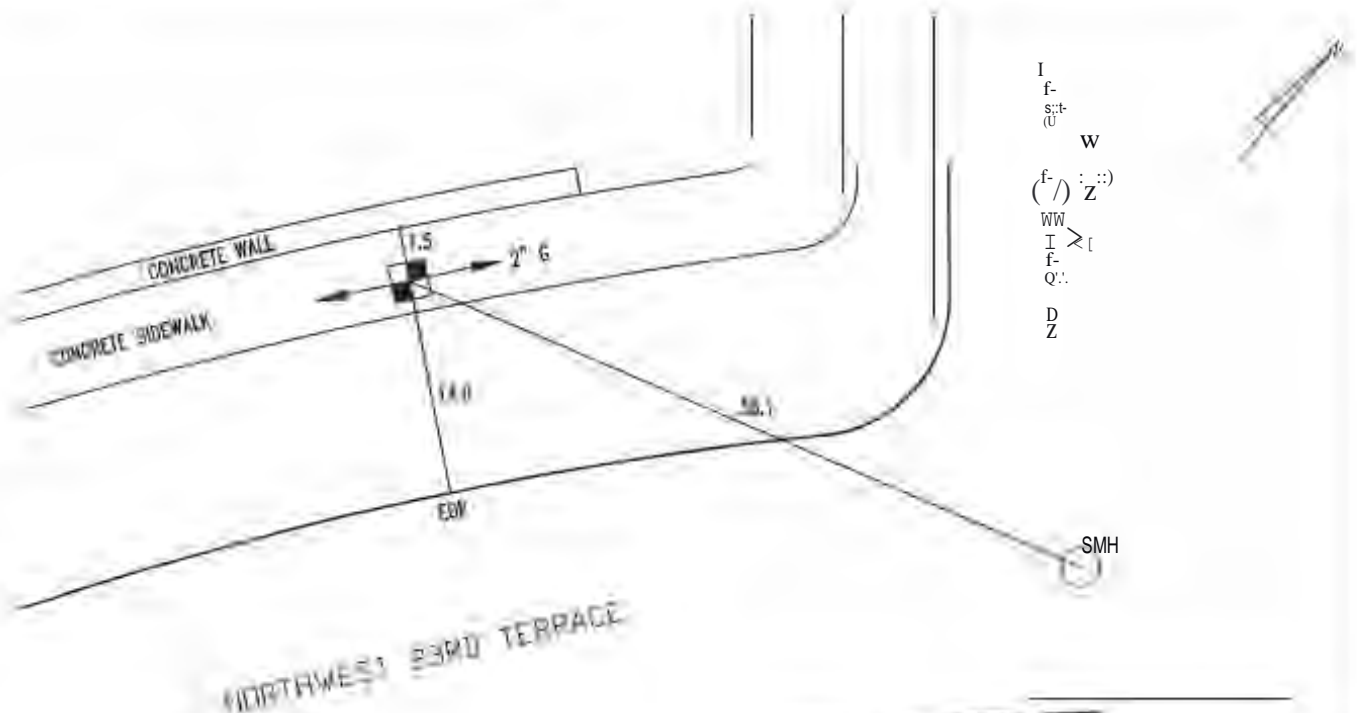
NOT TO SCALE

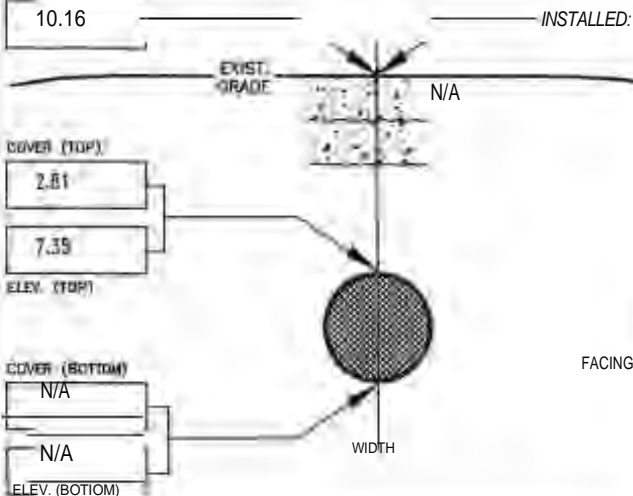


PN: PF04215 VACUUM TEST HOLE REPORT NO.: 43

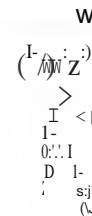
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB/ N/A	WORK ORDER/ N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET 1/ 35 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: DLHF // OF HOLES:						
MATERIAL AS FOUND WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 11-11-15						
SIZE AS FOUND 2"	SOIL CONDITIONS: SOFT WET SAND ROCKY							
UTILITY CONDITION GOOD								
<p>ELEV SURVEY PIN 10.03</p> <p>--- -- NSTALLD CHIS "X" AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p> <p>EXIST GRADE 0.2 CONCRETE</p> <p>COVER (TOP) 1.90</p> <p>ELEV. (TOP) 8.13</p> <p>COVER (BOTTOM) N/A</p> <p>ELEV. (BOTTOM) N/A</p> <p>WIDTH</p> <p>FACING</p>								
<p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694287.08</td> <td>933148.15</td> <td>10.03</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES:</p>			NORTH	EAST	ELEV.	694287.08	933148.15	10.03
NORTH	EAST	ELEV.						
694287.08	933148.15	10.03						

NOT TO SCALE



PROJECT NAME:	ESQUIRE LAKE DRAINAGE	CLIENT JOB#	N/A	WORK ORDER#	N/A
LOCATE REQUESTED BY:	MATHEWS CONSULTING INC.	PROJECT LOCATION:	POMPANO BEACH, BROWARD COUNTY, FLORIDA		
UTILITY REQUESTED:	WATER	SHEET#:	35 OF N/A	PROPOSED	DRAINAGE
UTILITY FOUND	WATER	FORM BY:	Kr	ASSISTED BY:	HF DL CC # OF HOLES:
MATERIAL AS FOUND	CAST IRON	PAVING CONDITION:	N/A	DATE DUG:	11-11-15
SIZE AS FOUND	6"	SOIL CONDITIONS:	SOFT WET SAND ROCKY		
ELEV SURVEY PIN	10.16	UTILTY CONDITION:	FAIR		
		INSTALLED:	HUB & TACKAT: CROWN	OF UTILITY.	MARKING TAPE: BLUE
		SURVEY PIN LOCATED BY:	COMPASS POINT		
		SURVEY INFO.:	ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (rm).		
		NORTH	EAST	ELEV.	
		694263.41	933182.36	10.16	
		HORIZONTAL DATUM = NAO 1983 / 1990, VERTICAL DATUM = NAVO 1988.			
		NOTES:			

NOT TO SCALE



SMH

51.0

NORTHWEST 23RD TERRACE

CONCRETE SIDEWALK

FRONT OF SIDEWALK

"WCAf INGiA Bffrl.:R WAY"
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 45

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: WATER	SHEET#: 35 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: WATER	FORM BY: KF	ASSISTED BY: HF DL CC
MATERIAL AS FOUND CAST IRON	PAVING CONDITION: N/A	DATE DUG: 11-11-15
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: FAIR
ELEV SURVEY PIN 9.50	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE BLUE	
EXIST. GRADE	SURVEY PIN LOCATED BY: COMPASS POINT	
COVER (TOP) 1.94	SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).	
7.56	NORTH EAST ELEV. 694322.84 933236.63 9.50	
ELEV. (TOP)	HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	
COVER (BOTTOM) N/A	NOTES:	
N/A		
ELEV. (BOTTOM)		

NOT TO SCALE

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Q-
D-
Z-
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SMH

NORTH/ST 10TH COURT

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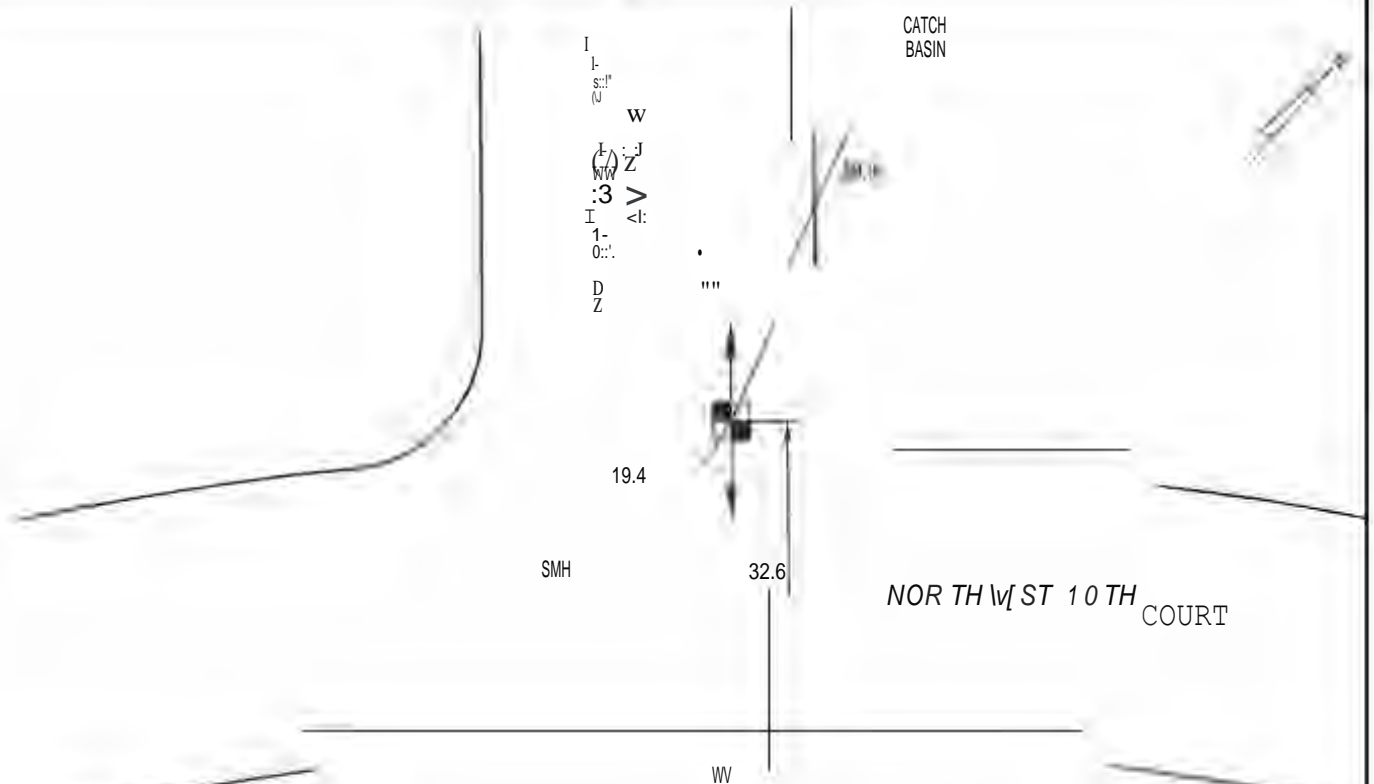
CATCH BASIN

"WCA rIN: AB: f1fR WAY"
1-800 -UN?fR If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 46

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET#: 35 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: KF	ASSISTED BY: DL HF CC AG # OF HOLES:						
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: FAIR	DATE DUG: 11-10-15						
SIZE AS FOUND 6"	SOIL CONDITIONS: SOFT WET SAND ROCKY							
ELEV SURVEY PIN 9.85	UTILITY CONDITION: FAIR							
EXIST. _____	AT: CROWN OF UTILITY. MARKING TAPE BLUE							
GRADE > < 0.2 ASPHALT	SURVEY PIN LOCATED BY: COMPASS POINT							
COVER (TOP) 2.60	<p>1 _____ 1</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET)</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694330.82</td> <td>933198.58</td> <td>9.85</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p>		NORTH	EAST	ELEV.	694330.82	933198.58	9.85
NORTH			EAST	ELEV.				
694330.82	933198.58	9.85						
ELEV. (TOP) 7.25								
COVER (BOTTOM) N/A	NOTES							
ELEV. (BOTTOM) N/A								

NOT TO SCALE



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 47

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 35 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS (SEE NOTE)	FORM BY: KF	ASSISTED BY: HF CCDL AG # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-10-15						
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 9.47	INSTALLED PK AT: CROWN OF UTILITY. MARKING TAPE YELLOW							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694350.26</td> <td>933206.55</td> <td>9.47</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694350.26	933206.55	9.47
NORTH	EAST	ELEV.						
694350.26	933206.55	9.47						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES: TEST HOLE ALSO REVEALED A 20" CMP STORM, RUNNING EAST-WEST, 1.30' EAST OF PK. COVER = 2.75. PK SET IN ASPHALT OVER CROWN OF 2" GAS.								

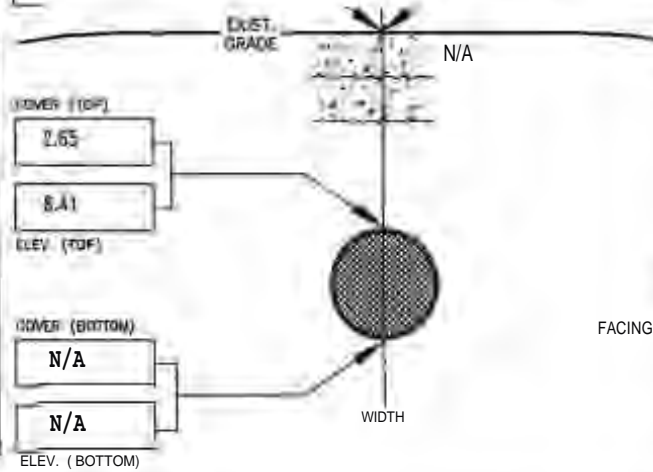
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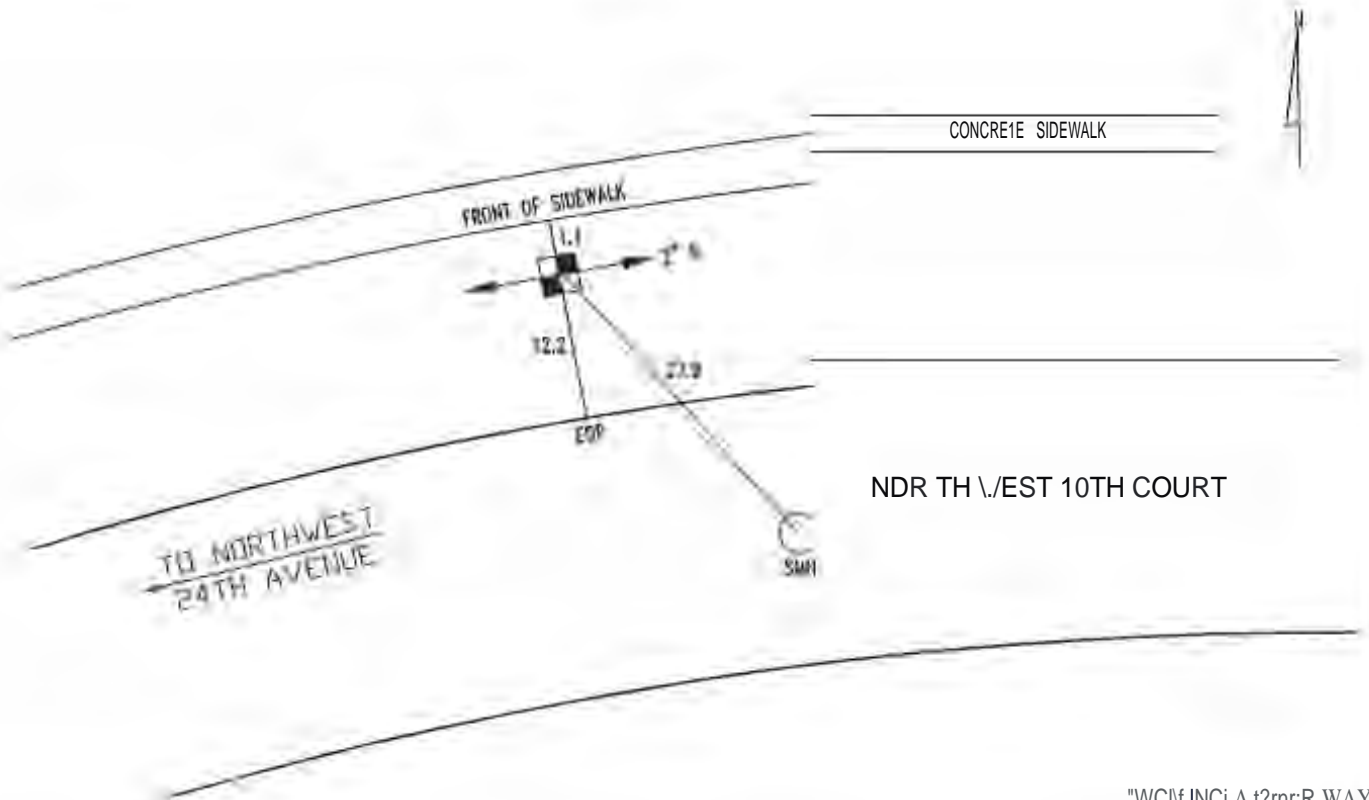
"LOCALITY A 17ffffR WAY"
1-800-UN?FR If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 48

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED GAS	SHEET / : 35 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND GAS	FORM BY: Kr	ASSISTED BY: Hr DL						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-12-15						
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT WET SAND ROCKY							
ELEV SURVEY PIN 11.06	UTILITY CONDITION: GOOD							
HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW								
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS rDRM ARE IN ENGLISH UNITS (m).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694401.74</td> <td>933326.27</td> <td>11.06</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694401.74	933326.27	11.06
NORTH	EAST	ELEV.						
694401.74	933326.27	11.06						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								



NOT TO SCALE

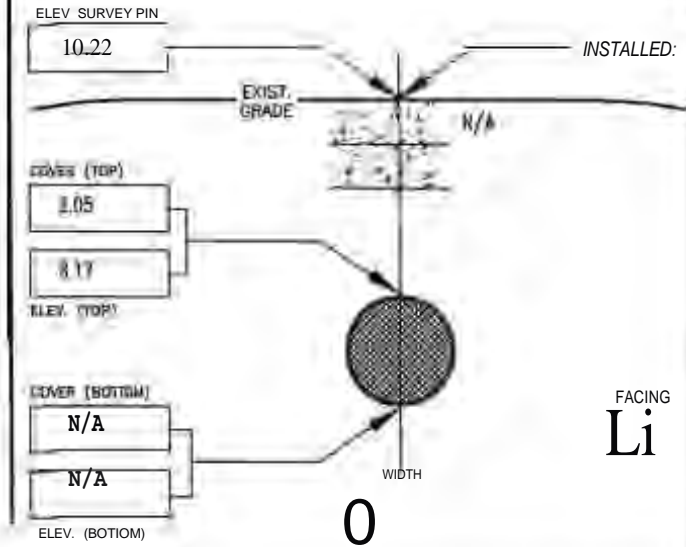


NORTHWEST 10TH COURT

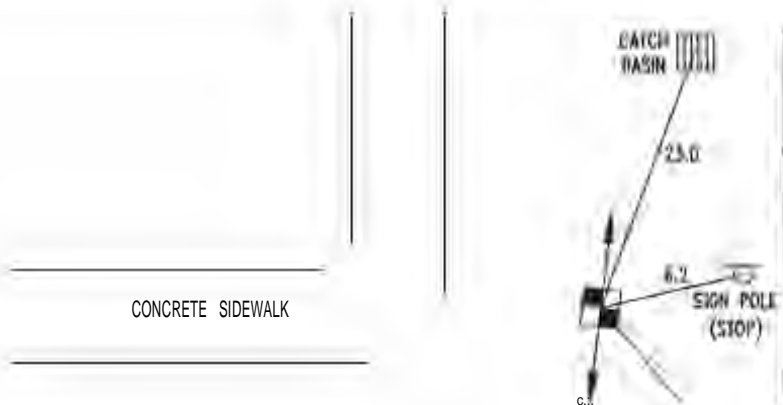
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 49

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 36 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: GAS	FORM BY: Kr	ASSISTED BY: Hr CC AG # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-9-15						
SIZE AS FOUND: 1"	SOIL CONDITIONS: sorr MOIST SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV. SURVEY PIN 10.22	INSTALLED: HUB & TACKAT: CROWN OF UTILITY. MARKING TAPE: YELLOW							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS rDRM ARE IN ENGLISH UNITS (mm).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694415.70</td> <td>933500.46</td> <td>10.22</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694415.70	933500.46	10.22
NORTH	EAST	ELEV.						
694415.70	933500.46	10.22						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES								



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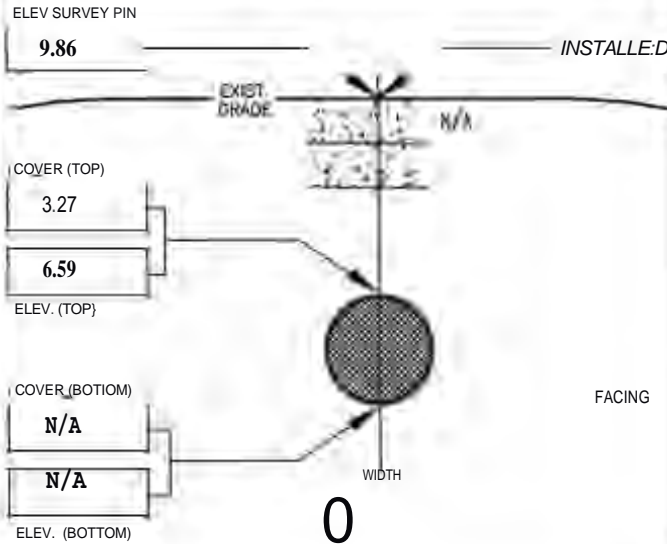
NDRTH./EST 10TH COURT

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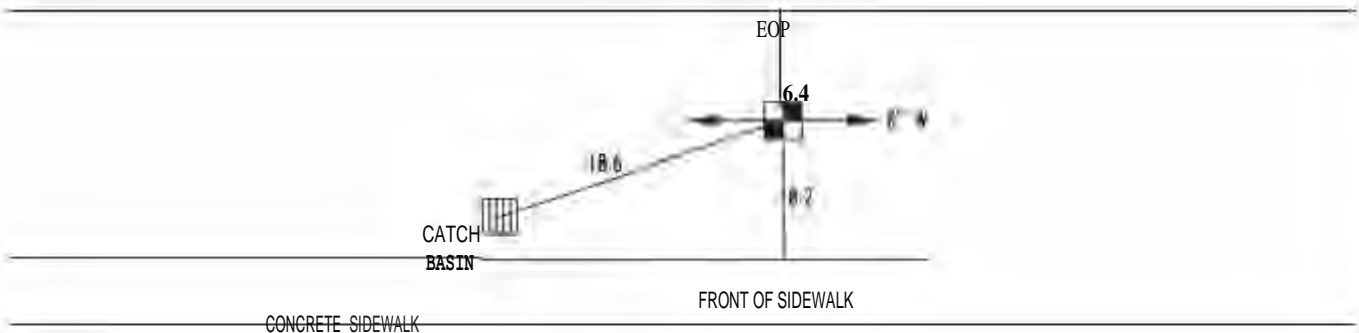
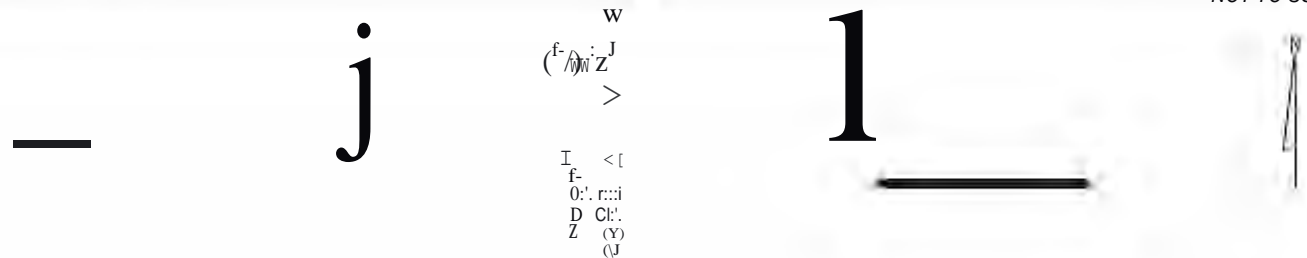
"LOCATING A BffffR WAY"
1-800-UNI?R If

PN: PF04215 VACUUM TEST HOLE REPORT NO.: 50

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 36 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: KF	ASSISTED BY: HF CC DLAG # OF HOLES:						
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: N/A	DATE DUG: 11-10-15						
SIZE AS FOUND: 6"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 9.86	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694366.84</td> <td>933532.37</td> <td>9.86</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694366.84	933532.37	9.86
NORTH	EAST	ELEV.						
694366.84	933532.37	9.86						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								



NOT TO SCALE



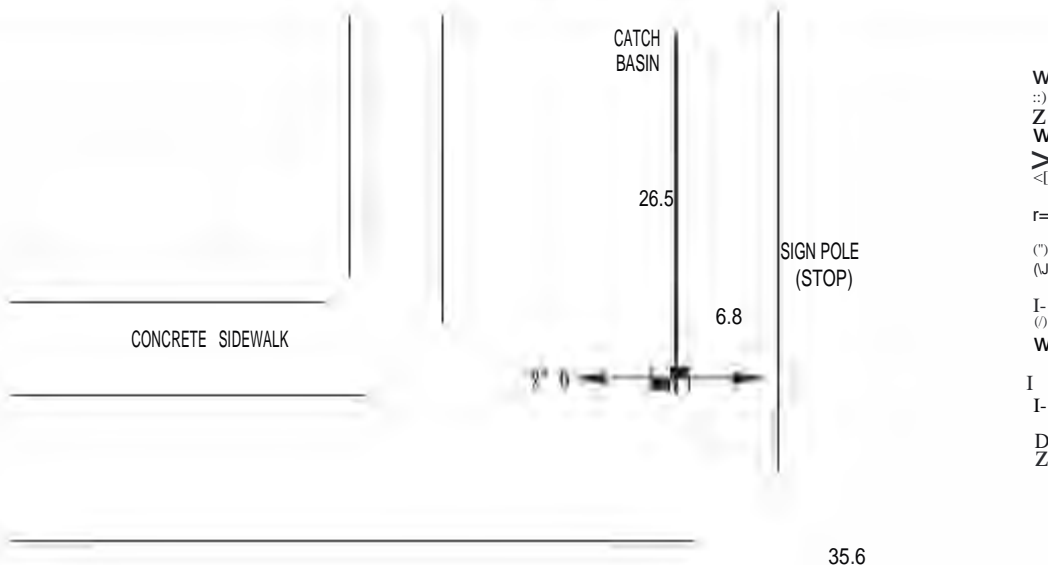
"LOCATING A DIFFERENT WAY"
1-800-UNIKRIT

PN: PF04215

VACUUM TEST HOLE REPORT NO.: 51

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 36 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HF CC AG # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-9-15
SIZE AS FOUND 2"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY	UTILITY CONDITION: GOOD
ELEV SURVEY PIN 10.50	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW	
SURVEY PIN LOCATED BY: COMPASS POINT		
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).		
NORTH	EAST	ELEV.
694411.74	933503.58	10.50
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.		
NOTES:		

NOT TO SCALE



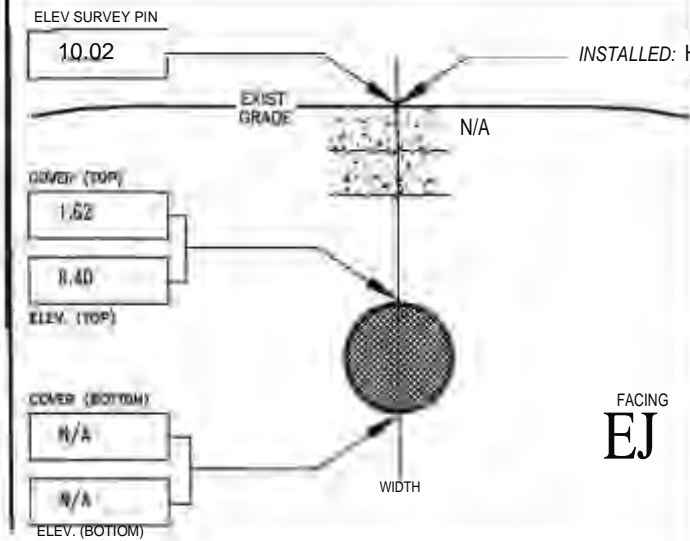
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NDRTH\EST 10TH COURT

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PN: Pf04215 VACUUM TEST HOLE REPORT NO.: 53

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 39 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HF DL # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION N/A	DATE DUG: 11-12-15						
SIZE AS FOUND 2"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 10.02	INSTALLED: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694573.88</td> <td>933045.72</td> <td>10.02</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694573.88	933045.72	10.02
NORTH	EAST	ELEV.						
694573.88	933045.72	10.02						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								



NOT TO SCALE



CONCRETE SIDEWALK

CATCH BASIN

NORTH 111-1 STREET

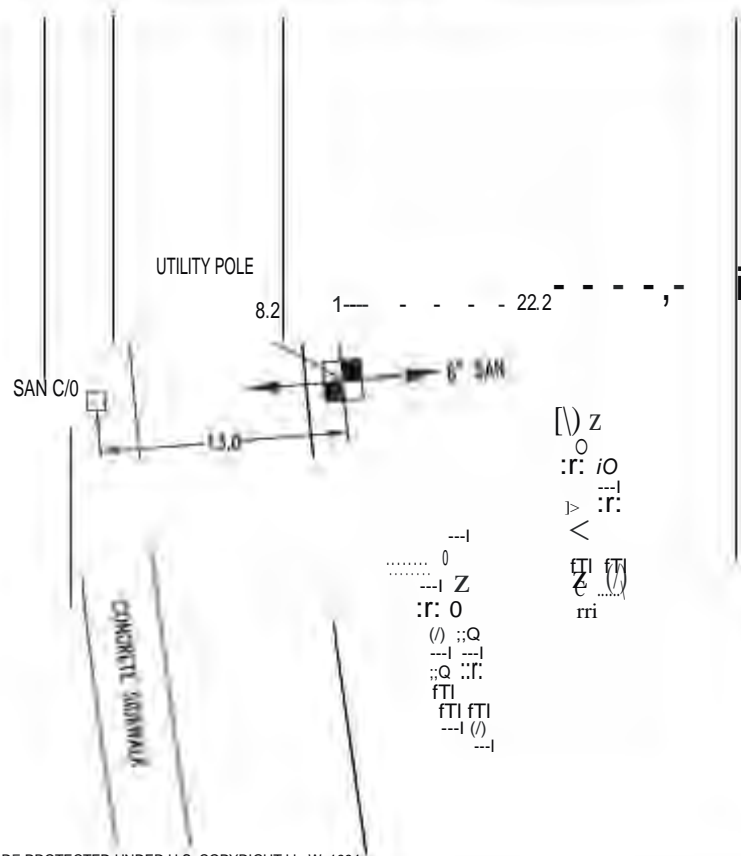
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 54

PROJECT NAME: ESQUIRE LAKE DRAINAGE		CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.		PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: SANITARY		SHEET #: 39 OF N/A	PROPOSED DRAINAGE
UTILITY FOUND: SANITARY		FORM BY: Kr	ASSISTED BY: HFDL # OF HOLES:
MATERIAL AS FOUND: CLAY		PAVING CONDITION: GOOD	DATE DUG: 11-12-15
SIZE AS FOUND: 6"		SOIL CONDITIONS: SOFT WET SAND ROCKY	
ELEV SURVEY PIN 10.13		UTILITY CONDITION: GOOD	
		AT: CROWN OF UTILITY. MARKING TAPE GREEN	
SURVEY PIN LOCATED BY: COMPASS POINT		SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (ft.).	
NORTH 694615.33		EAST 933043.15	ELEV. 10.13
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.			
NOTES			

NOT TO SCALE

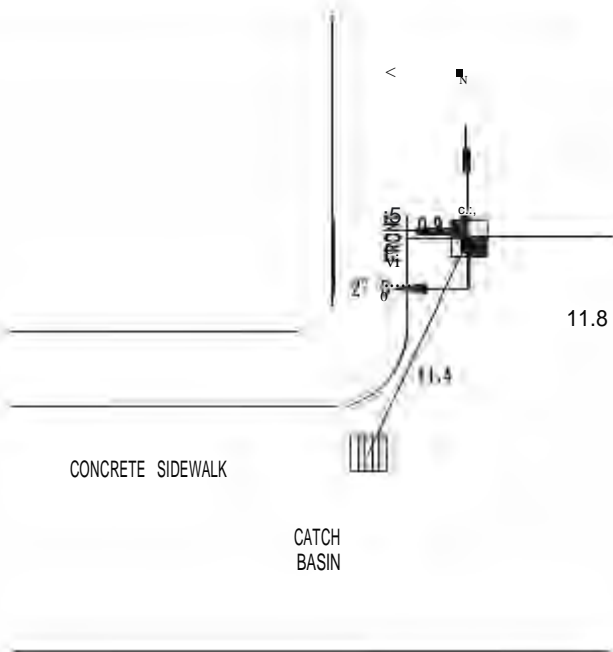


PN: PF04215 VACUUM TEST HOLE REPORT NO.: 55

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET j: 40 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HF						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-12-15						
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 10.69	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694798.75</td> <td>932997.24</td> <td>10.69</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694798.75	932997.24	10.69
NORTH	EAST	ELEV.						
694798.75	932997.24	10.69						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
<p>NOTES: TEST HOLE ALSO REVEALED 2" GAS 90° TURN TO THE WEST 1.40' SOUTH OF HUB. HUB SET OVER CROWN OF 2" GAS.</p>								

INSTALLATION HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW

NOT TO SCALE



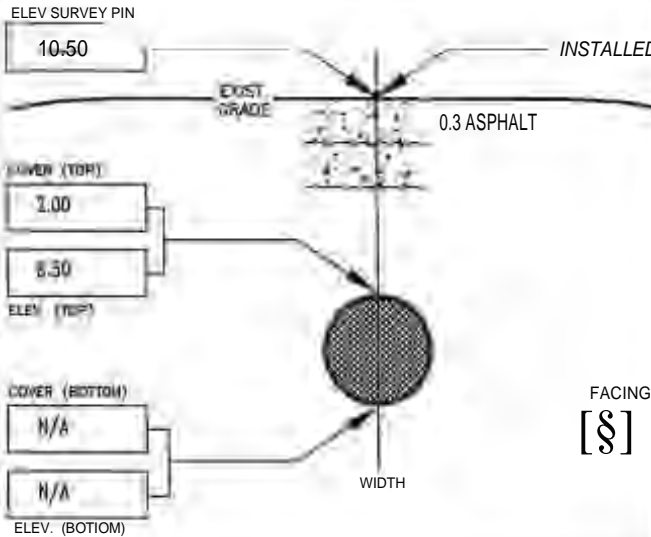
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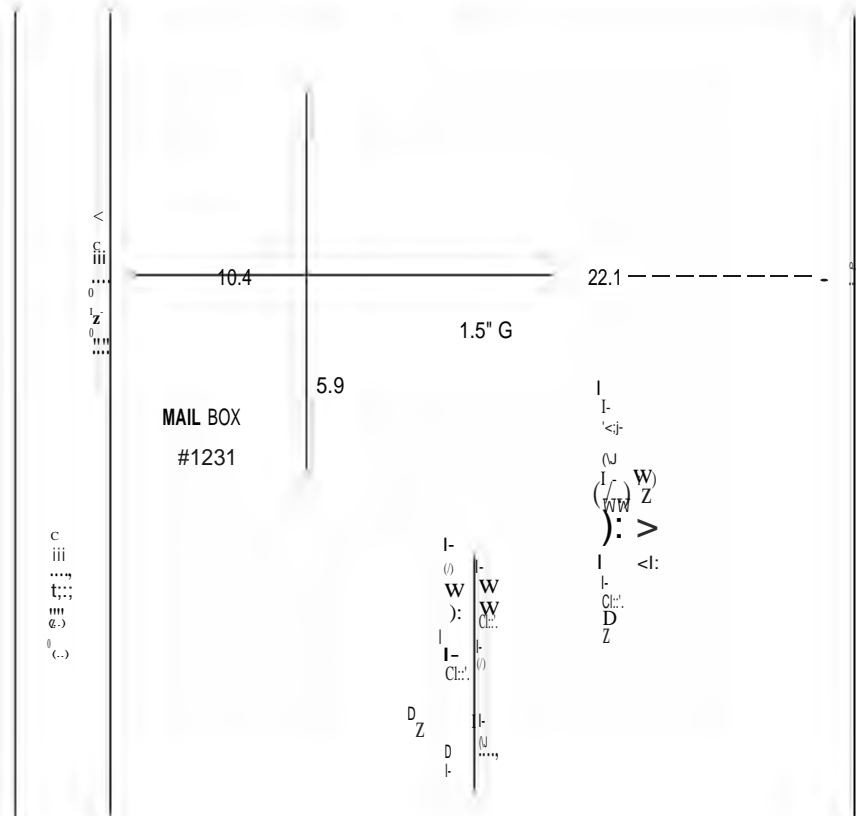
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 56

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 40 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HF CC DL # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 11-12-15						
SIZE AS FOUND: 1.5"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY	UTILITY CONDITION: GOOD						
ELEV SURVEY PIN 10.50	INSTALLED: PK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>694895.83</td> <td>933004.65</td> <td>10.50</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	694895.83	933004.65	10.50
NORTH	EAST	ELEV.						
694895.83	933004.65	10.50						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								



