

CITY OF NAPLES, FLORIDA
AGREEMENT
(CONSTRUCTION SERVICES)

Bid/Proposal No. **19-015**

Clerk Tracking No. 2019-00003

Project Name: **Cove Outfall Improvements**

THIS AGREEMENT (the "Agreement") is made and entered into this **16th day of January 2019** by and between the City of Naples, a Florida municipal corporation, (the "CITY") and **Quality Enterprises USA, Inc.**, a Virginia Corporation authorized to do business in Florida, located at: **3494 Shearwater Street; Naples, Florida 34117-8414** (the "CONTRACTOR").

WHEREAS, the CITY desires to obtain the services of the CONTRACTOR concerning certain services specified in this Agreement (referred to as the "Project"); and

WHEREAS, the CONTRACTOR has submitted an **(ITB) Invitation to Bid No. 19-015** for provision of those services; and

WHEREAS, the CONTRACTOR represents that it has expertise in the type of services that will be required for the Project.

NOW, THEREFORE, in consideration of the mutual covenants and provisions contained herein, the parties hereto agree as follows:

ARTICLE ONE
CONTRACTOR'S RESPONSIBILITY

1.1. The Services to be performed by the CONTRACTOR are generally described as **Cove Outfall Improvements** and may be more fully described in the Scope of Services, attached as **EXHIBIT A** and made a part of this Agreement.

1.2. The CONTRACTOR agrees to obtain and maintain throughout the period of this Agreement all such licenses as are required to do business in the State of Florida, the City of Naples, and in Collier County, Florida, including, but not limited to, all licenses required by the respective state boards and other governmental agencies responsible for regulating and licensing the services to be provided and performed by the CONTRACTOR pursuant to this Agreement.

1.3. The CONTRACTOR agrees that, when the services to be provided hereunder relate to a professional service which, under Florida Statutes, requires a license, registration, certificate of authorization or other form of legal entitlement to practice such services, it shall employ or retain only qualified personnel to provide such services.

1.4. The CONTRACTOR agrees to employ and designate, in writing, within 5 calendar days after receiving its Notice to Proceed, or other directive from the CITY, a qualified employee to serve as the CONTRACTOR's project manager (the "Project Manager"). The Project Manager shall be authorized and responsible to act on behalf of the CONTRACTOR with respect to directing, coordinating and administering all aspects of the services to be provided and performed under this Agreement.

1.5. The CONTRACTOR has represented to the CITY that it has expertise in the type of services that will be required for the Project. The CONTRACTOR agrees that all services to be provided by CONTRACTOR pursuant to this Agreement shall be subject to the CITY's review and approval and shall be in accordance with the generally accepted standards of practice in the State of Florida, as may be applied to the type of services to be rendered, as well as in accordance with all published laws, statutes, ordinances, codes, rules, regulations and requirements of any governmental agencies that regulate or have jurisdiction over the Project or the services to be provided and performed by the CONTRACTOR. In the event of any conflicts in these requirements, the CONTRACTOR shall notify the CITY of such conflict and utilize its best professional judgment to advise CITY regarding resolution of the conflict.

1.6. The CONTRACTOR agrees not to divulge, furnish or make available to any third person, firm or organization, without CITY's prior written consent, or unless incident to the proper performance of the CONTRACTOR's obligations hereunder, or in the course of judicial or legislative proceedings where such information has been properly subpoenaed, any non-public information concerning the services to be rendered by the CONTRACTOR hereunder, and the CONTRACTOR shall require all of its employees, agents, sub-consultants and subcontractors to comply with the provisions of this paragraph. However, the CONTRACTOR shall comply with the Florida Public Records laws including those requirements set out in ARTICLE FIVE, below.

1.7. The CONTRACTOR agrees not to employ or offer to employ any Elected Officer or City Managerial Employee of the CITY who in any way deals with, coordinates on, or assists with, the services provided in this Agreement, for a period of 2 years after termination of all provisions of this Agreement. For purposes of this paragraph, the term "Elected Officer" shall mean any member of the City Council. For purposes of this paragraph, the term "City Managerial Employee" shall mean the City Manager, the Assistant City Manager, the City Clerk, and any City department head or director. If the CONTRACTOR violates the provisions of this paragraph, the CONTRACTOR shall be required to pay damages to the CITY in an amount equal to any and all compensation that is received by the former Elected Officer or City Managerial Employee of the CITY from or on behalf of the contracting person or entity, or an amount equal to the former Elected Officer's or City Managerial Employee's last 2 years of gross compensation from the CITY, whichever is greater.

1.8. The CONTRACTOR agrees not to provide services for compensation to any other party other than the CITY on the same subject matter, same project, or scope of services as set forth in this Agreement without approval from the CITY. This section does not prevent the CONTRACTOR from contracting with other firms or government organizations for similar services.

1.9. Except as otherwise provided in this Agreement, the CONTRACTOR agrees not to disclose or use any information not available to members of the general public and gained by reason of the CONTRACTOR's contractual relationship with the CITY for the special gain or benefit of the CONTRACTOR or for the special gain or benefit of any other person or entity.

ARTICLE TWO CITY'S RESPONSIBILITIES

2.1. The CITY shall designate in writing a project coordinator to act as the CITY's representative with respect to the services to be rendered under this Agreement (the "Project Coordinator"). The Project Coordinator shall have authority to transmit instructions, receive information, interpret and define the CITY's policies and decisions with respect to the CONTRACTOR's services for the Project. However, the Project Coordinator is not authorized to issue any verbal or written orders or instructions to the CONTRACTOR that would have the effect, or be interpreted to have the effect, of modifying or changing in any way whatever:

- (a) The scope of services to be provided and performed by the CONTRACTOR;
- (b) The time the CONTRACTOR is obligated to commence and complete all such services; or
- (c) The amount of compensation the CITY is obligated or committed to pay the CONTRACTOR.

Any such modifications or changes shall only be made by or upon the authorization of the CITY's city manager as authorized by city council in the enabling legislation or in the CITY's procurement policies.

2.2. The Project Coordinator shall:

- (a) Review and make appropriate recommendations on all requests submitted by the CONTRACTOR for payment for services and work provided and performed in accordance with this Agreement;
- (b) Arrange for access to and make all provisions for the CONTRACTOR to enter the Project site to perform the services to be provided by the CONTRACTOR under this Agreement; and
- (c) Provide notice to the CONTRACTOR of any deficiencies or defects discovered by the CITY with respect to the services to be rendered by the CONTRACTOR hereunder.

2.3. The CONTRACTOR acknowledges that access to the Project Site, to be arranged by the CITY for the CONTRACTOR, may be provided during times that are not the normal business hours of the CONTRACTOR.

ARTICLE THREE TIME

3.1. Services to be rendered by the CONTRACTOR shall be commenced subsequent to the execution of this Agreement upon written **Notice to Proceed (NTP)** from the CITY for all or any designated portion of the Projects assigned to this Agreement and **shall be Substantially completed no later than 180-days from the NTP and Final completion no later than 210-days from the NTP. Project has an estimated completion date from the NTP of November 1, 2019 with a 60-day Close-out time frame.** Time is of the essence with respect to the performance of this Agreement.

3.2. Should the CONTRACTOR be obstructed or delayed in the prosecution or completion of its services as a result of unforeseeable causes beyond the control of the CONTRACTOR, and not due to its own fault or neglect, including but not restricted to acts of God or of public enemy, acts of government or of the CITY, fires, floods, epidemics, quarantine regulations, strikes or lock-outs, then the CONTRACTOR shall notify the CITY in writing within 5 working days after commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which the CONTRACTOR may have had to request a time extension.

3.3. No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the CONTRACTOR's services from any cause whatsoever, including those for which the CITY may be responsible in whole or in part, shall relieve the CONTRACTOR of its duty to perform or give rise to any right to damages or additional compensation from the CITY. The CONTRACTOR's sole remedy against the CITY will be the right to seek an extension of time to its schedule. This paragraph shall expressly apply to claims for early completion, as well as claims based on late completion.

3.4. Should the CONTRACTOR fail to commence, provide, perform or complete any of the services to be provided hereunder in a timely and reasonable manner, in addition to any other rights or remedies available to the CITY hereunder, the CITY at its sole discretion and option may withhold any and all payments due and owing to the CONTRACTOR until such time as the CONTRACTOR resumes performance of its obligations hereunder in such a manner so as to reasonably establish to the CITY's satisfaction that the CONTRACTOR's performance is or will shortly be back on schedule.

3.5 Liquidated Damages: Services to be rendered by the CONTRACTOR shall be commenced subsequent to the execution of this Agreement upon written Notice-to-Proceed from the CITY for all or any designated portion of the Project must be completed by the contract dates specified within the Notice-to-Proceed for construction. Should CONTRACTOR fail to complete the project within this timeframe, daily liquidated damages in an amount consistent with the current Sec. 8-10.2 (FDOT) Florida Department of Transportation Standard Specifications will be assessed.

3.6 Bonding by CONTRACTOR. A Payment & Performance Bond to be issued by a surety insurer authorized to do business in this state as surety. CONTRACTOR prior to commencement of work, will record Payment & Performance Bond in the public records of the Clerk of Collier County.

ARTICLE FOUR COMPENSATION

4.1. The total compensation to be paid the CONTRACTOR by the CITY for all Services is not to exceed **\$1,046,525.05 that includes a \$118,014.55 CITY controlled Contingency with the removal of Alternate Bid Items A-D2 (\$1,298,160.05 -251,635.00)** and shall be paid in the manner set forth in the "Basis of Compensation", which is attached as **EXHIBIT B** and made a part of this Agreement.

ARTICLE FIVE MAINTENANCE OF RECORDS

5.1. The CONTRACTOR will keep adequate records and supporting documentation which concern or reflect its services hereunder. The records and documentation will be retained by the CONTRACTOR for a minimum of five 5 years from the date of termination of this Agreement or the date the Project is completed, whichever is later. The CITY, or any duly authorized agents or representatives of the CITY, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the 5 year period noted above; provided, however, such activity shall be conducted only during normal business hours. If the CONTRACTOR desires to destroy records prior to the minimum period, it shall first obtain permission from the CITY in accordance with the Florida Public Records laws.

5.2 119.0701 F.S. CONTACT INFORMATION FOR CITY OF NAPLES' CUSTODIAN OF PUBLIC RECORDS, CITY CLERK'S OFFICE

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 City of Naples' Custodian of Public records, the City Clerk at Telephone: 239-213-1015; Email:PublicRecordsRequests@naplesgov.com; Address: 735 8th Street S., Naples, Florida 34102; Mailing address: same as street address.

5.3 The CONTRACTOR shall:

- (a) Keep and maintain public records required by the CITY to perform the service.
- (b) Upon request from the CITY's custodian of public records, provide the CITY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter 119.0701 F.S. or as otherwise provided by law.
- (c) 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.
- (d) 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.

**ARTICLE SIX
INDEMNIFICATION**

6.1. The CONTRACTOR agrees to indemnify and hold harmless the CITY from liabilities, damages, losses and costs, including, but not limited to, all attorneys' fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR and persons employed or utilized by the CONTRACTOR in the performance of the Contract.

**ARTICLE SEVEN
INSURANCE**

7.1. The CONTRACTOR shall obtain and carry, at all times during its performance under this Agreement, insurance of the types and in the amounts set forth in the document titled General Insurance Requirements, which is attached as **EXHIBIT C** and made a part of this Agreement.

**ARTICLE EIGHT
SERVICES BY CONTRACTOR'S OWN STAFF**

8.1. The services to be performed hereunder shall be performed by the CONTRACTOR's own staff, unless otherwise authorized in writing by the CITY. The employment of, contract with, or use of the services of any other person or firm by the CONTRACTOR, as independent contractor or otherwise, shall be subject to the prior written approval of the CITY. No provision of this Agreement shall, however, be construed as constituting an agreement between the CITY and any such other person or firm. Nor shall anything contained in this Agreement be deemed to give any such party or any third party any claim or right of action against the CITY beyond such as may otherwise exist without regard to this Agreement.

**ARTICLE NINE
WAIVER OF CLAIMS**

9.1. The CONTRACTOR's acceptance of final payment shall constitute a full waiver of any and all claims, except for insurance company subrogation claims, by it against the CITY arising out of this Agreement or otherwise related to the Project, except those previously made in writing and identified by the CONTRACTOR as unsettled at the time of the final payment. Neither the acceptance of the CONTRACTOR's services nor payment by the CITY shall be deemed to be a waiver of any of the CITY's rights against the CONTRACTOR.

**ARTICLE TEN
TERMINATION OR SUSPENSION**

10.1. The CONTRACTOR shall be considered in material default of this Agreement and such default will be considered cause for the CITY to terminate this Agreement, in whole or in part, as further set forth in this section, for any of the following reasons: (a) failure to begin work under the Agreement within the times specified under the Notice(s) to Proceed, or (b) failure to properly and timely perform the services to be provided hereunder or as directed by the CITY, or (c) the bankruptcy or insolvency or a general assignment for the benefit of creditors by the CONTRACTOR or by any of the CONTRACTOR's principals, officers or directors, or (d) failure to obey laws, ordinances, regulations or other codes of conduct, or (e) failure to perform or abide by the terms or spirit of this Agreement, or (f) for any other just cause. The CITY may so terminate this Agreement, in whole or in part, by giving the CONTRACTOR at least 3 calendar days written notice.

10.2. If, after notice of termination of this Agreement as provided for in paragraph 10.1 above, it is determined for any reason that the CONTRACTOR was not in default, or that its default was excusable, or that the CITY otherwise was not entitled to the remedy against the CONTRACTOR provided for in paragraph 10.1, then the notice of termination given pursuant to paragraph 10.1 shall be deemed to be the notice of termination provided for in paragraph 10.3 below and the CONTRACTOR's remedies against the CITY shall be the same as and limited to those afforded the CONTRACTOR under paragraph 10.3 below.