NOT TO SCALE

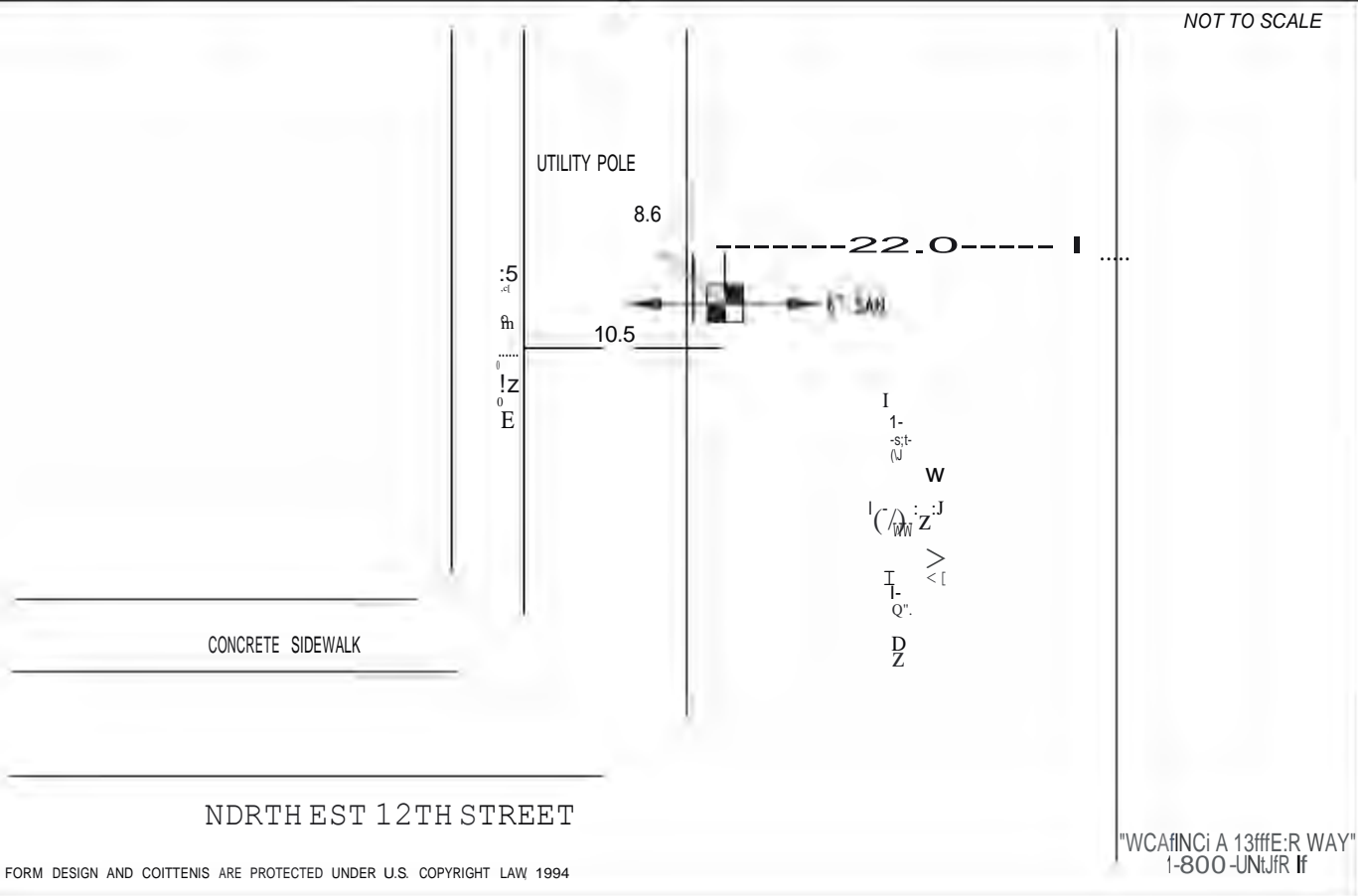


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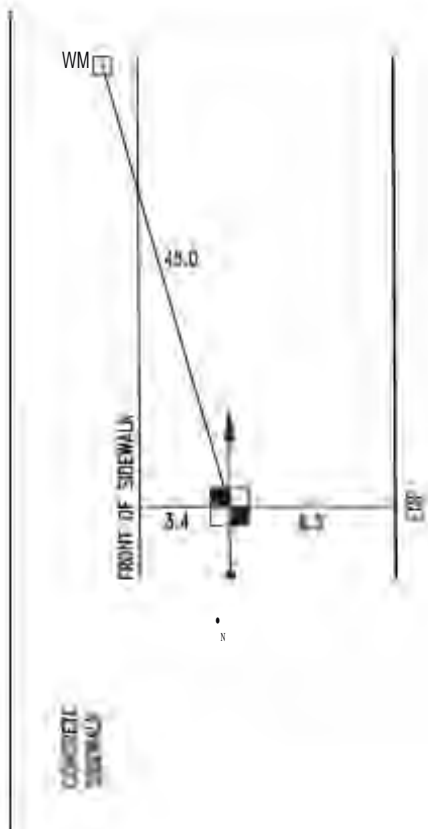
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: SANITARY	SHEET #: 40 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: SANITARY	FORM BY: KF	ASSISTED BY: HF DL # OF HOLES:
MATERIAL AS FOUND: PVC (GREEN)	PAVING CONDITION: GOOD	DATE DUG: 11-11-15
SIZE AS FOUND 6"	SOIL CONDITIONS: SOFT WET SAND ROCKY	
ELEV SURVEY PIN 10.58	UTILITY CONDITON: GOOD	
	INSTALLED: PK AT: CROWN OF UTILITY. MARKING TAPE: GREEN SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). NORTH EAST ELEV. 694853.94 933006.15 10.58 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	
COVER (TOP) 3.82 ELEV. (TOP) 8.76 COVER (BOTTOM) N/A ELEV. (BOTTOM) N/A	NOTES:	



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 58

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED GAS	SHEET #: 40 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: ER JD # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 11-6-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND	
UTILITY CONDITION: GOOD		
<p>ELEV SURVEY PIN 10.70</p> <p>----- INSTALLER: PK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p> <p>0.2 ASPHALT</p> <p>COVER (TOP) 10.06</p> <p>ELEV. (TOP) 8.04</p> <p>COVER (BOTTOM) N/A</p> <p>ELEV. (BOTTOM) N/A</p> <p>WIDTH</p> <p>FACING</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (ft).</p> <p>NORTH EAST ELEV.</p> <p>695017.19 932994.20 10.70</p> <p>HORIZONTAL DATUM ::: NAD 1983 / 1990, VERTICAL DATUM ::: NAVD 1988.</p> <p>NOTES:</p>		

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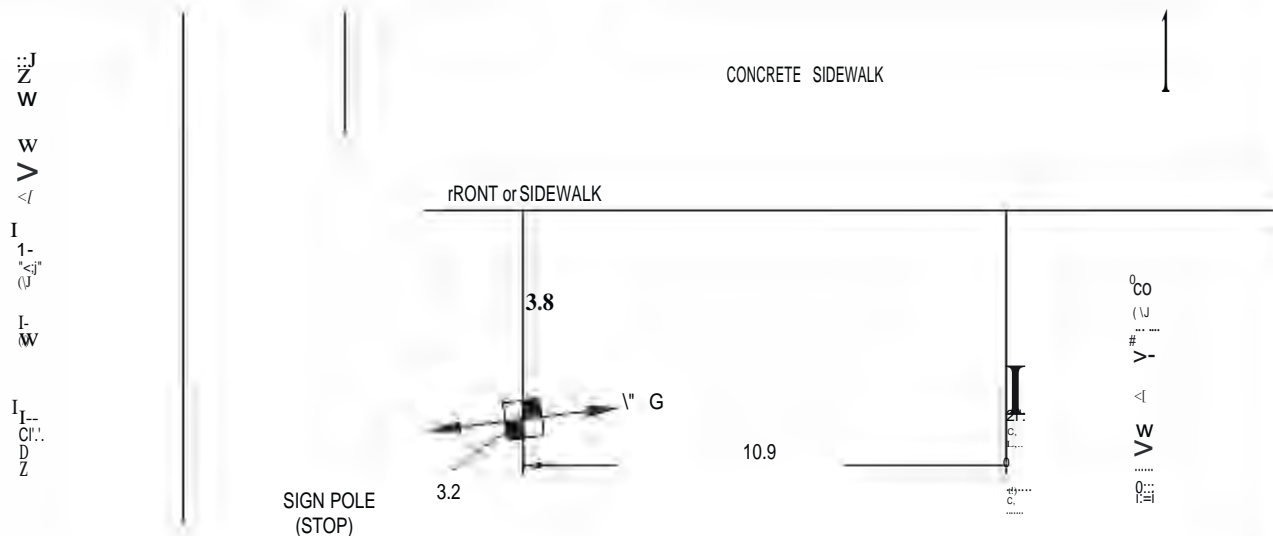
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VACUUM TEST HOLE REPORT NO.: 59

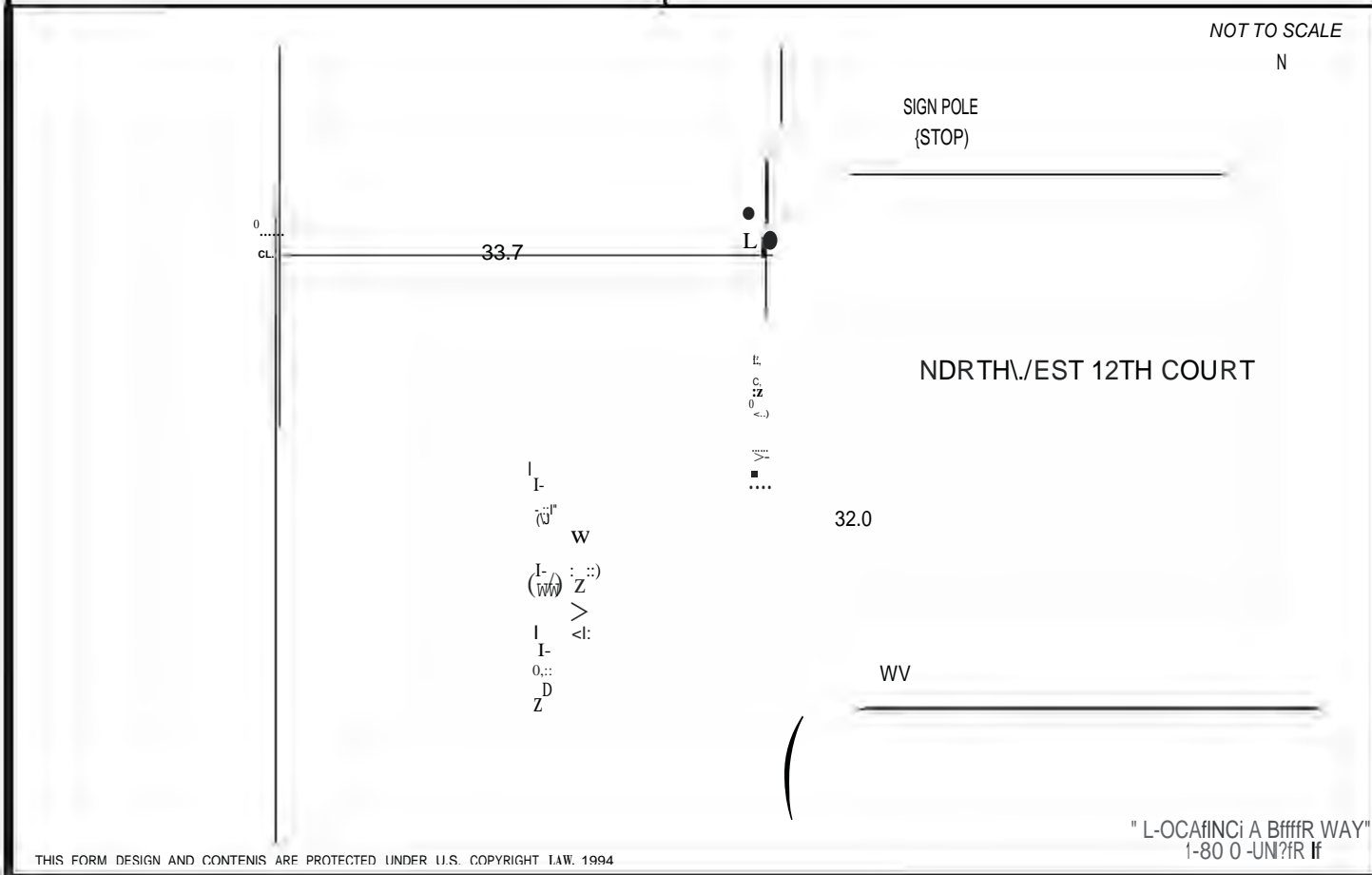
PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 40 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: ER JD # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-6-15						
SIZE AS FOUND: 1"	SOIL CONDITIONS: SOFT DRY SAND							
	UTILITY CONDITION: GOOD							
<p>ELEV SURVEY PIN 10.81</p> <p>----- INSTALLED: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (in).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>695040.97</td> <td>933042.59</td> <td>10.81</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES:</p>			NORTH	EAST	ELEV.	695040.97	933042.59	10.81
NORTH	EAST	ELEV.						
695040.97	933042.59	10.81						

NOT TO SCALE



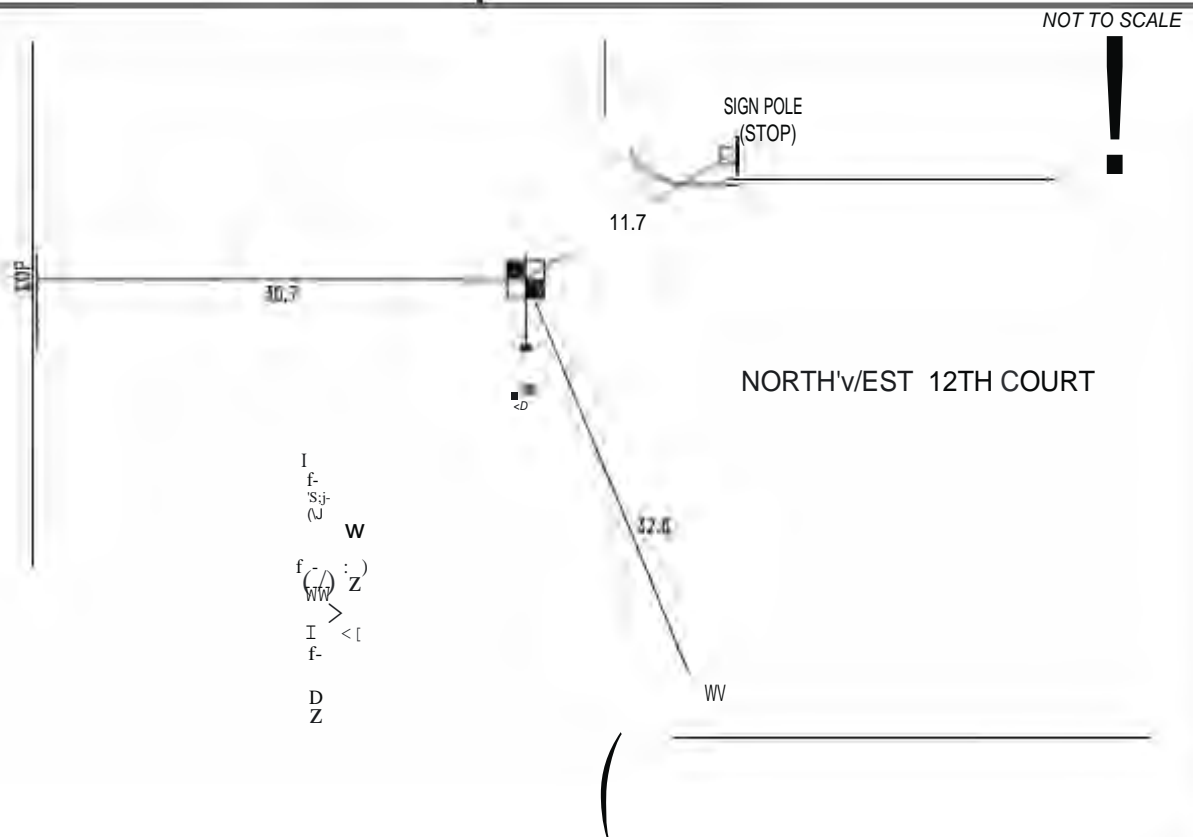
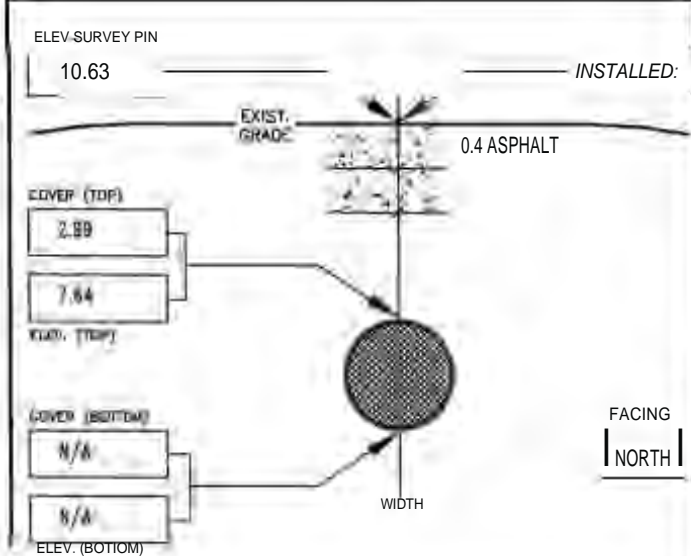
PN: PF04215 VACUUM TEST HOLE REPORT NO.: 60

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: TELEPHONE	SHEET#: 40 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: TELEPHONE	FORM BY: BP	ASSISTED BY: ERJD # OF HOLES: 1						
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: GOOD	DATE DUG: 11-6-15						
SIZE AS FOUND: 4"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
ELEV SURVEY PIN		UTILITY CONDITION: GOOD						
		INSTALLED: PK AT CROWN OF UTILITY. MARKING TAPE: ORANGE SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>695033.41</td> <td>933032.75</td> <td>10.54</td> </tr> </tbody> </table> HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.	NORTH	EAST	ELEV.	695033.41	933032.75	10.54
NORTH	EAST	ELEV.						
695033.41	933032.75	10.54						
COVER (BOTTOM): N/A ELEV. (BOTTOM): N/A FACING: NORTH WIDTH:		NOTES:						



PN: PF04215 VACUUM TEST HOLE REPORT NO.: 61

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: WATER	SHEET #: 40 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: WATER	FORM BY: BP	ASSISTED BY: ER JD # OF HOLES:						
MATERIAL AS FOUND: CAST IRON	PAVING CONDITION: GOOD	DATE DUG 11-6-15						
SIZE AS FOUND 6"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
ELEV. SURVEY PIN 10.63	UTILITY CONDITION: GOOD							
INSTALLED: PK	AT: CROWN	OF UTILITY. MARKING TAPE: BLUE						
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>695033.75</td> <td>933029.71</td> <td>10.63</td> </tr> </tbody> </table>			NORTH	EAST	ELEV.	695033.75	933029.71	10.63
NORTH	EAST	ELEV.						
695033.75	933029.71	10.63						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								



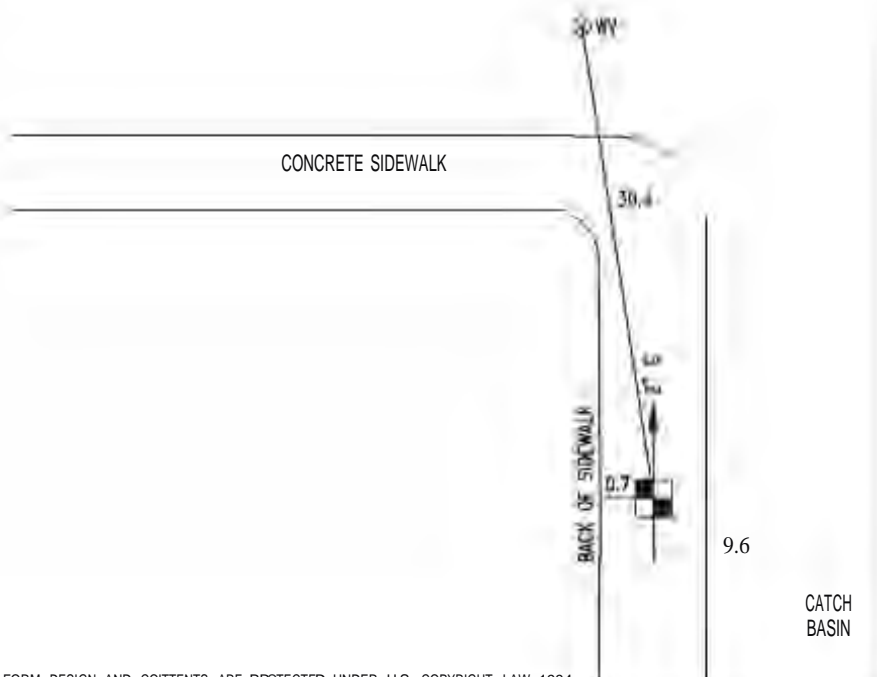
PN: PF04215

VACUUM TEST HOLE REPORT NO.: 62

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 40 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: ML # OF HOLES:
MATERIAL AS FOUND WRAPPED STEEL	PAVING CONDITION: FAIR	DATE DUG: 11-14-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY	
	UTILITY CONDITION: GOOD	
ELEV SURVEY PIN 10.51	SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET). NORTH EAST ELEV. 694718.38 933004.62 10.51 HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVO 1988.	
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 63

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION POMPAÑO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 41 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: GAS	FORM BY: BP	ASSISTED BY: JR JD # OF HOLES:
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 11-6-15
SIZE AS FOUND: 2"	SOIL CONDITIONS: SOFT DRY SAND	UTILITY CONDITION: GOOD

ELEV SURVEY PIN

10.67

EXIST GRADE

0.2 ASPHALT

COVER (TOP)

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ELEV. (TOP)

COVER (BOTTOM)

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ELEV. (BOTTOM)

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--- INSTALLLED: PK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW

SURVEY PIN LOCATED BY: COMPASS POINT

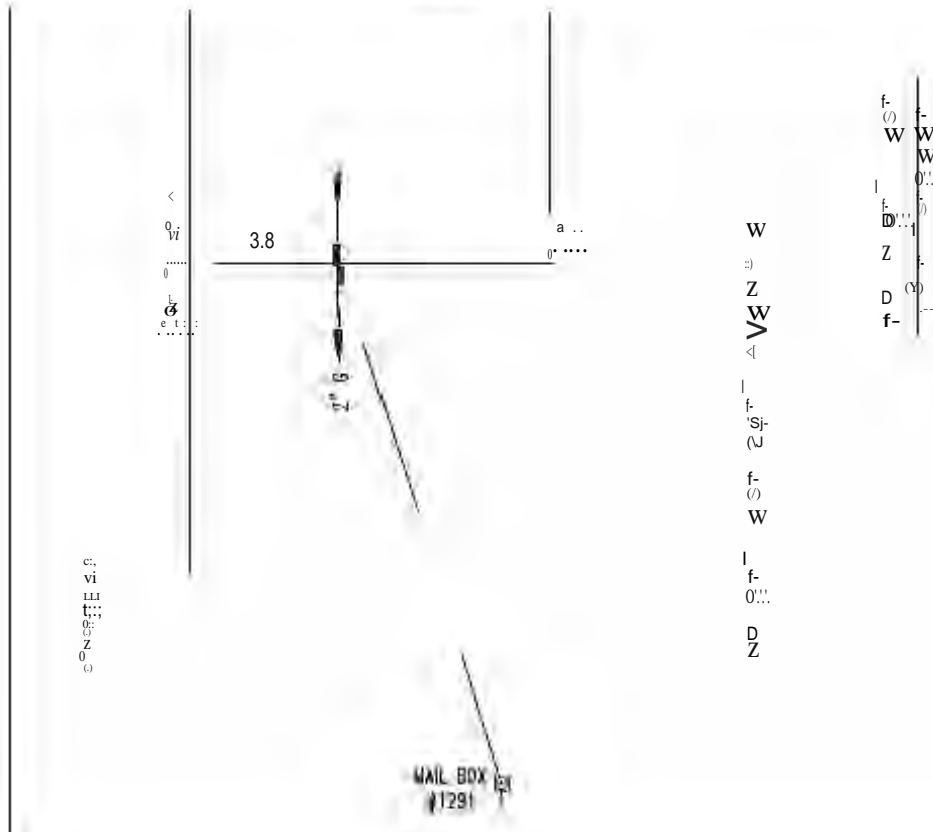
SURVEY INFO: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).

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695174.11	932990.07	10.67

HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.

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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 64

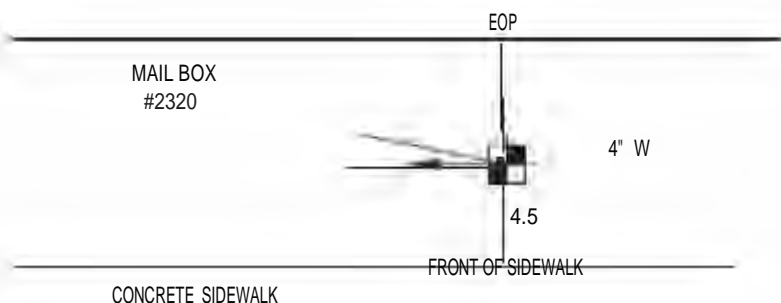
PROJECT NAME: ESQUIRE LAKE DRAINAGE		CLIENT JOB# N/A		WORK ORDER# N/A	
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.		PROJECT LOCATION: POMPAN0 BEACH, BROWARD COUNTY, FLORIDA			
UTILITY REQUESTED: WATER		SHEET#: 43 OF N/A		PROPOSED DRAINAGE	
UTILITY FOUND: WATER		FORM BY: KF		ASSISTED BY: HF DLCC AG # OF HOLES:	
MATERIAL AS FOUND: CAST IRON		PAVING CONDITION: N/A		DATE DUG: 11-10-15	
SIZE AS FOUND 4"		SOIL CONDITIONS: SOFT MOIST SAND ROCKY		UTILITY CONDITION: POOR	
ELEV. SURVEY PIN 11.11		HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: BLUE			
		SURVEY PIN LOCATED BY: COMPASS POINT			
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).					
		NORTH		EAST	
		695013.84		933400.34	
				ELEV. 11.11	
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAYD 1988.					
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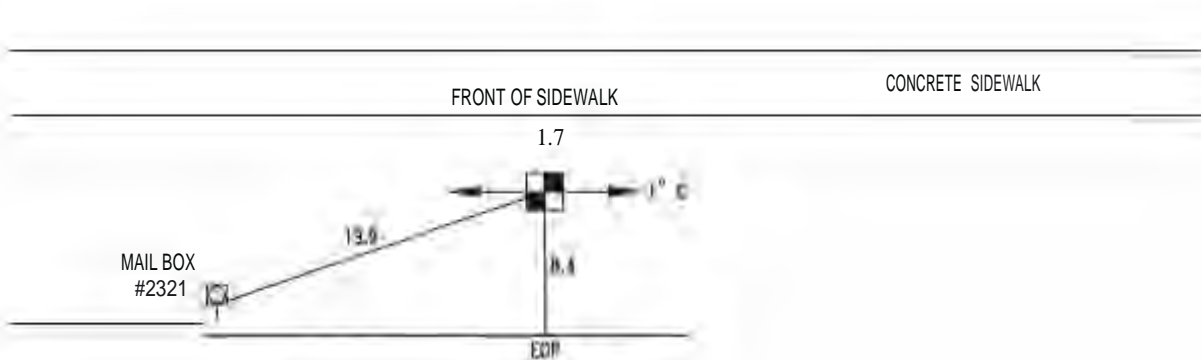


PN: PF04215 VACUUM TEST HOLE REPORT NO.: 65

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET#: 43 OF N/A	PROPOSED DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: DL HF CC AG # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION N/A	DATE DUG 11-10-15						
SIZE AS FOUND 1"	SOIL CONDITIONS: SOFT MOIST SAND ROCKY							
	UTILITY CONDITION: GOOD							
<p>ELEV SURVEY PIN 11.47</p> <p>INSTALLED HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p> <p>SURVEY PIN LOCATED BY: COMPASS POINT</p> <p>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</p> <table border="1"> <thead> <tr> <th>NORTH</th> <th>EAST</th> <th>ELEV.</th> </tr> </thead> <tbody> <tr> <td>695048.82</td> <td>933368.30</td> <td>11.47</td> </tr> </tbody> </table> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES:</p>			NORTH	EAST	ELEV.	695048.82	933368.30	11.47
NORTH	EAST	ELEV.						
695048.82	933368.30	11.47						

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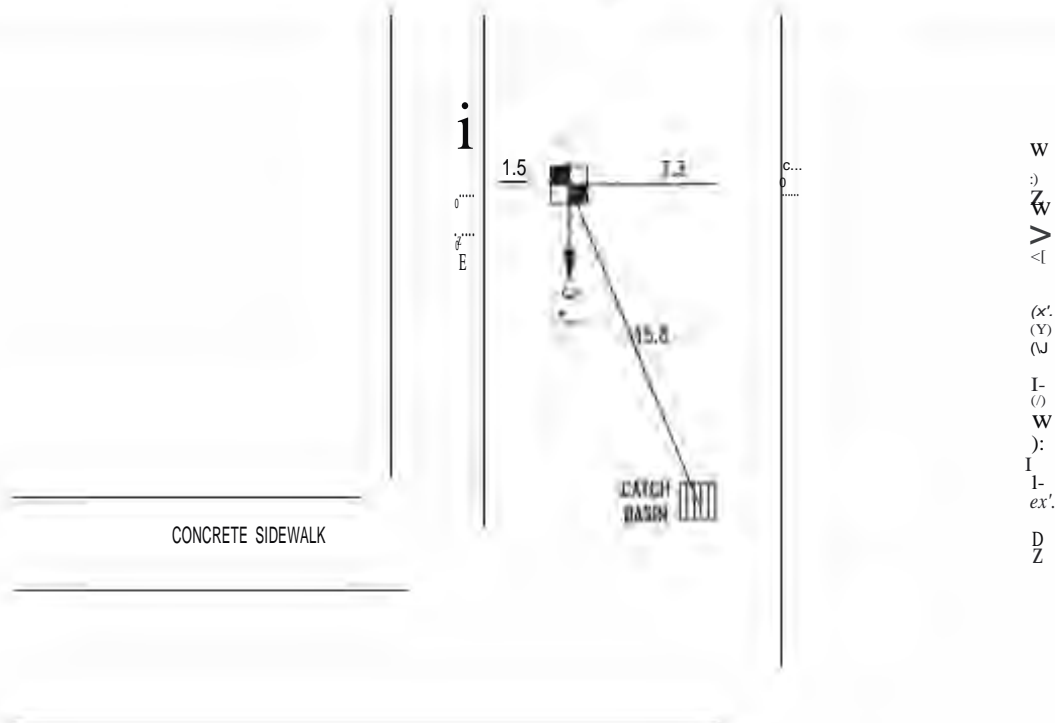
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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 66

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED GAS	SHEET #: 44 OF N/A	PROPOSED: DRAINAGE
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HF CC AG # OF HOLES:
MATERIAL AS FOUND WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-9-15
SIZE AS FOUND: 1"	SOIL CONDITIONS: SOFT WET SAND ROCKY	UTILITY CONDITION: GOOD
<div> <div>ELEV SURVEY PIN</div> <div>9.95</div> <div>EXIST GRADE</div> <div>COVER (TOP)</div> <div>2.10</div> <div>7.85</div> <div>COVER (BOTTOM)</div> <div>N/A</div> <div>ELEV. (BOTTOM)</div> </div> <div> <div>INSTALL</div> <div>HUB & TACK AT: CROWN</div> <div>OF UTILITY. MARKING TAPE: YELLOW</div> <div>0</div> </div>	<div> <div>SURVEY PIN LOCATED BY: COMPASS POINT</div> <div> <div>SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).</div> <div> <div>NORTH</div> <div>EAST</div> <div>ELEV.</div> <div>694453.64</div> <div>933504.48</div> <div>9.95</div> </div> </div> <div> <div>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAD 1988.</div> <div>NOTES</div> </div> </div>	

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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 67

PROJECT NAME: ESQUIRE LAKE DRAINAGE		CLIENT JOB# N/A	WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.		PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA	
UTILITY REQUESTED: GAS	SHEET #: 44 OF N/A	PROPOSED DRAINAGE	
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HF CC AG	# OF HOLES
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: N/A	DATE DUG: 11-9-15	
SIZE AS FOUND: 1"	SOIL CONDITIONS: SOFT WET SAND ROCKY		
ELEV SURVEY PIN 10.36	UTILITY CONDITION: GOOD	HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE YELLOW	
		SURVEY PIN LOCATED BY: COMPASS POINT	
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).			
NORTH		EAST	ELEV.
694594.07		933500.17	10.36
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.			
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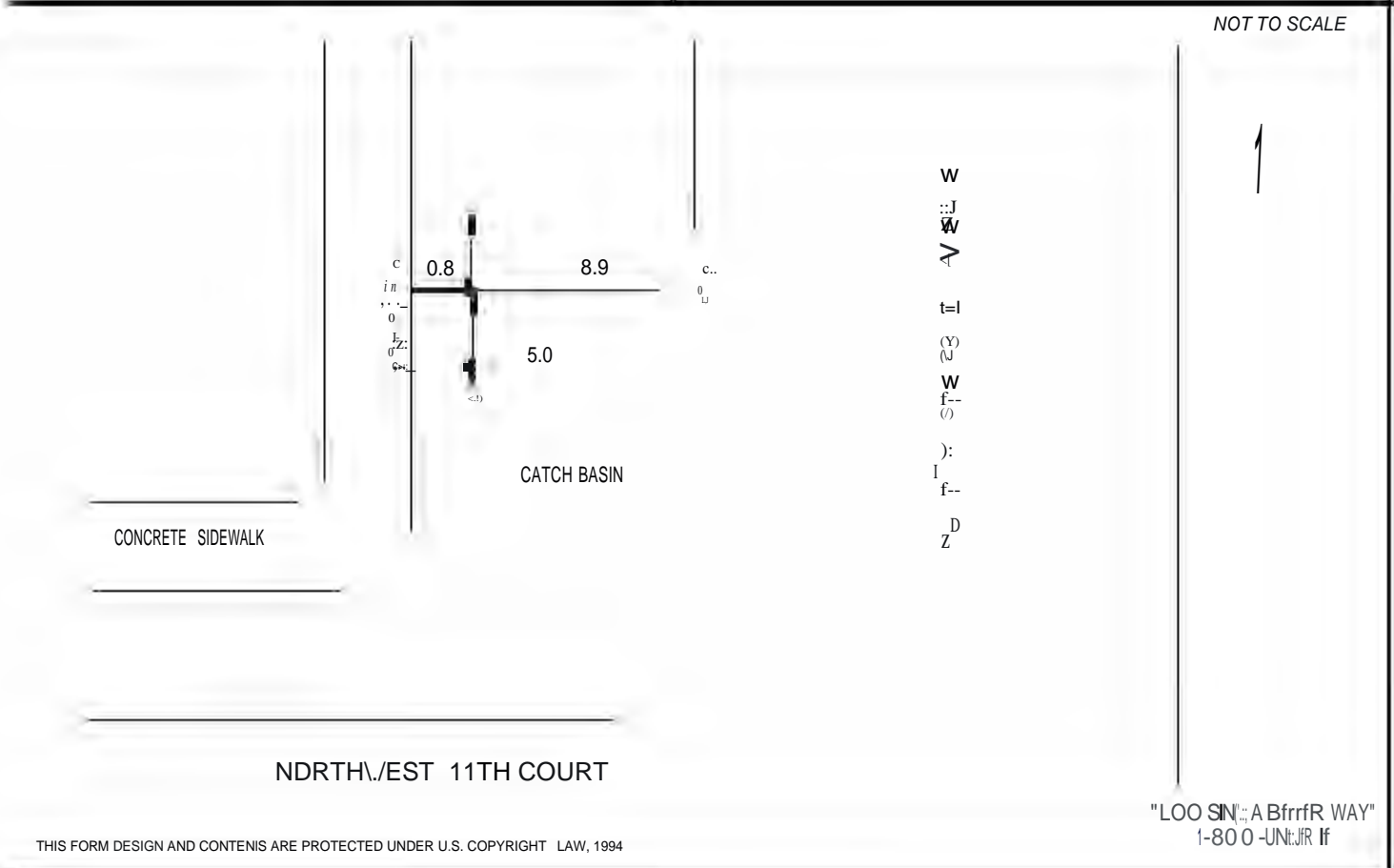
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2.0

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PN: PF04215 VACUUM TEST HOLE REPORT NO.: 68

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A	WORK ORDER# N/A						
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA							
UTILITY REQUESTED: GAS	SHEET #: 45 OF N/A	PROPOSED: DRAINAGE						
UTILITY FOUND: GAS	FORM BY: KF	ASSISTED BY: HFCC AG # OF HOLES:						
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITION: GOOD	DATE DUG: 11-9-15						
SIZE AS FOUND: 1"	SOIL CONDITIONS: SOFT WET SAND ROCKY							
ELEV SURVEY PIN 10.17	UTILITY CONDITION: GOOD							
INSTALLED: PK	AT: CROWN OF UTILITY. MARKING TAPE: YELLOW							
SURVEY PIN LOCATED BY: COMPASS POINT								
SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).								
<table border="0"> <tr> <td>NORTH</td> <td>EAST</td> <td>ELEV.</td> </tr> <tr> <td>694691.77</td> <td>933498.11</td> <td>10.17</td> </tr> </table>			NORTH	EAST	ELEV.	694691.77	933498.11	10.17
NORTH	EAST	ELEV.						
694691.77	933498.11	10.17						
HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.								
NOTES:								

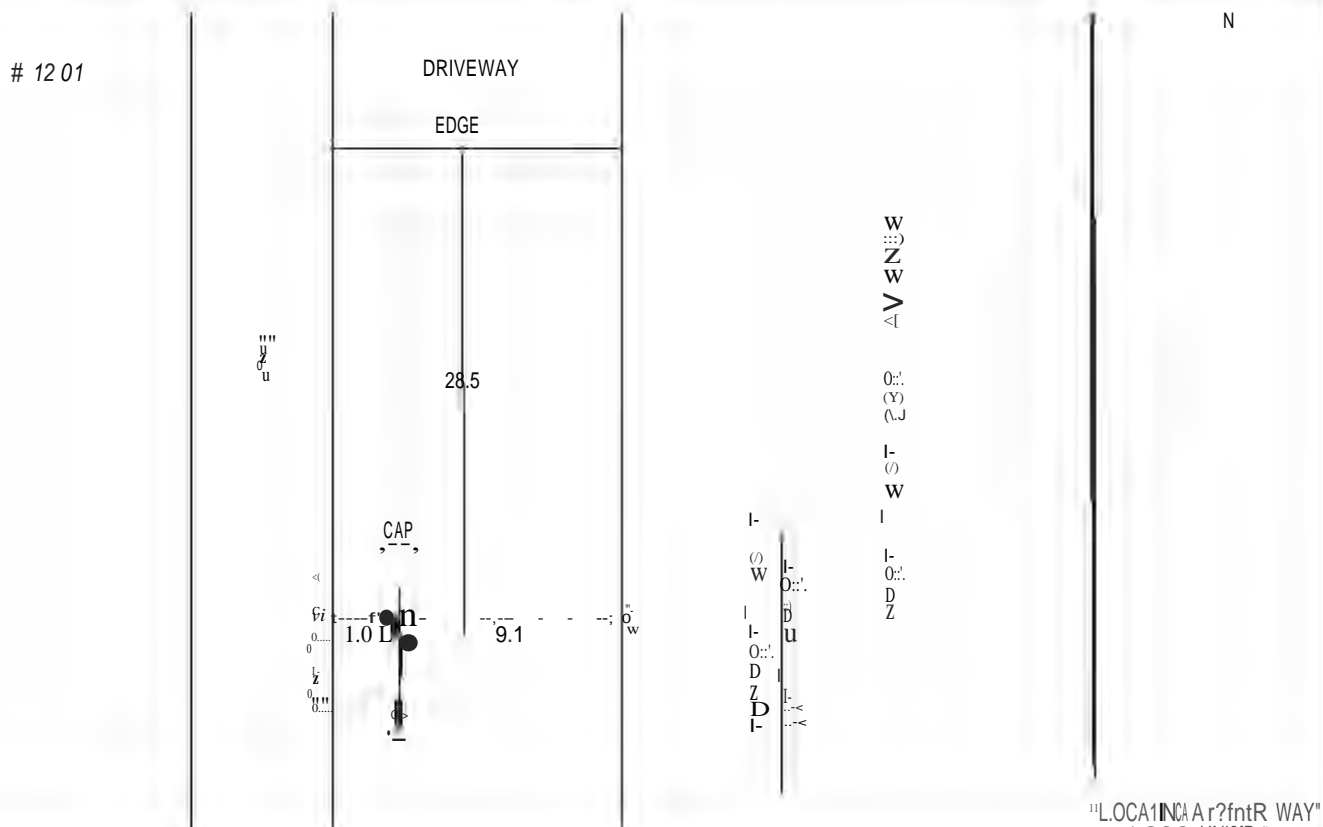


PN: PF04215

VACUUM TEST HOLE REPORT NO.: 69

PROJECT NAME: ESQUIRE LAKE DRAINAGE	CLIENT JOB# N/A WORK ORDER# N/A
LOCATE REQUESTED BY: MATHEWS CONSULTING INC.	PROJECT LOCATION: POMPANO BEACH, BROWARD COUNTY, FLORIDA
UTILITY REQUESTED GAS	SHEET#: 45 OF N/A PROPOSED: DRAINAGE
UTILITY FOUND: GAS	FORM BY: KF ASSISTED BY: CC HF AG # OF HOLES
MATERIAL AS FOUND: WRAPPED STEEL	PAVING CONDITIO:N N/A DATE DUG: 11- 9-15
SIZE AS FOUND	SOIL CONDITIONS: SOFT WET SAND ROCKY
	UTILITY CONDITION GOOD
ELEV SURVEY PIN <div style="border: 1px solid black; padding: 2px;">10.69</div> <p>INSTALL: HUB & TACK AT: CROWN OF UTILITY. MARKING TAPE: YELLOW</p>	SURVEY PIN LOCATED BY: COMPASS POINT SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET) . <div style="display: flex; justify-content: space-around;"> NORTH EAST ELEV. </div> <div style="display: flex; justify-content: space-around;"> 694789.43 933495.79 10.69 </div> <p>HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.</p> <p>NOTES TEST HOLE ALSO REVEALED CAP FOR GAS 240' NORTH OF HUB.</p>

NOT TO SCALE



PN: PF04215

VACUUM TEST HOLE REPORT NO.: 70

PROJECT NAME	ESQUIRE LAKE DRAINAGE	CLIENT JOB#	N/A	WORK ORDER#	N/A
LOCATE REQUESTED BY:	MATHEWS CONSULTING INC.	PROJECT LOCATION:	POMPANO BEACH, BROWARD COUNTY, FLORIDA		
UTILITY REQUESTED:	SANITARY	SHEET #:	45 OF N/A	PROPOSED	DRAINAGE
UTILITY FOUND:	SANITARY	FORM BY:	KF	ASSISTED BY:	HF DLCC # OF HOLES:
MATERIAL AS FOUND:	PVC (GREEN)	PAVING CONDITION	N/A	DATE DUG:	11-10-15
SIZE AS FOUND:	6"	SOIL CONDITIONS:	SOFT WET SAND ROCKY		
ELEV SURVEY PIN	10.99	UTILITY CONDITION	GOOD		
EXIST. GRADE		HUB & TACK AT:	CROWN	OF UTILITY.	MARKING TAPE GREEN
COVER (TOP)		SURVEY PIN LOCATED BY: COMPASS POINT			
4.32		SURVEY INFO.: ALL MEASUREMENTS ON THIS FORM ARE IN ENGLISH UNITS (FEET).			
6.87		NORTH EAST ELEV.			
ELEV. (BOTTOM)		694902.88 933495.46 10.99			
COVER (BOTTOM)		HORIZONTAL DATUM = NAD 1983 / 1990, VERTICAL DATUM = NAVD 1988.			
N/A		NOTES:			
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ELEV. (BOTTOM)					

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SECTION 02012

PROTECTING EXISTING UNDERGROUND UTILITIES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section includes materials and procedures for protecting existing underground utilities.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02220: Trenching, Backfilling, and Compacting

PART 2 - MATERIALS

2.1 REPLACEMENT IN KIND

- A. Except as indicated below or as specifically authorized by the Owner's Representative, reconstruct utilities with new material of the same size, type, and quality as that removed.

PART 3 - EXECUTION

3.1 GENERAL

- A. Replace in kind street improvements, such as curbs and gutters, barricades, traffic islands, signalization, fences, signs, etc., that are cut, removed, damaged, or otherwise disturbed by the construction.
- B. Where utilities are parallel to or cross the construction but do not conflict with the permanent work to be constructed, follow the procedures given below and as indicated in the drawings. Notify the utility owner 48 hours in advance of the crossing construction and coordinate the construction schedule with the utility owner's requirements. For utility crossings not shown in the drawings, refer to the General Conditions and the instructions of the Owner's Representative for guidance.
- C. Determine the true location and depth of utilities and service connections which may be affected by or affect the work. Determine the type, material, and condition of these utilities. In order to provide sufficient lead-time to resolve unforeseen conflicts, order materials and take appropriate measures to ensure that there is no delay in work.

D. Expose utilities 200 feet in advance of the pipeline construction.

3.2 PROCEDURES

- A. Protect in Place: Protect utilities in place, unless abandoned, and maintain the utility in service, unless otherwise specified in the drawings or in the specifications.
- B. Cut and Plug Ends: Cut abandoned utility lines and plug the ends. Plug storm drains and sewers with an 8-inch wall of brick and mortar. Cap waterlines with a cast-iron cap or install a 3-foot-long concrete plug. Dispose of the cut pipe as unsuitable material.
- C. Remove and Reconstruct: Where so indicated in the drawings or as required by the Owner's Representative, remove the utility and, after passage, reconstruct it with new materials. Provide temporary service for the disconnected utility.
- D. In the event an existing City utility is damaged by the Contractor which was accurately marking in the field, shown on the drawings, or previously identified through potholing procedures, the Contractor shall be responsible to make the repair if directed by City or pay City's current repair rate if City is required to make the repair.

3.3 COMPACTION

- A. Utilities Protected in Place: Backfill and compact under and around the utility so that no voids are left.
- B. Utilities Reconstructed: Prior to replacement of the utility, backfill the trench and compact to an elevation 1 foot above the top of the ends of the utility. Excavate a cross trench of the proper width for the utility and lay, backfill, and compact.

END OF SECTION

SECTION 02018
VIBRATION MONITORING

PART 1 - GENERAL

1.1 DESCRIPTION:

- A. Furnish, install, maintain, monitor, and remove vibration-monitoring equipment as specified and as indicated.
- B. Monitor vibrations and noise levels originating from construction operations as indicated or specified.
- C. Modify construction operation procedures if existing operation creates vibration or noise exceeding specified amounts.

1.2 RELATED SECTIONS:

- A. Section 01300 – Submittals
- B. Section 01700 – Project Closeout

1.3 SUBMITTALS:

- A. Submit the following:
 - 1. Qualifications of the independent vibration consulting firm's Professional Engineer including the names of the three (3) successful projects with names, current addresses, and telephone numbers of persons in charge of representing the owners or the owners at the time of monitored vibration-inducing operation and noise levels.
 - 2. Qualifications of the vibration consulting firm's personnel to install, operate and interpret the monitoring equipment including the name of the personnel and the names of the three (3) projects per person which they installed, operated, monitored, and interpreted monitoring equipment with names, current addresses and telephone numbers of persons in charge of representing the owner or the owners at the time of monitored vibration-inducing operations and noise levels.
 - 3. Prior to commencement of vibration inducing operations, submit in writing the plan for monitoring operations and equipment to be used to assure compliance with the vibration and noise limitation. As a minimum, this plan shall provide for the following:

- a. Recommended vibration-limiting methods to meet the specified peak particle velocity limitations and locations for taking measurements.
 - b. Manufacturers' brochures and written operation instructions for seismograph recording equipment intended to be used for each vibration occurrence.
4. Daily reports, while performing vibration-inducing operations, detailing each source of vibration, location of monitoring, and the vibration records highlighting peak particle velocities. All daily reports shall be stamped and signed by the Vibration Consulting Firm's Professional Engineer.

PART 2 - PRODUCTS

2.1 EQUIPMENT:

- A. Provide a low frequency sensitive three-component seismic recording instrument with wave paper trace, variable trigger level setting, peak particle velocity memory operation (in inches/second) and sound level readout capability.
- B. Manufacturers:
 1. Spregnetter, St. Louis, MO
 2. Slope Indicator Co., Seattle, WA
 3. D&L Equipment Corp., Spoffard, NH
 4. Or equal

PART 3 - EXECUTION

3.1 QUALITY ASSURANCE:

- A. Provide in accordance with Division 1
- B. Retain the services of an independent vibration consulting firm with the following in-house personnel to conduct the following vibration monitoring requirements:
 1. Preparation, signing and stamping of monitoring plans and daily reports, and overseeing monitoring and interpretation of monitoring equipment shall be performed by personnel with the following qualifications:
 - a. Be a Florida Registered Professional Engineer
 - b. Have a minimum of five (5) years experience in the vibration-consulting field

- c. Have successfully completed at least three (3) projects with vibration-inducing operations and noise levels equal to or more severe than those to be encountered
- 2. Installation, monitoring and interpretation of monitoring equipment shall be performed by personnel with the following qualifications:
 - a. Have at least three (3) years of experience in the operation of monitoring equipment proposed for use and interpretation of records produced by such equipment
 - b. Have installed, operated, monitored and interpreted equipment and records on at least three (3) projects with vibration-inducing operations and noise levels equal to or more severe than those to be encountered

3.2 EXECUTION:

- A. Furnish specified instrumentation to be installed, operated and interpreted by the vibration consulting firm's personnel, as specified below and indicated.
- B. Monitor vibrations and record the entire particle velocity wave train, not just peak velocities. Obtain accurate, legible seismometer records of monitored vibrations.
- C. Perform all vibration-inducing operations so that vibrations reaching adjacent structures and facilities are within specified limits.
- D. Monitor vibrations by measuring the peak particle velocity in the vicinity of work. Peak particle velocity is defined as a maximum of the three velocity components, measured in three mutually perpendicular directions at any point by an instrument and combining the results. The peak particle velocity as measured by the vibration consulting firm's personnel on or at the location as specified in the submitted vibration monitoring plan, for vibration-inducing operations, shall not exceed the following:

Type of Concrete	Peak Particle Age of Concrete, hrs.	Velocity in/sec.
Mass Concrete	0-11	1.0
	11 and over	2.0
Concrete Structures	0-11	0.5
	11-24	1.0
	24 and over	2.0
Permanent Structure or Utility		2.0

- E. In the event any recordings indicate that vibration limits are being exceeded,

immediately suspend all sheeting, driving and other vibration-inducing operations and submit a report to the Engineer. Revise operations to reduce vibrations and submit a copy of the revised procedure to the Engineer at no additional cost to the City.

- F. If evidence of displacement or damage to utilities, equipment, or structures is observed or reported, immediately notify the Engineer and discontinue operations creating the vibrations. Revise operation to reduce vibrations and submit a copy of the revised procedure to the Engineer.
- G. Restore or replace utilities, equipment, or structures damaged by at no additional cost to the City.
- H. Monitor and record on chart noise originating from construction activities.
- I. If noise limitations as specified City Ordinance's are exceeded notify the Engineer and discontinue operations creating noise. Revise operation to meet specified noise limitation before continuing.

END OF SECTION

SECTION 02110 CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 SCOPE

The work to be performed under this item shall consist of either the clearing of or the clearing and grubbing of the area along the alignment of construction as designated on the drawings.

- A. Clearing - Where clearing only is required it shall consist of the cutting and removal of all trees, stumps, bush, logs, hedges, and the removal of all fences and other loose or projecting material from the designated area. The grubbing of stumps and roots will be required.
- B. Clearing and Grubbing - Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which, in the opinion of ENGINEER, is unsuitable, including grubbing of stumps, roots, matter roots, foundations and disposal from the project of all spoil materials resulting from clearing and grubbing by burning or otherwise.

1.2 REFERENCES

- A. Florida Department of Transportation Standard Specifications for Road and Bridge construction (F.D.O.T.), latest edition.

PART 2 - MATERIALS

2.1 MATERIALS FOR REPLACEMENT

- A. All materials required to be brought on to the site for filling of holes caused by grubbing or otherwise shall be consistent with materials of the surrounding area.

PART 3 - EXECUTION

3.1 SCHEDULE

- A. CONTRACTOR shall schedule the clearing or clearing and grubbing work at a satisfactory distance in advance of the pipe laying operations.

3.2 SPOIL MATERIALS REMOVAL

- A. All materials to be disposed of by removal from the site shall be disposed of by CONTRACTOR at the Contractor's expense. In no case shall any discarded materials be left in piles adjacent to or within the project limits. The manner and location of disposal of materials shall be subject to review by ENGINEER and shall not create an unsightly or objectionable view.

3.3 CLEARING

- A. Clear the area of all objectionable materials. Trees unavoidably falling outside the specified limits must be cut up, removed, and disposed of in a satisfactory manner. Preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut to a height of not more than 12-inches above the ground. The grubbing of stumps and roots will be required.
- B. Fences shall be removed and disposed of or reinstalled in accordance with the plans or as directed by ENGINEER. Fence wire shall be neatly rolled and the wire and posts stored on the project if they are to be used again, or stored at a designated location if the fence is to remain the property of OWNER.

3.4 CLEARING AND GRUBBING

- A. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass and other unsatisfactory materials shall be removed.
- B. All holes remaining after the grubbing operation in embankment areas shall have the sides broken down to flatten out the slopes, and shall be filled with acceptable material, moistened and properly compacted in layers to the density required. The same construction procedure shall be applied to all holes remaining after grubbing in excavation areas where the depth of holes exceeds the depth of the proposed excavation.

END OF SECTION

SECTION 02140 DEWATERING

PART 1 - GENERAL

1.1 WORK INCLUDED

- 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.
- 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.

1.2 STATUTORY REQUIREMENTS

- A. **All State and local permits associated with the dewatering are the responsibility of the Contractor. Obtain and pay for all permits required for temporary dewatering systems. Contractor will need to secure Dewatering Permit for this project from SFWMD within 30 days of Tentative Notice to Proceed.**
- B. Compliance with the Florida Department of Environmental Protection's Generic Permit for the discharge of Produced Ground Water from a Non-Contaminated Site Activity (FDEP Document No. 62-621.300 (2)) shall be required for any dewatering operations.
- C. Original permits shall be prominently displayed on the site prior to constructing dewatering systems.

1.3 RELATED WORK

- A. Section 01410: Testing Laboratory Services
- B. Section 02220: Trenching, Backfilling and Compacting

- C. Section 02661: Water Main and Appurtenances
- D. Section 02730: Storm Water System
- E. Section 02730: Sanitary Sewer System

1.4 SUBMITTALS

- A. Administrative Submittals: Discharge permits.
- B. Shop Drawings:
 - 1. Water Control Plan:
 - a. Include dewatering pumps, stilling basin, and means of sound attenuation, water quality testing locations, parameters and frequency. Also, at a minimum include descriptions of proposed groundwater and surface water control facilities including, but not limited to, equipment, methods, standby equipment and power supply, pollution control facilities, and discharge locations to be utilized as required by this Section.
 - b. Plan shall follow the SFWMD Standard Operating Procedures, all SFWMD dewatering permit conditions of approval and all FDEP NPDES permit conditions of approval.

PART 2 - PRODUCTS

2.1 PUMP DRIVERS

- A. Sound attenuated pumps as manufactured by Thompson Pumps with "Silent Knight" canopy, or approved equal shall be used for all dewatering activities that require a pumping system. Contractor shall demonstrate, measure and record the dB levels at the time of initial set-up. The Contractor shall record the dB levels weekly.

PART 3 - EXECUTION

- A. The Contractor's proposed method for dewatering pipe trenches and manhole excavations 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. The Contractor is responsible for means and methods of construction dewatering activities.

- B. In areas of deep trench where dewatering and maintenance of vehicular traffic is required, the Contractor shall bench down the sides of the trench in order to cover the dewatering well point heads with temporary steel plating.**
- C. 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.
- D. The impact of anticipated subsurface soil/water conditions shall be considered when selecting methods of excavation and temporary dewatering and drainage systems. Where groundwater levels are above the proposed bottoms of excavations, a pumped dewatering system is expected for pre-drainage of the soils prior to excavation to final grade and for maintenance of the lowered groundwater level until construction has been completed to such an extent that the foundation, structure, pipe, conduit, or fill will not be floated or otherwise damaged. Type of dewatering system, spacing of dewatering units and other details of the work are expected to vary with soil/water conditions at a particular location.
- E. 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.
- F. Protection of Property - Contractor shall make an assessment for dewatering induced settlement and shall provide devices or systems, including but not limited to re-injection wells, infiltration trenches and cutoff walls, necessary to prevent damage to existing facilities, completed Work and adjacent facilities.
- G. Control surface water and groundwater such that excavation to final grade is made in the dry, and bearing soils are maintained undisturbed. Prevent softening, or instability of, or disturbance to, the sub-grade due to water seepage.
- H. Provide protection against flotation for all work.
- I. Wellpoints shall not be set in such a way that undermines or jeopardizes paved areas; if the setting of wellpoints undermines or impacts paved areas, the impacted areas shall be removed and restored equal to or better than their original condition at the expense of the Contractor.
- J. Pipe and conduit shall not be installed in water or allowed to be submerged prior to backfilling. Pipe and conduit which becomes submerged shall be removed and the excavation dewatered and restored to proper conditions prior to reinstalling the pipe and conduit.

- K. Collect and properly dispose of all discharge water from dewatering and drainage systems in accordance with State and local requirements and permits. As a minimum, no discharge or run-off of groundwater or surface water that is contaminated with any petroleum products (gasoline, diesel fuel, oil, grease, hydraulic fluid, etc.) and/or sanitary waste shall be made to surface water systems such as lakes, rivers, streams, the Intracoastal Waterway or “on-site” retention ponds that secondarily discharge to these surface water systems.
- L. Dewatering systems shall be designed to allow for localized variations in the depths of the excavations.
- M. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of sub-grades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- N. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rainwater and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.
- O. As the wellpoints are withdrawn, the locations of the voided areas shall backfilled by jetting approved backfill material into the voids until they are completely filled. These restored wellpoint voids are subject to random density verification testing.
- P. **Provide adequate noise attenuation enclosure around all engine generator pumping equipment and comply with City's Noise Ordinance, Article III, Noise. Dewatering pumps shall have mitigation measures to meet the City's Noise Ordinance: During such periods of normal construction hours of 7:00 am to 6:00 pm on Monday through Friday, the noise levels generated by construction activities shall not exceed 75 dBA for more than 10 percent of the time when measured at a distance of 50 feet from the construction site. The Contractor will be required to construct additional sound attenuation means to achieve compliance with the City's Noise Ordinance.**

END OF SECTION

SECTION 02210 EXCAVATION AND SWALE GRADING

PART 1 - GENERAL

1.1 SCOPE

This item shall consist of the excavating, removing and satisfactory disposition of all materials required to construct the Project and the placement and shaping of required swales to be done in accordance with these Specifications and in conformity with the dimensions and typical sections, lines, and grades, shown on the Plans.

All suitable material taken from excavation shall be used in the formation of embankment, subgrade and for backfilling as indicated on the Plans or hauled off-site, or as directed by the ENGINEER. When the volume of excavation is not sufficient for construction of the fill to the grades indicated, the deficiency shall be supplied by the Contractor.

1.2 REFERENCES

Standards applicable to these specifications shall be:

- A. Americans Association of State Highway and Transportation Officials (AASHTO).
- B. Florida Department of Transportation (F.D.O.T.) Section 120 "Excavation and Embankment".

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION OF WORK

3.1 EXCAVATION

The rough excavation shall be carried to the necessary depth to obtain the specified depth of subgrade compaction shown on the Plans. Likewise, on embankments, the depth of subgrade compaction shall be as shown on the Plans.

Should the CONTRACTOR, through negligence or other fault, excavate below the designated lines, he shall replace the excavation with approved materials, in an approved manner and condition, at this own expense. The ENGINEER shall have complete control over the interpretation of the Plans and Specifications concerning the excavation, moving, placing and disposal of all material and shall determine the suitability of material to be placed in embankments. All material determined unsuitable shall be disposed of in waste areas or as directed. Topsoil shall not be used in fill or in subgrades but shall be handled and placed as directed.

The CONTRACTOR shall inform and satisfy himself as to the character, quantity, and distribution of all material to be excavated. No payment will be made for any excavated material which is used for purposes other than those designated. All spoil areas shall be leveled to a uniform line and section and shall present a neat appearance before project acceptance.

Those areas outside of the pavement areas in which the top layer of soil material becomes compacted, due to hauling or to any other activity of the CONTRACTOR, shall be scarified to a depth of 4-inches, as directed, to loosen and pulverize the soil.

If it is necessary to interrupt existing irrigation systems, sewers or under drainage conduits, utilities or similar underground structures, or parts thereof, the CONTRACTOR shall be responsible for and shall take all necessary precautions to protect and preserve or provide temporary services. When such facilities are encountered, the CONTRACTOR shall, at his own expense, satisfactorily repair all damage to such facilities or structures which may result from any of his operations during the period of the contract.

3.2 SWALE EXCAVATION

Swale excavation shall consist of excavating for drainage swales such as intercepting, inlet or outlet or any other type as designed or shown on the Plans.

The work shall be performed in the proper sequence with the other construction. The location of all ditches shall be established on the ground. All satisfactory material shall be placed in fills; unsatisfactory material shall be placed in spoil areas or as directed. Waste or surplus material shall be disposed of as directed by the ENGINEER. All necessary handwork shall be performed to secure a finish true to line, elevation, and cross section, as designated.

Swales constructed on the project shall be maintained to the required cross section and shall be kept free from debris or obstructions until the project is accepted.

3.3 STRIPPING

All vegetation such as brush, heavy sods, heavy growth of grass, decayed vegetable matter, rubbish and any other unsuitable material within the area upon which embankment is to be placed shall be stripped or otherwise removed before the embankment is started, and in no case shall such objectionable material be allowed in or under the embankment.

END OF SECTION

SECTION 02220 TRENCHING, BACKFILLING AND COMPACTING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Excavate for all underground piping.
- B. Place and compact granular beds and fills over pipelines to rough grade elevations.
- C. **Dynamic Vibratory Compactor with rollers is not allowed.**
- D. Dewater excavations as required.

1.2 RELATED WORK

- A. Section 02661: Water Main and Appurtenances
- B. Section 02720: Storm Water System
- C. Section 02730: Sanitary Sewer System

1.3 SITE COMPACTION TESTING

- A. Testing of compacted fill materials will be performed in accordance with F.D.O.T. and A.A.S.H.T.O. specifications.
- B. If, during progress of Work, tests indicate that compacted materials do not meet specified requirements, remove defective work, replace and retest as directed by ENGINEER.
- C. Ensure compacted fills are tested before proceeding with placement of surface materials.

1.4 PROTECTION

- A. Protect trees, shrubs, lawn, areas to receive planting, rock outcropping and other features remaining as part of final landscaping.

- B. Protect bench marks and existing structures, roads, sidewalks, paving and curbs against damage from vehicular or foot traffic. Install and maintain proper bridging, planking and cants to provide access to buildings.
- C. Protect excavations by shoring, bracing, sheet piling underpinning, or by other methods, as required to prevent cave-ins or loose dirt from falling into excavations in accordance with Trench Safety Act.
- D. Underpin or otherwise support adjacent structure(s) which may be damaged by excavation work. This includes other utility lines, power poles and pipe runs.
- E. Notify ENGINEER of any unexpected sub-surface conditions. Discontinue work in the area until ENGINEER provides notification to resume work.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Bedding Materials: Pipe shall be placed on dry, undisturbed earth.
- B. Selected Backfill: After pipe joints have been inspected and given preliminary approval, and sufficient time has elapsed for setting of joints if necessary, backfilling shall be performed, together with tamping until fill has progressed to an elevation at least one foot above the top of the pipe bell. During this initial stage of backfilling, approved granular materials or loose soil free from lumps, clods, or stones shall be deposited in layers approximately 12-inches thick and compacted by manually operated machine tampers actuated by compressed air, or other suitable means. Tampers and machines shall be suitable for the work, and subject to approval by ENGINEER.
- C. Backfill Material: Excavated material, free from roots, rocks larger than 3½ inches in size and building debris.
- D. Fill under landscaped areas: Free from alkali, salt, and petroleum products. Use sub-soil excavated from site only if conforming to specified requirements.
- E. Imported Backfill:
 - 1. Materials for use as base, fill and backfill shall be as described below.
 - a. Satisfactory soil materials are defined as those complying with American Association of State Highway and Transportation Officials (AASHTO) M-145, soil classification Groups A-1, A-2-4 and A-3, and as described as common fill, below.

- b. Common fill material shall be a satisfactory soil material containing no more than 20 percent by weight finer than N. 200 mesh sieve. It shall be free from organic matter, muck, marl and rock exceeding 3 ½ inches in diameter. Common fill shall not contain broken concrete, masonry, rubble or other similar materials.
- F. Unsuitable Material: Unsatisfactory soil materials are those defined in AASHTO M-145 soil classification Groups A-2-5, A-2-6, A-2-7, A-4, A-5, A-6 and A-7 along with peat and other highly organic soils.

PART 3 - EXECUTION

3.1 PREPARATION AND LAYOUT

- A. Establish extent of excavation by area and elevation. Designate and identify datum elevation.
- B. Set required lines and levels.
- C. Maintain bench marks, monuments and other reference points.

3.2 UTILITIES

- A. Before starting excavation, establish the location and extent of underground utilities occurring in the work area.
- B. Notify ENGINEER if utility lines which are in the way of excavation are uncovered.
- C. Protect active utility services uncovered by excavation.
- D. Remove abandoned utility service lines from areas of excavation. Cap, plug or seal such lines and identify at grade.
- E. Accurately locate and record abandoned and active utility lines re-routed or extended on Project Record Documents or any utility lines which are not shown but are discovered or discovered in a new location during construction.

3.3 TRENCHING

- A. Ensure trenching does not interfere with normal 45 degree bearing splay of any foundation.

- B. Excavate in accordance with lines and grades.
- C. Cut trenches sufficiently wide to enable proper installation of pipe and to allow for inspection. Trim and shape trench bottom and leave free of irregularities, lumps and projections.
- D. Do not disturb soil within branch spread of existing trees or shrubs that are to remain. If it is necessary to excavate through roots, perform work by hand and cut roots with a sharp axe.
- E. When complete, request ENGINEER to inspect excavations. Correct unauthorized excavation as directed, at no cost to OWNER.
- F. Remove excess or unsuitable excavated sub-soil from site. All overexcavations or undermining shall be backfilled and tamped with suitable materials.
- G. Where deemed necessary by the Engineer, any undermining of soil beneath adjacent driveways, sidewalks, curb, roadways, footer or any other improved surface shall be filled with flowable fill at no additional cost to the Owner.
- H. Where wet or unsuitable materials are encountered at or below the excavation depth shown on the plans, the unsuitable material shall be removed and replaced to a depth of 8 inches below the excavation depth and replaced with suitable backfill material or FDOT #57 stone wrapped in filter fabric.
- I. Contractor shall provide all sheeting necessary to construct and protect the excavation, existing utilities, structures and private property.

3.4 DEWATERING

- A. Keep trenches dry. Provide necessary equipment including pumps, piping and temporary drains.
- B. Do not discharge drainage water into municipal sewers without municipal approval. Ensure water discharge does not contain silt held in suspension.
- C. Direct surface drainage away from excavated areas.
- D. Control the grading in and adjacent to excavations to prevent water running into excavated areas or onto adjacent properties or public thoroughfares.
- E. Furnish and operate suitable pumps on a 24 hour basis to keep excavations free of water until piping has been placed and backfilling has been completed.
- F. No water shall be allowed to rise over masonry or mortar until the concrete or mortar has set at least 24 hours.

- G. The Contractor is responsible for acquiring all necessary dewatering permits at no cost to the Owner.
- H. Dewatering pumps must comply with City noise ordinance.

3.5 BACKFILLING

- A. Do not start backfilling until piping has been inspected.
- B. Ensure trenches are free of building debris, wood, rocks over 3½ inches in diameter and water.
- C. Backfill systematically and as early as possible to allow maximum time for natural settlement and compaction.
- D. After backfill has reached a point one foot above the top of the pipe, a variation in the procedure as to manner of placing and amount of compaction to fill will be allowed, depending upon the location of the work and danger from subsequent settlement, as follows:
 - 1. For backfilling in unimproved areas (along utility easements and in parkway strip beyond the edge of driveways and graveled parking areas), from an elevation of one foot above top of pipe to the surface of the ground, backfill may be deposited by equipment. Depositing in layers, or tamping will not be required. Sufficient surplus excavated material shall be neatly rounded over the trench, to compensate for settlement. All surplus excavated materials beyond that indicated above shall be disposed of by Contractor.
 - 2. For backfilling beneath driveways and parking areas, alleys, and streets where non-rigid type surfacing is to be replaced. This shall also include dirt, gravel or asphalt driveways and alleys.
 - a. The backfill material shall be carefully deposited in uniform layers not to exceed 12-inches in thickness and each layer shall be compacted to 98% of maximum density in accordance with AASHTO T-180 with manually operated machine tampers.
 - b. In lieu of the foregoing compaction method, the backfill material and procedure used may be that as specified under Method 3, below.
 - 3. For backfilling across and beneath driveways, sidewalks, parking areas or streets where a rigid type paving is to be replaced (concrete and asphaltic concrete and brick surfaces).
 - a. All backfill material shall be approved granular material of high weight and density. The material shall be carefully deposited in

uniform layers not to exceed 12-inches thick (loose measure), and each layer shall be compacted by ramming or tamping with tools approved by ENGINEER in a manner that does not disturb the pipe. Where necessary, granular base material of the type and thickness specified shall be used for the last layer prior to surfacing.

E. Frequency of Backfill Density Testing

- 1. Density testing shall be required in 12" lifts, above the pipe at intervals not to exceed 300' in unpaved areas; every 100' under pavement and at three (3) locations at perpendicular road crossings. For structures, one test per 12" lift on one side of structure.**

END OF SECTION

SECTION 02260 FINISH GRADING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The Contractor shall, under this Section, supply, place, compact and roll finish grade materials prior to landscaping work.
- B. Finish grade sub-soil.
- C. Cut out areas to receive stabilizing base course materials for paving and sidewalks.
- D. Place, finish grade and compact topsoil.

1.2 RELATED WORK

- A. Section 02210: Excavation and Swale Grading.
- B. Section 02220: Trenching, Backfilling and Compacting.
- C. Section 02934: Sodding.

1.3 PROTECTION

- A. The Contractor shall prevent damage to existing fencing, trees, landscaping, natural features, bench marks, pavement, utility lines, and sprinkler system. Correct damage at no cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil shall be friable loam free from subsoil, roots, grass, excessive amount of weeds, stones and foreign matter; acidity range (ph) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. (Use topsoil stockpiled on site if conforming to these requirements, or as directed by the Engineer.)

PART 3 - EXECUTION

3.1 SUB-SOIL PREPARATION

- A. Rough grade sub-soil systematically to allow for a maximum amount of natural settlement and compaction. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones, etc., in excess of 2 inches in size. Remove sub-soil which has been contaminated with petroleum products.
- B. Cut out areas, to sub-grade elevation, which are to receive stabilizing base for paving and sidewalks.
- C. Bring sub-soil to required levels, profiles and contours. Make changes in grade gradual. Blend slopes in to level areas.
- D. Slope grade away from building minimum 4 inches in 10 feet (unless indicated otherwise on Drawings).

3.2 PLACING TOPSOIL

- A. Place topsoil in area where seeding, sodding and planting is to be performed. Place to the following minimum depths, up to finished grade elevations:
 - 1. 6-inches for seeded areas.
 - 2. 4 1/2-inches for sodded areas.
 - 3. 24-inches for shrub beds.
 - 4. 18-inches for flower beds.
- B. Use topsoil in relatively dry state. Place during dry weather.
- C. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles and contours of sub-grades.
- D. Remove stones, roots, grass, weeds, debris and other foreign material while spreading.
- E. Manually spread topsoil around trees, plants, buildings and other structures to prevent damage which may be caused by grading equipment.
- F. Lightly compact placed topsoil.

3.3 SURPLUS MATERIAL

- A. Remove surplus sub-soil and topsoil from site.
- B. Leave stockpile areas and entire job site clean and raked, ready to receive landscaping.

END OF SECTION

SECTION 02350 TREE PROTECTION & ROOT PRUNING

PART 1 - GENERAL

1.1 SUMMARY

- A. This item shall consist of furnishing all labor, materials, tools and equipment required to protect those trees designated to remain on the site. Protection of designated trees shall include directing heavy construction work activity away from the protected trees. Section Includes the pruning of trees that interfere with, or are affected by, execution of the Work, whether temporary or new construction.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Tree Pruning Schedule: Written schedule from certified arborist detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
- C. Qualification Data: For tree service firm and arborist, ISA certification required. **Registered Broward County Tree Trimmer is a requirement.**
- D. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly pruned and repaired when damaged.
- E. Maintenance Recommendations: From certified arborist, for care and protection of trees affected by construction during and after completion of the Work.
- F. Provide final log of work performed including any damage that occurred during construction and subsequent repairs.

1.3 QUALITY ASSURANCE

- A. **Registered Broward County Tree Trimmer is a requirement.**
- B. Tree Service Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site on a full-time basis during execution of the Work
- C. Arborist qualifications: An arborist certified by the International Society of Arboriculture.

- D. Tree Pruning Standards: Comply with ANSI A300 (Part 1), “Trees, Shrubs, and other Woody Plant Maintenance—Standard Practices(Pruning).”
- E. Pre-installation Conference: Before starting tree protection and trimming, meet with representatives of authorities having jurisdiction, Owner, Architect, consultants, and other concerned entities to review tree protection and trimming procedures and responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials for tree/vegetation protection barriers shall conform to the following requirements and AOB E:
 - 1. Mesh Construction Fencing by Conwed or Approved Equal (orange or green color)
 - 2. Cedar Posts (minimum length 6.0 feet)
 - 3. #14 gauge steel wire
- B. Temporary Signs: White or yellow weatherproof material, 8 inch by 40 inch minimum, with 3-inch black letter: text – “Tree Protection Area – Do Not Enter”.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Temporary Fencing: Install temporary fencing around the tree protection zones designated on the plans or where directed by the engineer to protect remaining vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
- B. Temporary Signs: Install temporary signs 60 feet apart, or two per protected tree, whichever is greater, on posts of temporary fencing. Maintain temporary signs and remove when construction is complete.
- C. Tree Trunk Protection: The Contractor shall provide 2 inches by 8 inches by 8-ft. boards, banded continuously around each trunk to prevent scarring of trees shown on the plans or designated by the Certified Arborist. For multi-stem trees, saplings, and shrubs to be protected within the area of construction, temporary fencing may be used for trunk protection.

The Contractor shall repair or replace any and all damaged plant material determined by the Certified Arborist to any existing or newly installed plant

material at its own expense. Unnecessary damage to ground cover or turf shall be repaired or replaced as specified for restoration of similar areas within the plans, or as directed by the Certified Arborist, and shall be at the Contractor's expense.

- D. **Root Zone Protection:** During the entire construction period all reasonable efforts shall be made to protect from damage those trees and their root system designated to remain. Around the trees to be protected, the Contractor shall avoid excessive excavation or compaction and damage during the removal of trees and shrubs designated to be removed. All plant material designated to be saved, or outside of the limits of construction, shall be protected during subsequent construction work. Work under these items will include construction and maintenance of temporary fencing to protect the root zones of existing trees and other plantings, construction and maintenance of tree trunk protection.

A protection barrier or temporary fence of at least 1.2m (4 feet) in height shall be installed around each tree to be protected and preserved. The tree protection shall be installed prior to the actual construction start and maintained for the duration of the project.

Within this protection zone, construction materials shall not be stored, equipment operated and/or temporary storage buildings or work trailers placed.

The protection barrier shall be constructed of orange snow fencing securely fastened to fence posts spaced a maximum of 1.5 m (5 feet) on center. Posts are 1.8m (6 feet) in length with 60 cm (2 feet) set into the ground and 1.2m (4 feet) extending above ground. The fencing shall be attached to the post with a minimum of four (4) nylon-locking ties evenly placed at each post.

- E. **Dimensions of the protection barrier are as follows:**

1. **Trees located in Tree Pits:**
 - a. Where trees are located within Tree Pits, the fencing should be installed at a minimum distance of the inside dimension of the Tree Pit opening with one stake at each corner of the opening.
2. **Trees Located in Parkways or Boulevards:**
 - a. **Small Trees (<9" D.B.H.):** Minimum 1.5m (5 feet) from face of tree along the parkway length. In the dimension bordered by the public sidewalk or curb, the fencing shall be the width of the grass parkway with a maximum offset of 30cm (1 foot) from back of curb or edge of sidewalk. In no case shall the closure be less than 61cm (2 feet) from the centerline of the tree. (Example: 6" Tree in a 6' parkway as measured from back of curb to sidewalk. The dimension of the protection fencing would be 1.2m x 3m (4' x 10') with tree in the center). Note: Larger grass parkways (>12') may allow for a ten-foot by ten foot (10' x 10').

- b. **Medium (10" to 15" D.B.H.):** Minimum of ten (10) feet from face of tree along the parkway length. In the dimension bordered by the public sidewalk or curb, the fencing shall be the width of the grass parkway with a maximum offset of one (1) foot from back of curb or edge of sidewalk. In no case shall the closure be less than two (2) feet from the centerline of the tree.
- c. **Large (>15" D.B.H.):** Minimum of fifteen (15) feet from face of tree along the parkway length. In the dimension bordered by the public sidewalk or curb, the fencing shall be the width of the grass parkway with a maximum offset of one (1) foot from back of curb or edge of sidewalk. In no case shall the closure be less than two (2) feet from the centerline of the tree.

The Contractor shall be responsible to protect all trees from damage at the construction site in accordance with Municipal Code Title 10 Chapter 32. It shall be the responsibility of the Contractor to restore all damaged parkways to their original condition. Any trees damaged as a result of construction activity as determined by the Certified Arborist shall be repaired, removed and/or replaced at the Contractor's expense. The Contractor as specified in the Municipal Code shall pay liquidated damages in the amount of the appraised value of the tree(s).

At a minimum, any tree greater than 4" D.B.H. that is permanently damaged due to the construction project and not originally marked for removal shall be replaced with a new tree as identified by the Owner and shall have a minimum of 4" caliper B&B. Any damaged tree smaller than 4" caliper measured 6" above the ground shall be replaced in kind, inch for inch.

- F. Materials shall be disposed of in accordance with specifications.
- G. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- H. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.
- I. Do not allow fires under or adjacent to remaining trees or other plants.

3.2 EXCAVATION

- A. Install shoring or other protective support systems to minimize shoring or benching of excavations.

- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks and comb soil to expose roots.
 - 1. Relocate roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and relocate them without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical; cut roots approximately 3 inches (75 mm) back from new construction.
 - 2. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect
 - 3. Do not allow heavy equipment in tree protection areas. All excavation work is to be performed by hand.
- D. Root Pruning: Do not cut main lateral roots; cut only smaller roots that interfere with installation of utilities or construction. Cut roots with sharp pruning instruments; do not break or chop.
- E. When excavating, place excavated soil on opposite side of trench from tree.

3.3 ROOT PRUNING

- A. Root pruning shall take place only where the roots of existing trees will be impacted by the Contractor during construction of the Project, as directed by the Certified Arborist.
- B. If construction is to occur within the root zone of existing plant material, root pruning and special plant care including fertilizing and watering will be required, as directed by the Certified Arborist and hereinafter specified. Prior to root pruning, remove all weeds growing in existing tree mulch rings. Root pruning using an approved mechanical root pruning saw shall be performed prior to digging where noted on the plans, or directed by the Certified Arborist. Air Spading excavation consisting of hand and/or pneumatic excavation may be required if indicated on plans or as directed by Certified Arborist. Whenever roots of plant material to remain are exposed during construction, the damaged root ends are to be removed by cutting them off cleanly.
- C. Initial watering shall be performed on all trees, which are designated for root pruning. Water trees immediately by thoroughly saturating root balls and provide a horticultural watering bag, such as a Gator Bag or equivalent, filled with water to keep root balls thoroughly saturated during first three weeks following root pruning. Thereafter refill bags as required, according to weather conditions, to keep root balls

in a moist condition during growing seasons, through the duration of the Project. Test root balls for optimal moisture once a week using a soil auger.