10.3. The CITY shall have the right to terminate this Agreement, in whole or in part, without cause upon 7 calendar days written notice to the CONTRACTOR. In the event of such termination for convenience, the CONTRACTOR's recovery against the CITY shall be limited to that portion of the fee earned through the date of termination, together with any retainage withheld and any costs reasonably incurred by the CONTRACTOR that are directly attributable to the termination, but the CONTRACTOR shall not be entitled to any other or further recovery against the CITY, including, but not limited to, anticipated fees or profits on work not required to be performed.

**ARTICLE ELEVEN
CONFLICT OF INTEREST**

11.1. The CONTRACTOR represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder. The CONTRACTOR further represents that no persons having any such interest shall be employed to perform those services.

**ARTICLE TWELVE
MODIFICATION**

12.1. No modification or change in this Agreement shall be valid or binding upon the parties unless in writing and executed by the party or parties intended to be bound by it.

**ARTICLE THIRTEEN
NOTICES AND ADDRESS OF RECORD**

13.1. All notices required or made pursuant to this Agreement to be given by the CONTRACTOR to the CITY shall be in writing and shall be delivered by hand or by United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following CITY's address of record:

City of Naples
735 Eighth Street South; Naples, Florida 34102-3796
Attention: **Charles T. Chapman IV**, City Manager

13.2. All notices required or made pursuant to this Agreement to be given by the CITY to the CONTRACTOR shall be made in writing and shall be delivered by hand or by the United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following CONTRACTOR's address of record:

Quality Enterprises USA, Inc.
3494 Shearwater Street; Naples, Florida 34117-8414
Attention: **Louis J. Gaudio**, Vice President
FEI/EIN Number: On File

13.3. Either party may change its address of record by written notice to the other party given in accordance with requirements of this Article.

**ARTICLE FOURTEEN
MISCELLANEOUS**

14.1. The CONTRACTOR assumes toward the CITY a duty of care commensurate with that which is imposed upon persons or firms in contractor's profession. CONTRACTOR will make reasonable efforts to ensure that its employees and agents maintain a professional demeanor and that the work area is compliant with CITY property maintenance and Project standards.

14.2. No modification, waiver, suspension or termination of the Agreement or of any terms thereof shall impair the rights or liabilities of either party.

14.3. This Agreement is not assignable, in whole or in part, by the CONTRACTOR without the prior written consent of the CITY.

14.4. Waiver by either party of a breach of any provision of this Agreement shall not be deemed to be a waiver of any other breach and shall not be construed to be a modification of the terms of this Agreement.

14.5. The headings of the Articles, Exhibits, Parts and Attachments as contained in this Agreement are for the purpose of convenience only and shall not be deemed to expand, limit or change the provisions in such Articles, Exhibits, Parts and Attachments.

14.6. This Agreement constitutes the entire agreement between the parties hereto and shall supersede, replace and nullify any and all prior agreements or understandings, written or oral, relating to the matter set forth herein, and any such prior agreements or understanding shall have no force or effect whatever on this Agreement.

14.7. The CONTRACTOR shall comply fully with all provisions of state and federal law, including without limitation all provisions of the Immigration Reform and Control Act of 1986 ("IRCA") as amended, as well as all related immigration laws, rules, and regulations pertaining to proper employee work authorization in the United States. The CONTRACTOR shall execute the Certification of Compliance with Immigration Laws, attached hereto as **EXHIBIT D**.

14.8 To the extent that any provision in the Specifications or any other Contract Documents pertaining to this Project conflict with any provision of this Agreement, this Agreement controls.

14.9 Dispute Resolution. Disputes under this Agreement shall be resolved through mutual consultation between the parties within 14 days after notice; and failing resolution through mutual consultation, through mediation within 30 days thereafter; and failing mediation, through Arbitration under the Florida Arbitration Code, by a single arbitrator. If the parties cannot agree on a mediator or arbitrator, within 14 days of failure of the previous method, they shall request the Chief Judge of the 20th Judicial Circuit to appoint a mediator, or an arbitrator, as the case may be. Time periods are waivable by mutual agreement of the parties, but shall not exceed 90 days for completion of the processes described herein, unless by mutual agreement. Costs of the mediator or arbitrator shall be shared equally.

14.10 Attorneys' fees. Except as otherwise provided herein, each party shall be responsible for its own attorneys' fees.


ARTICLE FIFTEEN APPLICABLE LAW

15.1. Unless otherwise specified, this Agreement shall be governed by the laws, rules, and regulations of the State of Florida, and by the laws, rules and regulations of the United States when providing services funded by the United States government. Any suit or action brought by either party to this Agreement against the other party relating to or arising out of this Agreement must be brought in the appropriate Florida state court in Collier County, Florida.

END OF ARTICLE PAGE

IN WITNESS WHEREOF, the parties hereto have executed this Agreement for the day and year first written above.

ATTEST:

By: 
Patricia L. Rambosk, City Clerk

Approved as to form and legal sufficiency:

By: 
Robert D. Pritt, City Attorney

CONTRACTOR:


Witness

Marcie Cohen
Witness Printed Name

CITY:

CITY OF NAPLES, FLORIDA,
A Municipal Corporation

By: 
Charles T. Chapman IV, City Manager

CONTRACTOR:

QUALITY ENTERPRISES USA, INC.
3494 Shearwater Street
Naples, Florida 34117-8414
Attention: **Louis J. Gaudio**, Vice President

By: 

Printed Name: Louis J. Gaudio

Title: Vice President

FEI/EIN Number: On File
A Virginia Corporation (VA)

(CORPORATE SEAL)

EXHIBIT A

SCOPE OF SERVICES

The Scope of Services to be provided under this Agreement are included in Attachment A-1 and Exhibit-E (Construction Plans) which are attached and made a part of this Agreement and those set out in the Bid, any issued Addendum(s)(four), and Vendor's Submittal of (ITB) Invitation To Bid No.19-015, titled Cove Outfall Improvements herein referenced and made a part of this Agreement.

END OF EXHIBIT A

SECTION 01010
SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Description of Work
- B. CONTRACTOR's Use of Site
- C. Work Sequence
- D. City Occupancy

1.2 DESCRIPTION OF WORK

A. WATER QUALITY IMPROVEMENTS AT THE COVE OUTFALL Plan Set

Work performed under this Contract includes the creation of a channelized sedimentation basin, the introduction of a living shoreline, and hardscaping improvements supporting a stormwater public outreach amenity. The creation of the channelized sedimentation basin and living shoreline will utilize hydraulic and/or mechanical dredging technologies that will allow the removal of marine sediment, the introduction of clean fill for gradation, and the introduction of riprap that will line the channelized sedimentation basin and re-contour the living shoreline. Dewatering of the dredged marine sediments will be required prior to transportation offsite. Once dewatered, sediments shall be disposed of at a repository licensed to receive the material. The introduction of a living shoreline will utilize approximately 5,000 plantings of *Spartina alterniflora* for landscaping.

The creation of a stormwater public outreach amenity will include benches, signage, and plantings as shown on the drawings. This includes the removal of approximately 2,650 SF of existing concrete sidewalk to be replaced by approximately 2,325 SF of brick pavers. Approximately 152 LF of existing guardrail will be replaced, and approximately 303 LF of handrails will be introduced, as shown on the drawings. This Contract is limited to the work shown on the plans and described herein, also known as Water Quality Improvements at the Cove Outfall.

B. POLLUTION CONTROL STRUCTURE AT CAMBIER PARK Plan Set:

Work performed under this Contract includes furnishing, installing and placing into operation a Pollution Control Structure in the southwest corner of Cambier Park, installation of approximately 54-feet of new 24-inch RCP, and grouting in place and abandoning approximately 53-feet of existing 24-inch RCP. The work also includes

all necessary work to connect the Pollution Control Structure to the existing storm sewer network. The work also includes all restoration to return the site to pre-construction condition or better.

Work performed under this Contract also includes the removal of a discharge weir located in a stormwater control structure at the intersection of Park Avenue and 6th Street. A new adjustable weir to be installed inside the existing manhole located at East Lake Drive, as shown on the plans. Contractor shall have a Licensed Professional Surveyor survey the existing manhole and provide data to design engineer for review along with weir submittal data, as described in the measurement and payment section of these specifications.

C. The Work also includes:

1. Furnishing of all labor, material, shoring and sheeting, dewatering and dewatering permits, maintenance of traffic, permits not acquired by owner, dock and park fees, superintendence, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, services and other means of construction necessary or proper for performing and completing the Work.
2. Sole responsibility for adequacy of plant and equipment.
3. Maintaining the Work area and site in a clean and acceptable manner.
4. Maintaining existing facilities in service at all times.
5. Protection of finished and unfinished Work.
6. Repair and restoration of Work or existing facilities damaged during construction.
7. Furnishing as necessary proper equipment and machinery, of a sufficient capacity, to facilitate the Work and to handle all emergencies normally encountered in Work of this character.
8. Furnishing, installing, and protecting all necessary pipes, structures, guides, track rails, bearing plates, anchor and attachment bolts, and all other appurtenances needed for the installation of the devices included in the equipment specified. Make anchor bolts of appropriate size, strength and material for the purpose intended. Furnish substantial templates and shop drawings for installation.

D. Implied and Normally Required Work: It is the intent of these Specifications to provide the City with complete operable systems, subsystems and other items of Work. All work called for in the Specifications applicable to this Contract, but not shown on the Plans in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the

Specifications, , which is reasonably implied or normally required to make each installation satisfactorily and completely operable, is deemed to be included in the Work and the Contract Amount and shall be performed by the CONTRACTOR as though it were specifically delineated or described. All miscellaneous appurtenances and other items of Work incidental to meeting the intent of these Specifications are included in the Work and the Contract Amount even though these appurtenances may not be specifically called for in these Specifications.

- E. Quality of Work: Regard the apparent silence of the Contract Documents as to any detail, or the apparent omission from them of a detailed description concerning any Work to be done and materials to be furnished as meaning that only the best general practice is to prevail and that only materials and workmanship of the best quality are to be used. Interpretation of these specifications will be made upon this basis.

1.3 ORDER OF PRECEDENCE

- A. The several parts of the Contract are intended to be complimentary in describing the Work and the responsibilities of the Contractor and the City and any requirements stipulated in one part of the Contract Documents is as binding on the parties as though occurring in all. In the event there are any conflicting provisions or requirements among the Contract Documents, the provisions and requirements of the Contract Documents shall take the following order of precedence:

1. Change Orders, Work Directives, and Contract Amendments
2. Construction Contract
3. Special Conditions
4. Supplemental General Conditions
5. General Conditions
6. Technical Specifications
7. Construction Plans/Drawings

In case of discrepancy concerning dimension, quantity, and location, graphic drawings will take precedence over the specifications; explanatory notes on the drawings will take precedence over conflicting drawn indications; and large scale details will take precedence over smaller scaled drawings. In case of discrepancy concerning quality and/or quantity within the documents, the Contractor shall include the better quality and/or the greater quantity, unless otherwise determined in writing by the City.

Interpretations and resolution of discrepancies within the Contract Documents shall be made solely by the City's Designee and issued in writing upon receipt of the Contractor's written request.

1.4 VIBRIATION MONTIORING

- A. The Contractor shall hire a third-party independent consultant who specializes in

vibration monitoring to be responsible for providing, monitoring, locating/relocating equipment, calibrating, maintaining all vibration monitoring equipment, and providing reports to the Engineer and Owner.

- B. Vibration monitoring shall be continuous during all construction operations. Vibrations shall be monitored by the placement of seismographs/sensors strategically placed between the construction operations and nearest structures adjacent to the project area. The locations of the seismographs/sensors will be moved as the excavation equipment moves along the project site during dredging, channel armoring, hardscape improvements, sheeting and shoring, backfilling and compacting, restoration activities. The number of seismographs to be used during construction shall be determined by the Contractor's selected testing firm. Minimum requirements of the seismic monitoring are listed below:
1. An additional seismograph unit (i.e., a spare unit) shall be available at all times for use as a spare in the event that one of the primary units fails to operate correctly.
 2. Since the seismographs may not be continuously monitored by the operator during construction, protection shall be provided around the sensors so that they are not disturbed. The protection shall be such that the seismograph sensors can be identified by homeowners or service personnel, and in a way that will prevent others from bumping or disturbing them.
 3. The operator of the seismographs shall identify specific setup locations each time the units are moved and shall document when they are deployed at each location. Locations by northing and easting coordinates are required and shall also be documented on the record set of plans, shown measured from at least two permanent reference points.
 4. It is understood that the seismic monitoring data will be downloaded on a regular basis and incorporated into weekly reports. Vibratory monitoring reports shall be signed and sealed by a registered Florida Professional Engineer. These reports shall be forwarded to the Engineer and Owner.
 5. It is also understood that the seismographs will be set to notify all team members, including the Engineer and Owner, via text message if the specified vibration threshold level is exceeded.
- C. Vibration Threshold Level: Collier County has established rules defining the maximum permissible vibration level associated with blasting operations, as outlines in Section 55-13 of the Collier County Laws & Ordinances, commonly referred to as the "Collier County Explosives Regulations." This section of the code limits the resultant peak particle velocity to 0.50 inches per second or less. Furthermore, the code mandates an "80% rule" indicating that if 80% of the maximum resultant peak particle velocity is exceeded, operations must cease until actions can be taken to assure that the maximum 0.50 inches per second resultant peak particle velocity is not exceeded.

Accordingly, the seismographs shall be set at a maximum permissible resultant peak particle velocity of 0.40 inches per second. All team members, including the Engineer and Owner, shall be notified immediately if the resultant peak particle velocity exceeds 0.40 inches per second so that further action can be taken.

It is noted that studies performed by the United States Bureau of Mines (USBM) and other authorities in the field of vibrations and their effects on structures have resulted in criteria based on Resultant Peak Particle Velocity as measured in units of inches per second. Should it be determined that the work cannot be performed without exceeding the 0.50 inches per second resultant peak particle velocity established by Collier County, these studies can be discussed with all team members to determine if the maximum vibration threshold limit can be raised.

1.5 CONTRACTOR'S USE OF SITE

A. Limit use of site and premises for work and storage to allow for the following:

1. Coordination of the Work under this CONTRACT with the work of the other contractors where Work under this CONTRACT encroaches on the Work of other contractors.
2. City occupancy and access to operate existing facilities.
3. Coordination of site use with ENGINEER.
4. Responsibility for protection and safekeeping of products under this CONTRACT.
5. Providing additional off-site storage at no additional cost to the City as needed.

B. Use of Premises: Contractor shall confine all construction equipment, the storage of materials and equipment and the operations of workers to the Project Site and land and areas identified in and permitted by the Contract Documents and other lands and areas permitted by law, rights of way, permits and easements, and shall not unreasonably encumber the Project site with construction equipment or other material or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or any land or areas contiguous thereto, resulting from the performance of the Work.

C. Contractor shall be responsible for payment of all fees and permits associated with mobilizing equipment, labor, and material to and from water.

1.6 WORK SEQUENCE

A. Construct Work in stages to accommodate the City's use of premises during construction period and in accordance with the limitations on the sequence of

construction specified. Coordinate construction schedules and operations with ENGINEER. The Contractor shall not open up work to conflict with work already in progress. The Engineer may, however require the Contractor to finish a section on which work is in progress prior to starting another section.

- B. Coordinate Work of all subcontractors.

1.7 CITY OCCUPANCY

- A. The City will occupy premises during entire period of construction in order to maintain normal operations. Cooperate with the City's Manager or designee in all construction operations to minimize conflict, and to facilitate City usage.
- B. Conduct operations with the least inconvenience to the general public.

1.8 PROTECTION OF EXISTING UTILITIES

- A. In case of damage to existing utilities caused by construction activities, contact the owner of the utility or appropriate City department (Stormwater, Water or Wastewater) immediately. Repair any damage to existing utilities caused by construction activities in coordination with or as directed by the owner of the utility.

Contractor shall locate all existing roadways, railways, drainage facilities and utility services above, upon, or under the Project site, said roadways, railways, drainage facilities and utilities being referred to in this Section as the "utilities". Contractor shall contact the owners of all Utilities to determine the necessity for relocating or temporarily interrupting any Utilities during the construction of the Project. Contractor shall schedule and coordinate its Work around any such relocation or temporary service interruption. Contractor shall be responsible for properly shoring, supporting and protecting all Utilities at all times during the course of the Work. The Contractor shall conduct his work at all times such that adequate drainage is provided and shall not interfere with or block existing drainage facilities such as gutters, ditches, storm drains, or other drainage appurtenances. Existing fire hydrants adjacent to the project shall be kept accessible for fire apparatus at all times and no material or equipment shall be placed within 25 feet of any hydrant.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

- A. Starting Work: Start Work within 10 days following the date stated in the Notice to Proceed and execute with such progress as may be required to prevent delay to

other contractors or to the general completion of the project. Execute Work at such items and in or on such parts of the project, and with such forces, material and equipment, as to complete the Work in the time established by the Contract. At all times, schedule and direct the Work so that it provides an orderly progression to completion within the specified time for completion. The Contractor shall obtain all necessary building permits prior to commencement of work. The Contractor shall become totally familiar with the requirements of all permits prior to start of work.

- B. Intent of Contract Documents: It is the intent of the Contract Documents to describe a functionally complete project (or portion thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials or equipment, such works shall be interpreted in accordance with that meaning. Reference to standards specifications, manuals or codes of any technical society, organization or association or to the laws or regulations of any governmental authority having jurisdiction over the Project, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, law or regulation in affect at the time the Work is performed, except as may be otherwise specifically stated herein.

If before or during the performance of the Work Contractor discovers a conflict, error or discrepancy in the Contract Documents, Contractor immediately shall report same to the Engineer in writing and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from the Engineer. Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to Contractor with the Contract Documents before commencing any portion of the Work.

Drawings are intended to show general arrangements, design and extent of work and are not intended to serve as shop drawings. Specifications are separated into divisions for convenience of reference only and shall not be interpreted as establishing divisions for the Work, trades, subcontracts, or extent of any part of the Work. In the event of a discrepancy between or among the drawings, specifications or other Contract Document provisions, Contractor shall be required to comply with the provision which is the more restrictive or stringent requirement upon the Contractor, as determined by the Engineer. Unless otherwise specifically mentioned, all anchors, bolts, screws, fittings, fillers, hardware, accessories, trim and other parts required in connection with any portion of the Work to make a complete, serviceable, finished and first quality installation shall be furnished and installed as part of the Work, whether or not called for by the Contract Documents.

- B. Investigation and Utilities: Contractor shall have the sole responsibility of satisfying 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 materials; availability and quality of labor; water and electric power; availability and condition of roads; work area; living facilities; climatic conditions and seasons; physical conditions at the work-site and the project area as a whole; topography and ground surface conditions; nature and quantity of the surface materials to be encountered; subsurface conditions; equipment and facilities needed preliminary to and during performance of the Work; and all other costs associated with such performance. The failure of Contractor to acquaint itself with any applicable conditions shall not relieve Contractor from any of its responsibilities to perform under the Contract Documents, nor shall it be considered the basis for any claim for additional time or compensation.

- C. **Schedule:** The Contractor, within ten (10) calendar days after receipt of the Notice of Award, shall prepare and submit to the Engineer, for review and approval, a progress schedule for the Project (herein "Progress Schedule"). The Progress Schedule shall relate to all Work required by the Contract Documents and shall provide for expeditious and practicable execution of the Work within the Contract Time. The Progress Schedule shall indicate the dates for starting and completing the various stages of the Work. The Engineer's review and approval of the submitted Progress Schedule updates shall be a condition precedent to the City's obligation to pay Contractor.

The Progress Schedule shall be updated monthly by the Contractor. All monthly updates to the Progress Schedule shall be subject to the Engineer's review and approval. Contractor shall submit the updates to the Progress Schedule with its monthly Applications for Payment noted below.

- D. **Submittals and Substitutions:** Contractor shall carefully examine the Contract Documents for all requirements for approval of materials to be submitted such as shop drawings, data, test results, schedules and samples. Contractor shall submit all such materials at its own expense and in such form as required by the Contract Documents in sufficient time to prevent any delay in the delivery of such materials and the installation thereof.

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other suppliers may be accepted by the City if sufficient information is submitted by Contractor to allow the City to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of substitute items of material and equipment will not be accepted by the City from anyone other than Contractor and all such request must be submitted by Contractor to the Engineer within thirty (30) calendar days after Notice of Award is received by Contractor.

If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall make application to the Engineer for acceptance thereof, certifying

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

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Engineer, if Contractor submits sufficient information to allow the Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for submission to and review by the Engineer shall be the same as those provided herein for substitute materials and equipment.

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

- E. Daily Reports, As-Builts and Meetings: Unless waived in writing, the Contractor shall complete and submit to the Engineer on a weekly basis a daily log of the Contractor's work for the preceding week in a format approved by the Engineer. The daily log shall document all activities of Contractor at the Project site including, but not limited to, the following:
1. Weather conditions showing the high and low temperatures during work hours, the amount of precipitation received on the Project site, and any other weather conditions which adversely affect the Work;
 2. Soil conditions which adversely affect the Work;
 3. The hours of operation by Contractor's and subcontractor's personnel;
 4. The number of Contractor's and subcontractor's personnel present and working at the Project site, by subcontract and trade;

5. All equipment present at the Project site, description of equipment use and designation of time equipment was used (specifically indicating any down time);
6. Description of Work being performed at the Project site;
7. Any unusual or special occurrences at the Project site;
8. Materials received at the Project site;
9. A list of all visitors to the Project site; and
10. Any problems that might impact either the cost or quality of the Work or the time of performance.

The daily log shall not constitute nor take the place of any notice required to be given by Contractor to the City pursuant to the Contract Documents.

Contractor shall maintain in a safe place at the Project site one record copy of the Contract Documents, including, but not limited to, all drawings, specifications, addenda, amendments, Change Orders, Work Directive Changes and Field Orders, as well as all written interpretations and clarifications issued by the Engineer, in good order and annotated to show all changes made during construction. The annotated drawings shall be continuously updated by the Contractor throughout the prosecution of the Work to accurately reflect all field changes that are made to adapt the Work to field conditions, changes resulting from Change Orders, Work Directive Changes and Field Orders, and all concealed and buried installations of piping, conduit and utility services. All buried and concealed items, both inside and outside the Project site, shall be accurately located on the annotated drawings as to depth and in relationship to not less than two (2) permanent features (e.g. interior or exterior wall faces). The annotated drawings shall be clean, and all changes, corrections and dimensions shall be given in a neat and legible manner in a contrasting color. The "As-Built" record documents, together with all approved samples and a counterpart of all approved shop drawings shall be available to the Engineer for reference. "As-built" record documents shall be submitted with each application for payment. The Engineer's review and acceptance of the submitted "As-builts" shall be a condition precedent to the City's obligation to pay Contractor. Upon completion of the Work and as a condition precedent to the Contractor's entitlement to final payment, samples and shop drawings shall be delivered to the Engineer by Contractor.

Contractor shall keep all records and supporting documentation which concern or relate to the Work hereunder for a minimum of five (5) years from the date of termination of this Agreement or the date the Project is completed, whichever is later. The City, or any duly authorized agents or representatives of the City, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the five (5) year period noted above; provided, however, such activity shall be conducted only during normal business hours.

- F. **Contract Time and Time Extensions:** Should Contractor be obstructed or delayed in the prosecution of or completion of the Work as a result of unforeseeable causes beyond the control of the Contractor, and not due to its fault or neglect,

including but not restricted to acts of God or of the public enemy, acts of government, fires, floods, epidemics, quarantine regulation, strikes or lockouts, Contractor shall notify the City in writing within forty-eight (48) hours after the commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which Contractor may have had to request a time extension.

No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the Work from any cause whole or in part, shall relieve Contractor of his duty to perform or give rise to any right to damages or additional compensation from the City. Contractor expressly acknowledges and agrees that it shall receive no damages for delay. Contractor's sole remedy, if any, against the City will be the right to seek an extension to the Contract Time; provided, however, the granting of any such time extension shall not be a condition precedent to the aforementioned "No Damage For Delay" provision. This paragraph shall expressly apply to claims for early completion, as well as to claims based on late completion.

- G. **Changes in Work:** The City shall have the right at any time during the progress of the Work to increase or decrease the Work. Promptly after being notified of a change, Contractor shall submit an itemized estimate of any cost or time increases or savings it foresees as a result of the change. Except in an emergency endangering life or property, or as expressly set forth herein, no addition or changes to the Work shall be made except upon written order of the City, and the City shall not be liable to the Contractor for any increased compensation without such written order.
- H. **Claims and Disputes:** A claim is a demand or assertion by one of the parties seeking an adjustment or interpretation of the terms of the Contract Documents, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term "Claim" also includes other disputes and matters in question between the City and Contractor arising out of or relating to the Contract Documents.

The responsibility to substantiate a Claim shall rest with the party making the Claim.

Claims by the Contractor shall be made in writing to the City within forty-eight (48) hours after the first day of the event giving rise to such Claim or else the Contractor shall be deemed to have waived the Claim. Written supporting data shall be submitted to the City within fifteen (15) calendar days after the occurrence of the event, unless the City grants additional time in writing, or else the Contractor shall be deemed to have waived the Claim. The Contractor shall proceed diligently with its performance as directed by the City, regardless of any pending claim, action, suit or administrative proceeding, unless otherwise agreed to by the City in writing. The City shall continue to make payments in accordance with the Contract Documents during the pendency of any Claim.

- I. **Other Work:** The City may perform other work related to the Project at the site by the City's own forces, have other work performed by utility owners or let other direct contracts. If the fact that such other work is to be performed is not noted in the Contract Documents, written notice thereof will be given to Contractor prior to starting any such other work. If Contractor believes that such performance will involve additional expense to Contractor or require additional time, Contractor shall send written notice of that fact to the City within forty-eight (48) hours of being notified of the other work. If the Contractor fails to send the above required forty-eight (48) hour notice, the Contractor will be deemed to have waived any rights it otherwise may have had to seek an extension to the Contract Time or adjustment to the Contract Amount.

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

If any part of Contractor's Work depends for proper execution or results upon the work of any other contractor or utility owner (or the City), Contractor shall inspect and promptly report to the Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure to report will constitute an acceptance of the other work as fit and proper for integration with Contractor's Work.

- J. **Compliance with Laws:** Contractor agrees to comply, at its own expense, with all federal, state and local laws, codes, statutes, ordinances, rules, regulations and requirements applicable to the Project, including but not limited to those dealing with taxation, worker's compensation, equal employment and safety (including, but not limited to, the Trench Safety Act, Chapter 553, Florida Statutes). If Contractor observes that the Contract Documents are at variance therewith, it shall promptly notify the Engineer in writing.
- K. **Assignment:** Contractor shall not assign this Agreement or any part thereof, without the prior consent in writing of the City. If Contractor does, with approval, Assign this Agreement or any part thereof, it shall require that its assignee be bound to it and to assume toward Contractor all of the obligations and responsibilities that Contractor has assumed toward the City.
- L. **Permits, Licenses and Taxes:** Pursuant to Section 218.80, F.S., the City will pay for

all permits and fees, including license fees, permit fees, impact fees or inspection fees applicable to the work, and due to the City of Naples, through an internal budget transfer(s). Contractor is not responsible for paying for permits issued by The City of Naples but is responsible for acquiring all permits.

All permits, fees and licenses necessary for the prosecution of the Work which are not issued by the City shall be acquired and paid for by the Contractor, unless otherwise noted.