- D. Contractor shall be responsible for the location of all utilities prior to instillation of trees. Notification of all local Utilities Alert Network is required for all planting sites.
- E. All pruning shall be overseen by a professional arborist (someone whose principal occupation is the care and maintenance of trees). All pruning shall be done according to the National Arborist Association's Pruning Standards for Shade Trees Class 11 - Standard Pruning Specifications.
- F. Any damage to the root zone, as determined by the Certified Arborist, will be compensated by pruning an equivalent amount of the top vegetative growth of the material within 1 week following root damage, fertilization and supplemental watering.
- G. Fertilize damaged trees with fertilizer that promotes root growth. Fertilizer nutrients shall be applied within 48 hours after root damage occurs. Fertilizer nutrients shall be applied within 48 hours after root damage occurs. A fertilizer with a 1: 1: 1 ratio shall be applied at the rate of .5 pounds of nutrients per 1000 square feet (2 kg per 90 square meters).
- H. Application shall be accomplished by placing dry fertilizer in holes in the soil. The holes shall be 8 inches (200 mm) to 12 inches (300 mm) deep and spaced 24 inches (600 mm) apart in an area beginning 30 inches (1 meter) from the base of the plant. Holes can be punched with a punch bar, dug with a spade, drilled with an auger or any other method approved by the Certified Arborist.
- I. Approximately 0.02 pounds (10 grams) of fertilizer nutrients shall be placed in each hole 250 holes per 1000 square feet (90 square meters). Fertilizer Nutrients shall not be measured for payment but considered incidental to root pruning. If the Certified Arborist determines that the whole method of fertilizer placement is not practical or desirable, an approved method of uniform surface application will be allowed. Neither separate measurement nor payment will be made for fertilization, but will be considered incidental to the cost of tree protection.
- J. Supplemental water shall be applied within 48 hours of any root damage. The water shall be applied at the rate of 7 quarts per square yard of surface area within the root zone of plant material having sustained damage to the root zone. Root zone shall be calculated as the areas, which extend three meters beyond the limits of the crown's branches. Subsequent weekly watering shall be applied if deemed necessary by the Certified Arborist. Neither separate measurement nor payment will be made for supplemental watering but will be considered incidental to the cost of tree protection.

- K. The Contractor shall repair or replace any and all damage determined by the Certified Arborist to any existing or newly installed plant material at its own expense. Unnecessary damage to ground cover or turf shall be repaired or replaced as specified for restoration of similar areas within the plans, or as directed by the Certified Arborist, and shall be at the Contractor's expense.
- L. Materials shall be disposed of in accordance with specifications.

3.4 REGARDING

- A. Do not fill within tree protection zones, unless otherwise indicated.
- B. Where filling for new construction is required within drip line of trees, perform work by hand to minimize damage to root system.
 - 1. Where existing grade is below elevation of finish grade, fill with topsoil. Place topsoil by hand in a single uncompacted layer and hand grade to required finish elevations.

3.5 TREE PRUNING

- A. Prune trees to remain that are affected by temporary and permanent construction.
- B. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
- C. Cut branches with sharp pruning instruments; do not break or chop.
 - 1. Clean all pruning instruments with antimicrobial solution between performing work on separate trees to avoid the potential spread of pathogens.
- D. Chip removed tree branches and use as organic mulch or dispose off-site.

3.6 TREE REPAIR AND REPLACEMENT

- A. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
- B. Remove and replace dead and damaged trees that arborist determines to be incapable of restoring to a normal growth pattern.
 - 1. Provide new trees of a 6-inch caliber size and of a species selected by Architect when damaged trees more than 6-inch caliber size, measured at breast height, are required to be replaced.
 - 2.
 - a. Planting New Trees: Comply with Columbia University standards.

- b. Warranty and Maintenance Period: One year.
- C. Aerate surface soil, compacted during construction, 10 feet (3 m) beyond drip line. Drill 2-inch (50-mm) diameter holes a minimum of 12 inches (300 mm) deep at 24 inches (600 mm) o.c. Backfill holes with an equal mix of augered soil and sand.

3.7 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess excavated material, displaced trees, and excess chips from Owner's property. Disposal shall be in a legal manner.

END OF SECTION

SECTION 02367

SHEET PILES

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This section covers the work necessary for the temporary sheet piles and cells, complete.
- B. The cost of sheet piles, if required, will be incidental to the drainage system installation.

1.2 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Society for Testing and Materials (ASTM):
 - a. A36, Structural Steel.
 - b. A183, Carbon Steel Track Bolts and Nuts.
 - c. A123, Zinc (Hot-Dip Galvanized) Coating on Iron and Steel Products.
 - d. A153, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware (R 1987).
 - e. A307, Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
 - f. A328, Steel Sheet Piling.
 - g. A572, High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality.
 - h. Comply with all OSHA Standards.

1.3 DEFINITIONS

- A. Elevations: Referenced to NAVD 1988.
- B. Obstruction: Sudden and significant increase of penetration resistance and deviation of pile out of tolerance resulting from encountering a subsurface or physical condition.
- C. Practical Refusal: Penetration resistance of at least 120 blows per foot for 3 continuous feet, 200 blows per foot for 1 foot, or 50 blows per inch for 2-consecutive inches, whichever comes first, and to continue driving pile would be

impractical. These criteria apply only for hammer sizes and operation as specified.

- D. Rated Hammer Energy:
 - 1. Diesel Hammers: Product of rated stroke times ram weight.
 - 2. Air Hammers: Rated energy from manufacturer's literature.
- E. Refusal: Zero rate of penetration for 10 seconds during pile driving.
- F. Set: Pile penetration in inches per blow.
- G. Sweep: Deviation from straightness measured along two perpendicular faces of pile while not subject to bending forces.
- H. Termination Penetration Resistance: Penetration resistance exceeding 60 blows per foot at which driving may be terminated.

1.4 SUBMITTALS

- A. Administrative Submittals: Pile driving schedule.
- B. Shop Drawings: Indicate tie rods and accessories, number of piles required, fabricated comers, and detail dimensions.
- C. Quality Control Submittals:
 - 1. Manufacturer's product data prior to ordering piles.
 - 2. Written sequence of setting and driving operation
 - 3. Drilling: Manufacturer's literature on equipment and operation procedures.
 - 4. Hammers: Manufacturer's specifications and catalog information. Show data necessary for computing bearing value of piles driven.
 - 5. Installer qualifications.
- D. If installed as sheet-piled cells, submit revised wet well sections including antiflotation calculations proposed by a Florida Professional Engineer.

1.5 QUALIFICATIONS

- A. Piling Installer: Minimum of 5 years of past successful experience on 10 projects of sheet pile installation (submit project list to Engineer).

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Sheet Piles: Lift and handle so that maximum bending stresses shall not exceed 22,500 pounds per square inch.

1.7 SPECIAL TOOLS

- A. Tool checking interlock dimensions.

PART 2 - PRODUCTS

2.1 SHEET PILES

- A. Minimum size and wall thickness shown manufactured to ASTM A572, Grade 50.
- B. Sections: Continuously interlocking type, structural characteristics as follows:

Section Designation	Nominal Web Thickness/In.	Weight Per SF-Pounds	Sect. Modulus Per LF/Cu.In.
PZ38	3/8 by 1/2	38.0	46.8
PZ32	3/8 by 1/2	32.0	38.3
PZ27	3/8	27.0	30.2
PDA27	3/8	27.0	10.7
PMA22	3/8	22.0	5.4
PSA23	3/8	23.0	2.4
PSA28	1/2	28.0	2.5
PS28	3/8	28.0	1.9
PS32	1/2	32.0	1.9
PSX32	29/64	32.0	2.4

- C. Section Modulus: Base on individual whole piece, not dependent on the interlock friction between pile sections to secure the required section modulus.
- D. Pulling (Handling) Holes: Manufacturer's standard, additional will not be allowed.
- E. Tolerances: Weight per square foot may not vary by more than 2-1/2 percent over or under that specified.

2.2 ACCESSORIES

- A. Tie Rod Assembly: Adjust spacing, size, plate dimensions, and length of tie rods if piling sections are of different proportions.
 - 1. Tie Rods:
 - a. Fabricated Steel: ASTM A36, upset ends, threaded American Standard Free Fit, Class 2.
 - b. Coat with grease and wrap for protection from rust and physical damage while in transit.
 - 2. Turnbuckles:
 - a. Forged steel with American Standard Class 2 fit threads, takeup, and other dimensions as shown in American Institute of Steel Construction, Manual of Steel Construction.
 - b. Finished with parts properly shaped and free from fins, cracks, flaws, seams, and other injurious defects.
 - c. Screw Threads: True to form, clean cut, and free from injurious defects.
 - d. Nuts: Standard hexagon, American Standard Class 2 fit threads.
- B. Steel Shapes, Plates, Bars, and Washers:
 - 1. General: ASTM A36, provide cut washers for each bolt head and nut.
 - 2. Bolts: ASTM A307, of length to finish 1/4 inch outside the nut and have additional thread to retighten.
 - 3. Hardware: Hot-dip galvanize, ASTM A123.

PART 3 - EXECUTION

3.1 DRIVING EQUIPMENT

- A. Air or Steam Hammer: Minimum manufacturers' rated capacity of 24,000 foot-pounds of energy per blow.
 - 1. Pressure Gauge: Locate near hammer for measuring air or steam pressure.
- B. Diesel Hammers:
 - 1. Ram Weight: Not less than 3,600 pounds.
 - 2. Energy Developed: Exceed 13,000 foot-pounds per blow.

- C. Sonic Hammers: Use of adequate size and type. Demonstrate capability prior to approval for pile driving.
- D. Drop Hammer or Combination of Water Jets and Hammer:
 - 1. Drop Hammers:
 - a. Weight:
 - 1) Piles 50 Feet Long or Less: Minimum 3,000 pounds.
 - 2) Piles Over 50 Feet Long: Minimum 4,000 pounds.
 - b. Drop Height: Maximum 10 feet.
 - c. Hammer Head: Certified, weight stamped.

3.2 PILE LENGTHS

- A. Lengths shown are those required below cutoff as shown on the shop drawings. Furnish sheet piling with sufficient extra length to provide for fresh heading and to reach from the cutoff elevation up to position of driving equipment.

3.3 DRIVING GUIDES

- A. Position sheet piles using temporary guide wales support and anchor guide wales to form rigid structures during the sheet pile setting and driving operation.
- B. Guide Wales: Stationary (not moveable) with fluctuating water stage.

3.4 SETTING

- A. Clean pile, inspect for defects and proper interlock dimensions.
- B. Allow pile sufficient clearance in the interlocks to slide, under its own weight, in the interlock of the sheet pile previously placed until the top of existing ground is reached by the tip of the sliding pile. Do not use vibratory or drive hammer to force the interlocking of piles.

3.5 DRIVING

- A. Before driving is started. check sheet piles for position and alignment. Locate pile top within 2 inches of location shown.
- B. Drive sheet piles to the tip elevations shown. Drive down piles which are raised during the process of driving adjacent piles.

- C. If refusal is reached before driving to the specified tip elevation, an impact hammer or controlled jetting may be used. Perform jetting on both sides of sheet pile simultaneously with driving.
- D. Remove and replace sheet pile driven out of interlock.
- E. Driving Tolerances:
 - 1. Not more than 1/8 inch per foot from the vertical in all directions. Furnish plumb line or other device for checking vertical alignment.
 - 2. Not more than 1 percent from vertical or 2 percent from batter shown.

3.6 PILE CUTOFF

- A. Cut square at required elevation with tools that will not damage area below cut surface.
- B. Tolerance: Plus or minus 1/2 inch.

3.7 CUTTING AND SPLICING PILES

- A. Extend to required grade by welding on additional full length piles driven below grade, and piles with damaged heads which have been cut off to permit further driving.
- B. Pile Splicing: Butt weld, making full penetration of the web. Piles adjoining spliced piles shall be full length piles.

3.8 WALES AND CAPS

- A. After driving sheet piling, install channel wales. Bolt splices in wales with field bolts. Set wales horizontal.
- B. Installation:
 - 1. Weld Splices using a single bevel butt joint, welded on one side on backing structure.
 - 2. Space wales within 1/4 inch for welded splices. Fabricate accessories by welding or as otherwise shown.

3.9 TIE ROD ASSEMBLIES

- A. Installation:
 - 1. Hand backfill tie rods to 6-inch depth above rods.

2. Support tie rods in straight line from bulkhead to anchor wall.
 3. Maintain tie rod support until such time as rod is tensioned.
- B. Use sandfill or wood cribbing to maintain tie rod alignment.
- C. Tension tie rods with turnbuckles in ENGINEER's presence. Lubricate turnbuckles with graphite prior to tensioning.

3.10 TIE ROD HOLES .

- A. Neatly cut through sheet piles by mechanical means. Flame cutting shall not be used.
- B. Spacing may vary up to 4 inches to avoid cutting sheet pile interlocks.
- C. Variations in Spacing: Prevent an accumulative variation of more than 4 inches.

3.11 SITE RESTORATION

- A. Sheet piles to be removed by Contractor.**

END OF SECTION

SECTION 02513 ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Prepare sub-grade to receive base course.
- B. Place stabilizing base courses, work and compact.
- C. Prime base course, place asphalt pavement.
- D. Prepare existing pavement to receive asphalt overlay. Place asphalt pavement overlay.

1.2 RELATED WORK

- A. Section 01410: Testing Laboratory Services.
- B. Section 02580: Pavement Marking.

1.3 REFERENCE STANDARDS

- A. ASTM D1557 - Tests for Moisture - Density Relationship of Soils using 10 lb. Rammer in 18 inch Drop.
- B. AASHTO M-81 - Penetration Graded Asphalt Cement.
- C. AASHTO M-140 - Emulsified Asphalt.
- D. FDOT Road and Bridge Construction - Section 200 - Rock Base.
- E. FDOT Road and Bridge Construction - Section 204 – Graded Aggregate Base.
- F. FDOT Road & Bridge Construction - Section 230 - Limerock Stabilized Base
- G. FDOT Road and Bridge Construction - Section 283 - Reclaimed Asphalt Pavement Base
- H. FDOT Road & Bridge Construction - Section 300 – Prime Tack Coats for Base Courses

- I. FDOT Road & Bridge Construction - Section 320 – Hot Bituminous Mixtures – Plant, Methods and Equipment
- J. FDOT Road and Bridge Construction - Section 330 - Hot Bituminous Mixtures General Construction Requirements.
- K. FDOT Road and Bridge Construction - Section 916-1 - Asphalt Cement.

1.4 TESTING AND INSPECTION

- A. Testing and inspection of asphalt pavement mixes and testing of placed stabilizing base course and asphalt pavement will be performed by an independent testing laboratory, in accordance with Section 01410-Testing Lab Services. Testing and inspection will be performed so as to minimize disruption to work.
- B. Allow testing laboratory access to the mixing plant for verification of weights or proportions, character of materials used and determination of temperatures used in the preparation of asphalt concrete mix.
- C. When and if required, the testing laboratory will perform laboratory tests on proposed asphalt pavement mixes to determine conformity with requirements.
- D. The testing laboratory will perform one series of compaction tests for stabilizing base course and for asphalt pavement. The contractor shall pay for costs of additional testing as required due to improper performance of work and for failed tests. Core samples are to be obtained for asphalt compaction verification as indicated by Engineer.
- E. When stabilizing base course or portion thereof has been placed and compacted in accordance with requirements, notify the testing laboratory to perform density and bearing value tests. Do not place asphalt pavement until results have been verified and base course installation approved.
- F. If compaction tests indicate that stabilizing base course or asphalt paving do not meet specified requirements, remove defective work, replace and retest at Contractor's expense.

PART 2 - MATERIALS

2.1 LIMEROCK

- A. The limerock material shall conform to FDOT Standard Specification for Road and Bridge Construction, Section 200, Section 230 and Section 911.

- B. Limerock Bearing Requirements - Limerock material used in construction of limerock base shall have an average LBR value of not less than 100. The average LBR value of material produced at a particular source shall be determined in accordance with an approved quality control procedure.

2.2 CRUSHED CONCRETE

- A. Composition - The minimum percentage of carbonates of calcium and magnesium in the material shall be 70. All foreign material such as metal fragments, organic matter, etc. shall be removed from the material before delivery to the job site.
- B. Gradation - 100 percent (by weight) of the material shall pass a 3 inch sieve, with 40 percent to 70 percent passing the number 10 sieve. Not more than 20 percent, by dry weight, of the material shall pass the 200 sieve by washing. all crushing or breaking up which might be necessary in order to meet such size requirements shall be done before the material is placed on the road.
- C. Bearing Requirements - The Crushed Concrete Base shall have an average Limerock Bearing Ratio (LBR) of not less than 100. The average LBR value of material produced at a particular source shall be determined in accordance with an approved quality control procedure.
- D. **Crushed Concrete may be substituted for Limerock as base material by adding 2 inches to the specified thickness.**

2.3 PRIME COAT

- A. Prime coat shall conform to FDOT Standard Specification for Road and Bridge Construction, Section 300.

2.4 TACK COAT

- A. Tack coat shall conform to FDOT Standard Specification for Road and Bridge Construction, Section 300.

2.5 TYPE S ASPHALTIC CONCRETE

- A. Asphaltic concrete surface course - Type S-III asphaltic concrete wearing surface, 1½ inches in compacted thickness or as indicated on the Drawings.
- B. Materials.
 - 1. Bituminous Material: Use Asphalt Cement, Viscosity Grade AC-20 or AC-30 meeting the requirements of FDOT Section 916-1.

2. Aggregate: Use aggregate consisting of crushed stone or crushed slag screenings, or a combination of these screenings with silica sand, that meets the gradation requirements and that provides the required stability of the mix, as specified below. Use crushed stone or crushed slag screenings that meet the requirements of Section 901. Use sand that meets the requirements of 332-2.2.3. Do not use aggregate containing any appreciable amount of phosphate.
3. Mineral Filler: If needed, meet the requirements of Section 917.

C. Composition of Mixture.

1. General: Use a bituminous mixture composed of a combination of aggregate (coarse, fine, or mixtures thereof), mineral filler if required, and bituminous material. Size, uniformly grade, and combine the several aggregate fractions in the proportions that the resulting mixture meets the grading and physical properties of the verified mix design.

The Contractor may use RAP meeting the requirements of 331-2.2.4 as a substitution for a portion of the combination of aggregates. If using RAP, the Contractor may use a recycling agent in accordance with the requirements of 331-2.2.5 in the mix in lieu of asphalt cement.

The Contractor may use recycled crushed glass meeting the requirements of 331-2.2.6 as a substitution for a portion of the combination of aggregates.

2. Grading Requirements:
 - a. General: Use a mix design that has been verified by the Engineer and meets the design range specified in Table 331-1.
 - b. Gradation: When tested before entering the asphalt plant in the combination to be used, ensure that the aggregate, including any mineral filler, does not contain more than 10% by weight of material passing the No. 200. Do not use any screenings in the combination of aggregate that contain more than 15% of material passing the No. 200 sieve. When blending two screenings to produce the screenings component of the aggregate, the Contractor may allow any component of such screenings to contain up to 18% of material passing the No. 200 sieve. The Contractor may wash screenings to meet these requirements. Use screenings that are free from lumps and foreign matter.
 - c. Proportions of Sand and Screenings: Allow no more than 25% by weight of the total aggregate used to be local sand. In addition to the local sand, the Contractor may use commercial washed sand in a quantity not to exceed 15% by weight of the total aggregate.

Obtain the commercial washed sand from an approved source having a Department sand mine number and meeting the requirements of Section 902 except those in 902-2.2.

If used in the mixture, consider the sand portion of RAP material to be local sand.

3. Mix Design:

- a. General: Meet the mix design requirements of 331-4.3. In addition to these requirements, include, in the mix design, test data showing that the material as produced will meet the requirements of Table 331-2.
- b. Stability: Combine the constituents of the mixture in such proportions as to produce a mixture having Marshall properties within the limits shown in Table 331-2.

4. Contractor's Quality Control: Provide the necessary control of the bituminous mixture and construction in accordance with the applicable provisions of 330-2.2 and 331-4.4. Furnish materials that meet the verified mix design. For the extraction gradation analysis, meet the provisions of 331-4.4.2 and Table 331-3. For plant calibration, meet the provisions of 331-4.4.3 and Table 331-3.

D. Acceptance of Mixture.

1. Acceptance at the Plant: The Engineer will accept the bituminous mixture at the plant with respect to gradation and asphalt content in accordance with the requirements of 331-4.
2. Acceptance on the Roadway: The Engineer will accept the bituminous mixture on the roadway with respect to compacted density and surface tolerance in accordance with the applicable provisions of 330-11 and 330-13.
3. Additional Tests: The Engineer will apply the provisions of 331-5.5 to Type III Asphaltic Concrete.
4. Mix temperature must be $\pm 30^{\circ}$ F of mix design prior to placement.

PART 3 - EXECUTION

3.1 INSTALLATION AND QUALITY CONTROL

- A. Installation and quality control of the asphaltic concrete pavement shall be in conformance with FDOT Standards for Road and Bridge Construction, latest

edition, Section 300 – Hot Bituminous Mixtures – General Construction Requirements.

END OF SECTION

SECTION 02521 FLOWABLE FILL

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. This Section specifies the requirements for flowable fill used for trenches, support for pipe structures, culverts, utility cuts and other works where cavities exist and where firm support is needed for pavements and structural elements. Flowable fill may also be used to fill water pipes that need to be abandoned in place and at other locations approved by the Engineer.

1.2 REFERENCE SPECIFICATIONS

- A. Section 01010 - Summary of Work
- B. Section 01090 - Reference Standards
- C. Section 01300 - Submittals
- D. Section 02220 - Trenching, Backfilling and Compacting

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The materials used shall conform with the requirements specified in Division III of the F.D.O.T. Standard Specification for Road and Bridge Construction, latest edition, and herein. Specific reference are as follows:

- | | | |
|----|--|-------------|
| 1. | Portland Cement (Type I, II or III) | Section 921 |
| 2. | Fly Ash, Slag and other Pozzolanic materials
For Portland Cement Concrete | Section 929 |
| 3. | Fine Aggregate (Sand)* | Section 902 |
| 4. | Water | Section 923 |

*Any clean sand with 100% passing 3/8" sieve and not more than 10% passing with 200 mesh may be used.

2.2 MIX PROPORTIONS

- A. The Contractor shall be responsible for producing a flowable mixture using these guidelines and by adjusting his mixture design as called for by circumstances or as may be directed by the Engineer.
- B. Flowable fill material shall be proportioned to produce a 28-day compressive strength of a minimum of 100 psi.
- C. General mix quantities are as follows:

<u>Components</u>	<u>Pounds per Cubic Yard</u>
Cement	50-100*
Fly Ash or Granulated Blast Furnace Slag	0-600
Fine Sand	2,750
	(Adjust to yield one cubic yard of flowable fill)
Water	500 (Max.)

*The percentage of cement may be increased above these limits only when early strength is required and future removal is unlikely.

- D. Weights for fine aggregates and water shall be adjusted for removability, pumpability and flowability. If required, strength test data shall be provided prior to batching.
- E. If required by the Engineer, the flowability can be measured by afflux time determined in accordance with ASTM C 939 and shall be 30 seconds +/- 5 seconds as measured on mortar passing the No. 4 sieve. The equipment required to perform this test shall be provided by the Contractor.

PART 3 - EXECUTION

3.1 PRODUCTION AND PLACING

- A. Flowable fill shall be produced and delivered using ready mix concrete trucks and placed easily by chute in a flowable condition directly into the cavity to be filled or into a pump for final placement.
- B. The flowable fill shall be placed to the designated fill line without vibration or other means of compaction. Placement shall be avoided during inclement weather, e.g. rain. The Contractor shall take all necessary precautions to prevent any damages caused by hydraulic pressure of the fill during placement prior to

hardening. Also, necessary means to confine the material within the designated space shall be provided by the Contractor.

3.2 ACCEPTANCE

- A. The flowable shall be proportioned and placed as specified herein. In general, the strength desired is the maximum hardness that can be excavated at a later date using conventional excavation equipment. No curing protection is required.
- B. The fill shall be left undisturbed until material obtains sufficient strength. Sufficient strength is 250 psi penetration resistance as measured using a hand held penetrometer. The penetrometer shall be provided by the Contractor.
- C. All flowable fill areas subject to traffic loads must have a durable riding surface.
- D. An approved type of accelerator may be approved for the placement of “Flowable Fill” in traffic areas when submitted to the Engineer. Depending on the condition of the cavity, paving can begin from 8-24 hours after placement.

END OF SECTION

SECTION 02526 CONCRETE SIDEWALKS AND DRIVES

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This Section covers work necessary to construct, replace or repair concrete sidewalks, drives and curbs which have been removed or damaged during the course of construction.
- B. Sidewalks, drives and curbs shall be replaced in the same location and to the same dimensions as were the originals unless instructed differently by CITY or ENGINEER.
- C. See GENERAL CONDITIONS which contain information and requirements that apply to the work specified herein and are mandatory for this project.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 02220: Trenching, Backfilling and Compacting.
- B. Section 03300: Concrete.

1.3 SUBMITTALS

- A. Submittals to show conformance with the Specifications shall be made in accordance with the GENERAL CONDITIONS.

PART 2 - PRODUCTS

2.1 FORMS

- A. Materials for forms shall be 2-inch dressed lumber straight and free from defects or standard metal forms may be used. Where short-radius forms are required, 1-inch dressed lumber or plywood may be used. Provide stakes and bracing materials as required to hold forms securely in place.

2.2 EXPANSION JOINT FILLER

- A. Expansion joint filler shall be ½-inch thick, preformed asphalt-impregnated, expansion joint material conforming to ASTM D 994.

2.3 REINFORCEMENT

- A. Welded wire fabric shall conform to ASTM A185 and be sized as indicated on the Drawings.
- B. Deformed reinforcing bars shall conform to ASTM A615 and be sized as indicated on the Drawings.
 - 1. Grade: 60
 - 2. Minimum yield strength: 60,000 psi

2.4 CONCRETE

- A. Concrete shall be as specified in Section 03300 - Concrete and shall have a compressive strength of 3000 psi at 28 days.

2.5 CURING COMPOUND

- A. Liquid membrane-forming curing compound shall be clear or translucent; suitable for spray application and shall conform to ASTM C 309, Type 1.

PART 3 - EXECUTION

3.1 PREPARATION OF SUBGRADE

- A. Bring the areas on which sidewalks, drives and curbs are to be constructed to required grade and compact by sprinkling and rolling or mechanical tamping. As depressions occur, refill with suitable material and recompact until the surface is at the proper grade. The upper 12 inches of subgrade or fill shall be compacted to 95 percent of maximum density at optimum moisture content as determined by ASTM D 1557.

3.2 SETTING FORMS

- A. Construct forms to the shape, lines, grades, and dimensions called for on the Drawings. Stake wood or steel forms securely in place, true to line and grade.
- B. Brace forms to prevent change of shape or movement in any direction resulting from the weight of the concrete during placement. Construct short-radius curved forms to exact radius. Tops of forms shall not depart from gradeline more than 1/8 inch when checked with a 10-foot straightedge. Alignment of straight sections shall not vary more than 1/8 inch in 10 feet.

3.3 SIDEWALK CONSTRUCTION

- A. Sidewalks shall be 6-inches thick.
- B. At locations where the new sidewalk is to abut existing concrete, saw concrete straight and install expansion asphalt joint.
- C. Place preformed asphalt expansion joints at intervals not exceeding 45 feet and around concrete poles, valve boxes, manholes or other objects protruding through the sidewalk.
- D. Provide contraction joints transversely to the walks at intervals not exceeding 5 feet. These joints shall be 3/16-inch by 1-inch weakened plane joints. They shall be straight and at right angles to the surface of the walk.
- E. Place, process, finish and cure concrete in conformance with the applicable requirements of ACI 614 and this Specification. Where the requirements differ, the high shall govern.
- F. Broom the surface with a fine-hair broom at right angles to the length of the walk and tool at all edges, joints and markings. Mark the walks transversely at 5-foot intervals with a jointing tool. Upon completion of the finishing, apply an approved curing compound to exposed surfaces. Protect the sidewalk from damage for a period of 7 days.
- G. Sidewalk pedestrian ramps shall meet ADA requirements.

3.4 DRIVE CONSTRUCTION

- A. Drives shall be 6 inches thick, 9 inches joining to pavement, and reinforced as indicated on the Drawings.
- B. Saw cut existing drive as shown on plans. Remove and dispose of existing drive.
- C. Place reinforcement as required by Drawings.
- D. Place pre-formed expansion joint material where new drive will abut existing drive and around manholes or other objects protruding through the drive.
- E. Construct concrete drives to the dimensions and grade of drives existing prior to construction.
- F. Broom the surface with a fine-hair broom at right angles to the length of the drive and tool all edges and joints. Upon completion of finishing, apply an approved curing compound to exposed surfaces.
- G. Protect drives from damage for a period of seven days.

END OF SECTION

SECTION 02570

MILLING OF EXISTING ASPHALT PAVEMENT

PART 1 - GENERAL

1.1 SCOPE

- A. The work specified in this Section consists of removing existing asphaltic concrete pavement by milling to improve the rideability of the finished pavement, to lower the finished grade adjacent to existing curb prior to resurfacing, or to completely remove existing pavement.
- B. When milling to improve rideability, an average depth of cut will be specified in the plans.
- C. Unless otherwise specified, the milled material becomes the property of the Contractor.

1.2 REFERENCES

- A. Florida Department of Transportation - Standard Specification for Road and Bridge Construction (Latest Edition)

PART 2 - EQUIPMENT

2.1 MILLING MACHINE

- A. The milling machine shall be capable of maintaining a depth of cut and cross slope that will achieve the results specified in the plans and specifications. The overall length of the machine (out to out measurement excluding the conveyor) shall be a minimum of 18 feet. The minimum cutting width shall be six feet.
- B. The milling machine shall be equipped with a built-in automatic grade control system that can control the transverse slope and the longitudinal profile to produce the specified results.
- C. Any commercially manufactured milling machine meeting the above requirements will be approved to start the project. If it becomes evident after milling has started that the milling machine cannot consistently produce the specified results, the milling machine will be rejected for further use.

- D. When milling to lower the grade adjacent to existing curb or other areas where it impractical to use the above described equipment, the use of a smaller milling machine will be permitted.
- E. The milling machine shall be equipped with means to effectively limit the amount of dust escaping the removal operation. For complete pavement removal, the use of alternate removal and crushing equipment, in lieu of the equipment specified above, may be approved by the Engineer.

PART 3 - EXECUTION

3.1 CONSTRUCTION

- A. When milling to improve rideability, the existing pavement shall be removed to the average depth specified in the plans, in a manner that will restore the pavement surface to a uniform cross section and longitudinal profile. The Project Engineer may require the use of a stringline to ensure maintaining the proper alignment.
- B. The contractor may elect to make multiple cuts to achieve the required pavement configuration or depth of cut.
- C. The milling machine shall be operated to effectively minimize the amount of dust being emitted from the machine. Prewetting of the pavement may be required.
- D. If traffic is to be maintained on the milled surface prior to the placement of the new asphaltic concrete, the pattern of striations shall be such as to produce an acceptable riding surface.
- E. Prior to opening an area which has been milled to traffic, the pavement shall be thoroughly swept with a power broom or other approved equipment to remove to the greatest extent practicable, fine material which will dust under traffic. This operation shall be conducted in a manner so as to minimize the potential for creation of a traffic hazard and to minimize air pollution.
- F. Sweeping of the milled surface with a power broom will be required prior to placing asphaltic concrete.
- G. In urban and other sensitive areas where dust would cause a serious problem, the Contractor shall use a street sweeper (using water) or other equipment capable of removing and controlling dust. Approval of the use of such equipment is contingent upon its demonstrated ability to do the work.
- H. To prevent, to the greatest extent practicable, the infiltration of milled material into the storm sewer system when the milling operation is within the limits of and

adjacent to a municipal curb and gutter or a closed drainage system, the sweeping operation shall be performed immediately after the milling operations or as directly by the Engineer.

END OF SECTION

SECTION 02574 PAVEMENT REMOVAL AND REPLACEMENT

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Work included under this Section consists of cutting, removing, protecting and replacing existing pavements of the various types encountered, roadways, driveways, sidewalks, curb and combination curb and gutter.
- B. Protection of Existing Improvements: The Contractor shall be responsible for the protection of all pavements, sidewalks and other improvements within the work area. All damage to such improvements, as a result of the Contractor's operations, beyond the limits of the work of pavement replacement as described herein, shall be repaired by the Contractor at his expense.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials, including limerock, bituminous prime and tack coat, and asphaltic concrete for the above work shall meet the requirements established therefore by the FDOT Specifications.
 - 1. Limerock shall be Miami or Ocala Limerock.
 - 2. Bituminous prime coat material shall be cutback asphalt Grade RC-70.
 - 3. Bituminous tack coat material shall be emulsified asphalt Grade RS-2.
 - 4. Asphaltic concrete shall be Type S-III

PART 3 - EXECUTION

3.1 PREPARATION

- A. *Pedestrian or school crossings:* Where the work crosses or interferes with school or pedestrian crossings, extreme care shall be taken by the contractor to insure the safety of school children or other pedestrians.

3.2 PERFORMANCE

A. Removals:

1. *Pavement Removal:* Where existing pavement is to be removed, the surfacing shall be mechanical saw cut prior to trench excavation, leaving a uniform and straight edge, with minimum disturbance to the remaining adjacent surfacing. The width of cut for this phase of existing pavement removal shall be minimal.
2. *Sidewalk, Drive, and Curb Removal:* Concrete sidewalks, curbs, combination curb and gutter, walks, drive ribbons, or driveways shall be removed by initially sawing the structure, with a suitable power saw, as specified above for pavement. When a formed joint in the concrete exists within 3 feet of the proposed saw cut and parallels the proposed saw cut, the removal line shall be extended to the formed joint. After sawing, the material shall be removed.

B. Restorations:

1. *General:* Street or roadway pavement cut and removed in connection with trench excavation shall be replaced or restored in equal or better condition than the original and as shown on the Drawings. The Drawings indicate minimum requirements.
2. **Pavement Restoration - Asphalt:**
 - a. Limerock base course shall be compacted for its full thickness to not less than 98 percent of maximum density as determined by AASHTO T-180.
 - b. Construction methods and equipment shall generally meet the requirements therefore as established in the FDOT Specifications, but shall be modified to meet the relatively narrow strip construction conditions. Any such modifications shall be approved by the Engineer prior to their use.
 - c. Joints with existing surface and base shall be straight and neat. If necessary to obtain a straight net joint, the Contractor shall cut out sufficient existing material and replace it with new material.
 - d. The upper surface of the completed base course shall be compacted to an elevation to permit the full depth of the surface course to be of the pavement surface. The completed surface shall match the line and grade of the existing surface. When pavement is removed to the edge of the roadway, the replaced base course shall extend not less than 6-inches beyond the edge of the surfacing constructed without deviating from the grade

3. *Driveway Restoration - Asphalt:* Driveway pavement with limerock base cut and removed in connection with trench excavation shall be replaced or restored as specified above for street or roadway pavement, except the new limerock base course shall equal the existing base course in thickness, except that in no case shall new driveway base course be less than 6-inches in thickness. Muck or unsuitable material found under existing driveway construction will not be removed and replaced.
4. Concrete, Sidewalk, Walkway, Driveway Ribbon and Curb Restoration.
 - a. Concrete sidewalks, walkways, driveways, driveway ribbons and curbs required to be removed for the installation of facilities under this Contract shall be restored. Class B concrete shall be used in all cases.
 - b. Replaced portions of these items shall conform to the lines, grades and cross sections of the removed portions. Concrete sidewalks and walkways shall be of 4-inch thickness; concrete driveways and driveway ribbons shall be 6-inch thickness. Replaced concrete curb and/or gutter shall joint neatly to the remaining section.
5. *Pavement Restoration - Concrete:* Rigid pavement shall be replaced in kind with Class B concrete, using high early strength cement.

END OF SECTION

SECTION 02580 PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The work included in this Section consists of applying pavement markings as required to restore disturbed pavement areas. Contractor is responsible for providing temporary painted striping during curing period of asphalt, and between asphalt lifts. Contractor shall provide permanent thermoplastic pavement markings. Work shall adhere to all City and FDOT standards.

1.2 RELATED REFERENCES

- A. All markings shall conform to the requirements of the Manual of Uniform Traffic Control Devices, and FDOT Roadway and Traffic Design Standards.
- B. Thermoplastic shall conform to the requirements of the Florida D.O.T. Standard Specifications for Road and Bridge Construction (Section 711) latest edition.

PART 2 - PRODUCTS

2.1 THERMOPLASTIC

- A. All final permanent markings to be Alkyd thermoplastic only.

2.2 TEMPORARY MARKINGS

- A. Temporary markings on final asphalt shall be only for backed construction tape. Lower asphalt lifts may be marked with paint or any other approved marking material.

2.3 REFLECTIVE PAVEMENT MARKERS (RPM'S)

- A. RPM'S shall meet FDOT Class B Specifications, and shall be installed per drawing details.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Thermoplastic shall not be installed on roadway until ten (10) calendar days after final lift of asphalt has been completed, with the exception of friction course which shall be thirty (30) days.
- B. If existing marking material is not compatible with Alkyd thermosplastic, it shall be removed prior to installation of new markings.

END OF SECTION

SECTION 02661 WATER MAINS

PART 1 - GENERAL

1.1 SCOPE

- A. The work to be performed under this Item shall include the furnishing and installing of water mains and appurtenances as herein described and as shown on the Plans. The Contractor shall perform all excavation, backfilling and related work required for the construction of these mains, in accordance with the provisions set forth under the applicable items of this Specification and of the General Requirements. Where not otherwise set forth, all work shall be in accordance with AWWA (ANSI) C600.

1.2 REFERENCES

Standards applicable in this Specification shall be:

- A. American Water Works Association (AWWA) and American National Standards Institute (ANSI).
1. AWWA C104 (ANSI A21.4) Cement-Mortar Lining for Ductile-Iron and Gray Iron Pipe and Fittings for Water.
 2. AWWA C105 Polyethylene Encasement for Ductile-Iron Pipe Systems
 3. AWWA C110 Gray-Iron and Ductile-Iron Fittings, 3-inch through 48-inch for Water and Other Liquids.
 4. AWWA C111 (ANSI A21.11) Rubber Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
 5. AWWA C150 (ANSI A21.50) Thickness Design of Ductile-Iron Pipe.
 6. AWWA C151 (ANSI A21.51) Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand Lined Molds for Water or Other Liquids.
 7. AWWA C600 Installation of Ductile Iron Water Mains and Appurtenances.
 8. AWWA C601 Standard for Disinfecting Water Mains.
 9. AWWA C900 Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for Water Distribution.
 10. AWWA C901 Polyethylene Pressure Pipe and Tubing for Water Service.

- B. American Association of State Highway and Transportation Official (AASHTO). AASHTO T-180-82 The Moisture-Density Relation of Soils Using a 10-pound. (4.54 kilogram) Rammer and an 18-inch (457 milimeter) Drop.

PART 2 - MATERIALS

2.1 PIPE

- A. Ductile Iron Pipe: Ductile iron pipe shall conform to AWWA C151 (ANSI A21.51) and shall conform to working pressure class 350 psi.
- B. Lining: Ductile iron pipe for water mains shall have an internal lining of cement mortar in accordance with AWWA C104/A21.4.
- C. Coating: Buried ductile iron pipe shall be bituminous coated per AWWA C151/A21.51
- D. Encasement: In corrosive environments, Ductile iron pipe, fittings and valves shall be encased in polyethylene in accordance with AWWA C105.
- E. **Polyvinyl Chloride (PVC) DR 18 Pipe (Color–blue): shall conform to AWWA C900. Pipe shall be manufactured by J-M Pipe, Diamond Plastic Corp., IPEX, National Plastic or Freedom Plastics**
- F. Service Lines: Service lines shall be polyethylene (SDR 9) tubing and have a minimum working pressure of 200 pounds per square inch (psi).