- M. Termination for Default: Contractor shall be considered in material default of the Agreement and such default shall be considered cause for the City to terminate the Agreement, in whole or in part, as further set forth in this Section, if Contractor:
- 1 fails to begin the Work under the Contract Documents within the time specified herein; or
 - 2 fails to properly and timely perform the Work as directed by the Engineer or as provided for in the approved Progress Schedule; or
 - 3 performs the Work unsuitably or neglects or refuses to remove material or to correct or replace such Work as may be rejected as unacceptable or unsuitable; or
 - 4 discontinues the prosecution of the Work; or
 - 5 fails to resume Work which has been suspended within a reasonable time after being notified to do so; or
 - 6 becomes insolvent or is declared bankrupt, or commits any act of bankruptcy; or
 - 7 allows any final judgment to stand against it unsatisfied for more than ten (10) days; or
 - 8 makes an assignment for the benefit of creditors; or
 - 9 fails to obey any applicable codes, laws, ordinances, rules or regulations with respect to the Work; or
 - 10 materially breaches any other provision of the Contract Documents.

The City shall notify Contractor in writing of Contractor's default(s). If the City determines that Contractor has not remedied and cured the default(s) within seven (7) calendar days following receipt by Contractor of said written notice, then the City, at its option, without releasing or waiving its rights and remedies against the Contractor's sureties and without prejudice to any other right or remedy it may be entitled to hereunder or by law, may terminate Contractor's right to proceed under the Agreement, in whole or in part, and take possession of all or any portion of the Work and any materials, tools, equipment, and appliances of Contractor, take assignments of any of Contractor's subcontracts and purchase orders, and complete all or any portion of Contractor's Work by whatever means, method or agency which the City, in its sole discretion, may choose.

If the City deems any of the foregoing remedies necessary, Contractor agrees that it shall not be entitled to receive any further payments hereunder until after the Project is completed. All monies expended and all of the costs, losses, damages and extra expenses (including Engineer and attorney's fees) or damages incurred by The City incident to such completion, shall be deducted from the Contract

Amount. Contractor agrees to pay promptly to the City on demand the full amount (including appeals) and interest thereon at the maximum legal rate of interest until paid. If the unpaid balance of the Contract Amount exceeds all such costs, expenditures and damages incurred by the City to complete the Work, such excess shall be paid to the Contractor. The amount to be paid to the Contractor shall be approved by the Engineer, upon application, and this obligation for payment shall survive termination of the Agreement.

The liability of Contractor hereunder shall extend to and include the full amount of any and all sums paid, expenses and losses incurred, damages sustained, and obligations assumed by The City in good faith under the belief that such payments or assumptions were necessary or required, in completing the Work and providing labor, materials, equipment, supplies, and other items therefore or re-letting the Work, and in settlement, discharge or compromise of any claims, demands suits, and judgments pertaining to or arising out of the work hereunder.

If, after notice of termination of contractor's right to proceed pursuant to this Section, it is determined for any reason that Contractor was not in default, or that its default was excusable, or that the City is not entitled to the remedies against Contractor provided herein, then Contractor's remedies against the City shall be the same as and limited to those afforded Contractor under "Completion" section below.

- N. Termination for Convenience and Right of Suspension: The City shall have the right to terminate this Agreement without cause upon seven (7) calendar days written notice to Contractor. In the event of such termination for convenience, Contractor's recovery against the City shall be limited to that portion of the Contract Amount earned through the date of termination, together with any retainage withheld and reasonable termination expenses incurred, but Contractor shall not be entitled to any other or further recovery against the City, including, but not limited to, damages or any anticipated profit on portions of the Work not performed.

The City shall have the right to suspend all or any portions of the Work upon giving Contractor not less than two (2) calendar days' prior written notice of such suspension. If all or any portion of the Work is so suspended, Contractor's sole and exclusive remedy shall be to seek an extension of time to its schedule in accordance with the procedures set forth in the Contract Documents. In no event shall the Contractor be entitled to any additional compensation or damages. Provided, however, if the ordered suspension exceeds six (6) months, the Contractor shall have the right to terminate the Agreement with respect to that portion of the Work which is subject to the ordered suspension.

- O. Completion: When the entire Work (or any portion thereof designated in writing by the City) is ready for its intended use, Contractor shall notify the Engineer in writing that the entire Work (or such designated portion) is substantially complete and request that the Engineer issue a Certificate of Substantial completion (or Certificate of Partial Substantial Completion). Within a reasonable time thereafter, the City, Contractor and Engineer shall make an inspection of the Work (or designated portion thereof) to determine the status of completion. If the City and

Engineer do not consider the Work (or designated portion) substantially complete, the Engineer shall notify Contractor in writing giving the reasons therefore. If the City and Engineer consider the Work (or designated portion) substantially complete, the Engineer shall prepare and deliver to Contractor a Certificate of Substantial Completion (or Certificate of Partial Substantial Completion) which shall fix the date of Substantial Completion for the entire Work (or designated portion thereof) and include a tentative punch list of items to be completed or corrected by Contractor before final payment. The City shall have the right to exclude Contractor from the Work and Project site (or designated portion thereof) after the date of Substantial Completion, but the City shall allow Contractor reasonable access to complete or correct items on the tentative punch list.

Upon receipt of written certification by Contractor that the Work is completed in accordance with the Contract Documents and is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Engineer will make such inspection and, if he finds the Work acceptable and fully performed under the Contract Documents, he shall promptly issue a final Certificate for Payment, recommending that, on the basis of his observations and inspection, and the Contractor's certification that the Work has been completed in accordance with the terms and conditions of the Contract Documents, that the entire balance found to be due Contractor is due and payable. Neither the final payment nor the retainage shall become due and payable until Contractor submits: all data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers of liens, arising out of the Contract Documents, to the extent and in such form as may be designated by the City. The City reserves the right to inspect the Work and make an independent determination as to the Work's acceptability, even though the Engineer may have issued his recommendations. Unless and until the City is completely satisfied, neither the final payment nor the retainage shall become due and payable.

- P. Warranty: Contractor shall obtain and assign to the City all express warranties given to Contractor or any subcontractors by any materialmen supplying materials, equipment or fixtures to be incorporated into the project. Contractor warrants to the City that any materials and equipment furnished under the Contract Documents shall be new unless otherwise specified, and that all Work shall be of good quality, free from all defects and in conformance with the Contract Documents. Contractor further warrants to the City that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, suppliers or processors except as otherwise provided for in the Contract Documents. If, within one (1) year after final completion, any Work is found to be defective or not in conformance with the Contract Documents, Contractor shall correct it promptly after receipt of written notice from the City. Contractor shall also be responsible for and pay for replacement or repair of adjacent materials or Work which may be damaged as a result of such replacement or repair. These warranties are in addition to those implied warranties to which the City is entitled as a matter of law.

- Q. **Supervision and Superintendents:** Contractor shall plan, organize, supervise, schedule, monitor, direct and control the work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the contract documents. Contractor shall be responsible to see that the finished work complies accurately with the Contract Documents. Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without prior written notice to the Engineer except under extraordinary circumstances. The superintendent shall be Contractor's representative at the Project site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor. The City shall have the right to direct Contractor to remove and replace its Project superintendent, with or without cause.
- R. **Protection of Work:** Contractor shall fully protect the Work from loss or damage and shall bear the cost of any such loss or damage until final payment has been made. If Contractor or any one for whom Contractor is legally liable for is responsible for any loss or damage to the Work, or other work or materials of the City or the City's separate contractors, Contractor shall be charged with the same, and any monies necessary to replace such loss or damage shall be deducted from any amounts due Contractor.

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

Contractor shall not disturb any benchmark established by the Engineer with respect to the Project. If Contractor, or its subcontractors, agents or anyone for whom Contractor is legally liable, disturbs the Engineer's benchmark, Contractor shall immediately notify The City and Engineer. The Engineer shall reestablish the benchmark and Contractor shall be liable for all costs incurred by The City associated therewith.

- S. **Emergencies:** In the event of an emergency affecting the safety or protection of persons or Work or property at the Project site or adjacent thereto, Contractor, without special instructions or authorization from the City or Engineer is obligated to act to prevent threatened damage, injury or loss. Contractor shall give Engineer written notice within forty-eight (48) hours after the occurrence of the emergency, if Contractor believes that after the occurrence of the emergency, if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Change Order shall be issued to document the consequences of the changes or variations. If Contractor fails to provide the forty-eight (48) hour written notice noted above, the Contractor shall be deemed to have waived any right it otherwise may have had to seek an adjustment to the Contract Amount or an extension to the Contract Time.

- T. **Project Meetings:** Prior to the commencement of Work, the Contractor shall attend a preconstruction conference with the Engineer and others as appropriate to discuss the Progress Schedule, procedures for handling shop drawings and other submittals, and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. During the prosecution of the Work, the Contractor shall attend any and all meetings convened by the Engineer or the City with respect to the Project, when directed to do so. Contractor shall have its subcontractors and suppliers attend all such meetings (including the preconstruction conference) as may be directed by the City or Engineer.
- U. **Traffic Control Plan:** A traffic control plan to support the Contractor's operations shall be submitted at least 72 hours prior to commencing work that shall conform to the Florida Department of Transportation's "Manual on Traffic Control and Safe Practices" which shall be obtained by the Contractor at his expense.
- V. **Hours of Work:** Work within the travelled way of the project shall commence no earlier than 7:00 a.m. local time and be completed no later than 7:00 p.m. local time. Hours of work may be altered at any time at the discretion of the City.
- W. **Tax Exemption:** The City of Naples is exempt from the payment of sales or use tax. The tax exemption certificate number is: 85-8012621645C-0.

PART 4 SAFETIES

- A. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
1. All employees on the Work and other persons and/or organizations who may be affected thereby;
 2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site; and
 3. Other property on Project site or adjacent thereto, including trees, shrubs, walks, pavements, roadways, structures, utilities and any underground structures or improvements not designated for removal, relocation or replacement in the Contract Documents.
- B. Contractor shall comply with all applicable codes, laws, ordinances, rules and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of underground structures and improvements and utility-owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation or replacement of their property. Contractor's duties and responsibilities for the safety and

protection of the Work shall continue until such time as the Work is completed and final acceptance of same by The City has occurred.

- C. Contractor shall designate a responsible representative at the Project site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to The City.

END OF SECTION

EXHIBIT B

BASIS OF COMPENSATION

As consideration for providing the Services as set forth in the Agreement, the CITY agrees to pay, and the CONTRACTOR agrees to accept payment on a time and reimbursement cost basis as indicated in Attachment B-1 which is attached and made a part of this Agreement. The CITY is adding a separate \$118,014.55 CITY controlled Contingency to the issuance of this Agreement with the removal of Alternate Bid Items A-D2 (\$1,298,160.05 -251,635.00) making the total amount of the Agreement at \$1,046,525.05.

Retainage of (10%) ten percent will be a part of said agreement and future payments.

END OF EXHIBIT B

REVISED BID TABULATION - Addendum 2					
BID TABULATION					
19-015 Cove Outfall Improvements					
Water Quality Improvements at the Cove Outfall Dredging, Armoring, Living Shoreline and Sidewalk Improvements					
Item No.	DESCRIPTION (Furnished & Installed)	UNIT	QTY	UNIT PRICE	TOTAL AMOUNT
1	Mobilization/Demobilization	LS	1	180,000.00	180,000.00
2	Construction Surveying and Stake-out (incl. Rec Dwg)	LS	1	25,000.00	25,000.00
				Subtotal	205,000.00
Access, Erosion and Turbidity Control					
3	Staked Silt Fence	LF	1,075	2.25	2,418.75
4	Floating/Staked Turbidity Barrier	LF	350	10.00	3,500.00
5	Erosion and Turbidity Control Monitoring/Maintenance	Day	120	300.00	36,000.00
6	MOT & Traffic Control	Day	120	185.00	22,200.00
7	Temporary 6' Chain Link Fence	LF	1,155	10.00	11,550.00
				Subtotal	75,668.75
Dredge, Disposal and Fill					
8	Dredge, Disposal and Fill	LS	1	110,000.00	110,000.00
Drainage Structures					
9	Type "C" Inlet	EA	1	3,000.00	3,000.00
10	15" Corotech A2 Liner Pipe	LF	13	120.00	1,560.00
				Subtotal	114,560.00
Channel/Shoreline Armoring					
11	Large Washed Shell	TON	12	115.00	1,380.00
12	Sheet Bags (Filled with Large Washed Shell)	TON	106	255.00	27,030.00
13	Type A Riprap (6" Average Dia) (including Geotextile Fabric)	TON	60	105.00	6,300.00
14	RPCG Layer 1	TON	80	110.00	8,800.00
15	RPCG Layer 2	TON	104	110.00	11,440.00
16	RPCG Layer 3 (including Geotextile Fabric where applicable)	TON	1,400	90.00	126,000.00
17	RPCG Layer 4	TON	234	115.00	26,910.00
18	Remove and Replace Wood Barrier	LS	1	15,000.00	15,000.00
				Subtotal	222,860.00
Living Shoreline Planting					
19	Spartina - Furnish & Install (4" Containerized @ 12" O.C.)	EA	6,000	2.80	14,000.00
20	Red Mangroves - Rhizophora Mangie (3 gallon container)	EA	8	90.00	720.00
				Subtotal	14,720.00
Landscaping					
21	Selective Clearing and Grubbing	SY	24	285.00	6,840.00
22	Earthwork	CY	24	65.00	1,560.00
23	Planting Soil and Soil Amendments	CY	24	70.00	1,680.00
24	Root Barrier	LF	185	15.00	2,775.00
25	Trees	EA	2	700.00	1,400.00
26	Palms	EA	8	2,100.00	16,800.00
27	Shrub and Groundcover	SF	605	2.65	1,603.25
28	Mulch (3-inch depth)	CF	1,920	3.00	5,760.00
29	Irrigation System	SF	900	7.25	6,525.00
30	Jack and Bore (Irrigation sleeves)	LS	1	5,500.00	5,500.00
				Subtotal	50,143.25
Hardscape Improvements					
31	Existing Sidewalk demolition	SF	2,631	1.50	3,946.50
32	AE2680STX - 6' Contour Bench	EA	4	2,250.00	9,000.00
33	AE2845CT - STX / 45 Gal. TR	EA	2	2,300.00	4,600.00
34	Educational Signs	EA	2	5,000.00	10,000.00
35	Metal Hand Railing / Post & Cable	LF	303	570.00	172,710.00
36	Guardrail including transition barrier wall	LF	133	655.00	87,115.00
37	Brick Pavers	SF	1,695	6.00	10,170.00
38	Brick Paver Subbase - 8"	SY	300	16.50	4,950.00
39	Concrete	CY	7	460.00	3,220.00
40	Curb Type D	LF	303	19.00	5,757.00
41	Milling Existing Asphalt	SY	440	5.50	2,420.00
42	Road Restoration - Stabilized Subgrade	SY	120	6.50	780.00
43	Road Restoration - Limerock Base (6-inch Limerock Base)	SY	120	12.75	1,530.00
44	1-1/2" Asphalt - Type SP-12.5 (First Lift)	SY	440	20.00	8,800.00
45	1" Asphalt - Type SP-9.5; Traff. Lv. C (Second Lift)	SY	440	13.50	5,940.00
46	Concrete Bulkhead	CY	5	2,250.00	11,250.00
47	Concrete Pad (benches and trash cans)	SY	8	60.00	480.00
48	ADA Sidewalk Tile	EA	2	275.00	550.00
49	Remove and Replace traffic signs	EA	3	260.00	780.00
				Subtotal	343,998.50
Water Quality Improvements at the Cove Outfall Dredging, Armoring, Living Shoreline and Sidewalk Improvements (Items 1 - 49)					1,026,950.50

Pollution Control Structure at Cambler Park						
50	Mobilization/Demobilization (5% Base Bid)	LS	1	7,295.00	7,295.00	
51	Traffic Control	LS	1	3,400.00	3,400.00	
52	Pollution Control Structure	LS	1	121,000.00	121,000.00	
53	Stormwater Infrastructure Modifications	LS	1	18,000.00	18,000.00	
54	Remove Discharge Weir	LS	1	1,100.00	1,100.00	
55	Install Discharge Weir	LS	1	2,400.00	2,400.00	
Pollution Control Structure at Cambler Park Subtotal (Items 50 - 55)						153,195.00
TOTAL BASE BID: Water Quality Improvements at the Cove Outfall Dredging, Armoring, Living Shoreline and Sidewalk Improvements and Pollution Control Structure at Cambler Park (Items 1 to 55)						
Contingency (10% Base Bid)				LS	1	118,014.55
TOTAL CONSTRUCTION COST						1,298,160.05
ALTERNATE BID ITEMS						
A	Alternate A - DELETE WORK FOR ITEM 36 - Guardrail including transition barrier wall	LF	133	(6.55.00)	-87,115.00	
Subtotal Alternate A						-87,115.00
B1	Alternate B1 - DELETE WORK FOR ITEM 37 - Brick Pavers and Place Concrete Sidewalk	SF	1,695	-6.00	-10,170.00	
B2	Alternate B2 - DELETE WORK FOR ITEM 38 - Brick Paver Subbase 8"	SY	300	-16.50	-4,950.00	
Subtotal Alternate B (Items B1 to B2)						-15,120.00
C	Alternate C - DELETE WORK FOR ITEMS 50 to 55 - Pollution Control Structure at Cambler Park	LS	1	-145,900.00	-145,900.00	
Subtotal Alternate C						-145,900.00
D1	Alternate D1 - DELETE WORK FOR ITEM 54 - Remove Discharge Weir	LS	1	-1,100.00	-1,100.00	
D2	Alternate D2 - DELETE WORK FOR ITEM 55 - Install Discharge Weir	LS	1	-2,400.00	-2,400.00	
Subtotal Alternate D (Items D1 to D2)						-3,500.00

*All values based on PDR estimates

This solicitation has potential for P-Card Payment. Does your company accept credit card payment? YES NO X

If "yes," please indicate payment options on the below chart.

Payment Options	YES	NO	PERCENTAGE AND/OR TERMS FOR EARLY PAYMENT
Is there a discount for a credit card payment?			
Is there an additional charge for credit card payment?			
Discount for early payment?			
Prompt payment terms: % Days Net 30 Days			

Company Name: Quality Enterprises USA, Inc.

EIN: 54-0947002

Email: LGAUDIO@QEUSA.COM

Name and Title of Individual completing this schedule:

Louis J. Gaudio

Vice President

(Printed Name)

(Title)



12/20/18

(Signature)

(Date)

EXHIBIT C

GENERAL INSURANCE REQUIREMENTS

The Contractor shall not commence work until he has obtained all the insurance required under this heading, and until such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has also been obtained and approved by the Owner.

Certificates of insurance must be issued by an authorized representative of the insurance company at the request and direction of the policyholder and must include sufficient information so as to identify the coverage and the contract for Owner's improvements for which they are issued. Certificates of insurance must be issued by a nationally recognized insurance company with a Best's Rating of no less than B+VII, satisfactory to the Owner, and duly authorized to do business in the state of said Contract.

The Contractor shall procure and maintain, during the life of this Contract, Workmen's Compensation Insurance for all of his employees to be engaged in work under this Contract, and he shall require any subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work, unless such employees are covered by the protection afforded by the Contractor's insurance. In case any employees are to be engaged in hazardous work under this Contract, and are not protected under this Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate coverage for the protection of such employees. It is acceptable to use a State-approved Workmen's Compensation Self-Insurance fund.

The Contractor shall take out and maintain during the life of this Contract, Public Liability and Property Damage and shall include Contractual Liability, Personal Injury, Libel, Slander, False Arrest, Malicious Prosecution, Wrongful Entry or Eviction, Broad Form Property Damage, Products, Completed Operations and XCU Coverage to be included on an occurrence basis, and to the full extent of the Contract to protect him, the Owner, and any subcontractor performing work covered by this Contract from damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract, whether such operations be by himself or by a subcontractor, or by anyone directly or indirectly employed by either of them. The Contractor shall also maintain automobile liability insurance including "non-owned and hired" coverage. The entire cost of this insurance shall be borne by the Contractor.

The amount of such insurance shall be no less than \$1,000,000 annual aggregate for bodily injury and property damage combined per occurrence.

The City of Naples must be named as Additional Insured on the insurance certificate and the following must also be stated on the certificate. "These coverage's are primary to all other coverage's the City possesses for this contract only." The City of Naples shall be named as the Certificate Holder. The Certificate Holder shall read as follows:

The City of Naples
735 Eighth Street South
Naples, Florida 34102

No City Division, Department, or individual name should appear on the Certificate.
No other format will be acceptable.

The Certificate must state the bid number and title.

When using the ACORD 25 – Certificate of Insurance only the most current version will be accepted.

The City of Naples requires a copy of a cancellation notice in the event the policy is cancelled. The City of Naples shall be expressly endorsed onto the policy as a cancellation notice recipient.

[If other insurance or insurance requirements or any waivers, attach as Exhibit C-1 through C-__]

EXHIBIT D

CERTIFICATION OF COMPLIANCE WITH IMMIGRATION LAWS

The undersigned is the **Vice President of the Quality Enterprises USA, Inc.**, company ("the CONTRACTOR"), and hereby certifies to the following:

1. The CONTRACTOR is in full compliance with all provisions of the Immigration Reform and Control Act of 1986 ("IRCA"), as well as all related immigration laws, rules, regulations pertaining to proper employee work authorization in the United States.

2. The undersigned has verified that the CONTRACTOR has obtained and maintains on file, and will continue to obtain and maintain on file, all documentation required by law, including but not limited to, Form I-9, Employment Eligibility Verification, for all persons employed by or working for the CONTRACTOR in any capacity on any project for the City of Naples (CITY). All such persons have provided evidence of identity and eligibility to work to the CONTRACTOR in accordance with the IRCA and related law. The undersigned hereby affirms that no person has been or will be employed by the CONTRACTOR to work on projects for the CITY who is not authorized to work under law. The undersigned further affirms that the CONTRACTOR's files will be updated by written notice any time that additional employees work on projects for the CITY.

3. The CONTRACTOR will have its contractors, subcontractors, suppliers and vendors who are involved in projects for the CITY to sign a written acknowledgment that they too are in compliance with immigration law. It is understood that failure to do so could result in the CONTRACTOR being liable for any violation of the law by such third parties.

4. The CONTRACTOR will fully cooperate with and have its contractors, subcontractors, suppliers and vendors to fully cooperate with, all inquiries and investigations conducted by any governmental agency in connection with proper compliance with the laws pertaining to appropriate work authorization in the United States.

5. The undersigned, on behalf of the CONTRACTOR, acknowledges that this Certification may be relied upon by the CITY, its officers, directors, employees, and affiliates or related persons and entities.

6. If it is found that the CONTRACTOR has not complied with the laws pertaining to proper employment authorization, and any legal and administrative action ensues against the CITY, the CONTRACTOR will indemnify, defend and hold the CITY harmless along with their officers, directors, employees, and affiliated or related persons and entities.

7. The CONTRACTOR acknowledges that the CITY by their authorized representatives shall have the right, at any time, upon 24 hours' notice, to examine the CONTRACTOR's books and records to confirm that the CONTRACTOR is in compliance with the terms of this certification.

Executed this 7th day of JANUARY, 2019.


By: 
Louis J. Gaudio, Vice President

EXHIBIT E

SCOPE OF SERVICES

The Scope of Services to be provided under this Agreement are included in Attachment A-1 and Exhibit-E (Construction Plans) consisting of Pollution Control Structure at Cambier Park Set (1-8 pages) and Water Quality Improvements at the Cove Outfall Set (1-26 pages) which are attached and made a part of this Agreement and those set out in the Bid, any issued Addendum(s)(four), and Vendor's Submittal of (ITB) Invitation To Bid No.19-015, titled Cove Outfall Improvements herein referenced and made a part of this Agreement.

END OF EXHIBIT E

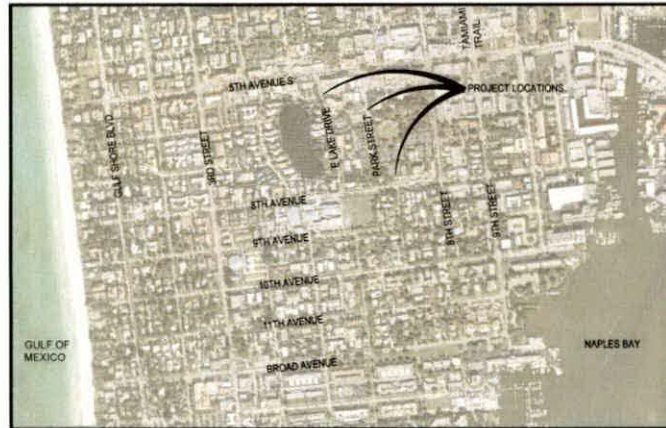
CITY OF NAPLES, FLORIDA

NAPLES BAY RESTORATION & WATER QUALITY IMPROVEMENTS AT THE COVE

CONSTRUCTION PLANS FOR

POLLUTION CONTROL STRUCTURE AT CAMBIER PARK

INDEX OF SHEETS		
DRAWING NUMBER	SHEET TITLE	SHEET DESCRIPTION
General		
1	G-001	COVER SHEET AND INDEX OF SHEETS
2	G-002	GENERAL NOTES
3	G-003	LOCATION MAP & LEGEND
Civil		
4	C-101	EXISTING SITE PLAN
5	C-102	PROPOSED IMPROVEMENT PLAN
6	C-103	PROPOSED IMPROVEMENT PROFILE
7	C-501	DETAILS
8	C-502	BEST MANAGEMENT PRACTICES



LOCATION MAP



GOVERNING SPECIFICATIONS:

THE PROJECT DEVELOPMENT CODE;
 CITY OF NAPLES;
 COLLIER COUNTY;
 FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT);
 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP);
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD);
 UNITED STATES ARMY CORPS OF ENGINEERS (USACE);
 IN THE EVENT OF A CONFLICT, THE MOST RESTRICTIVE APPLIES.

MAYOR
 BILL BARNETT

VICE MAYOR
 GARY PRICE

CITY COUNCIL
 REG BLIXTON
 LINDA PENNIMAN
 MICHELLE MCLEOD
 TERRY HUTCHINSON
 ELLEN SEIGEL

STREETS AND STORMWATER DIRECTOR
 GREGG STRAKAULUSE, P.E.

PLANS PREPARED FOR



City of Naples Streets and Stormwater Department
 295 Riverside Circle, Naples, FL 34102
 Tel. (239) 213-5016 Fax. (239) 213-5010 www.naplesgov.com

PLANS PREPARED BY



Stantec Consulting Services Inc.
 5801 Pelican Bay Boulevard, Suite 300
 Naples, FL U.S.A.
 34108
 Tel. 239 646 4040
 www.stantec.com
 Florida Certification No. 27013



**Know what's below.
 Call before you dig.**

**CALL 48 HOURS BEFORE YOU DIG
 IT'S THE LAW. BEAL BY:
 SUNSHINE STATE ONE CALL OF
 FLORIDA, INC.**

BID SET

ATTENTION IS DIRECTED TO THE FACT THAT
 THESE PLANS MAY HAVE BEEN REDUCED IN
 SIZE BY REPRODUCTION. THIS MUST BE
 CONSIDERED WHEN OBTAINING SCALED DATA

**STANTEC PROJECT NO. 177310582
 OCTOBER, 2018**

CIVIL & MECHANICAL
 ENGINEER OF RECORD:
 KELLY BLAKE SMITH, P.E.