2.2 FITTINGS

- A. Ductile Iron Fittings - Ductile iron fittings shall be mechanical joint type and shall conform to ANSI/AWWA C110/A21.10. All fittings shall have a working pressure rating of 350 psi in sizes 4-inch through 24-inch and 250 psi for sizes 30-inch through 54-inch, and shall be coated and lined as specified for pipe.
- B. DIP fittings shall be encased in polyethylene in accordance with AWWA C105.

2.3 JOINTS

- A. Push-on Joints - 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). These joints may be U.S. pipe and Foundry "Tyton" Joints or approved equal.
- B. Restrained Joints - Restrained joints are to be used for changes in elevation or alignment as shown on the Plans or as required in the field by the Engineer. The

length of restraint required shall be approved by the engineer. These joints may be U.S. Pipe and Foundry "TR Flex" Joints, MEGALUGS, or approved equal. Restraining devices for PVC pipe is as follows:

- Series 2000PV (mechanical joint restraint for PVC pipe) as manufactured by EBBA Iron or approved equal - For restraining plain end PVC pipe at mechanical joint fittings.
- Series 1600 (bell restraint harness for C900 PVC pipe) as manufactured by EBBA Iron or approved equal - For use on restraining C900 PVC pipe bells.

2.4 CONCRETE FOR THRUST BLOCKS

- A. Concrete for thrust blocks shall have a compressive strength of 2,500 psi after 28 days.

2.5 FOUNDATION ROCK

- A. A sieve analysis of foundation rock shall conform to the following limits:
- B. Passing 3/4" - 100% Passing #4 - 0-10%
- C. Passing 3/8" - 20-55% Passing #8 - 0-5%

2.6 ELECTRONIC PIPE LOCATORS

- A. The Contractor shall install blue "Scotchmark" electronic ball markers at all fittings and service connections. The Contractor shall furnish the Town, upon completion of the work, with a transmitter/receiver device for locating the ball markers.

PART 3 - EXECUTION

The installation and testing of the water main shall be done in accordance with AWWA (ANSI) C600 plus the additional requirements described herein or shown on the Plans.

3.1 PREPARATION

- A. Clearing - The Contractor shall perform all clearing necessary, where applicable, for the proper installation of all water mains, and appurtenances in the locations shown on the drawings. 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 Engineer.

- 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 material from piping.

3.2 TRENCHING

- A. Perform trench excavation and provide pipe protection to the line and grade indicated on the contract drawings and as specified in Section 02220. 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. 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.

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 pipe shall be made by backfilling with approved material and compacted as directed by the Engineer. 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.

3.3 INSTALLATION

- A. All pipe, fittings and valves shall be installed according to AWWA Specification C600. 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 5 and 6 in AWWA Specification C600.
- C. Pipe Restraint - All bends, tees, and dead ends shall be restrained by a thrust block as detailed on the drawings (or other approved method).
 - 1. All bends, tees and dead ends in pipe 4 inches to 12 inches shall be restrained by a thrust block as detailed on the drawings. In pipe sizes greater than 12 inches, the restraint shall be by restraint joints on the piping on each side of the fittings for distances detailed on the drawings.
- D. Polyethylene Encasement - 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. General - 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 Engineer, but shall not be performed in any case until the Engineer 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 allowed.

2. Backfill material shall be free of roots, logs, limbs, large rocks or any material or debris determined to be unsuitable by the Engineer. The Engineer 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) Initial Lift (to 12 inches above pipe) - The initial lift shall be carefully backfilled around and over the pipe with select materials, not exceeding 1/2 inch in diameter, and compacted in 6 inch layers with manual equipment to an average maximum density of 95 percent as determined by AASHTO T-180 (Modified Proctor).
 - b) 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 as determined by AASHTO T-180 (Modified Proctor).
 - c) 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.

3.4 PIPELINE CLEANING (PIGGING)

- A. The Contractor shall clean and flush water mains in the following manner:
 1. The Contractor will insert a flexible polyurethane foam "swab" (2 lbs/CF) complete with rear polyurethane drive seal, into the first section of pipe. The "swab" shall remain there until the pipeline construction is complete. The "swab" may also be inserted into wyes or tees after construction is complete.
 2. Cleaning and flushing shall be accomplished by propelling the "swab" down the pipeline to the exit point with potable water during the initial filling of the main, prior to bacteriological testing. Flushing shall continue until the pig exits and the water is completely clear.
 3. If cleaning and flushing exit point is through a fire hydrant (8" line or smaller) the Contractor shall remove the hydrant internal valve assembly to allow passage of the "swab".

3.5 FIELD QUALITY CONTROL

A. Hydrostatic Tests:

1. 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 P.S.I. 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.
2. No pipe installation will be accepted unless and until the leakage is less than that as specified under Section 4.2 of the AWWA (ANSI) C600.

B. Sterilization of Complete Line:

1. Before being placed in service, each line shall be sterilized in accordance with the directions of the Florida State Board of Health and in accordance with AWWA C601.

C. Connections to the Existing System:

1. Connections to be made by the Contractor are shown on the Plans. Connections shall not be made until the new main is cleared by HRS.

D. Density Tests:

1. The Engineer shall specify at what locations test will be made in the backfill to determine the adequacy of the compaction operation.

3.6 ADJUSTING AND CLEANING

A. Restoring Surfaces:

1. 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.
2. 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 Engineer. All damaged or undermined areas of existing pavement, not previously removed, shall be removed and restored to original conditions or in the specified manner.
3. 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

SECTION 02720 STORM WATER SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Site piping and structure system for storm water.

1.2 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of storm sewage system's products of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer's Qualifications: Firm with at least 10 years of successful installation experience on projects with storm sewage work similar to that required for project.
- C. Codes and Standards:
 - 1. Comply with latest edition of FDOT standards and indices.
 - 2. Environmental Compliance: Comply with applicable portions of local Environmental Agency regulations pertaining to storm systems.

1.3 SUBMITTALS

- A. Pre-cast drainage structures, frames, grates and lids.
- B. Drainage Pipe.
- C. Pollution Retardant Baffles.
- D. Endwalls.

1.4 CLEARING

- A. Clearing for installation of pipe and all drainage structures shall be confined within the working limits of the trenches. Trees, utility poles, survey monuments, underground and overhead utilities shall be suitably protected and preserved.

1.5 EXISTING UTILITIES

- A. Furnish temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers, cables, etc., and other obstructions encountered in the progress of the work.
- B. When the grade of alignment of the pipe is obstructed by existing utility structures, such as conduits, ducts, pipes, branch connections to water or sewer mains, and other obstructions, the obstructions shall be permanently supported, relocated, removed or reconstructed by the CONTRACTOR in cooperation with the owners of such structures. The ENGINEER shall make no deviation from the required line or grade except as directed in writing.
- C. It shall be the responsibility of the CONTRACTOR to notify the owners of existing utilities in the area of construction a minimum of 48 hours prior to any excavation adjacent of such utilities, so that field locations of said utilities may be established.
- D. It shall be the responsibility of the contractor to maintain positive drainage on the surface and to ensure that the existing underground drainage system continues to function as intended during the construction of the new drainage system. The contractor shall submit a plan to maintain the existing drainage patterns and underground system for the approval of the ENGINEER prior to beginning any work on the existing or new drainage systems.

PART 2 - PRODUCTS

2.1 PIPE

- A. **REINFORCED CONCRETE PIPE:**
 - 1. A reputable manufacturer, engaged in the full time business of manufacturing concrete pipe, shall produce the concrete pipe. Pipe manufacturer shall produce the pipe from an approved, permanent plant acceptable to the ENGINEER.
 - 2. All concrete pipe shall be reinforced and shall conform to the requirements of A.S.T.M. C-76, Class III, B-Wall. Pipe shall have an interior surface, which is smooth, uniform and free from rough spots, irregularities and projections. Nominal pipe lengths shall be 8' unless authorized otherwise by the CITY'S Representative. Lifting holes will not be permitted.
 - 3. Concrete pipe shall be either bell or spigot, unless approved by ENGINEER.

4. Internal tongue and groove rubber gasket joints will be used at CONTRACTOR'S option. The internal rubber gasket joint shall be supplied by the pipe manufacturer and shall be completely compatible in every respect with the pipe furnished. The pipe manufacturer shall install the rubber gasket on the inside of the bell or groove on the pipe at the plant. All materials and accessories for the rubber gasket joint and the methods of jointing shall be in strict conformance with the pipe manufacturer's direction and recommendation. Joint must be completely watertight.
5. Cement grout joints shall be completely water tight and acceptable to the CITY'S Representative. A full bed of mortar shall be placed in the bell and/or groove and on the tongue and/or spigot. The annular space in the pipe joint shall be wiped with cement mortar to insure the joint is filled and to present a smooth surface. The complete exterior periphery of the joint shall have a standard cement grout diaper joint. Diaper shall be installed within the aid of an approved cloth ring. Cement mortar joints shall be made in the dry. Mortar and grout shall be one part Portland cement to two parts by weight of sand. Mortar shall have enough water to make a stiff mixture that can be molded and worked. Cement mortar joints shall not be covered until inspected and approved by the CITY'S Representative.

B. GASKETED PVC DRAINAGE PIPE

1. PVC pipe for stormwater (rated minimum 50 psi) – 4 inch through 12 inch, shall conform to AWWA C900; 14 inch to 48 inch shall conform to AWWA C905. Pipe shall also conform to ASTM D1784 and shall be made from a 12454A or 12454B virgin PVC compound. Reclaimed materials are not acceptable.
2. All PVC material for pipe and couplings shall be white in color for stormwater and as uniform as commercially practical in density and other physical properties. Green will be accepted if white is unavailable.
3. At least 85% of the total footage of pipe of any class and size shall be furnished in standard lengths. The remaining 15% in random lengths. Random lengths shall not be less than ten feet long.
4. All joints shall be made with integrally-formed bell and spigot gasketed connections. Pipe ends shall be tapered to accept the gasket coupling. Joining surfaces of spigots and joints shall be free of gouges and imperfections that could cause leakage. The manufacturer shall provide documentation showing no leakage when gasketed pipe joints are tested in accordance with ASTM test method D3212. Elastomeric seals (gaskets) shall meet the requirements of ASTM designation F477.
5. Gaskets shall not support bacterial growth or affect the quality of the water to be transported.

2.2 STORM SEWER MANHOLES

- A. Precast reinforced concrete storm sewer manholes to meet ASTM C478.
- B. Top: Precast concrete, of concentric cone, eccentric cone, or flat slab top type as indicated.
- C. Base: Precast concrete, steel reinforced, base riser section with integral floor, as indicated.
- D. Frame and Cover: Ductile iron, heavy duty, indented top design, with lettering cast into top reading "STORM SEWER".
- E. Frame and Grate: Cast iron grate to meet FDOT Standards, traffic bearing H20 loading. All castings shall be true to pattern in form, have the correct dimensions and be free from faults and cracks. Bearing surfaces between frames and covers shall be machine fitted to prevent rocking.
- F. Pipe Connectors: Resilient, complying with ASTM C923.

2.3 STORM SEWER INLETS

- A. Catch Basins: Precast reinforced concrete catch basins as indicated. FDOT Type as indicated.
 - 1. Frame and Grate: Cast iron grate to meet FDOT Standards, traffic bearing, H20 loading.
 - 2. Pipe Connectors: Resilient, complying with ASTM C923.

2.4 EXFILTRATION TRENCH

- A. The exfiltration trench may use either slotted or perforated RCP pipe as the distribution conduit within the trench. All perforations/slots shall be in conformance with the applicable FDOT index. Perforated/slotted pipe shall terminate 4 feet from the inlet/structure with the final 4 feet of pipe being solid wall pipe. Trench rock shall be 3/4 inch to 1 inch washed rock. The trench shall be lined on all sides with a Geotextile filter fabric and shall comply with FDOT Specifications, Sections 514 and 985.
- B. Filter fabric shall be installed as per FDOT Index #280 with overlap.

2.5 FRAMES AND COVERS

- A. The manhole, inlet and structure frames and covers shall be set firmly in mortar so that the top of cover will be flush with the finished grade in paved areas (following the cross slope/slope of roadways and/or driveways) and 1 inch above

the finished grade in unpaved areas, unless shown otherwise on the project construction drawings.

2.6 GROUT

- A. Dry Pack Grout: Grout shall consist of one part Portland Cement Type I conforming to ASTM C150 to two parts well graded sand conforming to ASTM C33. Mixing water shall be potable. The sand and cement shall be mixed thoroughly and then water added slowly and only in sufficient quantity to produce a mixture which has the consistency of damp earth and will hold its shape when formed into a ball in the hand.

2.7 BAFFLE DEVICE

- A. Refer to “Pollution Retardant Baffle (PRB) Detail” on Drawing D-4.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions under which storm water system's materials and products are to be installed.
- B. Do not proceed with work until unsatisfactory conditions have been corrected.
- C. Examine piping before installation to detect apparent defects. Mark defective materials with white paint and promptly remove from site.

3.2 INSTALLATION

- A. Storm water lines shall be laid accurately to both line and grade. The Project Manager will generally not accept any line laid with a slope varying by more than 15 percent of its design slope, especially for lines laid at minimum gradients where scouring velocity cannot be achieved. The Project Manager reserves the right to independently verify questionable as-built survey results. Visible leakage (unless designed for a percolation system), deflections, horizontal misalignment, vertical joint sagging shall be grounds for rejection of the storm lines.
- B. Trenches and excavations shall be kept dry while work is in progress. The Contractor shall be responsible to ensure that all safety requirements are met. Unsuitable material such as boulders and debris shall be removed from the site. The pipe barrel shall be uniformly supported along its entire length on undisturbed soil or bedding material. Proper bedding shall be supplied if the existing material includes rock, organic material or other sharp or unsuitable material.

- C. Lay piping beginning at low point of system, true to grades and alignment indicated, with unbroken continuity of invert.
- D. Place bell ends or groove ends of piping facing upstream.
- E. Install gaskets in accordance with manufacturer's recommendations for use of lubricants, cements, and other special installation requirements.
- F. Cleaning Piping: Clear interior of piping of dirt and other superfluous material as work progresses. Maintain swab or drag in line and pull past each joint as it is completed.
 - 1. In large, accessible piping, brushes and brooms may be used for cleaning.
 - 2. Place plugs in ends of uncompleted conduit at end of day or whenever work stops.
 - 3. Flush lines between manholes to remove collected debris.
- G. Closing Abandoned Utilities: Close open ends of abandoned underground utilities which are indicated to remain in place. Construct closures to withstand hydrostatic or earth pressure which may result after ends of abandoned utilities have been closed.
 - 1. Close open ends of concrete or masonry utilities with 8 in. thick brick masonry bulkheads.
 - 2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed.
 - 3. Wood plugs are not acceptable.
- H. Interior Inspection: Inspect piping to determine whether line displacement or other damage has occurred.
 - 1. Make inspections after lines between manholes, or manhole locations, have been installed and approximately 2 ft. of backfill is in place, and again at completion of project.
 - 2. If inspection indicates poor alignment, debris, displaced pipe, infiltration or other defects, correct such defects, and re-inspect.
 - 3. Inspections are to be coordinated with Owner and Engineers 48 hours prior to inspection.

3.3 INSTALLATION OF PRECAST CONCRETE MANHOLES

- A. Place precast concrete sections as indicated. Where manholes occur in pavements, set tops of frames and covers flush with finish surface. Elsewhere, set tops 1.5 inches above finish surface in unpaved areas, unless shown otherwise on the project construction drawings.

1. Install in accordance with ASTM C891.
2. Provide rubber joint gasket complying with ASTM C443 at joints of sections.

3.4 INSTALLATION OF INLET STRUCTURES

- A. Structures shall be set to the pipe grade firm and plumb in the locations shown on the Project construction drawings. Joints shall be cleaned, primed and the required gasket or sealant applied as recommended by the manufacturer. Voids remaining in the joint shall be caulked with anhydrous cement grout on both the inside and outside to make a smooth watertight joint seal.
- B. Structures shall be located along the center line of the swale and parallel to the edge of roadway and/or sidewalk. In the event of a design "bust", final grade elevation shall be 0.10 of a foot lower than the adjacent final grade of the roadway or sidewalk, whichever is lower.

3.5 BACKFILLING

- A. Conduct backfill operations of open cut trenches closely following laying, jointing, and bedding of pipe, and after initial inspection and testing are completed.
- B. To minimize local area traffic interruptions, allow no more than 100 ft. between pipe laying and point of complete backfilling.

3.6 FIELD QUALITY CONTROL

- A. Upon completion of the storm water improvements and corresponding roadway, under the observation of the Project Manager, the Contractor shall utilize either his water truck or City fire hydrants (with the Contractor's temporary water meter installed) to thoroughly flood the roadway to verify drainage flow lines. Correction of incorrect flow lines (not corresponding to the grades and lines shown on the construction plans) and any birdbaths is the responsibility of the Contractor (at his expense).
- B. Upon completion of the installations, the system shall be flushed thoroughly to remove dirt and other foreign matter.
- C. Storm drainage piping will be checked by the Owner and Engineer to determine whether any displacement of pipe has occurred, after trench has been backfilled to 2 feet above pipe and tamped as specified. Light will be flashed between manholes, or if manholes have not as yet been constructed, between locations of inlets and manholes, by means of flashlight or by reflecting sunlight with a mirror. If illuminated interior of pipelines shows poor alignment, displaced pipe, or any other defects, the Contractor, at his expense, shall correct these defects.

- D. At the Owner's discretion, portions of or the entire system may be televised by the Owner. If the televised pipelines show poor alignment, displaced pipe or other defects, the Contractor, at his expense, shall correct these defects.
- E. All disturbed areas shall be fine graded, raked, and prepared for sod. All sod to be installed neat, trim and shall be St. Augustine sod in areas with irrigation and Bahia sod in areas with no irrigation.

END OF SECTION

SECTION 02931 IRRIGATION SYSTEMS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The work specified in this section of the specifications consists of the removal, disposal, maintenance, and replacement of existing operating irrigation systems on or adjacent to private property affected by the construction operations.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REMOVAL, DISPOSAL AND MAINTENANCE

- A. The Contractor shall remove and dispose of that portion of the existing irrigation systems necessary for the prosecution of the grading, trench excavation and pavement construction operations and as directed by the City and shall perform any required adjustments to the irrigation systems to insure that the balance of the system not affected by the construction operations will remain operative. All materials removed shall become the property of the Contractor and shall be disposed of in areas provided by him/her and by methods approved by the City.
- B. The Contractor shall be required to verify the location and working order of existing irrigation systems and shall develop a plan to modify each system in accordance with this section of the specifications. The plan shall show the location and size of all irrigation lines, heads, plugs, tie-ins, sleeves, etc., and shall submit copies of this plan to the City for approval prior to any excavation effecting irrigation systems.

3.2 REPLACEMENT

- A. The Contractor shall determine and install any casing or carrier pipes that may be required when the irrigation pipes are to be installed under driveways.
- B. The Contractor upon completion of the final dressing and prior to grassing shall replace the affected irrigation system to include that grassed area between right-of-way and the roadway.
- C. All materials used for replacement shall be of equal or better quality found to be existing on each lot and shall be subject to the approval of the City.

END OF SECTION

SECTION 02934 SODDING

PART 1 - GENERAL

1.1 SCOPE

- A. The Specifications for Sodding conform to the applicable portions of Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition Section 570 with the following exceptions:
 - 1. Add the following to the applicable section, deleting all references that are contrary: The Contractor is required to mow all sodded areas immediately prior to final acceptance of the project by the City. The payment for mowing, maintaining the sod in a moist condition until final acceptance as well as payment for the water shall be included in the Contract price for miscellaneous restoration in park, as indicated in the Bid Form of the Proposal.
 - 2. The payment for sodding shall also include an adequate layer of 1" minimum topsoil with the sod acceptable to the City Landscape Architect and the price and payment shall be full compensation for items applicable to this section excluding those items covered in other bid items.
 - 3. The work consists of soil preparation, lawn bed preparation, and sodding complete, in strict accordance with the specifications and the applicable drawings to produce a grass lawn acceptable to the City Landscape Architect.

1.2 WORK INCLUDED

- A. Testing of topsoil.
- B. Raking and leveling topsoil as required for sodding.
- C. Liming and fertilizing of topsoil.
- D. Laying and rolling of sod.
- E. Maintaining sod.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Fertilizer:

1. Fertilizer shall be commercial fertilizer, as manufactured by Florikan, Lenard Reed mix or approved equal. Said fertilizer shall have a 10-20-6 N.P.K. content and contain a minimum of 60 percent of organic material.
2. It shall be delivered at the site in the original sealed containers.
3. Conform to the City's Ordinance 155.5205 *Florida-Friendly Fertilizer Use*. A copy of the ordinance is provided following this Section.

B. Sod:

1. The sod shall be as grown by a certified turf nursery and CONTRACTOR shall inform ENGINEER as to the source of the sod to be utilized prior to ordering and delivery of sod.
2. Sod shall be furnished and installed in rectangular sod strips measuring 12 to 16-inches in width of standard lengths of not less than 2 feet and delivered on pallets.
3. After the preparation of the areas to be sodded has been approved by ENGINEER sod all previously sodded areas where no permanent construction exists. Supply and install sod which is equal to or approved equal to sod which exists at the project site. As a minimum, Type No. 1 sod composed of grasses grown from a Bahia Seed mixture shall be used for stabilization of final grade.
4. St. Augustine Floratam Sod shall be placed in areas that will be or are irrigated. Bahia sod shall be placed in areas not irrigated.

PART 3 - EXECUTION

3.1 INSTALLATION

- #### **A. Soil Preparation:**
- All areas that are to be sodded shall be eradicated of any grass, weeds, and debris to a depth of 12 inches, through mechanical and chemical means and the ground brought to an even grade. The whole surface shall be rolled with a roller weighing not more than one hundred (100) pounds per foot of width.

During the rolling, all depressions caused by settlement of rolling shall be filled with additional soil, and the surface shall be regraded and rolled until presenting a smooth and even finish that is up to the required grade. Finish grade shall allow for 1" topsoil (as above) and the sod to allow for proper mowing height in relation to adjacent beds and pavement.

- B. Applying Fertilizer: Prepare sodded areas by distributing topsoil with fertilizer to a depth indicated on the drawings. Apply fertilizer at rate of twenty (20) pounds per one thousand (1,000) square feet and in accordance with the City's Ordinance 155.5205 *Florida-Friendly Fertilizer Use*. Application shall be uniform, utilizing approved mechanical spreaders. Mix fertilizer thoroughly with the soil to a depth of three (3) inches. Hand rake until all bumps and depressions and all foreign materials are removed. Wet prepared area thoroughly.
- C. Sodding
 - 1. The Contractor shall sod all areas that are not paved or planted as designated on the drawings within the contract limits, unless specifically noted otherwise.
 - 2. The sod shall be certified to meet Florida State Plant Board Specifications, absolutely true to variety type, and free from weeds, fungus, insects and disease of any kind.
- D. All sod furnished shall be living sod containing at least 70 percent of thickly matter grasses as specified and free from noxious weeds.
- E. No broken pads or torn or uneven ends will be accepted. Standard size sections of sod shall be strong enough to support own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section. Sod shall not be harvested when its moisture content (excessively wet or dry) may adversely affect its survival.
- F. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not installed within this time period shall be subject to inspection and rejection by ENGINEER, and shall be removed from the site and a fresh sod supply shall be furnished at no extra cost to OWNER.
- G. Sod panels shall be laid tightly together so as to make a solid sodded lawn area with edges butted together and without stretching grass panels. Sod shall be laid uniformly against the edges of all buildings, paved and planted areas. Immediately following sod laying, the lawn areas shall be rolled with a lawn roller customarily used for such purposes, and then thoroughly watered immediately. If, in the opinion of the City Landscape Architect, top-dressing is necessary after rolling to fill the voids between the sod panels and to even out inconsistencies in the sod, clean sand as approved by the City Landscape Architect shall be uniformly spread over the entire surface of the sod and thoroughly watered in.

- H. The topsoil shall not be moist at time of installation; however, it shall contain sufficient moisture so as not be powdery or dusty, both as determined by the supplier's representative.
- I. During delivery, prior to and during the planting of the lawn areas, the sod panels shall at all times be protected from excessive drying and unnecessary exposure of the roots to the sun. All sod shall be stacked during construction and planting so as not to be damaged by sweating or excessive heat and moisture.
- J. CONTRACTOR shall be responsible to furnish his own supply of water to the site at no extra cost. If possible, OWNER shall furnish CONTRACTOR, upon request, with a source and supply of water. Contractor shall apply for temporary meter and pay Owner for water used at current utility billing rates. However, if OWNER' water supply is not available or not functioning, CONTRACTOR shall be responsible to furnish adequate supplies at his own cost. All work injured or damaged due to the lack of, or the use of too much water, shall be CONTRACTOR's responsibility to correct.

3.2 MAINTENANCE

- A. Within the contract limits, the Contractor shall produce a dense, well-established lawn. The Contractor shall be responsible for all mowing every week after installation, repair and re-sodding of all eroded areas, sunken or bare spots until Certification of Acceptability by the City Landscape Architect. Repaired sodding shall be accomplished to blend with the original work.
- B. Water the first day the sod is laid, and then in conformance with the SFWMD watering restrictions for newly planted sod per the attached. All watering shall be of sufficient quantity to wet or restore water to depth of four (4) inches.
- C. Maintain the entire sodded areas until final acceptance at the completion of the Contract. Maintenance shall include watering as specified, weeding and removal of stones which may appear. In the event that the sod installation is not accepted by ENGINEER, the entire area shall be maintained and cut by CONTRACTOR until final acceptance of the sod installation.
- D. Take whatever measures are necessary to protect the sod while it is developing. These measures shall include furnishing or warning signs, barriers, or any other necessary measures of protection.

END OF SECTION

DIVISION 3

CONCRETE

SECTION 03300 CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. This section covers all work necessary for providing, testing and placing ready mix concrete.
- B. See GENERAL CONDITIONS which contain information and requirements which apply to the Work specified herein and are mandatory for this project.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01400 - Quality Control.
- B. Section 02521 – Flowable Fill

1.3 REFERENCE STANDARDS, CODES AND SPECIFICATIONS

- A. ACI 214 "Recommended Practice for Evaluation of Compressive Test Results of Field Concrete".
- B. ACI 318 "Building Code Requirement for Reinforced Concrete".
- C. ASTM C31 "Standard Method for Making and Curing Concrete Compressive and Flexure Test Specimens in the Field".
- D. ASTM C33 "Standard Specification for Concrete Aggregates".
- E. ASTM C94 "Standard Specification for Ready-Mix Concrete".

1.4 SUBMITTALS

- A. Submittals shall be in accordance with the GENERAL CONDITIONS and shall include the following:
 - 1. Concrete mix designs and trial mix laboratory reports.
 - 2. Manufacturer's certification of admixtures.
 - 3. Contractor's schedule and sequence of placement.
 - 4. All Test Results.

5. Drawings showing locations of construction joints.

1.5 QUALITY ASSURANCE

- A. Submit certificates of mill reports on all foreign cements for review by ENGINEER before batching concrete.
- B. Secure the services of a reputable manufacturer for counseling regarding the use of any specified admixture, as required.
- C. The ENGINEER shall have access to and have the right to inspect all batch plants, cement mills, and supply facilities of suppliers, manufacturers, subcontractors, and contractors providing products included in these Specifications. Batch plants shall have current certification that all weighing scales have been tested and are within the tolerances as set forth in the National Bureau of Standards Handbook No. 44.

1.6 CERTIFICATION

- A. Submit batch delivery tickets to the ENGINEER in compliance with and in accordance to ASTM C94.

1.7 TESTING

- A. Performed by an acceptable Engineering Laboratory at CITY's expense. CONTRACTOR shall assist in the collection of samples. Any retests shall be within the Scope of the Contract.
- B. Criteria:
 1. Each test: not less than 5 cylinders; retain one after 28 days.
 2. One test for every 50 consecutive cubic yards of concrete cast.
 3. Furnish ENGINEER with 4 certified copies of tests made of 2 at 7 days, and 2 at 28 days.
 4. (1) Slump and temperature verification. Concrete temperature shall not exceed 100°F when placed.
- C. Questionable strength of in-place concrete:
 1. Additional tests may be ordered by the ENGINEER.
 2. Execute the core tests in accordance with ASTM C42 procedure.
 3. Costs of additional tests showing strength of in-place concrete conforming to design criteria are the responsibility of the CITY.

4. Costs of additional tests showing noncompliance with the design criteria are the responsibility of the CONTRACTOR.
5. Additional items at CONTRACTOR's expense:
 - a. Provide load tests as directed by the ENGINEER.
 - b. Reinforce structure as directed or remove and replace all Under strength concrete structure in place.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cement
 1. Portland cement Type I or Type II conforming to ASTM C 150. In addition, the tricalcium aluminate content of Type I cement shall not exceed 12 percent.
 2. Type I or Type II cement, at the Contractor's option, may be used for nonhydraulic structures, slabs on grade, sidewalks, thrust blocks and miscellaneous.
 3. Type II cement or Type I cement, in combination with pozzolan (fly ash) as hereinafter specified, shall be used for all precast sanitary structures.
- B. Water: potable, salt free.
- C. Fine Aggregate: salt free and clean, conforming to ASTM C33.
- D. Coarse Aggregate: salt free and clean, conforming to ASTM C33.
- E. All Aggregate: quarried/mined in fresh water only.

2.2 MIXES

- A. Slab on Grade, Thrust Blocks, sidewalks, curb and Miscellaneous Cast-In-Place
 1. 28 day compressive strength: 3000 psi
 2. Minimum cement content: 470 lbs/yd³.
 3. Admixture: As required below, use only specified product.
 4. Slump: 4-inches \pm 1 inch. (Thrust blocks, curbs, footers)
Slump: 6-inches \pm 1 inch. (Sidewalk, driveways, slab on grade)
 5. Air Content: (ASTM C231): 2 ½ - 5 ½ percent.

6. Maximum water/cement ratio: 0.55 lb/lb.
- B. Precast concrete:
1. 28 day compressive strength: 4000 psi, minimum, or as illustrated on the Drawings.
 2. Minimum cement content for 4000 psi concrete: 6 bags per cubic yard.
 3. Admixture: As required below, use only specified products.

2.3 ADMIXTURES

- A. Provide air-entraining admixture in all concrete. Admixture shall conform to ASTM C 260, except it shall be nontoxic after 30 days and shall contain no chlorides. Furnish manufacturer's compliance statement for these requirements.
- B. All concrete shall contain a water-reducing admixture. The admixture shall conform to ASTM C 494, Type A or Type D, except it shall contain no chlorides, shall be nontoxic after 30 days, and shall be compatible with the air-entraining admixtures. The amount of admixture added to the concrete shall be in accordance with the manufacturer's recommendations. Furnish a compliance statement that the admixture used satisfies all requirements of this Specification.
- C. The pozzolan to be used in combination with Type I cement, as previously specified, shall be Class C or Class F fly ash conforming to ASTM C 618-78. Furnish test data confirming that the fly ash in combination with the cement to be used meets all strength requirements, is compatible with air-entraining agents and other additives, and provides increased sulfate resistance equivalent to or better than Type II cement.

2.4 CURING COMPOUNDS

- A. Normal placement without special finish; approved products:
1. Master Builders Company: "Masterseal".
 2. Sonneborn-Contech: "Kure-N'Seal".

2.5 DEFORMED REINFORCING BARS

- A. ASTM A615: "Standard Specification for Deformed and Plain Billet-Steel Bars for concrete Reinforcement".
1. Grade: 60
 2. Minimum yield strength: 60,000 psi.

- B. Sizes shall be as indicated on the Drawings.

2.6 WELDED WIRE FABRIC

- A. Welded wire fabric shall conform to ASTM A185.

2.7 ACCESSORIES

- A. Tie wires shall be 16-gauge, black, soft-annealed wire.
- B. Bar supports shall be of proper type for use intended. Bar supports in beams and slabs exposed to view after stripping shall be galvanized or plastic coated. Use concrete supports for reinforcing in concrete placed on grade.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Place no concrete until all reinforcing steel, pipes, inserts, sleeves, etc., have been set in place and reviewed by the ENGINEER. Notify the ENGINEER of scheduled pours 24 hours prior to placement.

3.2 PLACING

- A. Place concrete expeditiously in clean forms that are not hot to the touch; spray forms with water just prior to placing concrete. Before placing concrete directly against earth, install vapor barrier to prevent water absorption, secure reinforcement in position, inspect, and approve before placing concrete. Do not rest runways for transporting concrete on the reinforcing steel. Deposit concrete as nearly as practical in final position; and, do not allow concrete to drop freely more than 5 feet. Place all concrete during daylight, unless otherwise authorized. Where reinforcing steel above the top of the cast is coated with concrete while placing below, remove all concrete from such reinforcing steel after the placing is complete and prior to the next cast.
- B. Place slabs-on-grade carefully to avoid damages to the vapor barrier.
- C. Concrete shall not be placed in the rain or when it looks as if it is going to rain unless specifically authorized by the ENGINEER.

3.3 CONSOLIDATION

- A. Consolidate concrete in layers by internal vibrating equipment, supplemented by hand rodding and tamping as required. Do not use vibrators to move the concrete laterally inside the forms.
- B. Maintain internal vibrators at speed of at least 5000 impulses per minute when submerged in concrete. Maintain at least 1 spare vibrator in working condition at site at all times.
- C. Limit duration of vibration to time necessary to produce satisfactory consolidation without causing segregation. In no case more than 15 seconds per square foot of exposed surface. Move the vibrator constantly and place in each specific spot only once.

3.4 JOINTS

- A. Construction joints:
 - 1. Locate as illustrated on the Drawings and as reviewed by the ENGINEER for slabs.
 - 2. Key joints.
- B. Expansion Joints. Place pre-formed expansion joints as indicated on the Drawings.

3.5 CURING

- A. Begin curing of concrete as soon as practicable after placing, but not more than 3 hours thereafter.
- B. Begin curing of the structural elements immediately after removal of forms.
- C. Apply curing compounds as specified.

3.6 FINISHES

- A. Formed surfaces:
 - 1. Patching: immediately after stripping forms, patch all defective areas with mortar similar to the concrete mix; but, without coarse aggregate. Patch minor honeycombs, bulges and other minor defects as designed by the ENGINEER, only where exposed to view. Clean, dampen, and fill all the holes with patching mortar.

- a Major defective areas, as judged by the ENGINEER, including those resulting from the leakage of forms, excessive honeycombs, large bulges, and large offsets at form joints: chip away to a depth of at least 1/4 inch; and, the surfaces that are to be patched coat with an epoxy-polysulfide adhesive. Press patching mortar in for a complete bond and finish to match adjacent areas.
 - b Minor defective areas, as judged by the ENGINEER, including honeycombs, air bubbles, holes resulting from removal of ties and those resulting from leakage of forms: patch with grout without resorting to chipping. Minor bulges and offsets at form joints: finish as specified herein below.
 - 2. Finishes; locations:
 - a Rough or board finish: for all concrete surfaces not exposed to public view.
 - 3. Finishes; definitions:
 - a Rough or board finish: reasonably true to line and plane. Tie holes and defects patched, and the fins exceeding 1/4 inch rubbed down, otherwise, surfaces may be left with texture imparted by forms.
- B. Unformed surfaces (flatwork):
- 1. Finishes:
 - a General: grade and screed slab to exact elevation, as required. After screeding, tamp mixture thoroughly to drive the coarse aggregate down from surfaces and apply finish specified hereinafter.
 - b Broom finish: slab on grade.
 - 2. Finishes; definition:
 - a Broom finish: finish with street type broom as soon as surface water sheen has disappeared.

3.7 FIELD QUALITY CONTROL

- A. Only ready mixed concrete in accordance with ASTM C94 will be accepted.
- B. Place all concrete within 1-1/2 hours after introduction of water to mix.
- C. Under no circumstances may additional water be added to mix.
- D. Discard unused concrete older than 1-1/2 hours. Retempering is prohibited.

END OF SECTION

SECTION 03732 CONCRETE REPAIRS

PART 1 - GENERAL

1.1 THE REQUIREMENT

- A. The Contractor shall furnish all materials, labor, equipment, tools, etc., required for the repair, renovation, and replacement of concrete and/or reinforcing steel as indicated on the Drawings, specified herein, and determined by field survey.

The Contractor, in conjunction with the Engineer, shall determine the extent of cracked or deteriorated concrete to be rehabilitated and/or resurfaced. A summary of the work to be performed shall be submitted to the Engineer for review, and such summary shall be approved by the Engineer prior to commencement of the Work.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Shall be as specified in Section 01090, Reference Standards.

1.3 SUBCONTRACTOR/APPLICATOR QUALIFICATIONS

The Contractor shall furnish the name of all subcontractors/applicators which he proposes to use for this work, including necessary evidence and/or experience records to ascertain their qualifications in the application of epoxy, urethane, and polymer-modified mortars. Approved applicator qualifications shall include:

- A. A minimum of 5 years experience in applying epoxy, urethane, and polymer-modified and cement-based compounds similar to those specified in this Section.
- B. A letter from the manufacturer of the specified materials, on the manufacturer's letterhead, signed by an officer of the company, stating that the subcontractor/applicator has been trained in the proper techniques for applying the product, including surface preparation and mixing, placing, curing, and caring for the manufacturer's products. This letter shall further state that the subcontractor/applicator is on the manufacturer's approved list of contractors.

1.4 SUBMITTALS

- A. Material certifications and technical data sheets on all grouts, mortars, epoxy resins, aggregates and repair products specified in this Section.
- B. Subcontractor/Applicator qualifications as specified in Section 1.04.

- C. Shop Drawings detailing any planned deviation from the proposed construction sequence and/or method of repair.
- D. The Contractor, based on their experience in their profession, may submit to the Engineer for approval, alternative materials and/or methods of work to assure the durability and watertight integrity of the repair work performed.

1.5 ADDITIONAL GUARANTEE

- A. The Contractor shall guarantee all repair work performed under this Contract against defects in workmanship resulting in leakage and/or failure of concrete bond for a period of two years from the date of the Certificate of Substantial Completion.

PART 2 - MATERIALS

2.1 WATER

- A. The water used for mixing concrete repair products shall be clean, potable, and free of deleterious substances.

2.2 AGGREGATE

- A. All aggregate shall conform to ASTM C-33. The aggregate supplier shall submit to the Engineer documentation that the proposed aggregates comply with ASTM C-33 and the requirements listed below:
- B. Pea Gravel - Pea gravel shall meet the gradation and material requirements of Standard Size 14 as defined by ASTM C-33. Pea gravel shall be clean and free from deleterious matter and shall contain no limestone.

2.3 EPOXY BONDING AGENT

- A. An epoxy bonding agent shall be used when applying fresh concrete to previously placed concrete. Epoxy bonding agent shall conform to ASTM C-881 Type I, II, IV or V; Grade 2 for epoxy resin adhesives, depending on the application. The class of epoxy bonding agent shall be suitable for all ambient and substrate temperatures. The epoxy resin shall be "Sika Armatec 110" as manufactured by the Sika Corp, Lyndhurst, NJ, "CR 246" as manufactured by Sto Concrete Restoration Division, Atlanta, GA, "Duralbond" as manufactured by Tamms Industries Co., Mentor OH, or equal.