KELLY BLAKE SMITH, P.E. NO. 69876
 DATE _____

GENERAL NOTES:

- 1. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE CITY/COUNTY. WHERE CONFLICTS OR OMISSIONS EXIST, THE CITY OF NAPLES STANDARDS SHALL DICTATE. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE CITY OF NAPLES.
2. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING TO BE HELD BETWEEN THE CITY OF NAPLES, STREETS AND STORM WATER DEPARTMENT, UTILITIES DEPARTMENT, PARKS DEPARTMENT, ENGINEER OF RECORD, CONTRACTOR, AND OTHER INTERESTED PARTIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS 01600 MATERIAL AND EQUIPMENT.
4. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS 01600 MATERIAL AND EQUIPMENT.
5. CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES (SUNSHINE STATE ONE CALL, 1-800-432-4770) FOR UTILITY LOCATES AT LEAST 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGH THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
7. ALL ELEVATIONS ARE BASED UPON MEAN SEA LEVEL, 1988 NAVD.
8. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS, REQUIRED OWNER/ENGINEER APPROVED SUBMITTALS, AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. ANY PENALTIES, STOP WORK ORDERS OR ADDITIONAL WORK RESULTING FROM THE CONTRACTOR BEING IN VIOLATION OF THE REQUIREMENTS ABOVE SHALL BE FULLY BORNE BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL SUBMIT RIGHT-OF-WAY PERMIT APPLICATION THROUGH CITY OF NAPLES STREETS AND TRAFFIC DIVISION SHOWING MAINTENANCE OF TRAFFIC AND ANY ROAD OR LANE CLOSURES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED ITEMS INCLUDING, BUT NOT LIMITED TO, DRIVEWAYS, PAVEMENT, SIDEWALKS, SIGNS, STORM CULVERTS, FENCES AND LANDSCAPING AS REQUIRED BY OWNER, ENGINEER OF RECORD, AND/OR OTHER GOVERNING ENTITIES.
11. ALL DISTURBED AREAS SHALL BE RESTORED, INCLUDING REGRADING, TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR REGRADING AND REPLANTING VEGETATION IN ALL AREAS DISTURBED BY THE CONSTRUCTION.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL CLEARED VEGETATION WITHIN FIVE (5) DAYS OF CLEARING AND GRUBBING WORK. SITE SHALL BE CLEANED PRIOR TO WEEKENDS.
14. CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES NEEDED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES. THESE MEASURES SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ALL STATE AND LOCAL REQUIREMENTS.
15. ANY DISCREPANCIES IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE BIDDING OR COMMENCING WORK.
16. NO FIELD CHANGES OR DEVIATION FROM DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE CITY OF NAPLES.
17. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY OF NAPLES, AS REQUIRED, A MINIMUM OF 48 HOURS IN ADVANCE AND NOTIFY ENGINEER 48 HOURS IN ADVANCE.
18. NO CONNECTION TO, OR ANY OTHER CONSTRUCTION SHALL BE PERFORMED ON AN EXISTING UTILITY MAIN OR STRUCTURE WITHOUT THE PRESENCE OF A CITY OF NAPLES UTILITY INSPECTOR.
19. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THREE (3) SETS OF RED LINE AS-BUILTS TO THE ENGINEER OF RECORD WITHIN TWO (2) WEEKS AFTER CONSTRUCTION HAS BEEN COMPLETED ON EACH PHASE.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY TESTING TO ASSURE THAT THE PROPER COMPACTION HAS BEEN ACHIEVED ON THE SUBGRADE, BASE AND ALL OTHER PERTINENT BACKFILL AREAS THAT HAVE BEEN COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH TESTING AND RETESTING OF THE AREAS AND SHALL PROVIDE THE OWNER AND THE ENGINEER WITH COPIES OF CERTIFICATION OF COMPACTION FROM THE TESTING COMPANY.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL PRIOR TO NOTICE TO PROCEED OF CONSTRUCTION TO DETERMINE IF ANY OFF SITE MATERIALS WILL NEED TO BE IMPORTED TO ACHIEVE THE GRADES SPECIFIED ON THE PLANS.
22. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A REGISTERED FLORIDA PROFESSIONAL LAND SURVEYOR FOR LAYOUT OF ALL WORK AND RESTORING THE MONUMENTS AND PROPERTY CORNERS DISTURBED DURING CONSTRUCTION. PROOF OF REGISTRATION SHALL BE SUBMITTED TO THE ENGINEER.
23. ALL SHEETING AND BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND WORKING DRAWINGS OF PROPOSED SHORING, SHEETING AND BRACING WHICH HAS BEEN PREPARED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF FLORIDA.
24. THIS SET OF PLANS HAS BEEN PREPARED IN GENERAL ACCORDANCE WITH THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THE FDOT STANDARD PLANS AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

DEMOLITION:

- 1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND LICENSES FOR PERFORMING THE DEMOLITION WORK AND SHALL FURNISH A COPY OF SAME TO THE ENGINEER PRIOR TO COMMENCING THE WORK. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES OR LOCAL AUTHORITIES FURNISHING GAS, WATER, ELECTRICAL, TELEPHONE, OR SEWER SERVICE SO THEY CAN REMOVE, RELOCATE, DISCONNECT, CAP OR PLUG THEIR EQUIPMENT IN ORDER TO FACILITATE DEMOLITION.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL TREES, STRUCTURES, AND UTILITIES NOT MARKED FOR REMOVAL OR DEMOLITION AND SHALL PROMPTLY REPAIR ANY DAMAGE AS DIRECTED BY THE ENGINEER AT NO COST TO THE CITY OF NAPLES.
4. THE CONTRACTOR SHALL REMOVE PAVING MARKED FOR DEMOLITION WHICH INCLUDES ALL ASPHALT, CONCRETE, BASE AND RETAINING WALLS (INCLUDING FOOTERS).
5. THE CONTRACTOR SHALL REMOVE TREES MARKED FOR REMOVAL WHICH INCLUDES THE ROOTS ASSOCIATED WITH THE TREES. TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN ACCORDANCE WITH THE CITY/COUNTY REGULATIONS.
6. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL SIGNS, MAILBOXES, FENCING, DRAINAGE STRUCTURES, ETC AS REQUIRED TO COMPLETE THIS PROJECT. ALL SUCH RESTORATION SHALL BE COMPLETED IMMEDIATELY FOLLOWING PIPE INSTALLATION AND BACKFILL AND SHALL BE INCLUDED IN CONTRACTOR'S PRICE FOR PROJECT.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF ALL REMOVED/DEMOLISHED PIPE, STRUCTURES, EQUIPMENT AND APPURTENANCES AT NO ADDITIONAL COST TO THE CITY OF NAPLES.

DRAINAGE NOTES:

- 1. THE STORM DRAINAGE PIPING SHALL BE SUBJECTED TO A VISUAL INSPECTION BY THE CITY AND ENGINEER PRIOR TO PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.
2. THE CONTRACTOR SHALL MAINTAIN THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE INSPECTED BY CITY AND ENGINEER PRIOR TO FINAL ACCEPTANCE.
3. DRAINAGE PIPES TO BE ABANDONED SHALL BE PLUGGED WITH BRICK AND MORTAR AT BOTH ENDS AND FILLED WITH GROUT.
4. ALL PIPE JOINTS AND STRUCTURE PENETRATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX AND SPECIFICATION SECTIONS 430 AND 425.

UTILITY NOTES:

- 1. ALL UTILITY, PIPE AND STRUCTURAL BEDDING AND BACKFILL SHALL CONFORM TO SPECIFICATION SECTION 02223.
2. SUBSURFACE SOIL EXPLORATION ANALYSIS AND RECOMMENDATION FOR PROPOSED POLLUTION CONTROL STRUCTURE PREPARED BY YPC CONSULTING (JULY 7TH, 2016) AND PROVIDED IN APPENDIX A OF TECHNICAL SPECIFICATIONS.

TEMPORARY EROSION AND SEDIMENT CONTROL:

- 1. CONTRACTOR SHALL INSTALL PRIOR TO AND MAINTAIN DURING CONSTRUCTION ALL SEDIMENT CONTROL MEASURES AS SHOWN ON PLANS.
2. EROSION CONTROL MEASURES WILL BE INSPECTED BY CONTRACTOR AT LEAST DAILY, AFTER REACH RAIN EVENT AND REPAIRED BY THE GENERAL CONTRACTOR IF DAMAGED. CLEAN OUT OF SEDIMENT CONTROL STRUCTURES WILL BE PERFORMED BY THE CONTRACTOR WHEN SEDIMENT HAS ACCUMULATED TO ONE-HALF (1/2) HEIGHT OF FABRIC FOR SILT FENCE, TURBIDITY BARRIERS, AND INLET SEDIMENT TRAPS.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROVIDING SEDIMENT AND EROSION CONTROL MEASURES TO PROVIDE OPTIMUM SEDIMENT AND EROSION CONTROL. SEDIMENT AND EROSION CONTROL MEASURES SHALL COMPLY WITH CHAPTER 6 OF THE FLORIDA DEVELOPMENT MANUAL.
4. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION BY CITY OF NAPLES DESIGNATED REPRESENTATIVE OR OTHER REGULATORY AGENCY REPRESENTATIVE AT NO ADDITIONAL COST TO THE CITY OF NAPLES.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING DITCHES, WETLAND VEGETATION, STORM DRAIN PIPE, AND INLETS IN THE VICINITY OF WORK TO BE PERFORMED, FROM DAMAGE OR SILTATION, WHETHER OR NOT SPECIFICALLY IDENTIFIED IN THE PLANS.
6. EROSION CONTROL MEASURES DESCRIBED SHALL BE MAINTAINED UNTIL PERMANENT DRAINAGE FACILITIES HAVE BEEN RECONSTRUCTED AND VEGETATION ON PLANTED SLOPES IS SUFFICIENTLY ESTABLISHED TO BE AN EFFECTIVE EROSION DETERRENT.
7. CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD INTO PUBLIC STREETS. IF TRACKING OR FLOW OF MUD OCCURS, CONTRACTOR SHALL CONSTRUCT A SOIL TRACKING PREVENTION DEVICE IN ACCORDANCE WITH FDOT DESIGN STANDARDS 2010, INDEX NO. 106. ALL ROADWAYS SHALL BE SWEEP DAILY AT MINIMUM, OR MORE FREQUENTLY IF DEEMED NECESSARY BY CITY OF NAPLES REPRESENTATIVE AT NO ADDITIONAL COST TO THE CITY OF NAPLES.
8. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON ESTABLISHMENT OF PERMANENT VEGETATION OR PROJECT COMPLETION, AS DIRECTED BY THE CITY'S REPRESENTATIVE.
9. SILT FENCE AND TURBIDITY BARRIERS SHALL MEET THE REQUIREMENTS OF FDOT DESIGN STANDARDS 2010, INDEX NO. 102 AND 103.
10. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTROL OF EROSION WITHIN THE WORK SITE AND PREVENTION OF SEDIMENTATION OF ANY ADJACENT OR DOWNSTREAM WATERWAYS. THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. THE CONTRACTOR'S METHODS OF OPERATION MAY DICTATE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND INSTALLING ADDITIONAL MEASURES.
11. ANY EXPOSED DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 20 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING, WHICH CONTRACTOR SHALL WATER AS NECESSARY TO ESTABLISH GRASS AT NO ADDITIONAL COST TO THE CITY OF NAPLES.


Stantec
5801 Pelican Bay Blvd. Suite 200
Naples, Florida 34108-2709
Tel. 239.499.4540
www.stantec.com

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Notes

Revision	By	App'd	Yr	MM	DD

No.	Issued	ISSUED BY	DATE	DATE

Permit-Seal

KELLY BLAKE SMITH, PE 67874
Engineer Reg. No.

Client/Project
CITY OF NAPLES

POLLUTION CONTROL STRUCTURE
AT CAMBER PARK

Title

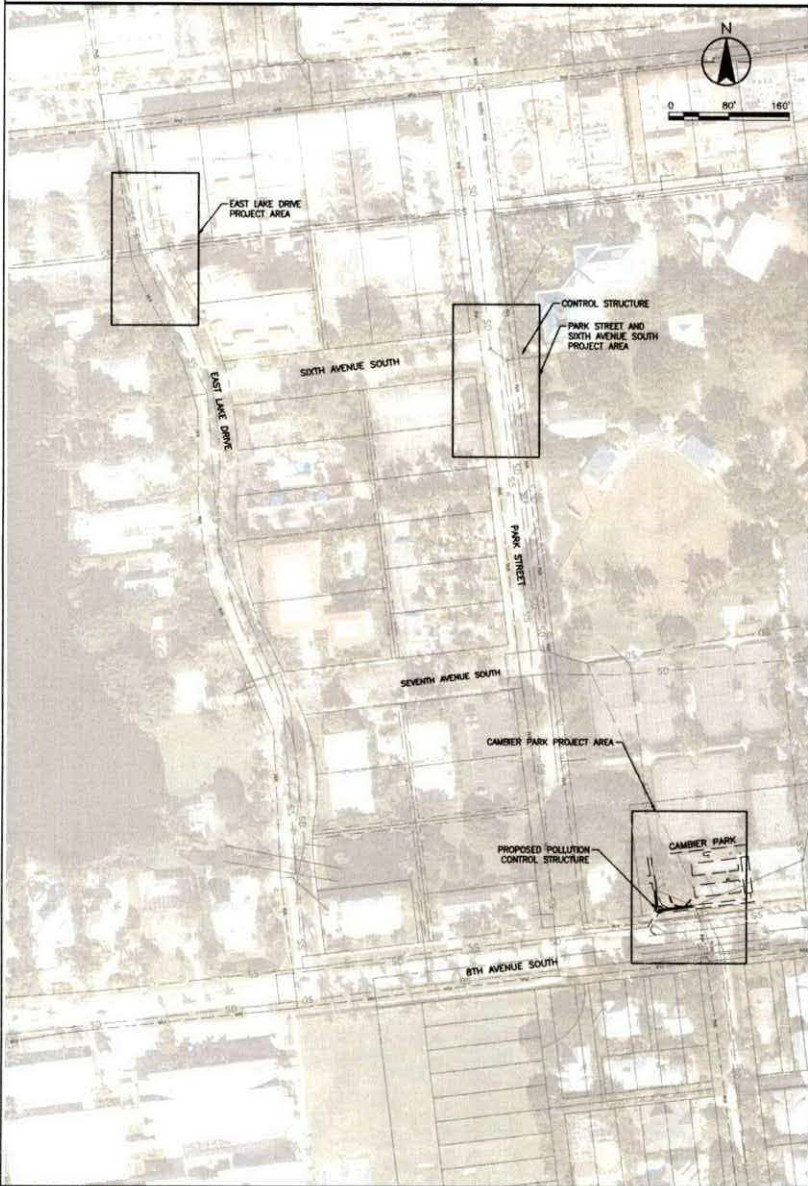
GENERAL NOTES

Project No.	Scale	
177310582		
Project Phase	Sheet	Drawing No.
BID SET	2 of 8	G-002

DATE PLOTTED: 11/15/2016 10:58:02 AM
PLOTTER: HP DesignJet T1100ps
PLOT DEVICE: HP DesignJet T1100ps

CIVIL CONSTRUCTION

LOCATION MAP



EXISTING

CENTERLINE	---	WM	
WATER MAIN	---	SS	
SANITARY SEWER	---	SD	
STORM SEWER	---	FM	
FORCE MAIN	---	BE	
BURIED ELECTRIC	---	BT	
BURIED TELEPHONE	---	CATV	
CATV	---		
EDGE OF PAVEMENT	---		
PROPERTY LINE	---		
RIGHT-OF-WAY	---		
EASEMENT	---		
SIDEWALK	---		
OVERHEAD WIRES	---		
UTILITY POLES			
GUY WIRE and ANCHOR			
SURVEY REFERENCE			
VALVES			
WATER METER			
FIRE HYDRANT			
SWALE INVERT/DIRECTION OF FLOW			
PIPE CULVERT			
P.I. STATION			
ASPHALT PAVEMENT			
CONCRETE PAVEMENT, DRIVEWAY			
FENCE			
TREES			

NEW

TEE		AxByC TEE A TEE (A=B=C)
CROSS		AxByCxD CROSS A CROSS (A=B=C=D)
BEND		AxB (WHEN NOTED) BEND C A BEND C (A=B)
WYE		AxBxC WYE A WYE (A=B=C)
PLUG		
WATER MAIN	SIZE	WM
SANITARY SEWER	SIZE	SS
FORCE MAIN	SIZE	FM
STORM SEWER	SIZE	SD
UNDERDRAIN	SIZE	DR
IRRIGATION MAIN	SIZE	IR
MISC. UTILITY	TYPE	UTC
FIRE HYDRANT	LOCATION	STA 11+80.117'
EASEMENT		
VALVE	SIZE, TYPE	6 GV
ASPHALT PAVEMENT		
SPOT ELEVATION		
SWALE INVERT		
FENCE (NEW)		

ABBREVIATIONS

BOC	BACK OF CURB
EOP	EDGE OF PAVEMENT
FIR	FOUND IRON ROD
FPW	WOOD POWER POLE
UTB	UTILITY BOX
(M)	MEASURED
(P)	PLAT
O.R.	OFFICIAL RECORDS
PG.	PAGE
MHS	MANHOLE-SEWER
CMP	CORRUGATED METAL PIPE
RJ	RESTRAINED JOINT
SIR	SET IRON ROD, WITH CAP, LB 1772
GV	GATE VALVE
OMP	OVERHEAD POWER LINE
MES	METERED END SECTION
WM	WATER METER COVER
ELEC.	ELECTRIC UTILITY
RCP	REINFORCED CONCRETE PIPE
VCS	VALVE COVER-SEWER
(D)	DEED
(SP)	STATE PLANE
TOB	TOP OF BANK
TOS	TOE OF SLOPE
ELEV.	ELEVATION
P.C.P.	PERMANENT CONTROL POINT
P.R.M.	PERMANENT REFERENCE MONUMENT
R.O.W.	RIGHT-OF-WAY
A.E.	ACCESS EASEMENT
I.E.	IRRIGATION EASEMENT
D.E.	DRAINAGE EASEMENT
P.U.E.	PUBLIC UTILITY EASEMENT
C.U.E.	COLLIER COUNTY UTILITY EASEMENT
EL & ELEV.	ELEVATION
C/L	CENTERLINE
CONC.	CONCRETE
A/C	AIR CONDITIONER
TELE.	TELEPHONE SERVICE
S.I.P.	SET 5/8" IRON PIN WITH CAP STAMPED LB-7866 24" LONG
F.I.P.	FOUND IRON PIN WITH CAP
F.C.M.	FOUND CONCRETE MONUMENT
D.H.	DRILL HOLES
P.K. NAIL	PARKER KYLON NAIL
P.V.C.	POLY VINYL CHLORIDE

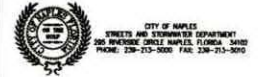
DRAFTING LEGEND

	SECTION LETTER		DRAWING NUMBER ON WHICH SECTION IS SHOWN
	DETAIL NUMBER		DRAWING NUMBER ON WHICH DETAIL IS SHOWN
	WATER SURFACE ELEVATION		
	EQUIPMENT TAG		



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Notes

Revision	By	Appr.	YR/AR/DO
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File Name	177310582.dwg	Job	177310582	Scale	AS SHOWN
Drawn	KBS	Check	DOJ	Design	DAJ

Permit Seal

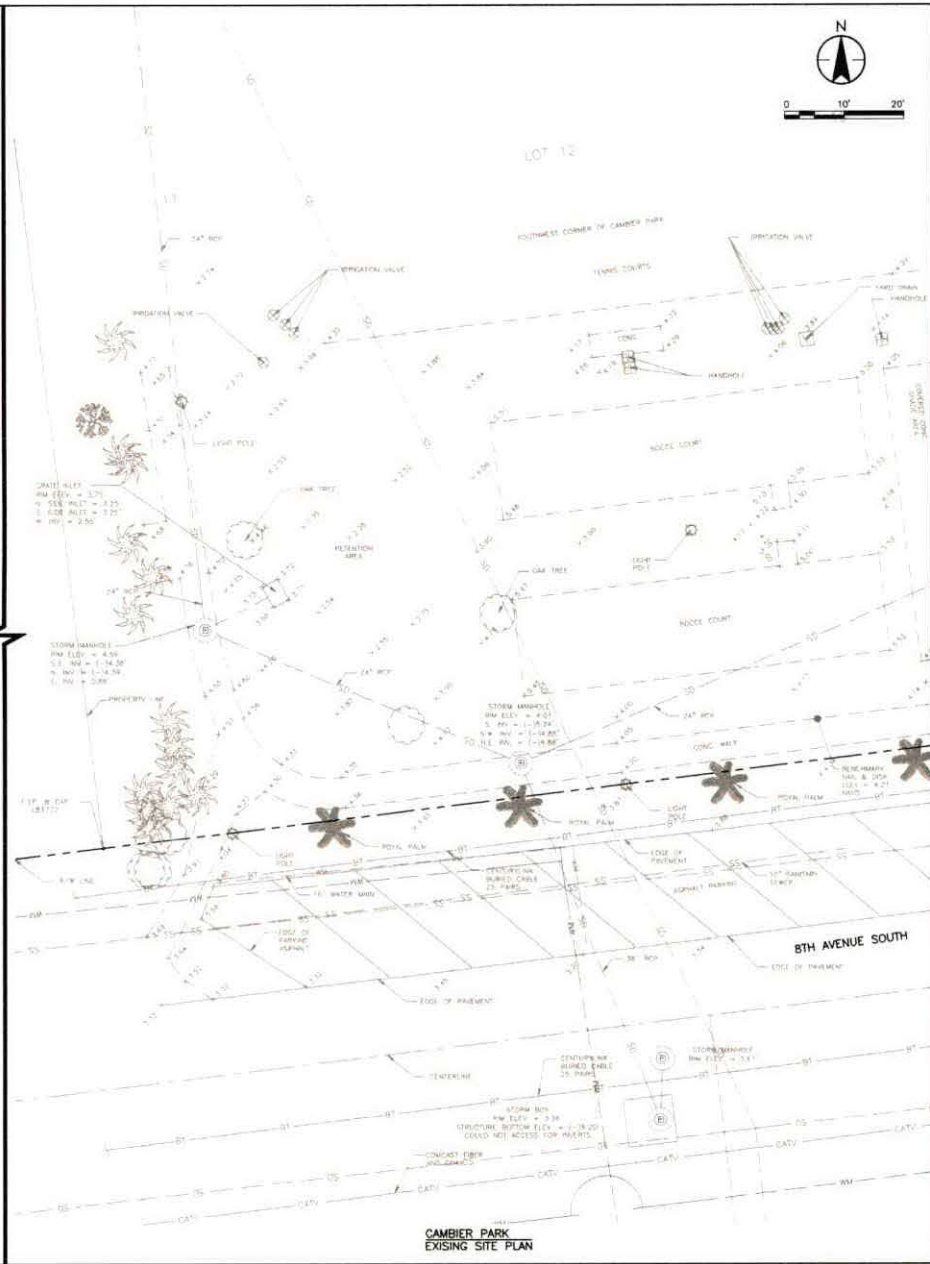
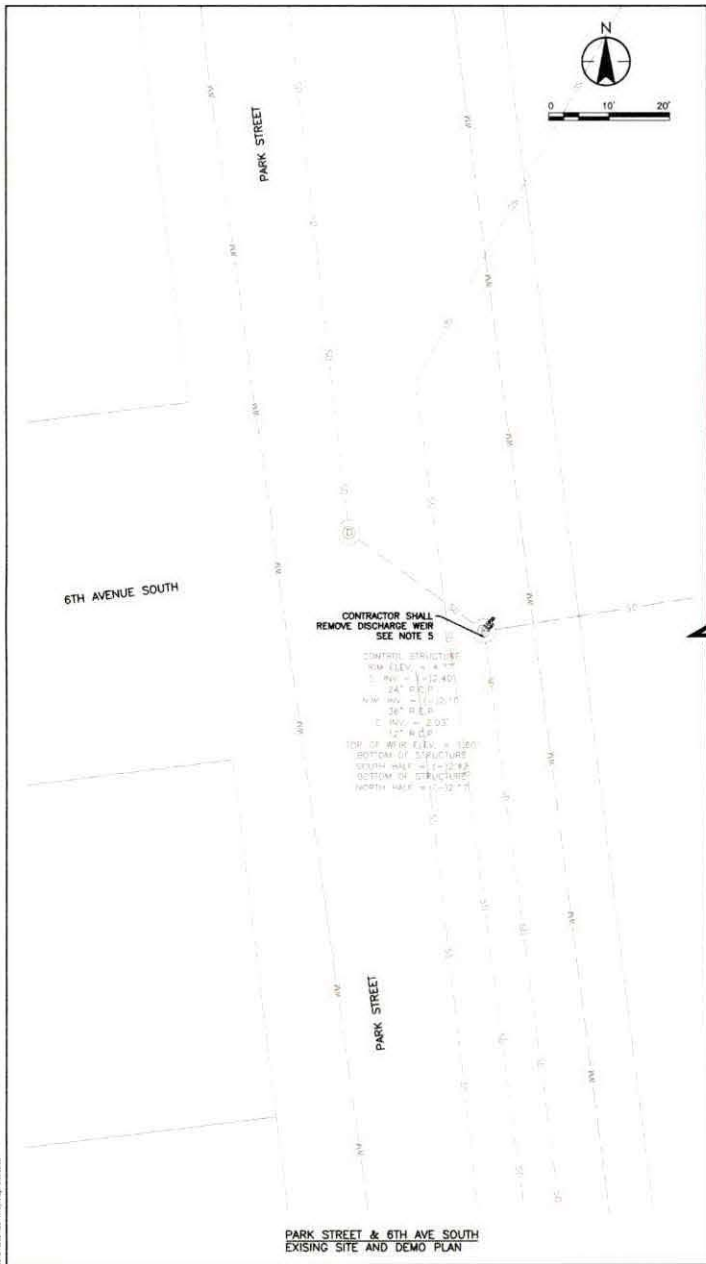
KELLY BLAKE SMITH, PE 69876
Engineer Reg. No.

Client/Project
CITY OF NAPLES

POLLUTION CONTROL STRUCTURE
AT CAMBER PARK

Title
LOCATION MAP & LEGEND

Project No. 177310582
Project Phase Sheet Drawing No.



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- Notes
- CONTRACTOR SHALL PROVIDE NOT FOR SIDEWALK CLOSURES IN ACCORDANCE WITH FOOT INDEX 800.
 - CONTRACTOR SHALL UTILIZE SOUND ATTENUATED Dewatering PUMPS FOR Dewatering SYSTEMS THAT WILL OPERATE OUTSIDE OF PERMITTED WORK HOURS.
 - CONTRACTOR SHALL PROVIDE PRE AND POST CONSTRUCTION VIDEO OF ALL DOWNSTREAM STORM SEWER PIPES AND STRUCTURES FOR AT LEAST 500 LF FROM GRATE INLET. STORM SEWER PIPES SHALL BE CLEANED TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE CITY OF NAPLES.
 - CONTRACTOR SHALL COORDINATE WITH FPL TO RELOCATED ELECTRIC SERVICE THAT MAY BE IN CONFLICT WITH PROPOSED STORM SEWER.
 - CONTRACTOR SHALL MAINTAIN SPRING LAKE ELEVATION UNTIL INSTALLATION OF PROPOSED WEIR IS COMPLETE.

Revision	By	App'd	TR. DATE

Permit-Seal

KELLY BLAKE SMITH, PE 69876
 Engineer Reg. No.

Client/Project
 CITY OF NAPLES

POLLUTION CONTROL STRUCTURE
 AT CAMBER PARK

Title
 EXISTING SITE PLAN

Project No. 177310582 Scale

Project Phase Sheet Drawing No.