2.4 ANTI-CORROSION REBAR COATING

- A. All reinforcing steel cut or exposed during demolition and/or repair operations shall be protected with an anti-corrosive coating. The anti-corrosive coating shall be a two- component, polymer-modified cementitious material such as "Sika Armatec 110" manufactured by Sika Corp., Lyndhurst, NJ, IOCR 246" manufactured by Sto Concrete Restoration Division, Atlanta, GA, or equal.

2.5 WATERPROOF INJECTION GROUT

- A. Waterproof crack repair material shall be a one-component, water-activated polyurethane hydrophilic/hydrophobic injection grout capable of 700% expansion. Polyurethane grout shall form a tough flexible/rigid foam seal that is impenetrable to water. Hydrophilic injection grout shall be "Prime Flex 900 LV" manufactured by Prime Resins, Conyers, GA, "Scotch-Seal 5600 Chemical Grout" manufactured by 3M Construction Markets, St. Paul, MN, "Hydro- Active Flex LV" manufactured by De Neef Construction Chemicals, Waller, TX, or approved equal. Hydrophobic injection grout shall be "Prime Flex 920" manufactured by Prime Resins, Conyers, GA, "Sikafix HH" manufactured by Sika Corp., Lyndhurst, NJ, "Hydro-Active Cut" manufactured by De Neef Construction Chemicals, Waller, TX, or equal.

2.6 SPALL REPAIR PATCHING MATERIAL

- A. All spall repairs not requiring formwork shall be repaired using a two-component, polymer- modified cementitious mortar and shall have a minimum 28-day compressive strength of 7000 psi. Spall repair mortar for use in horizontal applications shall be manufactured by Sika Corp., Lyndhurst, NJ, "Duraltop Fast Set" manufactured by Tamms Industries, Mentor, OH, IOCR 700" manufactured by Sto Concrete Restoration Division, Atlanta, GA, or approved equal.
 - 1. Spall repair mortar for use in vertical applications shall be "Sikatop III" manufactured by Sika Corp., Lyndhurst, NJ, "Duraltop Gel" manufactured by Tamms Industries, Mentor, OH, "CR730" manufactured by Sto Concrete Restoration Division, Atlanta, GA, or equal.
- B. All spall repairs requiring formwork shall be repaired using a two-component, polymer- modified cementitious mortar/pea gravel mixture and shall have a minimum 28-day compressive strength of 6000 psi. Each unit of mortar shall be mixed with Saturated Surface Dry (SSD) pea gravel to form the repair material following the manufacturer's recommendations. Spall repair mortar shall be "Sikatop 111 Plus" manufactured by Sika Corp., Lyndhurst, NJ, "Duraltop Flowable Grout" manufactured by Tamms Industries, Mentor, OH, "CR 730" manufactured by Sto Concrete Restoration Division, Atlanta, GA, or equal.

- C. All spall repair materials shall conform to EPA/USPHS standards for surface contact with potable water supplies.

2.7 STORAGE OF MATERIALS

- A. The Contractor shall provide an area for repair material storage free from exposure to moisture in any form, before, during, and after delivery to the site. Manufactured materials shall be delivered in unbroken containers labeled with the manufacturer's name and product type. All mortar products shall be stored on raised platforms. Materials susceptible to damage by freezing shall be stored in a dry, heated, insulated area. Any material that has hardened, partially set, become caked and/or has been contaminated or deteriorated shall be rejected. All aggregates shall be stored in clean bins, scows or platforms.

PART 3 - INSTALLATION

3.1 GENERAL REQUIREMENTS

- A. No repair work shall be undertaken when ambient temperatures are below manufacturer's safe recommendations. No admixtures, except those required by the manufacturer, shall be used in the repairs specified herein. All products shall be applied in strict accordance with manufacturer's recommendations. The Contractor shall furnish and install safe scaffolding and ladders for the Engineer's prework inspection, the repair work activities, and the Engineer's final inspection
- B. Sandblast or waterblast (3000-4000 psi waterjet) deteriorated areas to remove all loose concrete, existing coatings, unsound material, debris, and laitance. All surfaces shall be clean, free of dirt, grease, loose particles, and deleterious substances and shall be prepared according to manufacturer's requirements.

3.2 EPOXY BONDING AGENT

- A. Existing concrete surfaces shall be roughened prior to application of bonding agent. Concrete surface shall be clean and sound, free of all foreign particles and laitance. Repair material shall be placed while bonding agent is still tacky. If bonding agent cures prior to placement of repair material, bonding agent shall be reapplied.
- B. Repairing concrete with epoxy mortars shall conform to all the requirements of ACI 503.4 "Standard Specification for Repairing Concrete with Epoxy Mortars" (latest edition), except as modified herein.

3.3 ANTI-CORROSION REBAR COATING

- A. Reinforcing steel cut or exposed during demolition and/or repair operations shall be sandblasted and cleaned prior to coating with an anti-corrosive coating. Coating shall thoroughly cover all exposed parts of the steel and shall be applied according to manufacturer's recommendations.

3.4 WATERPROOF INJECTION GROUT

- A. All existing, leaking cracks 1/4" or smaller shall be repaired by pressure injecting a waterproof injection grout into the prepared crack. Seal crack surface and install injection ports per manufacturer's recommendations. Holes drilled for injection ports shall not cut rebar. If rebar is encountered during drilling, the hole shall be abandoned and relocated, and the abandoned hole shall be patched immediately with non-shrink grout flush with the surface of the existing concrete. Once the surface sealing material has cured, inject crack with waterproof injection grout using standard pressure injection equipment as directed by the manufacturer.

3.5 SPALL REPAIR PATCHING MATERIAL

- A. All voids or spalled areas to be repaired shall be chipped back to sound concrete a minimum 1/8" deep, cleaned and repaired with spall repair patching material according to manufacturer's recommendations. All patching shall provide a final finished surface which is flat, level and even with the existing concrete surface. Repair mortar shall not be feathered to meet existing concrete surface. Final patching on horizontal surfaces shall receive a broom finish consistent with the finish on the existing structure.

3.6 CURING

- A. All repair products shall be cured in strict accordance with manufacturer recommendations.

3.7 WORK IN CONFINED SPACES

- A. The Contractor shall provide and maintain safe working conditions for all employees and subcontractors. Fresh air shall be supplied continuously to confined spaces through the combined use of existing openings, forced-draft fans and temporary ducts to the outside, or by direct air supply to individual workers. Fumes shall be exhausted to the outside from the lowest level of the confined space. Electrical fan motors shall be explosion-proof if in contact with fumes. No smoking or open fires shall be permitted in or near areas where volatile fumes may accumulate.

END OF SECTION

DIVISION 5

METALS

SECTION 05500 METAL FABRICATIONS

PART 1 - GENERAL

1.1 THE REQUIREMENT

- A. The Contractor shall furnish and install miscellaneous metal items as shown on the Drawings and specified herein for a complete installation.

1.2 SUBMITTALS

- A. The Contractor shall submit shop drawings and other information to the Engineer for review in accordance with Section 01300 entitled "Submittals". No fabrication shall be started until shop drawings have been reviewed by the Engineer. The drawings shall be made in conformity with standard practice and indicate: fabrication, assembly and erection details, sizes of members, profiles, fastenings, supports and anchors, finishes, patterns, clearances, and connections to other work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. All materials shall be of the best quality and entirely suited for the particular service. Metals shall be free from defects and have structural properties to safely render required service.
- B. Fastenings shall, insofar as practicable, be noncorrosive, nonstaining and concealed. Exposed welds shall be ground smooth to form a neat uniform fillet without weakening base metal. Unexposed welds shall have all slag removed before applying shop coating. Moulded, bent or shaped members shall be formed and clean, sharp rises, without dents, scratches, cracks or other defects. All anchors, bolts, shims and accessory items shall be provided as required for building into or fastening to adjacent work. All ferrous metals shall be galvanized, except as otherwise specified.
- C. Unless otherwise specified the miscellaneous metal work shall be equal to or exceed the requirements of the following standards:

Carbon and Low Alloy Steel
Plates and Structural Fabrication
Sheet Steel

ASTM Designation
A 36, A 529 or A 283, Grade C
A 570, Grade C

Bars and Rods	A 36 or A 306, Grade 60
Pipe - general use process pipe	A 53 or A 120 Schedule 40 A 524 Grade I
<u>Fasteners*</u>	
Standard Strength Bolts	A 307, Grade A
High Strength Bolts	A 325
Eyebolts	A 489
<u>Steel Coatings</u>	
Zinc - Electrodeposited	A 164
Hot Dipped	A 123 and A 386
Cadmium	A 165
<u>Stainless Steel</u>	
Plate and Sheets	A 167, Type 316
Bars and Shapes	A 276, Type 316
Fasteners*	A 167 and A 276, Type 316
<u>Cast Iron</u>	
Gray	A 48. Class 30B
Malleable	A 47
Ductile	A 536, Grade 60-40-18
<u>Wrought Iron</u>	
Plates	A 42
Sheets	A 162
Shapes and Bars	A 207
Pipe	A 72
<u>Bronze</u>	
Rods, Bars, and Shapes	B 138, Alloy B Soft
<u>Fasteners</u>	
Yellow Brass Cap Screws and Other Small Fasteners	B 16, B 36, or B 134
Silicon Bronze Bolts	B 97, B 98, B 99 and B 124
<u>Aluminum</u>	
Structural Shapes	B 308, Alloy 6061- T6
Castings	B 26, B 85 and B 108
Extruded Bars, Rods and Tubes	B 221 Bars - Alloy 6061 Other - Alloy 6063
Plates and Sheet	B 209 Plates - Alloy 6061 Sheets - Alloy 3003

*All fasteners shall be manufactured in the U.S.A. Certifications of compliance shall be submitted for all fasteners supplied on this project.

- D. Materials with more than one specification or grade listed shall conform to specification or grade providing the highest strength and appropriate mechanical properties for the fabrication technique used.

2.2 PROTECTIVE COATINGS

- A. All ferrous metal, except stainless steel and galvanized surfaces, shall be properly cleaned and given one shop coat of primer compatible with the coating system specified in Section 09900 entitled "Painting", Metal work, including anchors, to be encased in concrete shall be shop primed unless specified to be stainless steel or galvanized.
- B. Castings that are to be left unpainted shall be cleaned and coated with a coal-tar-pitch varnish.
- C. Hot-dip galvanizing or zinc coatings applied on products fabricated from rolled, pressed or forged steel shapes, plates, bars and strips shall comply with ASTM A 123. Hot-dip galvanizing or zinc coatings on assembled steel products shall comply with ASTM A 386. The weight of coatings shall be designated in Table 1 for the class and thickness of material to be coated.
- D. Galvanized surfaces for which a shop coat of paint is specified shall be chemically treated to provide a bond for the paint. Except for bolts and nuts, all galvanizing shall be done after fabrication.
- E. Aluminum to be placed adjacent to masonry or dissimilar metals shall be protected with an isolating coating of bitumastic and/or felt.

2.3 STEEL

- A. Unless otherwise noted, all steel shall conform to the following:
 - 1. Stainless steel floor plates shall conform to ASTM A 793 and shall be furnished with checkered design.
 - 2. Galvanized steel pipe shall conform to ASTM A 53.
 - 3. Carbon steel bolts and fasteners shall conform to ASTM A 307 and shall be galvanized.
 - 4. Carbon steel rails, 40 pound, shall conform to the dimensions listed in AISC Specifications.
 - 5. Other steel shall be mild steel.

6. All stainless steel anchor bolts and fasteners shall be of Type 316 stainless steel.

2.4 STRUCTURAL AND MISCELLANEOUS ALUMINUM

- A. All structural and miscellaneous aluminum shapes, bars and plates shall be Alloy 6061- T6. Aluminum to be placed adjacent to concrete, masonry or dissimilar metals shall be protected with one coat of bitumastic paint. Mill finish shall be provided.

2.5 FASTENERS

- A. General: Bolts, screws, nuts, washers, anchors and other fasteners shall be first quality and shall conform to the material specifications named herein. All necessary bolts, anchor bolts, nuts, washers, plates and bolt sleeves shall be furnished by the Contractor in accordance herewith. Anchor bolts shall have suitable washers and, where so required, their nuts shall be hexagonal. Stainless steel and silicon bronze bolts shall have a raised letter or symbol on the bolts indicating the manufacturer.

Concrete and masonry inserts shall be drill-in type as manufactured by Phillips Drill Company, Michigan City, Indiana; Hilti, Tulsa, OK; or equal. Powder or gun-driven, fiber, and plastic inserts shall not be used unless specifically noted.

- B. Material: All bolts, anchor bolts, nuts, washers, plates, and bolt sleeves shall be Type 316 stainless steel.

If any bolts, anchor bolts, nuts and washers, are specified to be galvanized, they shall be zinc coated, after being threaded, by the hot dip process in conformity with ASTM A 123, or A 153, as is appropriate.

- C. Concrete Inserts: Concrete inserts shall be designed to support safely, in the concrete that is used, the maximum load that can be imposed by the bolts used in the inserts.

- D. Dissimilar Metal: All dissimilar metal shall be connected with appropriate fasteners and shall be insulated with a dielectric or approved equal. Unless otherwise specified, aluminum shall be fastened with ASTM A276 Type 316 stainless steel bolts and insulated with micarta, nylon, rubber, or equal.

- E. Anchor Bolts: Anchor bolts shall be set accurately and be carefully held in suitable templates of approved design. Where indicated on the Drawings, specified, or required, anchor bolts shall be provided with square plates at least 4-inches by 1/8 inch or shall have square heads and washers and be set in the concrete forms with suitable pipe sleeves, or both. Drill-in type anchors shall be as shown on the Drawings.

PART 3 - EXECUTION

3.1 FABRICATION

- A. General: All workmanship shall be first class and conform to recognized and accepted best practice. All structural materials shall be thoroughly straightened in the shop by methods that will not injure them before templates are placed on same for laying out and before any work is done upon them.
- B. Finished members shall be absolutely straight and free from open joints and distortions of any kind. All shearings shall be neatly finished. Flame cutting may be used in the preparation of the various members provided this operation is performed by a machine. All necessary fillets, connections, brackets, posts, and other details not shown on the drawings, but necessary for the work, shall be furnished by the Contractor. Fabrication shall be by welding except where riveted construction is specifically allowed by the Contract Documents.
- C. Steel: Steel fabrication shall meet the applicable requirements of the AISC Specification for Design, Fabrication, and Erection of Structural Steel for Buildings.
- D. Aluminum: Aluminum fabrication shall meet the applicable requirements of the Aluminum Construction Manual, Specifications for Aluminum Structures.
- E. Welding: All welding shall be in accordance with the latest revised standards and recommendations of the American Welding Society. The welding of all joints shall produce complete fusion with the parent metal and shall be free from deleterious metals and cracks. Machine welding shall be used insofar as practicable. Tack welding will not be permitted on exposed surfaces. Finished welded joints shall be reasonably smooth and free from grooves, depressions or other irregularities. Any other irregularities shall be corrected by welding and/or grinding. All scale or flux shall be removed after each pass. Bronze shall be welded by either the inert gas shielded arc method or by brazing with the proper flux and filler metal. All flush welds of butt joints shall be ground smooth where exposed to view.
- F. Castings:
 - 1. Castings shall be tough, sound and free from blow holes, shrinkage cracks or other defects. Castings shall be smooth and clean. Units that have been plugged or filled will be rejected.
 - 2. Iron castings shall be close-grained gray iron or ductile iron.

3.2 INSTALLATION

- A. All miscellaneous items shall be installed in conformance with specifications and details as shown on the drawings, or processed shop drawings. Installation and erection shall conform to the best practice with each item set plumb, level, true to line and securely anchored in its proper place.

END OF SECTION

APPENDIX A

**SFWMD ENVIRONMENTAL RESOURCE
PERMIT**

**BROWARD COUNTY SURFACE WATER
MANAGEMENT LICENSE**



Environmental Protection and Growth Management Department
ENVIRONMENTAL LICENSING AND BUILDING PERMITTING DIVISION
Environmental Engineering and Licensing Section
1 North University Drive, Room 201-A, Plantation, Florida 33324
Phone * 954-519-1483 Fax * 954-519-1412

September 12, 2016

City of Pompano Beach
Attention: Alessandra Delfico, P.E., Utility Engineer
1201 NE 5th Avenue
Pompano Beach, FL 33060

RE: Esquire Lake Neighborhood Stormwater Improvements
City of Pompano Beach, S/T/R (33-48-42)

This is to notify you of the Environmental Protection and Growth Management Department's (EPGMD) action concerning your application received 06/13/2016. The application has been reviewed for compliance with the following:

ERP Review - GRANTED

EPGMD has the authority to review the project for compliance with the provisions of Chapter 373, Part IV, Florida Statutes pursuant to an agreement between EPGMD, DEP and the SFWMD. The agreement is outlined in a document entitled "DELEGATION AGREEMENT AMONG THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT, AND BROWARD COUNTY."

Based on the information submitted, Environmental Resource Permit No. 06-04094-P was issued on 09/12/2016.

Should you object to the conditions of the Environmental Resource Permit, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed action. Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the attached "Notice of Rights", we will assume you concur with the action taken by EPGMD.

Broward County Surface Water Management Review - GRANTED

EPGMD has reviewed the project for compliance with the Surface Water Management requirements of Chapter 27, Article V Sec. 27-191 through 27-202 of the Broward County Code.

Based on the information submitted, Surface Water Management License No. SWM2004-046-2 was issued on 09/12/2016. The above named licensee is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents and specifications, as submitted by licensee, and made a part hereof.

Please be advised that no Certificate of Occupancy can be issued on this project until released, in writing, by all EPGMD divisions as required. Such release will be pending approval of any engineering certifications required by specific condition No. 15.

The above referenced approvals will remain in effect subject to the following:

1. Not receiving a filed request for a Chapter 120, Florida Statutes administrative hearing;
2. the attached SFWMD General Conditions;
3. the attached SFWMD Special Conditions;
4. the attached Broward County General Conditions;
5. the attached Broward County Specific Conditions;
6. the attached _48_ exhibits.

Issuance of the above referenced Broward County license(s) constitutes a final agency determination. A person with a substantial interest may file a petition to request review of or to intervene in a review of a final administrative determination, subject to the provisions of Section 27-14, Broward County Code of Ordinance.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the Permittee (and the persons listed in the attached distribution list) no later than 5:00 p.m. on 09/12/2016, in accordance with Section 120.60 (3), Florida Statutes.

By: _____

Carlos Adoriso, .E., Engineering Unit Supervisor
Surface Water Management Program

Enclosed are the following:

- / executed staff report;
- : set(s) of stamped and approved plans;
- :.../Noti ce of Right s; and
- / Inspection Guidelines Brochure.



Surface Water Management Program

“What to Expect When We Are Inspecting Surface Water Management Systems”

A guideline for **engineers, contractors, and licensees** of surface water management systems when applying for the release of Certificate(s) of Occupancy.

The intent of this document is to establish some guidelines to achieve compliance with the Code while maximizing customer service needs to licensees and their agents and the local building departments by facilitating the Certificate(s) of Occupancy (CO) release procedure for building projects. It is also the intent of this document to encourage licensees and their agents and the local building departments to not put our inspection staff on the “critical path”. ***We recognize that the local building departments must adhere to the requirements of the Florida Building Code and the requirements of Article I of the Broward County Natural Resource Protection Code.***

The Environmental Licensing and Building Permitting Division (ELBPD) - Surface Water Management Licensing program has the responsibility of reviewing designs, licensing, and inspecting surface water management systems within portions of Broward County under the provisions of the Broward County Natural Resource Protection Code, Chapter 27, Section 27-191 through Section 27-201. This includes enforcement for the purpose of protecting our natural resources. This document contains specific information about the ELBPD’s surface water management inspection procedures, review of record/as-built drawings, and time required to complete the procedure successfully. Please be advised this document may be included with the approved license and may be modified on an as-needed basis.

The following certification package must be submitted at least two (2) weeks prior to the anticipated date of occupancy; exceptions may be made on a case by case basis.

Note: Item 1 is not applicable to plans stamped as General Licenses (GL##-###). Items 2 & 3 may apply to GL if plans are stamped for construction certification.

1. Final Record/As-built Drawings (hard copy and electronic) of the site, lake/canal slopes, control structure(s) or overflow structure(s) (where applicable), and Finished Floor Elevation(s); etc.
2. Signed and sealed letter from a Florida-Registered Professional Engineer certifying all components of the surface water management system were constructed in substantial conformance with the approved plans; and
3. When requesting a partial certification include a \$100 partial certification fee (fees are subject to change). The certifying engineer must indicate that a substantial amount of the water management system has been constructed to serve the partial phase to satisfy the water quality and water quantity requirements of the Code and exactly which lots/buildings are requested for release.

Staff will perform an inspection on a first-come first-served basis of the above items. A successful submittal of the required items will prevent unwanted delays in the inspection and CO release processes.

What we look for During the Record/As-Built Drawing Review and During the Inspection

1. The engineer's letter must contain the appropriate certification language. The suggested wording is located in the Code and in the specific conditions of the license. The letter must be signed and sealed. It is imperative that the engineer of record describe any minor modifications to the system that were made during the construction of the project. However, substantial modifications must have received prior approval by the Surface Water Licensing Program.
2. The as-built/record drawing must document the Finished Floor Elevation(s) showing substantial conformance with approved plans.
3. In addition to rim, manhole, and pipe invert elevations, the plans should contain a sufficient amount of survey information to show that the site grades and perimeter grades were constructed in substantial conformance with the approved plans.
4. If part of the approved system, lake and canal slope as-built plans should contain a substantial number of cross sections (a minimum of 1 section per 50 linear feet is preferred) to show compliance with the Department's slope criteria. The staff reserves the right to require additional slope cross sections as necessary as well as slope regrading. Surface area calculations at the control elevation should be submitted for lakes.
5. Control structure or overflow structure information must show all (as-built) dimensions and elevations.
6. All catch basin and manhole structures must have appropriate mudwork to prevent seepage that could lead to structure/asphalt failures and subsequent turbidity violations.
7. All catch basins, manholes, and pipes must be relatively free of sediment and debris and must be accessible to staff. Arrangements should be made with staff for inspecting basins that are covered with fabric materials for sediment control purposes. Fabric must be removed by the licensee or other appropriate personnel prior to the inspection.
8. Lake, canal, swale, dry detention/retention area slopes must be stabilized through appropriate measures, i.e., no evidence of erosion or sedimentation should be encountered during the inspection. Arrangements should be made with staff with regards to timeliness of sodding or seeding slopes and bottoms of dry detention/retention areas.
9. All baffle mechanisms must be made water tight at all contact surfaces of basin walls by a durable gasket device.

Successful compliance with the above items will insure a timely release of the Certificate(s) of Occupancy from division staff.

Upon completion of the field inspection, arrangements with inspection staff will be made to correct all observed field deficiencies. With your cooperation, the Operation Letter will be released upon correction of all field deficiencies.

Environmental Licensing and Building Permitting Division

Surface Water Management Program

1 North University Drive, Suite 201-A • Plantation, Florida 33324

Phone 954-519-1483 FAX 954-519-1412

NOTICE OF RIGHTS

As required by Sections 120.569(1), and 120.60(3), Fla. Stat., following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the Broward County Environmental Protection and Growth Management Department's (EPGMD, formerly known as Department of Planning and Environmental Protection or DPEP) action under the "Delegation Agreement Among the Florida Department of Environmental Protection, The South Florida Water Management District and Broward County" has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on an EPGMD decision which does or may determine their substantial interests shall file a petition for hearing with the EPGMD Environmental Compliance Administrator, within 21 days of receipt of written notice of the decision, unless the following shorter time period applies: within 14 days of service of an Administrative Order pursuant to Subsection 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of either written notice through mail, or electronic mail, or posting that the EPGMD has or intends to take final agency action, or publication of notice that the EPGMD has or intends to take final agency action. Any person who receives written notice of an EPGMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

Filing Instructions

The Petition must be filed with the EPGMD Enforcement Administration Section's Environmental Compliance Administrator. Filings with the Environmental Compliance Administrator may be made by mail, hand-delivery or facsimile. **Filings by facsimile will not be accepted after October 1, 2014.** A petition for administrative hearing is deemed filed upon receipt during normal business hours by the Environmental Compliance Administrator, at the Broward County government offices in Plantation, Florida. Any document received by the EPGMD Enforcement Administration after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Environmental Compliance Administrator, Enforcement Administration Section, 1 N University Drive, Suite 307, Plantation, FL 33324.
- Filings by hand-delivery must be delivered to the EPGMD Enforcement Administration Section. **Delivery of a petition to the Broward County security desk does not constitute filing. To ensure proper filing, it will be necessary to request the Broward County security officer to contact the Environmental Compliance Administrator's office.** An employee of the Environmental Compliance Administrator's office will receive and file the petition.
- Filings by e-mail must be transmitted to the EPGMD Enforcement Administration Section at **epdhotline@broward.org**. The filing date for a document transmitted by electronic mail shall be the date the EPGMD Enforcement Administration Section receives the complete document. A party who files a document by e-mail shall (1) represent that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause and that the party shall produce it upon the request of other parties; and (2) be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed.

Initiation of an Administrative Hearing

Pursuant to Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the EPGMD in legible form and on 8 and 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, EPGMD file number or any other EPGMD identification number, if known.
2. The name, address and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the EPGMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the EPGMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the EPGMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the EPGMD to take with respect to the EPGMD's proposed action.

A person may file a request for an extension of time for filing a petition. The EPGMD may, for good cause, grant the request. Requests for extension of time must be filed with the EPGMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the EPGMD and any other parties agree to or oppose the extension. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

If the EPGMD takes action with substantially different impacts on water resources from the notice of intended agency decision, the persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, Fla. Admin. Code, unless otherwise provided by law.

Mediation

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-.405, Fla. Admin. Code. The EPGMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Sections 120.60(3) and 120.68, Fla. Stat., a party who is adversely affected by final EPGMD action may seek judicial review of the EPGMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the Environmental Compliance Administrator within 30 days of rendering of the final EPGMD action.

SFWMD General Conditions

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.
2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.
3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007), and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), which are both incorporated by reference in subparagraph 62-330.050(9)(b)5, F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.
4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), 'Construction Commencement Notice,' indicating the expected start and completion dates. A copy of this form may be obtained from the Agency, as described in subsection 62-330.010(5), F.A.C. If available, an Agency website that fulfills this notification requirement may be used in lieu of the form.
5. Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.
6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:
 - a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex - 'Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit' [Form 62-330.310(3)]; or
 - b. For all other activities - 'As-Built Certification and Request for Conversion to Operational Phase' [Form 62-330.310(1)].
 - c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.
7. If the final operation and maintenance entity is a third party:
 - a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as- built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.3 of Volume I) as filed with the Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.
 - b. Within 30 days of submittal of the as- built certification, the permittee shall submit 'Request for Transfer of Environmental Resource Permit to the Perpetual Operation Entity' [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.
8. The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.

9. This permit does not:
 - a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;
 - b. Convey to the permittee or create in the permittee any interest in real property;
 - c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
 - d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.
10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.
11. The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.
12. The permittee shall notify the Agency in writing:
 - a. Immediately if any previously submitted information is discovered to be inaccurate; and
 - b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.
13. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.
14. If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, work involving subsurface disturbance in the immediate vicinity of such discoveries shall cease. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section, at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Such subsurface work shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and notification shall be provided in accordance with Section 872.05, F.S.
15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.
16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.
17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.
18. Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with Rule 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

SFWMD Special Conditions

1. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
2. Measures shall be taken during construction to insure that sedimentation and/or turbidity problems are not created in the receiving water.
3. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
4. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
5. The conditions outlined in the Broward County Specific Conditions section, except where language specifically relates to Broward County Code, are incorporated into these SFWMD Special Conditions.
6. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
7. Operation of the surface water management system shall be the responsibility of permittee.
8. All terms, conditions, and exhibits previously stipulated by SFWMD Permit # 06-04094-P will apply to this license unless specifically modified.
9. This permit expires on 9/12/2021.
10. If prehistoric or historic artifacts such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, the permitted project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The Permittee or other designee should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at 850-245-6333 or 800-847-7278, as well as the appropriate permitting agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.
In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with section 872.05, Florida Statutes.

Broward County General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth herein are accepted by the licensee and must be completed by the licensee and are enforceable by the Environmental Protection and Growth Management Department (EPGMD) pursuant to Chapter 27 of the Broward County Code of Ordinances. The EPGMD will review this license periodically and may revoke or suspend the license, and initiate administrative and/or judicial action for any violation of the conditions by the licensee, its agents, employees, servants or representatives.
2. This license is valid only for the specific uses set forth in the license application and any deviation from the approved uses may constitute grounds for revocation, suspension, and/or enforcement action by the EPGMD.
3. In the event the licensee is temporarily unable to comply with any of the conditions of the license or with this chapter, the licensee shall notify the EPGMD within eight (8) hours or as stated in the specific section of this chapter. Within three (3) working days of the event, the licensee shall submit a written report to EPGMD that describes the incident, its cause, the measures being taken to correct the problem and prevent its reoccurrence, the owner's intention regarding the repair, replacement and reconstruction of destroyed facilities and a schedule of events leading toward operation with the license condition.
4. The issuance of this license does not convey any vested rights or exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, or any violations of federal, state or local laws or regulations.
5. This license must be available for inspection on licensee's premises during the entire life of the license.
6. By accepting this license, the licensee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this licensed facility or activity, that are submitted to the EPGMD, may be used by the EPGMD as evidence in any enforcement proceeding arising under Chapter 27 of the Broward County Code of Ordinances, except where such use is prohibited by Section 403.111, Florida Statutes.
7. The licensee agrees to comply with Chapter 27 of the Broward County Code of Ordinances, and shall comply with all provisions of the most current version of this chapter, as amended.
8. Any new owner or operator of a licensed facility shall apply by letter for a transfer of license within thirty (30) days after sale or legal transfer. The transferor shall remain liable for performance in accordance with the license until the transferee applies for and is granted a transfer of license. The transferee shall be liable for any violation of Chapter 27 that results from the transferee's activities. The transferee shall comply with the transferor's original license conditions when the transferee has failed to obtain its own license.
9. The licensee, by acceptance of this license, specifically agrees to allow access and shall allow access to the licensed source, activity or facility at times by EPGMD personnel for the purposes of inspection and testing to determine compliance with this license and Chapter 27 of the Broward County Code of Ordinances.
10. This license does not constitute a waiver or approval of any other license, approval, or regulatory requirement by this or any other governmental agency that may be required.
11. Enforcement of the terms and provisions of this license shall be at the reasonable discretion of EPGMD, and any forbearance on behalf of EPGMD to exercise its rights hereunder in the event of any breach by the licensee, shall not be deemed or construed to be a waiver of EPGMD's rights hereunder.

Broward County Specific Conditions

1. The licensee shall allow authorized personnel of the Environmental Licensing and Building Permitting Division (ELBPD), municipality or local water control district to conduct such inspections at reasonable hours, as are necessary to determine compliance with the requirements of the license and the approved plans and specifications.
2. The responsible entity shall agree to maintain the operating efficiency of the water management works. Except in cases where the responsible entity is a governmental agency, the agreement shall further require that if the water management works is not adequately maintained, the County may undertake the required work and bill all associated costs to the responsible entity. If the payment for such obligations is not satisfied within 30 days, said obligation shall become a lien against the property associated with the water management works. Where ownership of the water management works is separate from property ownership, the ELBPD shall require these agreements to be recorded.
3. The licensee shall prosecute the work authorized in a manner so as to minimize any adverse impact of the works on fish, wildlife, natural environmental values, and water quality. The licensee shall institute necessary measures during the construction period, including fill compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters. Any erosion, shoaling or deleterious discharges due to permitted actions will be corrected promptly at no expense to the County.
4. The licensee shall comply with all applicable local land use and subdivision regulations and other local requirements. In addition, the licensee shall obtain all necessary Federal, State, local and special district authorizations prior to the start of any construction alteration of works authorized by this license.
5. Offsite discharges during construction and development shall be made only through the facilities authorized by this license. Water discharged from the project shall be through structures having a mechanism for regulating upstream water stages. Stages may be subject to operating schedules satisfactory to the appropriate regulatory agency.
6. The licensee shall hold and save the County harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance or use of any facility authorized by the license.
7. The license does not convey property rights nor any rights or privileges other than those specified therein.
8. No construction authorized by the license shall commence until a responsible entity acceptable to the ELBPD has been established and has agreed to operate and maintain the efficiency of the system. The entity must be provided with sufficient ownership so that it has control over all water management facilities authorized therein. Upon receipt of written evidence of the satisfaction of this condition, the ELBPD will issue authorization to commence the construction.
9. No beautification, or erection of any structure that will prohibit or limit access of maintenance equipment or vehicles in the right-of-way or easements will be allowed.
10. Any license which grants any entity the permission to place a structure on property which is owned by Broward County or upon which Broward County has an easement shall be construed to create a revocable license for that structure to remain on the property. Broward County may require removal of such a structure at no cost to the County.
11. The area under license will be maintained in a safe and operating condition at all times. Equipment will be promptly removed from the right-of-way or easement and the right-of-way or easement will be restored to its original or better condition within a reasonable time on termination of the authorized use.

12. The ELBPD will be notified, as required in the license or as indicated on the approved plans, to coordinate and schedule inspections.

13. The operation or construction will be in accordance with the approved details and plans submitted with the application. Any modification must be submitted to the ELBPD in writing and receive prior approval.

14. Monitoring may be required for sites with high pollutant generating potential, such as industrial sites, Class I and II solid waste disposal sites, and projects discharging to areas identified in Section 27-200 (b) (1) (o). Such monitoring will be under the cognizance of the ELBPD.

15. Upon completion of the construction of a surface water management system or phase thereof licensed by the ELBPD, it is a requirement of the issuance of the license, and hence transfer of operation and maintenance responsibility, that a Florida Registered Professional Engineer certify that the surface water management system was indeed constructed as licensed. Certified record drawings shall accompany the certification. Suggested wording for this is as follows:

I HEREBY CERTIFY TO THE CONSTRUCTION COMPLETION OF ALL THE COMPONENTS OF THE SURFACE WATER MANAGEMENT FACILITIES FOR THE ABOVE REFERENCES PROJECT AND THAT THEY HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE BROWARD COUNTY ELBPD, AND HEREBY AFFIX MY SEAL THIS _____ DAY OF _____, 20____.

(SEAL)

16. Water management areas shall be legally reserved to the operation entity and for that purpose by dedication on the plat, deed restrictions, easements, etc., so that subsequent owners or others may not remove such areas from their intended use. Management areas, including maintenance easements, shall be connected to a public road or other location from which operation and maintenance access is legally and physically available.

17. The licensee shall notify the ELBPD in writing within twenty-four (24) hours of the start, finish, suspension, and/or abandonment of any construction or alteration of works authorized by this license.

18. A prorated share of surface water management retention/detention areas, sufficient to provide the required flood protection and water quality treatment, must be provided prior to occupancy of any building or residence.

19. The operation license shall be valid for a specific period of time not to exceed five (5) years from the date the license is transferred to the operation phase. The operation license shall be renewed in accordance with Section 27 - 198 (d) (2) of the Article.

20. The ELBPD reserves the right to require additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.

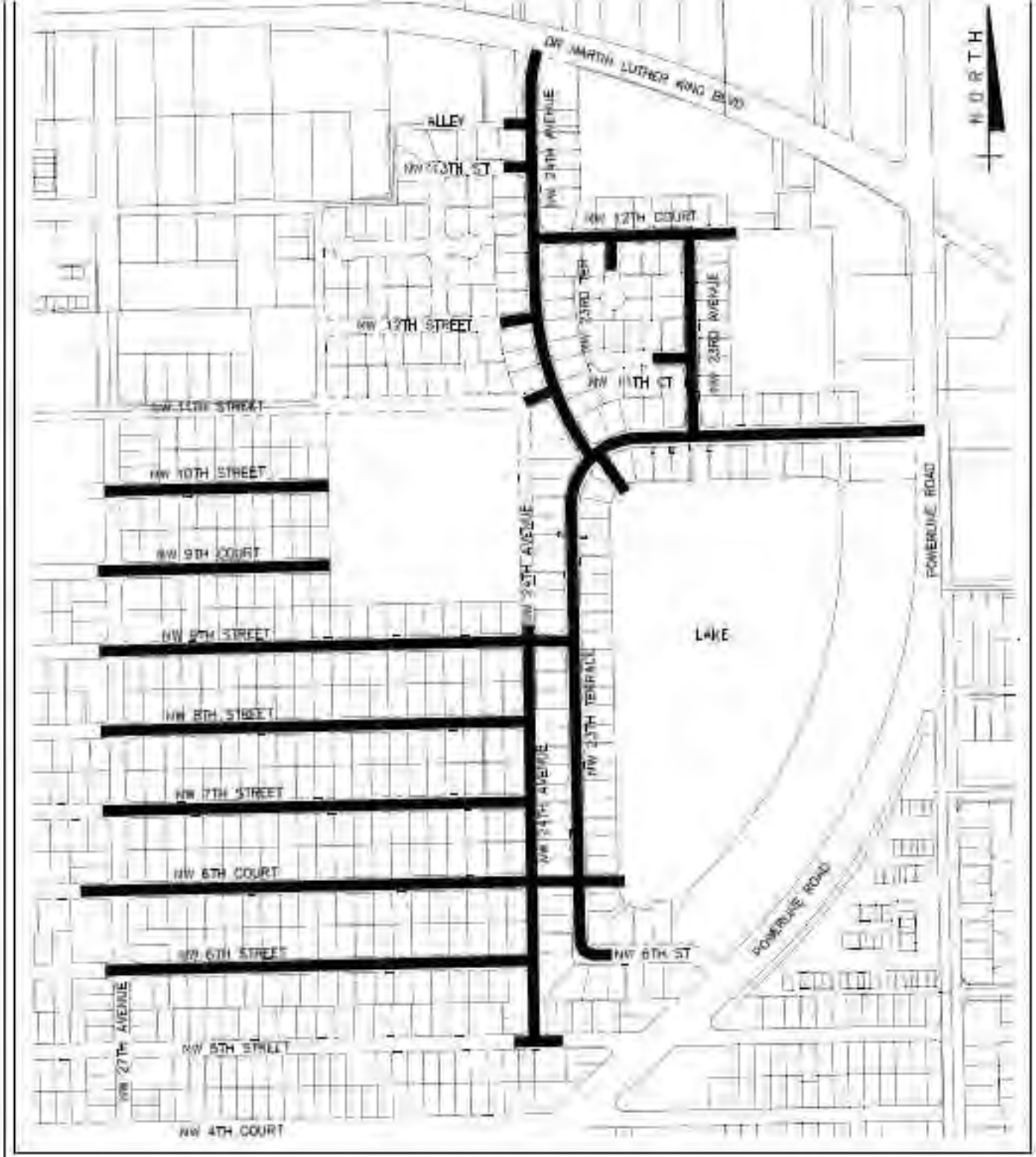
21. This permit does not constitute the approval required by Section 27-353(i), Broward County Code, to conduct dewatering operations at or within one-quarter mile radius of a contaminated site. Please contact the Pollution Prevention Division at (954) 519-1260 for further information.

22. The licensee shall keep a log of the operation and maintenance schedule for all components of the surface water management system.

23. The surface water management system must be inspected by the ELPBP to verify compliance with Specific Condition No. 15 of the license. In accordance with the Broward County Natural Resource Protection Code, Article I, Sec. 27-66 (f), the County agency or municipal agency charged with issuing a certificate of occupancy (CO) shall not issue a CO until notified of the Broward County ELBPD approval. Partial certifications will be handled in accordance with Specific Condition No. 18.

24. The licensee is advised that he/she is required to submit a Storm Water Notice of Intent (NOI) application at least 48 hours prior to the commencement of construction to the Florida Department of Environmental Protection, NPDES Stormwater Notices Center, MS #3585 at 2600 Blair Stone Road - Tallahassee, Florida 32399-2400.

25. All special conditions, exhibits and other materials previously stipulated by license number SWM2004-046-0 and permit number 06-04094-P remain in effect unless otherwise revised and shall apply to this modification.



— PROJECT AREA

LOCATION MAP

NTS

Exhibit 1

STAFF REPORT

Project Name: Esquire Lake Neighborhood Stormwater Improvements

Permit Number: 06-04094-P **License Number:** SWM2004-046-2

Application Number: 160613-24 **Concurrent Application** L2016-154

Application Type: Environmental Resource Modification

Location: Broward County **Section-Township-Range:** 33-48-42

Permittee's Name: City of Pompano Beach

Project Area: 33.33 acres **Drainage Area:** 33.33 acres

Project Land Use: Roadway

Drainage Basin: C-14

Receiving Body: Existing System

Purpose:

The modification of SFWMD Permit # 06-04094-P and Broward County Surface Water Management License No. SWM2004-046-0 for the construction and operation of a surface water management system to serve an existing 33.33 acre roadway.

Project Evaluation:

Project Site Description:

The site is presently developed as a roadway containing a surface water management system that does not provide water quality treatment of storm runoff. The site is located South of Martin Luther King Boulevard and East of Powerline Road in Pompano Beach.

Proposed Project Design:

A system of swales, inlets and culverts will direct the storm runoff to 3,697 LF of 4'W x 4'H (2,519 LF) and 4'W x 5'H (1,178 LF) exfiltration trench for water quality treatment prior to discharge to Esquire Lake for storm runoff attenuation via existing control structures and outfalls. The existing 36-inch outfalls at the northwest and southwest corner of Esquire Lake are proposed to be upsized to 42-inch RCP outfall pipes.

The applicant's consultant has demonstrated through plans and calculations that proposed project meets the requirements of the Code.

Control Elevation:

Control Elevation = 6.5 ft, NAVD WSWT Control Elevation = 6.5 ft, NAVD

Method of Determination = BC Avg. Wet Season Water Table Map

Project Background:

An Environmental Resource General License Application No. GL-POB1606-027 was also issued for this project

Water Quality Design:

Water quality treatment will be provided in the exfiltration trench system for 1.0 inch over the entire site.

<u>Basin Name</u>	<u>Treatment Type</u>	<u>Treatment Method</u>	<u>Volume Required</u>	<u>Volume Provided</u>
Esquire Lake Neighborhood	Treatment	Exfiltration Trench	2.78 ac-ft	6.76 ac-ft
			Total: 6.76 ac-ft	

Environmental Summary:

No wetland areas were identified within the project area and no wetland impacts are anticipated from the development of this parcel. Therefore, no wetland mitigation requirements have been included in the permit for this project. The proposed activities have been evaluated for potential secondary and cumulative impacts and to determine if the project is contrary to the public interest. Based upon the proposed project design, EPGMD has determined that the project will not cause adverse secondary or cumulative impacts to the water resources and is not contrary to the public interest.

Exhibit 2B

Special Concerns:

Operating Entity: City of Pompano Beach
Attention: Alessandra Delfico, P.E., Utility Engineer
1201 NE 5th Avenue
Pompano Beach, FL 33060

Waste Water System/Supplier: BCUD #4

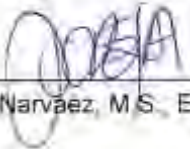
Exhibit 2C

STAFF RECOMMENDATION:


South Florida Water Management District and Broward County rules have been adhered to and an Individual Permit should be granted.

06-04094-P; SWM2004-046-2; STAFF REVIEW:

Surface Water Management Program:



Johana Narváez, M.S., Engineer Intern



Carlos Adorisio, P.E., Engineering Unit Supervisor

Aquatic and Wetland Resources Program:

d! J

Linda Sunderland, Manager

Exhibit 2D

CITY OF POMPANO BEACH ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS

CITY PROJECT No. _____

CITY BID No. _____



LOCATION MAP
N.T.C.



100% DESIGN
MAY 2016

DRAWING LIST

SHEET	DRAWING	TITLE
0-1	0-1	GENERAL
0-2	0-2	TITLE SHEET, LOCATION MAP AND DRAWING LIST
0-3	0-3	SURVEY LOCATIONS AND GENERAL NOTES
0-4	0-4	HORIZONTAL CONTROL DATUMS
0-5	0-5	VERT. MAP
1-1	1-1	10' HIGH STREET PLAN AND PROFILE - SHEET 1
1-2	1-2	10' HIGH STREET PLAN AND PROFILE - SHEET 2
1-3	1-3	10' HIGH STREET PLAN AND PROFILE - SHEET 3
1-4	1-4	10' HIGH STREET PLAN AND PROFILE - SHEET 4
1-5	1-5	10' HIGH STREET PLAN AND PROFILE - SHEET 5
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1-8	1-8	10' HIGH STREET PLAN AND PROFILE - SHEET 8
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1-60	1-60	10' HIGH STREET PLAN AND PROFILE - SHEET 60
1-61	1-61	10' HIGH STREET PLAN AND PROFILE - SHEET 61
1-62	1-62	10' HIGH STREET PLAN AND PROFILE - SHEET 62
1-63	1-63	10' HIGH STREET PLAN AND PROFILE - SHEET 63
1-64	1-64	10' HIGH STREET PLAN AND PROFILE - SHEET 64
1-65	1-65	10' HIGH STREET PLAN AND PROFILE - SHEET 65
1-66	1-66	10' HIGH STREET PLAN AND PROFILE - SHEET 66
1-67	1-67	10' HIGH STREET PLAN AND PROFILE - SHEET 67
1-68	1-68	10' HIGH STREET PLAN AND PROFILE - SHEET 68
1-69	1-69	10' HIGH STREET PLAN AND PROFILE - SHEET 69
1-70	1-70	10' HIGH STREET PLAN AND PROFILE - SHEET 70
1-71	1-71	10' HIGH STREET PLAN AND PROFILE - SHEET 71
1-72	1-72	10' HIGH STREET PLAN AND PROFILE - SHEET 72
1-73	1-73	10' HIGH STREET PLAN AND PROFILE - SHEET 73
1-74	1-74	10' HIGH STREET PLAN AND PROFILE - SHEET 74
1-75	1-75	10' HIGH STREET PLAN AND PROFILE - SHEET 75
1-76	1-76	10' HIGH STREET PLAN AND PROFILE - SHEET 76
1-77	1-77	10' HIGH STREET PLAN AND PROFILE - SHEET 77
1-78	1-78	10' HIGH STREET PLAN AND PROFILE - SHEET 78
1-79	1-79	10' HIGH STREET PLAN AND PROFILE - SHEET 79
1-80	1-80	10' HIGH STREET PLAN AND PROFILE - SHEET 80
1-81	1-81	10' HIGH STREET PLAN AND PROFILE - SHEET 81
1-82	1-82	10' HIGH STREET PLAN AND PROFILE - SHEET 82
1-83	1-83	10' HIGH STREET PLAN AND PROFILE - SHEET 83
1-84	1-84	10' HIGH STREET PLAN AND PROFILE - SHEET 84
1-85	1-85	10' HIGH STREET PLAN AND PROFILE - SHEET 85
1-86	1-86	10' HIGH STREET PLAN AND PROFILE - SHEET 86
1-87	1-87	10' HIGH STREET PLAN AND PROFILE - SHEET 87
1-88	1-88	10' HIGH STREET PLAN AND PROFILE - SHEET 88
1-89	1-89	10' HIGH STREET PLAN AND PROFILE - SHEET 89
1-90	1-90	10' HIGH STREET PLAN AND PROFILE - SHEET 90
1-91	1-91	10' HIGH STREET PLAN AND PROFILE - SHEET 91
1-92	1-92	10' HIGH STREET PLAN AND PROFILE - SHEET 92
1-93	1-93	10' HIGH STREET PLAN AND PROFILE - SHEET 93
1-94	1-94	10' HIGH STREET PLAN AND PROFILE - SHEET 94
1-95	1-95	10' HIGH STREET PLAN AND PROFILE - SHEET 95
1-96	1-96	10' HIGH STREET PLAN AND PROFILE - SHEET 96
1-97	1-97	10' HIGH STREET PLAN AND PROFILE - SHEET 97
1-98	1-98	10' HIGH STREET PLAN AND PROFILE - SHEET 98
1-99	1-99	10' HIGH STREET PLAN AND PROFILE - SHEET 99
1-100	1-100	10' HIGH STREET PLAN AND PROFILE - SHEET 100

FOR INFORMATION REGARDING THIS PROJECT CONTACT:
RENEGADE TRAVIS, P.C.
MATHEWS CONSULTING, INC.
117 E. ROSEMARY AVENUE, SUITE 100
WEST PALM BEACH, FL 33411
561/999-6175



RENEGADE TRAVIS, P.C.
P.O. BOX 140888
WEST PALM BEACH, FL 33411

TITLE SHEET AND
LOCATION MAP
SHEET: 1 of 100
DRAWING: 100-1

[illegible]

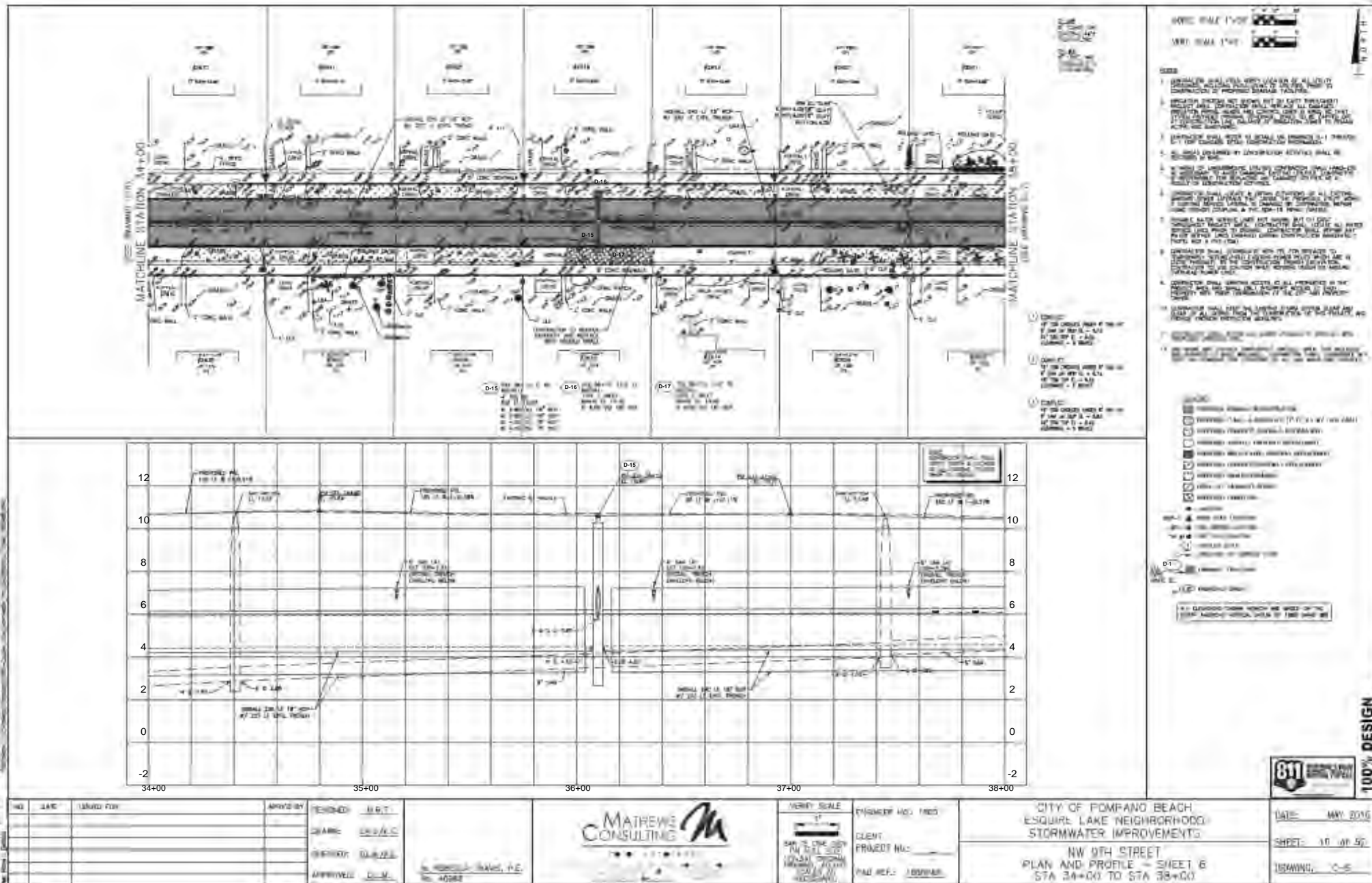
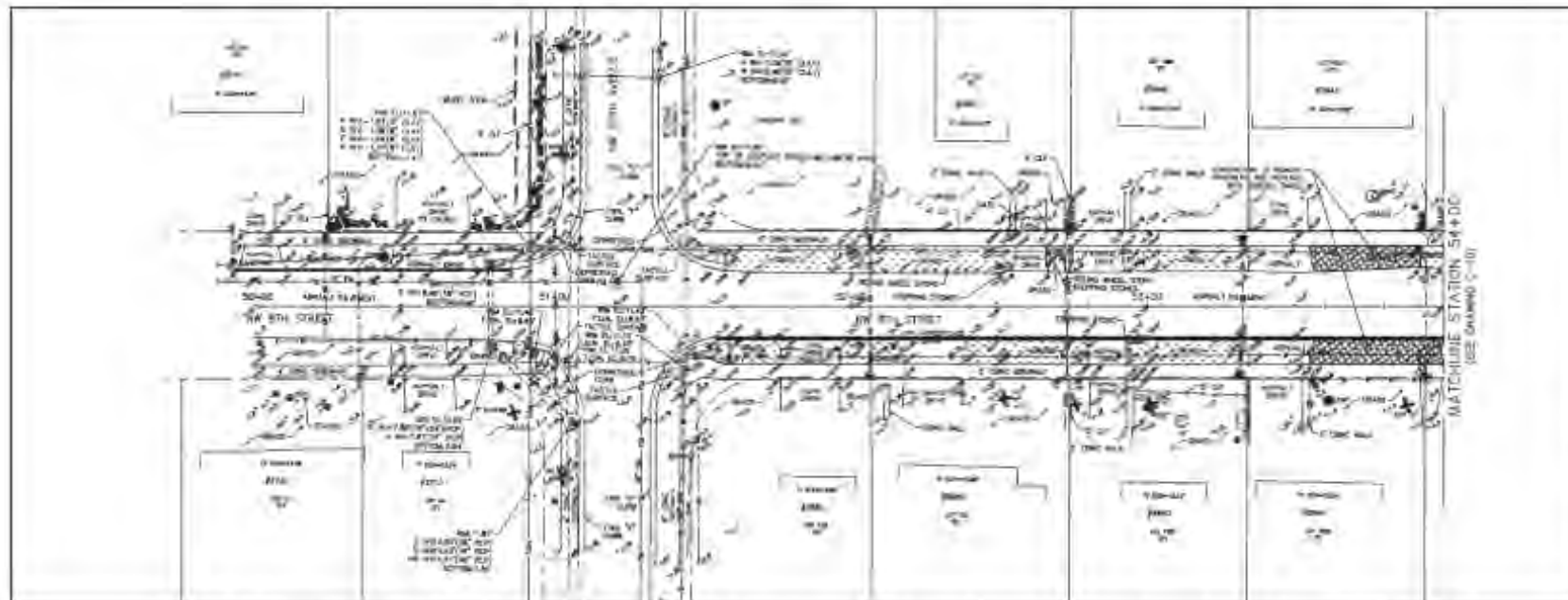
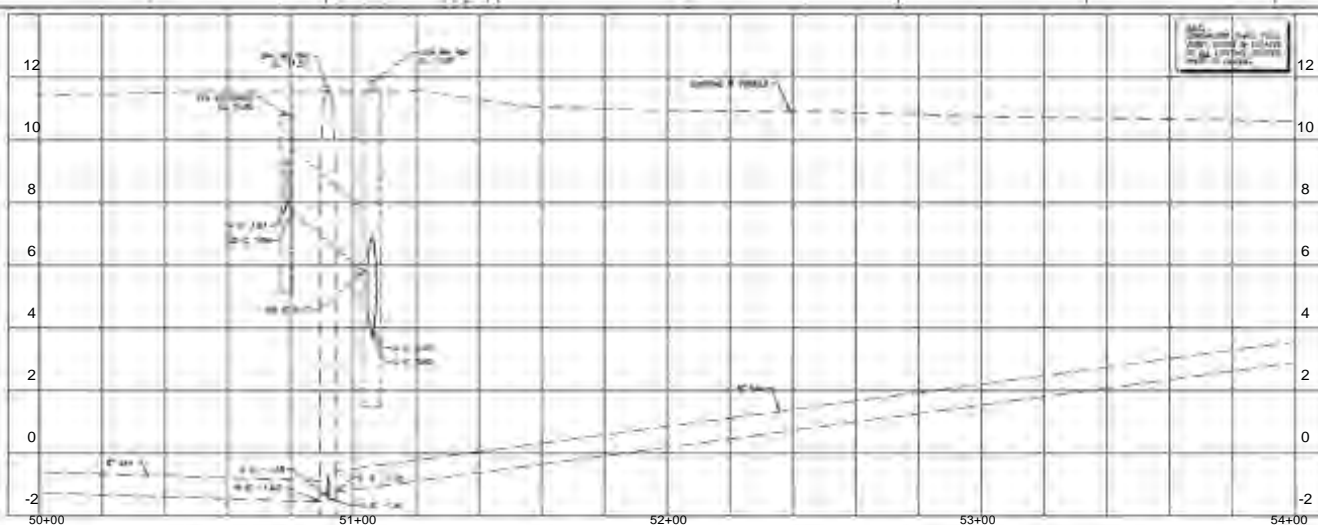


Exhibit 10



- NOTE: SCALE 1"=20'
- NOTE: SCALE 1"=20'
1. EXISTING AND PROPOSED STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.
 2. EXISTING STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.
 3. EXISTING STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.
 4. EXISTING STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.
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 10. EXISTING STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.
 11. EXISTING STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.
 12. EXISTING STORMWATER IMPROVEMENTS SHALL BE SHOWN ON THIS PLAN.



- LEGEND
- EXISTING STORMWATER IMPROVEMENTS
 - PROPOSED STORMWATER IMPROVEMENTS
 - EXISTING GROUND SURFACE
 - PROPOSED STORMWATER PROFILE
 - PROPOSED FINISHED GROUND SURFACE
 - EXISTING CURB AND SIDEWALK
 - PROPOSED CURB AND SIDEWALK
 - EXISTING LANDSCAPING
 - PROPOSED LANDSCAPING
 - EXISTING UTILITY
 - PROPOSED UTILITY
 - EXISTING TRAVELWAY
 - PROPOSED TRAVELWAY
 - EXISTING RIGHT-OF-WAY
 - PROPOSED RIGHT-OF-WAY

NO.	DATE	ISSUED FOR	APPROVED BY	REVISION	DATE

MATHEWS CONSULTING

VERIFIED SCALE

1"=20'

PLAN

PROFILE

ENGINEER: H.D. FRED

CLIENT:

PROJECT NO.:

DATE: 10/20/2010

CITY OF POMPANO BEACH

ESQUIRE LAKE NEIGHBORHOOD

STORMWATER IMPROVEMENTS

NW 8TH STREET

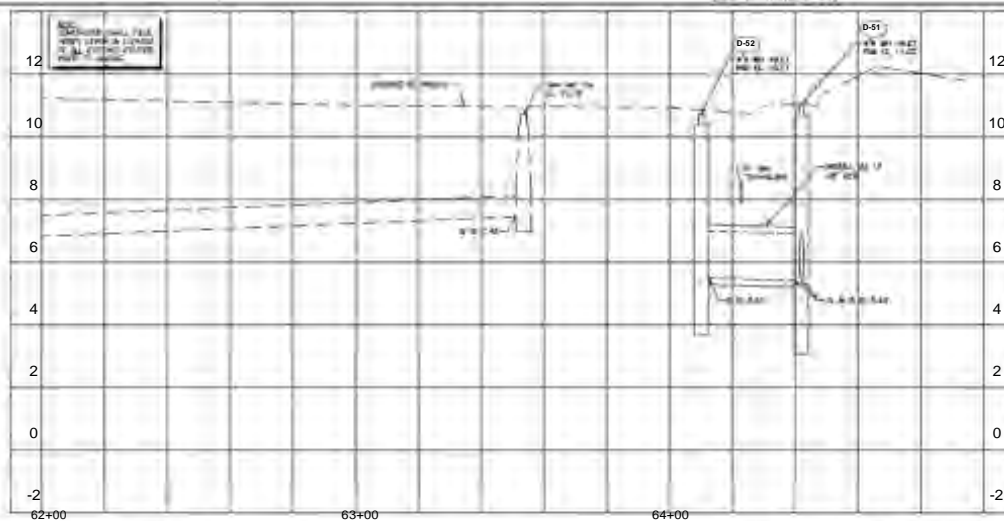
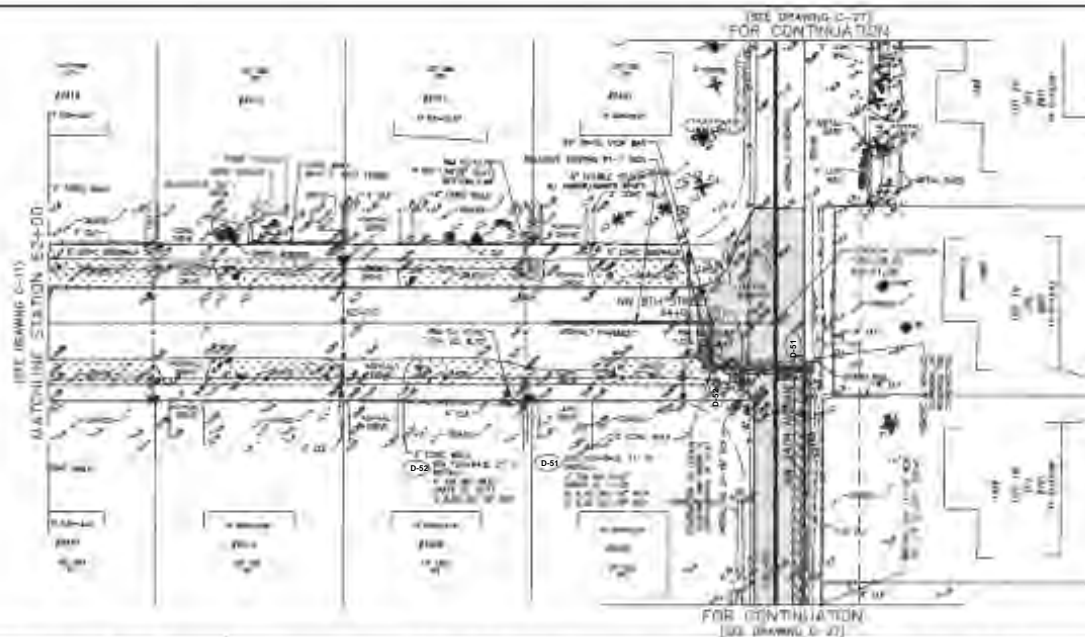
PLAN AND PROFILE - SHEET 9

STA 50+00 TO STA 54+00

DATE: MAY 2010

SHEET: 15 OF 50

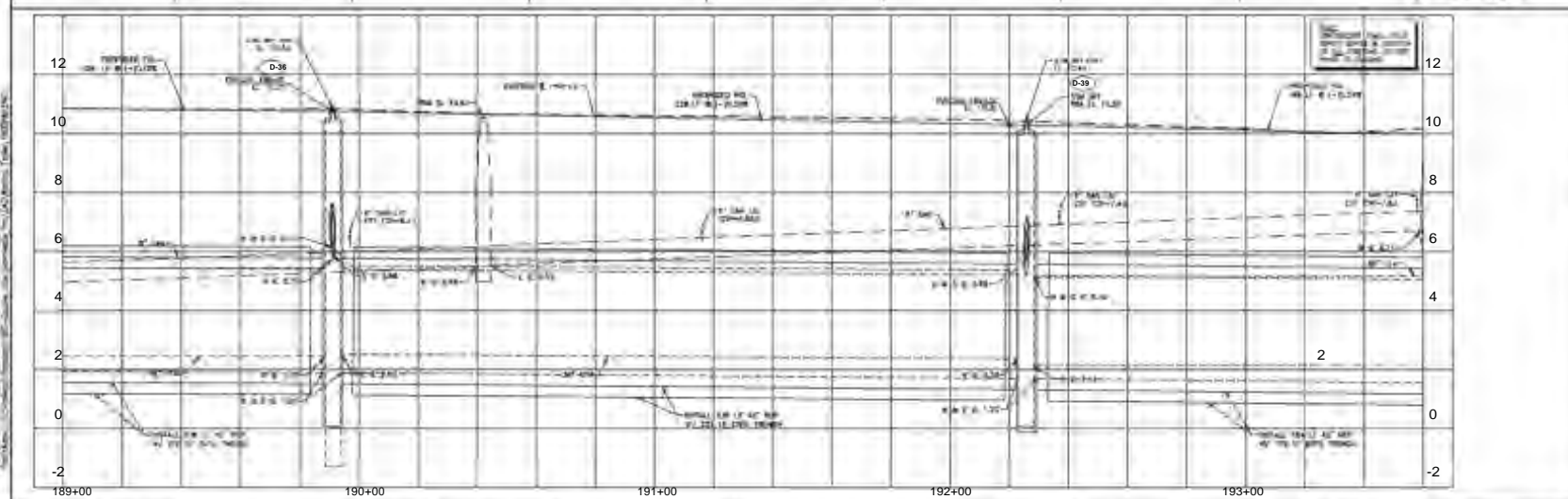
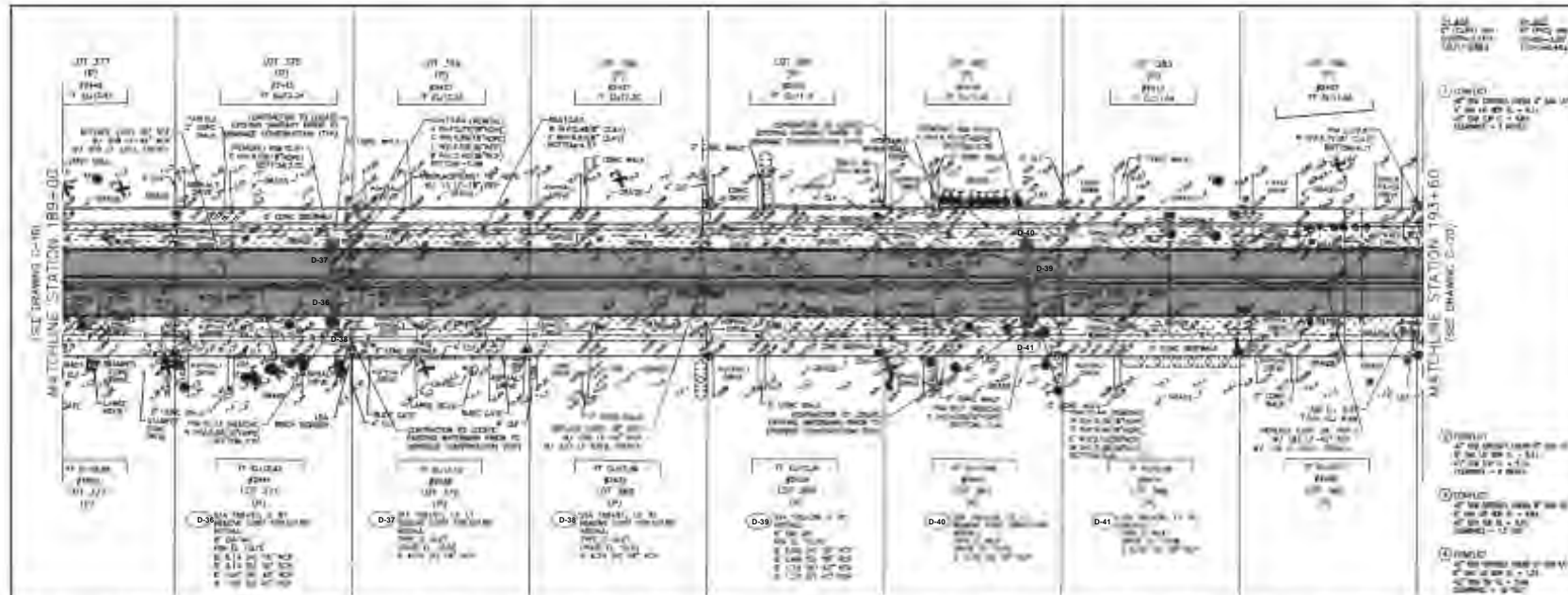
ISSUING: C-8



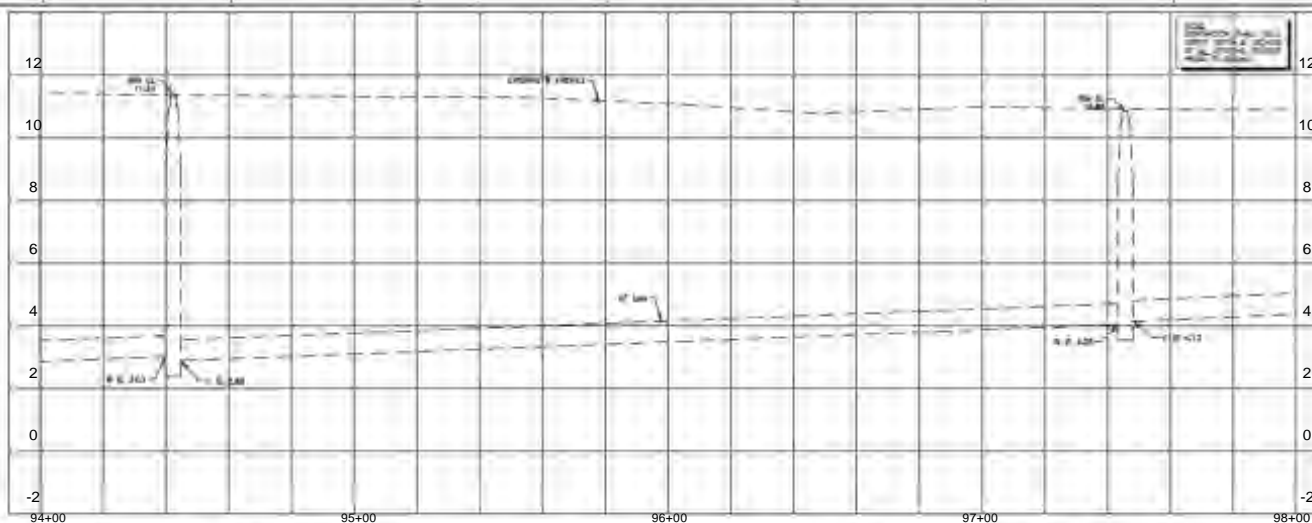
1. **REVIEW** **WALL** **1" x 6"** 
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51. **REVIEW** **WALL** **1" x 6"** 
52. **REVIEW** **WALL** **1" x 6"**

-
- D-1
- System
- Database
- Network
- User
- Mobile Device
- Cloud
- Gear
- Lightbulb
- Magnifying Glass
- Person
- Document
- Speech Bubble
- Mail
- Location Pin
- Calendar
- Clock
- Play Button
- Stop Button
- Refresh Button
- Search Icon
- List Icon
- Checkmark
- Close Button
- Help Icon
- Settings Icon
- Power Icon
- Lock Icon

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NO.	DATE	ISSUED FOR	APPROVED BY	DESIGNED BY	DATE	PROJECT NO.	CITY OF POMPANO BEACH ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS	DATE: MAY 2016
				CHANG	05/10/16			SHEET: 23 OF 50
				CHANG	05/10/16		NW 8TH EXPIRT PLAN AND PROFILE - SHEET 19 STA 189+00 TO STA 193+00	DRAWING: C-19
				APPROVED	05/10/16			



- NOTES:**
1. ALL STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MICHIGAN STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
 2. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
 3. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
 4. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
 5. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
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 9. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
 10. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
 11. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.
 12. ALL STRUCTURES SHALL BE DESIGNED TO WITHSTAND A MINIMUM OF 100 YEARS OF SERVICE.

- LEGEND:**
- 1. Catch Basin
 - 2. Manhole
 - 3. Culvert
 - 4. Stormwater Pipe
 - 5. Stormwater Pipe
 - 6. Stormwater Pipe
 - 7. Stormwater Pipe
 - 8. Stormwater Pipe
 - 9. Stormwater Pipe
 - 10. Stormwater Pipe
 - 11. Stormwater Pipe
 - 12. Stormwater Pipe

NO.	DATE	ISSUED FOR	APPROVED BY	DESIGNED BY	DATE

MAITREWS CONSULTING

100% DESIGN

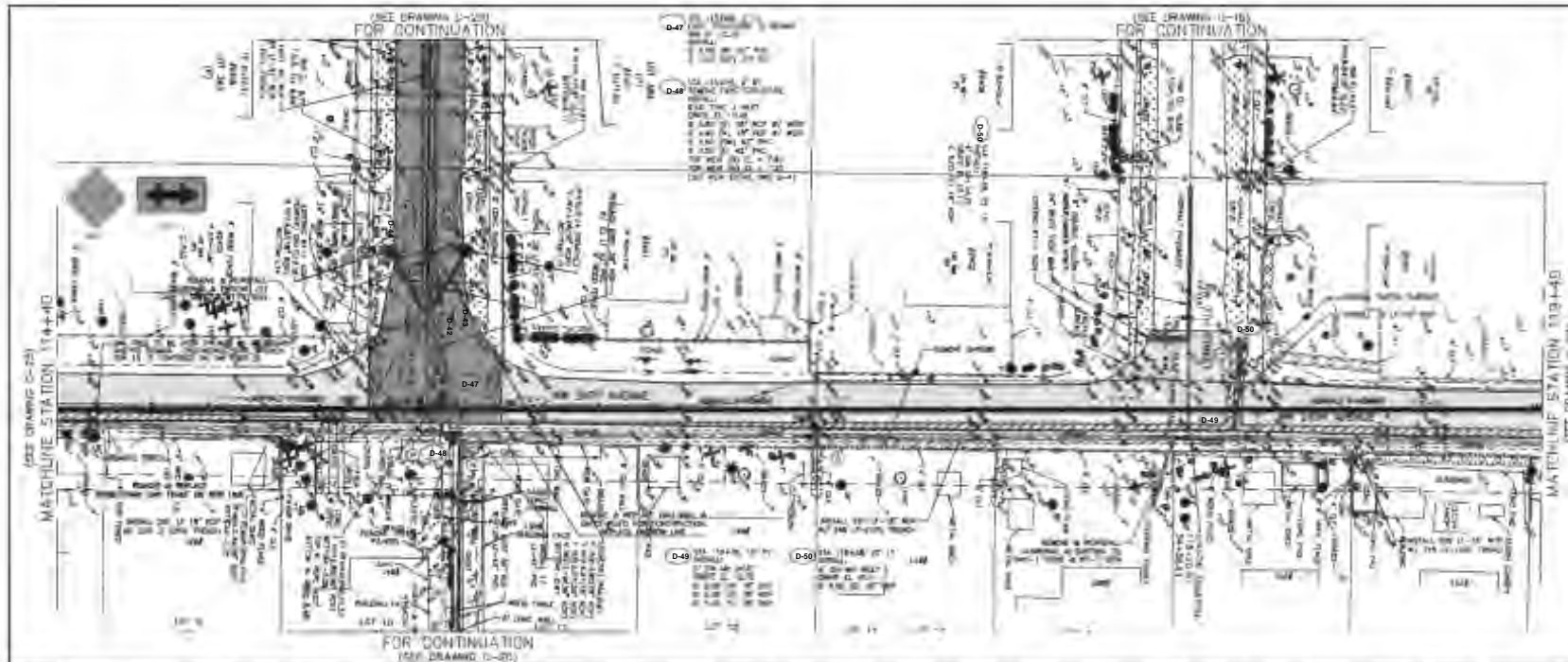
CITY OF POMPANO BEACH
ESQUIRE LAKE NEIGHBORHOOD
STORMWATER IMPROVEMENTS

NW 6TH STREET
 PLAN AND PROFILE - SHEET 42
 STA 94+00 TO STA 98+00

DATE: MAY 2016

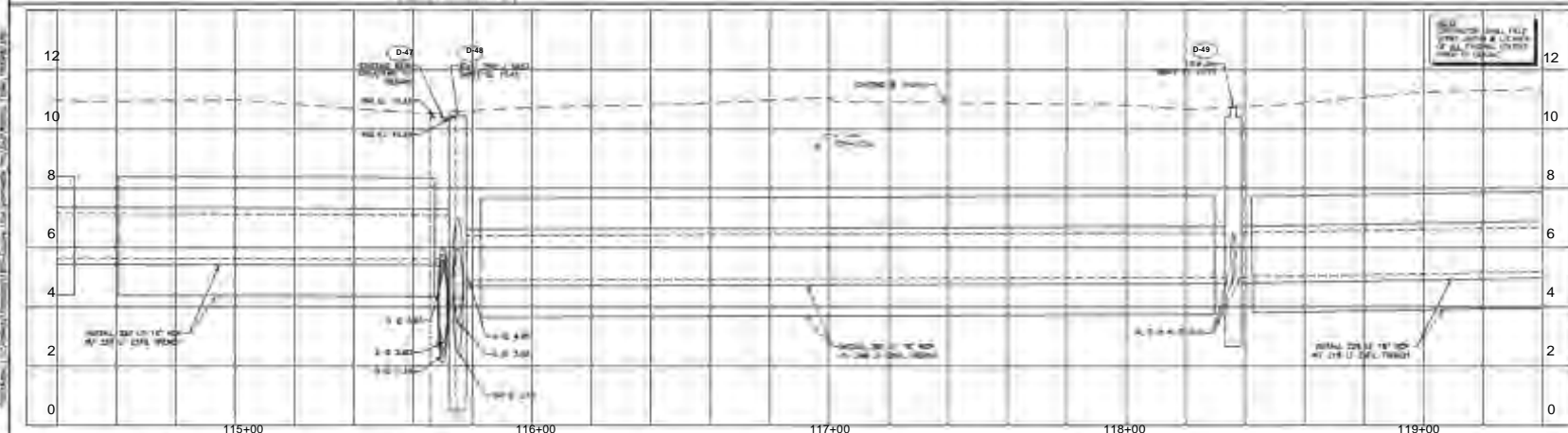
SHEET: 26 OF 50

ISSUING: C-32



- NOTES:
1. EXISTING DRAINAGE SHALL BE MAINTAINED AS MUCH AS POSSIBLE. ANY CHANGES TO EXISTING DRAINAGE SHALL BE INDICATED BY A DASHED LINE.
 2. EXISTING DRAINAGE SHALL BE MAINTAINED AS MUCH AS POSSIBLE. ANY CHANGES TO EXISTING DRAINAGE SHALL BE INDICATED BY A DASHED LINE.
 3. EXISTING DRAINAGE SHALL BE MAINTAINED AS MUCH AS POSSIBLE. ANY CHANGES TO EXISTING DRAINAGE SHALL BE INDICATED BY A DASHED LINE.
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 12. EXISTING DRAINAGE SHALL BE MAINTAINED AS MUCH AS POSSIBLE. ANY CHANGES TO EXISTING DRAINAGE SHALL BE INDICATED BY A DASHED LINE.

- LEGEND:
- EXISTING DRAINAGE
 - PROPOSED DRAINAGE
 - EXISTING MANHOLE
 - PROPOSED MANHOLE
 - EXISTING PIPE
 - PROPOSED PIPE
 - EXISTING STREET
 - PROPOSED STREET
 - EXISTING CURB
 - PROPOSED CURB
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK
 - EXISTING LANDSCAPE
 - PROPOSED LANDSCAPE
 - EXISTING UTILITIES
 - PROPOSED UTILITIES
 - EXISTING FENCE
 - PROPOSED FENCE
 - EXISTING SIGN
 - PROPOSED SIGN
 - EXISTING LIGHT
 - PROPOSED LIGHT
 - EXISTING TREE
 - PROPOSED TREE
 - EXISTING BUSH
 - PROPOSED BUSH
 - EXISTING GRASS
 - PROPOSED GRASS
 - EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - EXISTING CONCRETE
 - PROPOSED CONCRETE
 - EXISTING BRICK
 - PROPOSED BRICK
 - EXISTING STONE
 - PROPOSED STONE
 - EXISTING METAL
 - PROPOSED METAL
 - EXISTING WOOD
 - PROPOSED WOOD
 - EXISTING PLASTER
 - PROPOSED PLASTER
 - EXISTING GYPSUM
 - PROPOSED GYPSUM
 - EXISTING CARPET
 - PROPOSED CARPET
 - EXISTING TILE
 - PROPOSED TILE
 - EXISTING FLOOR
 - PROPOSED FLOOR
 - EXISTING CEILING
 - PROPOSED CEILING
 - EXISTING WALL
 - PROPOSED WALL
 - EXISTING ROOF
 - PROPOSED ROOF
 - EXISTING FOUNDATION
 - PROPOSED FOUNDATION
 - EXISTING STRUCTURE
 - PROPOSED STRUCTURE
 - EXISTING EQUIPMENT
 - PROPOSED EQUIPMENT
 - EXISTING FURNITURE
 - PROPOSED FURNITURE
 - EXISTING SIGNAGE
 - PROPOSED SIGNAGE
 - EXISTING LIGHTING
 - PROPOSED LIGHTING
 - EXISTING SECURITY
 - PROPOSED SECURITY
 - EXISTING ACCESS
 - PROPOSED ACCESS
 - EXISTING EGRESS
 - PROPOSED EGRESS
 - EXISTING ENTRANCE
 - PROPOSED ENTRANCE
 - EXISTING EXIT
 - PROPOSED EXIT
 - EXISTING DOOR
 - PROPOSED DOOR
 - EXISTING WINDOW
 - PROPOSED WINDOW
 - EXISTING SKYLIGHT
 - PROPOSED SKYLIGHT
 - EXISTING PORCH
 - PROPOSED PORCH
 - EXISTING PATIO
 - PROPOSED PATIO
 - EXISTING DECK
 - PROPOSED DECK
 - EXISTING BALCONY
 - PROPOSED BALCONY
 - EXISTING TERRACE
 - PROPOSED TERRACE
 - EXISTING WALKWAY
 - PROPOSED WALKWAY
 - EXISTING DRIVEWAY
 - PROPOSED DRIVEWAY
 - EXISTING GARAGE
 - PROPOSED GARAGE
 - EXISTING PORCH
 - PROPOSED PORCH
 - EXISTING PATIO
 - PROPOSED PATIO
 - EXISTING DECK
 - PROPOSED DECK
 - EXISTING BALCONY
 - PROPOSED BALCONY
 - EXISTING TERRACE
 - PROPOSED TERRACE
 - EXISTING WALKWAY
 - PROPOSED WALKWAY
 - EXISTING DRIVEWAY
 - PROPOSED DRIVEWAY
 - EXISTING GARAGE
 - PROPOSED GARAGE



NO.	DATE	ISSUED FOR	APPROVED BY	DESIGNED BY	CHECKED BY	APPROVED BY	DATE	PROJECT NO.	CITY OF POMPANO BEACH ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS	DATE: MAY 2016
									NW 24TH AVENUE STA 114+40 TO STA 119+40	SHEET: 20 OF 50
										DRAWING: C-35

MATTHEWS CONSULTING

11111 N. W. 24TH AVENUE, SUITE 100
POMPANO BEACH, FL 33068

VERIFY SCALE

1" = 10' HORIZONTAL
1" = 4' VERTICAL

ENGINEER HAS REVIEWED

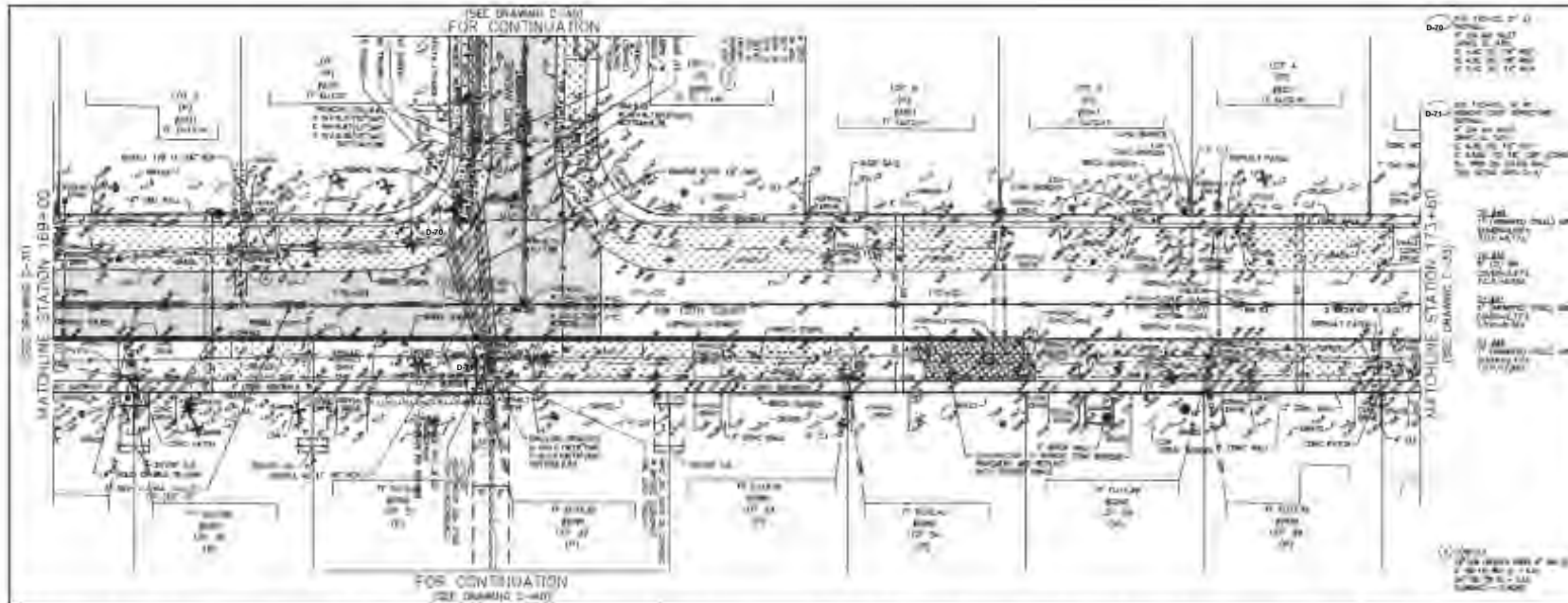
CLIENT: CITY OF POMPANO BEACH

PROJECT NO.: 15000000

DATE: MAY 2016

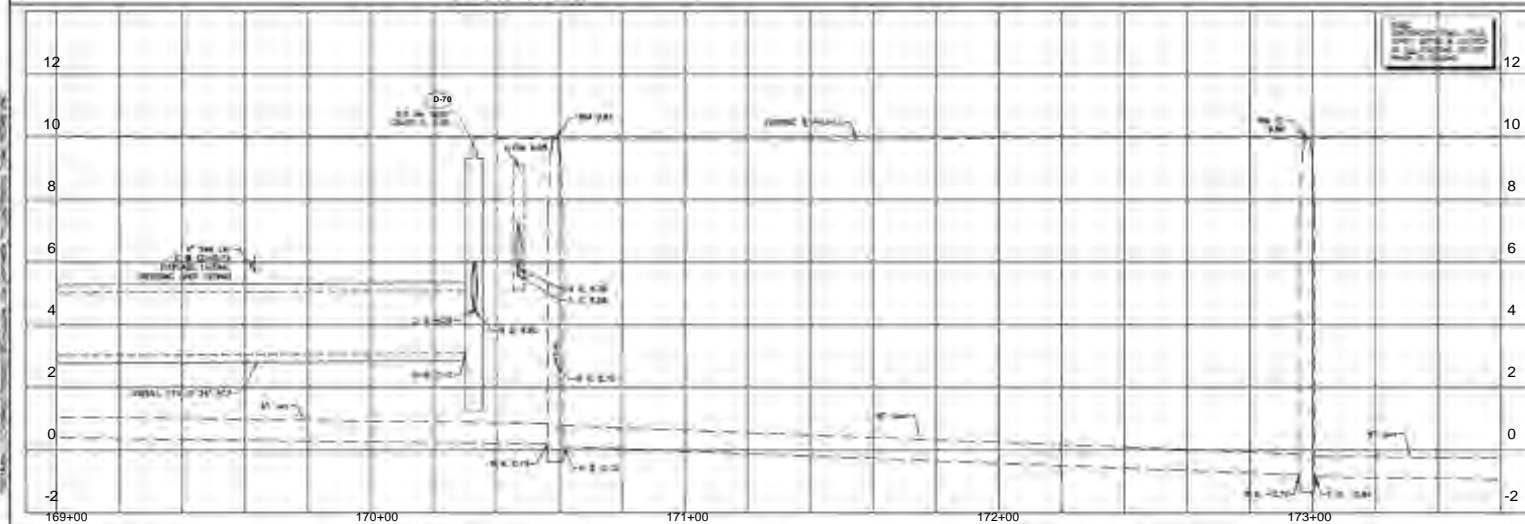
811

100% DESIGN



- NOTES:
1. ALL STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS ADOPTED BY THE BOARD OF SUPERVISORS.
 2. ALL STRUCTURES SHALL BE DESIGNED TO RESIST A MINIMUM OF 15 PSI OF SOIL PRESSURE.
 3. ALL STRUCTURES SHALL BE DESIGNED TO RESIST A MINIMUM OF 15 PSI OF SOIL PRESSURE.
 4. ALL STRUCTURES SHALL BE DESIGNED TO RESIST A MINIMUM OF 15 PSI OF SOIL PRESSURE.
 5. ALL STRUCTURES SHALL BE DESIGNED TO RESIST A MINIMUM OF 15 PSI OF SOIL PRESSURE.
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 9. ALL STRUCTURES SHALL BE DESIGNED TO RESIST A MINIMUM OF 15 PSI OF SOIL PRESSURE.
 10. ALL STRUCTURES SHALL BE DESIGNED TO RESIST A MINIMUM OF 15 PSI OF SOIL PRESSURE.

- LEGEND:
- 1. Catch Basin
 - 2. Manhole
 - 3. Culvert
 - 4. Stormwater Pipe
 - 5. Stormwater Pipe
 - 6. Stormwater Pipe
 - 7. Stormwater Pipe
 - 8. Stormwater Pipe
 - 9. Stormwater Pipe
 - 10. Stormwater Pipe



NO.	DATE	ISSUED FOR	BY	REVISION	DATE
1	05/01/2010	FOR REVIEW	W.B.T.		
2	05/01/2010	FOR REVIEW	W.B.T.		
3	05/01/2010	FOR REVIEW	W.B.T.		
4	05/01/2010	FOR REVIEW	W.B.T.		
5	05/01/2010	FOR REVIEW	W.B.T.		
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7	05/01/2010	FOR REVIEW	W.B.T.		
8	05/01/2010	FOR REVIEW	W.B.T.		
9	05/01/2010	FOR REVIEW	W.B.T.		
10	05/01/2010	FOR REVIEW	W.B.T.		

MATHEWS CONSULTING

W.B.T.

W.B.T.

PROJECT NO. 1000000000

CLIENT: CITY OF POMPA BEACH

PROJECT NAME: ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS

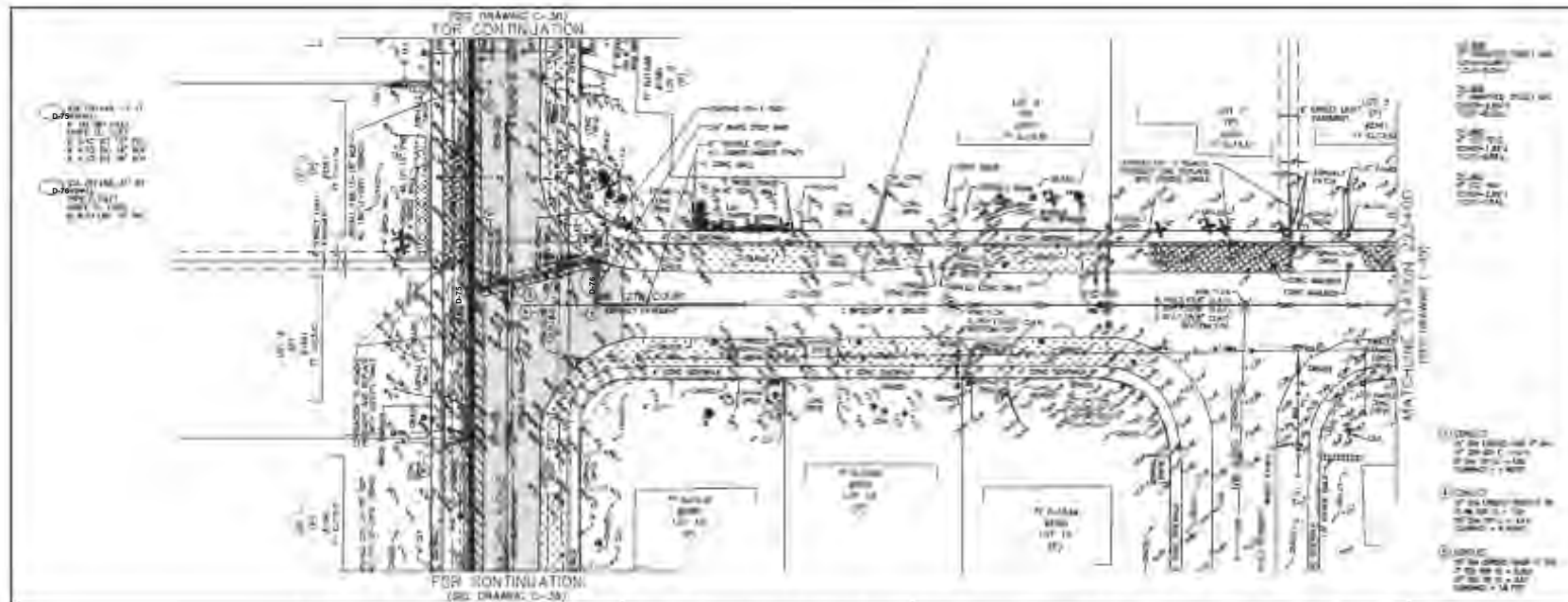
DATE: MAY 2010

SHEET: 36 OF 50

ISSUING: C-30

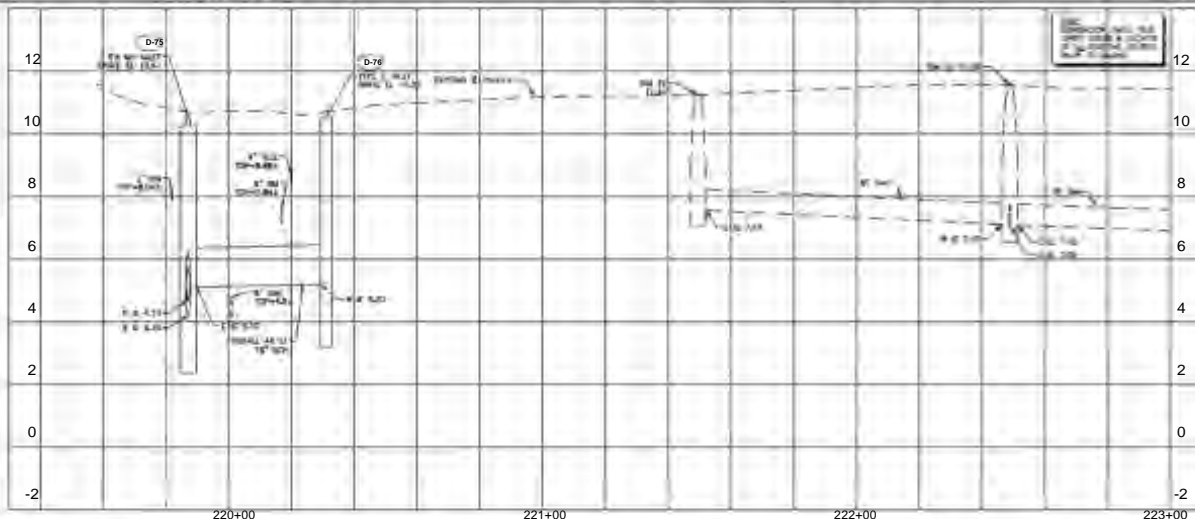
811

100% DESIGN



- NOTES:
1. STORMWATER SHALL BE COLLECTED AND CONVEYED TO THE EXISTING STORMWATER SYSTEM.
 2. STORMWATER SHALL BE CONVEYED TO THE EXISTING STORMWATER SYSTEM AT THE EXISTING MANHOLE.
 3. STORMWATER SHALL BE CONVEYED TO THE EXISTING STORMWATER SYSTEM AT THE EXISTING MANHOLE.
 4. STORMWATER SHALL BE CONVEYED TO THE EXISTING STORMWATER SYSTEM AT THE EXISTING MANHOLE.
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 11. STORMWATER SHALL BE CONVEYED TO THE EXISTING STORMWATER SYSTEM AT THE EXISTING MANHOLE.
 12. STORMWATER SHALL BE CONVEYED TO THE EXISTING STORMWATER SYSTEM AT THE EXISTING MANHOLE.

- LEGEND:
- 1. EXISTING STORMWATER SYSTEM
 - 2. EXISTING STORMWATER SYSTEM
 - 3. EXISTING STORMWATER SYSTEM
 - 4. EXISTING STORMWATER SYSTEM
 - 5. EXISTING STORMWATER SYSTEM
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 - 9. EXISTING STORMWATER SYSTEM
 - 10. EXISTING STORMWATER SYSTEM
 - 11. EXISTING STORMWATER SYSTEM
 - 12. EXISTING STORMWATER SYSTEM



NO.	DATE	ISSUED FOR	APPROVED BY	DESIGNED	CHECKED	IN CHARGE	PROJECT NO.	CITY OF POMPANO BEACH ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS	DATE: MAY 2016
								NW 12TH STREET PLAN AND PROFILE - SHEET 38 STN 220+00 TO STN 223+00	SHEET: 38 OF 50
									ISSUING: C-38

Exhibit 43

REINFORCEMENT PLAN

TYPE 7 NT (NON-TRAFFIC)

STRUCTURE TOP (TYPE 7-NT)

NO. 408-1

COVER FOR ALL FRAMES

ENGINEERING STANDARDS 2016

COVER FOR MANHOLES AND JUNCTIONS

NO.	DATE	REVISION	APPROVED BY

REINFORCEMENT PLAN

TYPE 7 T (TRAFFIC H-20)

STRUCTURE TOP FOR BOX MANHOLE AND JUNCTION

NO. 408-2

CAST IRON FRAME FOR MANHOLES

ENGINEERING STANDARDS 2016

CAST IRON FRAME FOR MANHOLES

NO.	DATE	REVISION	APPROVED BY

STORMWATER SYSTEM EXFILTRATION TRENCH

GRADE EL. 10.5 NAVD

TOP EL. 6.52

WATER TABLE 6.50

PIPE SIZE (VARIABLE)

AVG IE 2.27

4' HIGH x 4' WIDE ROCK TRENCH

3' HIGH x 3' WIDE

TYPICAL EXFILTRATION TRENCH LONGITUDINAL SECTION

WEIR DETAIL

7" x 3" ALUMINUM

SPOT WELD ANGLE TO RAFTER PLATE

CORRUGATED ALUMINUM HALF PIPE WITH GASKET

WEIR DETAIL

ENGINEERING STANDARDS 2016

WEIR DETAIL

NO.	DATE	REVISION	APPROVED BY

STAFF REPORT DISTRIBUTION LIST
ADDRESSES

Owner:

City of Pompano Beach
Attention: Alessandra Delfico, P.E., Utility Engineer
1201 NE 5th Avenue
Pompano Beach, FL 33060

Applicant:

City of Pompano Beach
Attention: Alessandra Delfico, P.E., Utility Engineer
1201 NE 5th Avenue
Pompano Beach, FL 33060

**Engineering
Consultant:**

Mathews Consulting, Inc.
Attention: M. Rebecca Travis, P.E.
477 Rosemary Avenue, Suite 330
West Palm Beach, FL 33401

Other:

City of Pompano Beach Building Official
Army Corps of Engineers

Exhibit 48

APPENDIX B

**BROWARD COUNTY ENVIRONMENTAL
RESOURCE LICENSE**



Environmental Protection and Growth Management Department
ENVIRONMENTAL LICENSING and BUILDING PERMITTING DIVISION
1 North University Drive, Suite 201-A Plantation, FL 33324
Phone: 954-519-1483 Fax: 954-519-1412

BROWARD COUNTY
Environmental Licensing and Building Permitting Division
ENVIRONMENTAL RESOURCE GENERAL LICENSE

GL-POB1606-027

Broward County Code(s): 27-336(a)(1)h.

Applicant: City of Pompano Beach
2280 NW 9TH ST, Pompano Beach

Description: Installation of two new headwalls along the perimeter of an existing surface water lake

Issue Date: 07/11/2016 Expiration Date: 07/11/2018

The above project has been reviewed and was verified to meet the criteria outlined in Chapter 27-336(a)(1) of the Broward County Natural Resource Protection Code for the issuance of this Environmental Resource General License (GL). This approval is specific for the plans and description described on this verification. Any changes to project footprint, design or size must be reviewed by the Department and may require additional licensing.

Construction shall be in accordance with the submitted Application, the approved plans and the attached General Conditions. This approval does not authorize impacts to natural resources (mangroves, sea grasses, etc). Failure to comply with the license conditions may result in suspension or revocation of the license and/or enforcement actions.

Issuance of this license does not relieve the licensee from obtaining any other required federal, state or local permits or authorizations required for this project prior to commencement.

Per Section 27-58(b)(9), "The licensee, by acceptance of this license, specifically agrees to allow access and shall allow access to the licensed source, activity, or facility at times to the COUNTY personnel for the purposes of inspection and testing to determine compliance with this license and this chapter."

Aquatic and Wetland Resources Reviewer: Michelle Decker

Telephone: (954) 519-1205

email: mdecker@broward.org

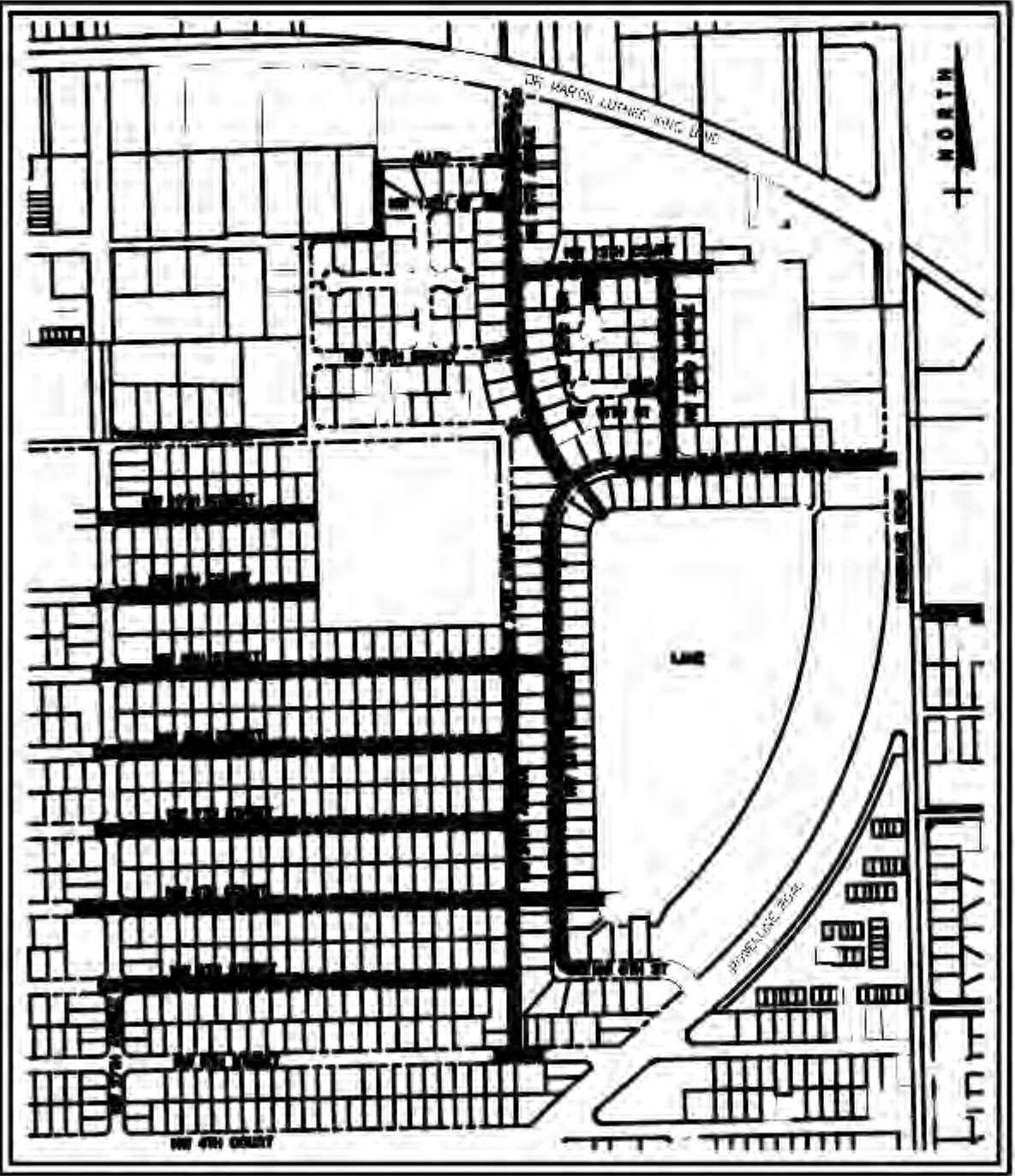
1. The terms, conditions, requirements, limitations and restrictions set forth herein are accepted by the licensee and enforceable by EPGMD pursuant to this chapter. EPGMD will review this license periodically and may revoke the license, initiate administrative and/or judicial action for any violation of the conditions by the licensee, its agents, employees, servants or representatives or principals.
2. This license is valid only for the specific uses set forth in the license application, and any deviation from the approved uses may constitute grounds for revocation and enforcement action by EPGMD.
3. In the event the licensee is temporarily unable to comply with any of the conditions of the license, the licensee shall notify EPGMD within twelve (12) hours. Within five (5) working days of the event, the licensee shall submit a written report to EPGMD that describes the incident, its cause, the measures being taken to correct the problem and prevent its reoccurrence, the owner's intention toward repair, replacement, and reconstruction of destroyed facilities, and a schedule of action leading toward operation within the license conditions.
4. The issuance of this license does not convey any vested rights or exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, or any violations of federal, state or local laws or regulations.
5. This license must be available for inspection on the licensee's premises during the entire life of the license.
6. By accepting this license, the licensee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, that are submitted to EPGMD, may be used by EPGMD as evidence in any enforcement proceeding arising under Chapter 27, except where such use is prohibited by § 403.111, F.S.
7. The licensee agrees to comply with Chapter 27, as amended.
8. Any new owner of a licensed facility shall apply by letter for a transfer of license within thirty (30) days after sale or legal transfer. The transferor shall remain liable for performance in accordance with the license until the transferee applies for, and is granted the transfer of license. The transferee shall also be liable for performance in accordance with the license.
9. The licensee, by acceptance of this license, specifically agrees to allow access to the licensed source at reasonable times by EPGMD personnel for the purposes of inspection and testing to determine compliance with this license and this Chapter 27.
10. This license does not constitute a waiver or approval of any other license that may be required for other aspects of the total project.
11. If the licensee wishes to renew a license or extend its term, the licensee shall make application sixty (60) days prior to its expiration. Expired licenses are not renewable.
12. In addition to the general conditions set forth above, each license issued by EPGMD shall contain specific conditions determined by site conditions and requirements pursuant to the regulations as determined by the director of EPGMD. The licensee agrees that specific conditions are enforceable by EPGMD for any violation thereof.
13. Enforcement of the terms and provisions of this license shall be at the reasonable discretion of EPD, and any forbearance on behalf of EPD to exercise its rights hereunder in the event of any breach by the licensee shall not be deemed or construed to be a waiver of EPD's rights hereunder.

1. Notify EPD in writing a minimum of forty-eight (48) hours prior to project commencement and a maximum of forty-eight (48) hours after project completion.
2. Notify the Department immediately in the event of any project-caused environmental problem(s).
3. All project generated solid waste and/or spoil material must be disposed of in a suitable
4. Turbidity screens or equivalent shall be properly deployed and maintained as necessary during construction activities so that turbidity levels do not exceed twenty-nine (29) NTU's above natural background fifty (50) feet downstream of project.
5. Only clean fill and clean demolition materials shall be placed in the water bodies being filled. Clean demolition materials include things such as brick, stone, ceramic and concrete rubble which are uncontaminated by other materials. Any fill material used shall be free of garbage, rubbish, refuse, asphalt, hazardous materials, organic matter such (as) wood, lumber, tree or tree trimmings, or other contaminants. The disposal of any putrescible or deleterious debris in any water body is prohibited.
6. This license does not eliminate the necessity to obtain any required federal, state, local or special district permit/license/approval prior to the start of any activity authorized by this license.

CITY OF POMPANO BEACH ESQUIRE LAKE NEIGHBORHOOD STORMWATER IMPROVEMENTS

CITY PROJECT No. _____

CITY BID No. _____



LOCATION MAP
N 1/2



100% DESIGN
maY 2016

DRAWING LIST

SHEET	DRAWING	TITLE
GENERAL		
1	G-1	TITLE SHEET, LOCATION MAP AND DRAWING LIST
2	G-2	SURVEY, CHORD AND GENERAL NOTES
3	G-3	HORIZONTAL CONTROL DETAILS
4	G-4	VERT. CUR.
CIVIL		
5	C-1	NW 10TH STREET - PLAN AND PROFILE - SHEET 5
6	C-2	NW 10TH STREET - PLAN AND PROFILE - SHEET 6
7	C-3	NW 8TH STREET - PLAN AND PROFILE - SHEET 7
8	C-4	NW 8TH STREET - PLAN AND PROFILE - SHEET 8
9	C-5	NW 6TH STREET - PLAN AND PROFILE - SHEET 9
10	C-6	NW 6TH STREET - PLAN AND PROFILE - SHEET 10
11	C-7	NW 4TH STREET - PLAN AND PROFILE - SHEET 11
12	C-8	NW 4TH STREET - PLAN AND PROFILE - SHEET 12
13	C-9	OUTFALL #1 PLAN AND PROFILE - SHEET 13
14	C-10	NW 2ND STREET - PLAN AND PROFILE - SHEET 14
15	C-11	NW 2ND STREET - PLAN AND PROFILE - SHEET 15
16	C-12	NW 1ST STREET - PLAN AND PROFILE - SHEET 16
17	C-13	NW 1ST STREET - PLAN AND PROFILE - SHEET 17
18	C-14	NW 1ST STREET - PLAN AND PROFILE - SHEET 18
19	C-15	NW 1ST STREET - PLAN AND PROFILE - SHEET 19
20	C-16	NW 1ST STREET - PLAN AND PROFILE - SHEET 20
21	C-17	NW 1ST STREET - PLAN AND PROFILE - SHEET 21
22	C-18	NW 1ST STREET - PLAN AND PROFILE - SHEET 22
23	C-19	NW 1ST STREET - PLAN AND PROFILE - SHEET 23
24	C-20	NW 1ST STREET - PLAN AND PROFILE - SHEET 24
25	C-21	NW 1ST STREET - PLAN AND PROFILE - SHEET 25
26	C-22	NW 1ST STREET - PLAN AND PROFILE - SHEET 26
27	C-23	NW 1ST STREET - PLAN AND PROFILE - SHEET 27
28	C-24	NW 1ST STREET - PLAN AND PROFILE - SHEET 28
29	C-25	NW 1ST STREET - PLAN AND PROFILE - SHEET 29
30	C-26	NW 1ST STREET - PLAN AND PROFILE - SHEET 30
31	C-27	NW 1ST STREET - PLAN AND PROFILE - SHEET 31
32	C-28	NW 1ST STREET - PLAN AND PROFILE - SHEET 32
33	C-29	NW 1ST STREET - PLAN AND PROFILE - SHEET 33
34	C-30	NW 1ST STREET - PLAN AND PROFILE - SHEET 34
35	C-31	NW 1ST STREET - PLAN AND PROFILE - SHEET 35
36	C-32	NW 1ST STREET - PLAN AND PROFILE - SHEET 36
37	C-33	NW 1ST STREET - PLAN AND PROFILE - SHEET 37
38	C-34	NW 1ST STREET - PLAN AND PROFILE - SHEET 38
39	C-35	NW 1ST STREET - PLAN AND PROFILE - SHEET 39
40	C-36	NW 1ST STREET - PLAN AND PROFILE - SHEET 40
41	C-37	NW 1ST STREET - PLAN AND PROFILE - SHEET 41
42	C-38	NW 1ST STREET - PLAN AND PROFILE - SHEET 42
43	C-39	NW 1ST STREET - PLAN AND PROFILE - SHEET 43
44	C-40	NW 1ST STREET - PLAN AND PROFILE - SHEET 44
45	C-41	NW 1ST STREET - PLAN AND PROFILE - SHEET 45
46	C-42	NW 1ST STREET - PLAN AND PROFILE - SHEET 46
47	C-43	NW 1ST STREET - PLAN AND PROFILE - SHEET 47
48	C-44	NW 1ST STREET - PLAN AND PROFILE - SHEET 48
49	C-45	NW 1ST STREET - PLAN AND PROFILE - SHEET 49
50	C-46	NW 1ST STREET - PLAN AND PROFILE - SHEET 50
51	C-47	NW 1ST STREET - PLAN AND PROFILE - SHEET 51
52	C-48	NW 1ST STREET - PLAN AND PROFILE - SHEET 52
DETAILS		
53	D-1	STANDARD DETAILS - SHEET 53 OF 7
54	D-2	STANDARD DETAILS - SHEET 54 OF 7
55	D-3	STANDARD DETAILS - SHEET 55 OF 7
56	D-4	STANDARD DETAILS - SHEET 56 OF 7
57	D-5	STANDARD DETAILS - SHEET 57 OF 7
58	D-6	STANDARD DETAILS - SHEET 58 OF 7
59	D-7	STANDARD DETAILS - SHEET 59 OF 7

FOR INFORMATION REGARDING THIS PROJECT, CONTACT:

REBECCA TRAVIS, P.E.

MATHEWS CONSULTING, INC.
477 S. ROSEMARY AVENUE, SUITE 330
WEST PALM BEACH, FL 33401
561/655-6770



477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401
Phone: 561-655-6770 Fax: 561-655-6771
www.mathewsconsulting.com CD 007963

M. REBECCA TRAVIS, P.E.
No. 412956

GENERAL CIVIL

TITLE SHEET AND
LOCATION MAP

SHEET 1 of 52

DRAWING: G-1

APPENDIX C

**BROWARD COUNTY WATER CONTROL
DISTRICT #3 APPROVAL**

Rebecca Travis

From: Archie, Carl <CARCHIE@broward.org>
Sent: Thursday, July 14, 2016 3:24 PM
To: Rebecca Travis
Cc: 'Alessandra Delfico'; NARVAEZ, JOHANA
Subject: RE: Pompano Beach Esquire Lake Stormwater Improvements project - WCD#3

I have reviewed the propose drainage improvements. WCD # 3 has no objections. Thanks.



Carl R. Archie, P.E., Engineering Unit Supervisor
Water and Wastewater Services/Water Management Division
2555 West Copans Road
Pompano Beach, Fl. 33069
(954)831-0753, FAX (954)831-3285
WWW.BROWARD.ORG

From: Rebecca Travis [<mailto:RTravis@mathewsconsultinginc.com>]
Sent: Tuesday, July 12, 2016 1:25 PM
To: Archie, Carl <CARCHIE@broward.org>
Cc: 'Alessandra Delfico' <Alessandra.Delfico@copbfl.com>
Subject: Pompano Beach Esquire Lake Stormwater Improvements project - WCD#3

Mr. Archie,

As discussed, please find attached the RAI letter from Broward County Environmental Licensing for the City of Pompano Beach Esquire Lake Project. Wanted you to have my email address for your response.

Thanks.

Rebecca Travis, P.E., ENV SP, LEED Green Associate

Mathews Consulting, Inc.

477 S. Rosemary Ave., Suite 330

West Palm Beach, FL 33401

561-655-6175

561-655-6179 fax

561-308-7544 cell

www.mathewsconsultinginc.com

Under Florida law, most e-mail messages to or from Broward County employees or officials are public records, available to any person upon request, absent an exemption. Therefore, any e-mail message to or from the County, inclusive of e-mail addresses contained therein, may be subject to public disclosure.

APPENDIX D

SFWMD DEWATERING GENERAL PERMIT BY RULE



SOU

FLORI

WATE

MANAGE

DISTRICT

Ref: License L2016-154
SFWMD Appl. No
160613-24

DATE: Aug 22, 2016
NAME: Mathews Consulting, Inc.
Travis, Rebecca
477 S. Rosemary Ave, Suite 330
West Palm Beach, FL 33401-3340
PROJECT NAME: Esquire Lake Neighborhood
PROJECT LOCATION: BROWARD COUNTY, S33/T48S/R42E
WATER USE TYPE: Short-Term Dewatering

Based on the information provided, this project qualifies for a General Permit by Rule pursuant to Rule 40E-2.061, Florida Administrative Code (F.A.C.).

Short-Term Dewatering (e.g. well pointing, utility or lake construction, exploratory testing, aquifer performance tests)

- Maximum daily pumpage of less than 5 million gallons (MG) and a maximum total project pumpage of less than 100 MG over a one year period;
- All discharge will remain on the project site unless associated with an aquifer performance test;
- The dewatering depth will not be below 0.0 feet NGVD within 1,000 feet of saline water, except when dewatering water with a chloride concentration of greater than 1,000 milligrams per liter;
- Dewatering will not occur within 100 feet of a wastewater treatment plant rapid-rate land application system permitted under Part IV of Chapter 62-610, F.A.C.;
- Dewatering will not occur within 1,000 feet of a known landfill or contamination; and
- Dewatering will not occur within 1,000 feet of a freshwater wetland unless dewatering activities are completed within 60 days

Work may proceed, with the understanding that the owner is responsible for assuring that the project operates within the requirements of Rule 40E-2.061 F.A.C. Additionally, the owner is responsible for obtaining any required federal, state, local or special authorization prior to the start of any project.

Water Use Bureau
Regulation Division
South Florida Water Management District