BID SET 4 of 8 C-101

- Notes
- CONTRACTOR SHALL COORDINATE WITH FPL ON LIGHT POLE PROTECTION.
 - ALL SHEETING AND BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND WORKING DRAWINGS OF PROPOSED SHORING, SHEETING AND BRACING WHICH HAS BEEN PREPARED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER.
 - CONTRACTOR SHALL AVOID DAMAGE TO THE ROOT STRUCTURE OF THE CANOPY TREES.
 - CONTRACTOR SHALL HIRE AN ARBORIST AND INSTALL ROOT BARRIER IN ACCORDANCE WITH DIRECTION FROM ARBORIST AS NECESSARY TO PROTECT TREE. NOTIFY ENGINEER IMMEDIATELY IF ALIGNMENT OF PROPOSED 24-INCH STORM IN CONFLICT WITH ROOT BARRIER.
 - LOCATION OF STORM SEWER AND MANHOLE ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS.

Revision	By	ADD	PK W/REV

PK Name	DATE	APP	CHK	DATE	PK Name	DATE	APP	CHK	DATE
177310582 (Orig)									

Permit-Seal

KELLY BLAKE SMITH, PE 69876
Engineer Reg No.

Client/Project
CITY OF NAPLES

POLLUTION CONTROL STRUCTURE
AT CAMBIER PARK

Title
PROPOSED IMPROVEMENT PLAN

Project No. 177310582 Scale

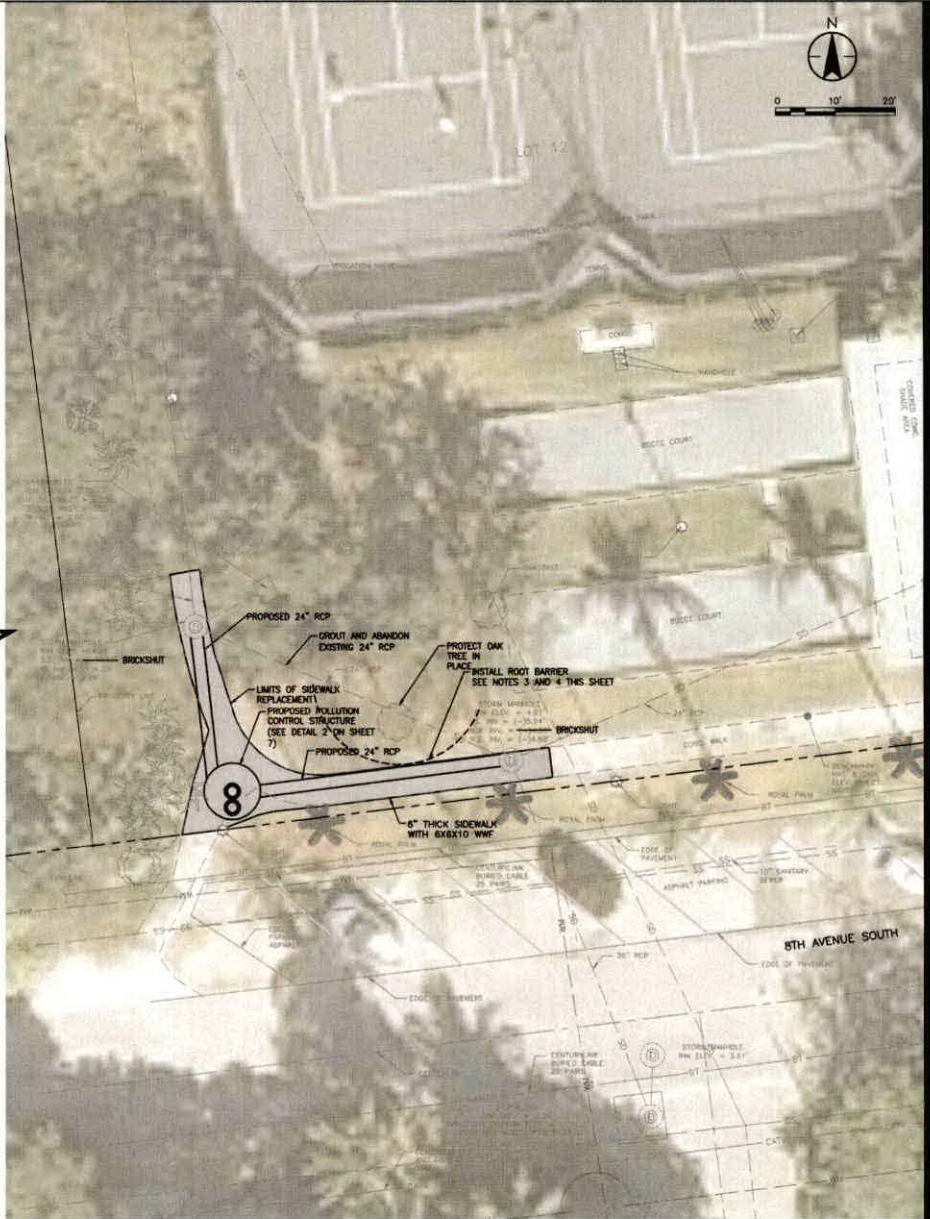
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BID SET 5 of 8 C-102

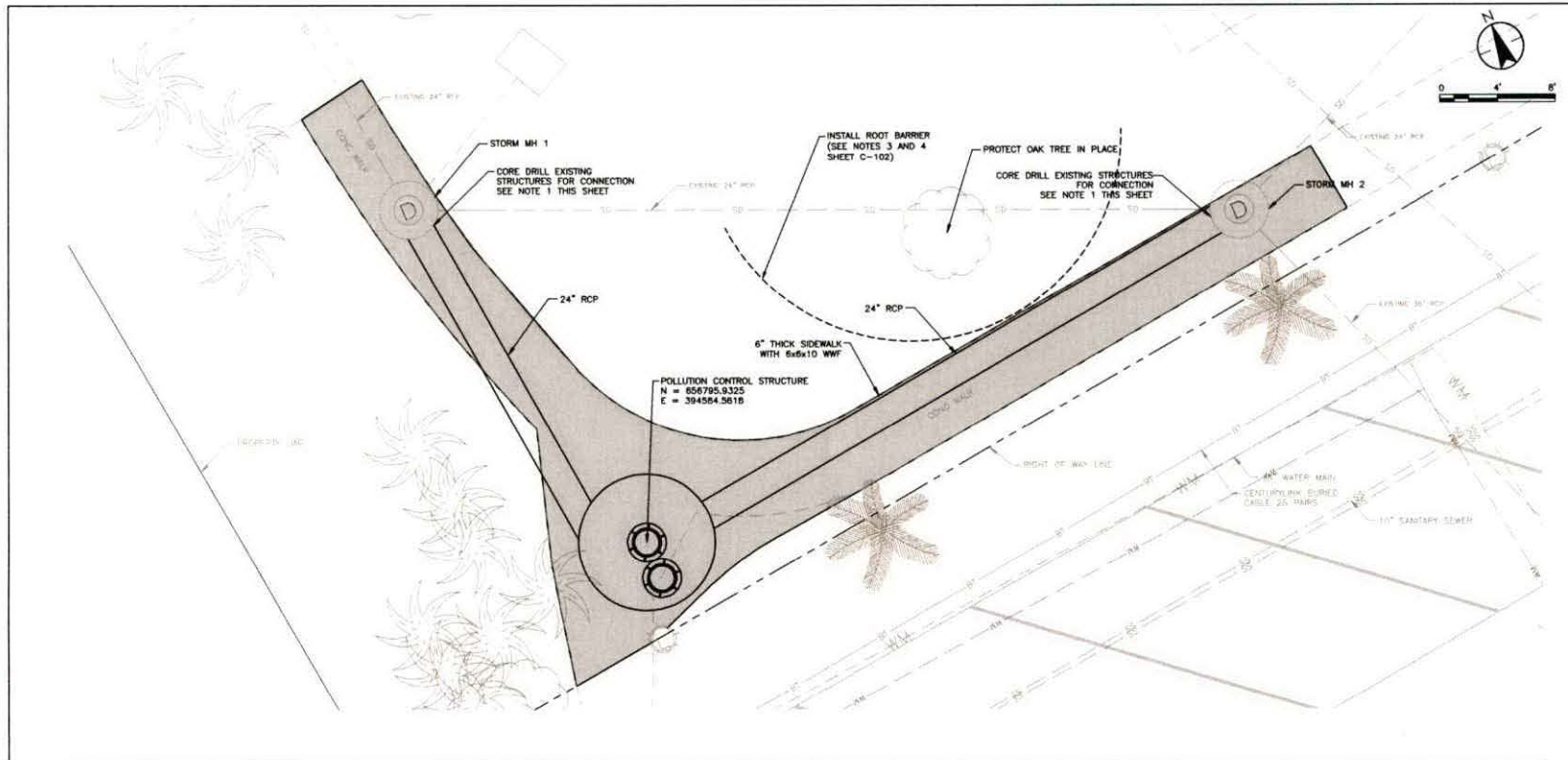


- CONTRACTOR SHALL SURVEY EXISTING MANHOLE FOR PROPOSED WEIR TO BE INSTALLED IN EXISTING MANHOLE.
- CONTRACTOR SHALL PROVIDE A WEIR SUBMITTAL INCLUDING SURVEY INFORMATION.
- WEIR ELEVATION SHALL BE PROVIDED BY ENGINEER DURING SUBMITTAL REVIEW.

EAST LAKE DRIVE
PROPOSED IMPROVEMENT PLAN



CAMBIER PARK
PROPOSED IMPROVEMENT PLAN



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CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 830 PARKWAY DRIVE NAPLES, FLORIDA 34102
 PHONE: 239-263-5000 FAX: 239-273-3000

- Notes
1. CONSTRUCT COLLAR FOR NEW PENETRATION IN ACCORDANCE WITH FOOT INDEX 435.001. CONCRETE COLLAR FOR EXTENSION OF EXISTING PIPE COLLAR/VERTS FOR RECTANGULAR STRUCTURES) OR CONCRETE COLLAR FOR JOINING MAINLINE PIPE AND STUB PIPE (FOR ROUND STRUCTURES).

Revision	By	App'd	YY-MM-DD

File Name	DATE	APP	CHK	DES	DATE
177310582-03.dwg					

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 Engineer Reg No.

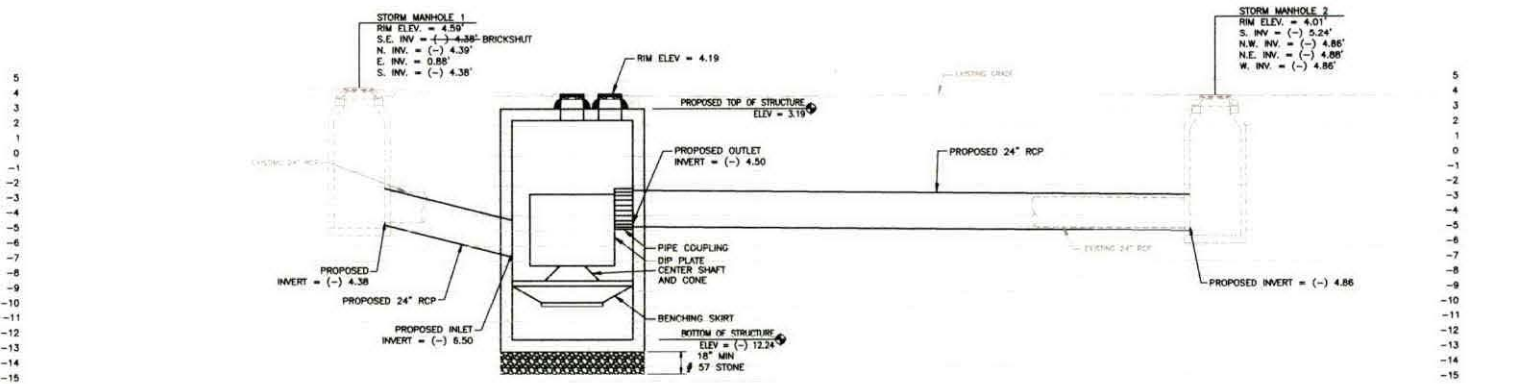
Client/Project
 CITY OF NAPLES

POLLUTION CONTROL STRUCTURE
 AT CAMBIER PARK

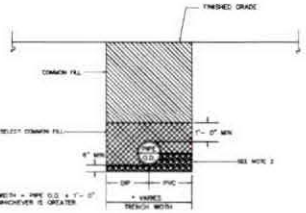
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Project No.	Scale
177310582	
Project Phase	Sheet
BID SET	6 of 8

Drawing No.
 C-103



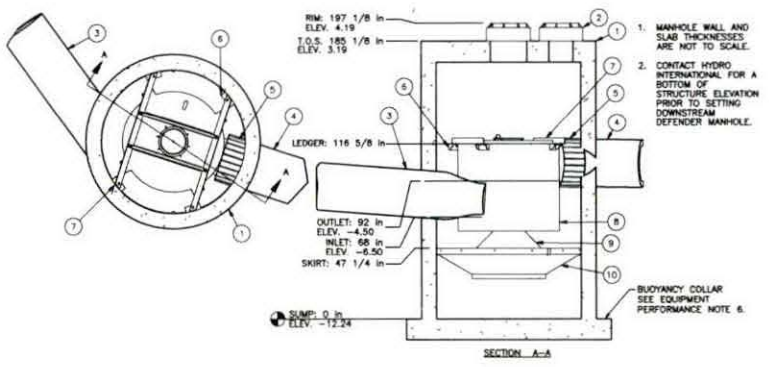
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 177310582-03.dwg



- NOTES: 1) COMPACT FILL SHALL BE COMPACTED TO MATCH CRITERIA PROVIDED IN BACKFILL DETAILS FOR PAVED AND UNPAVED LOCATIONS RESPECTIVELY. 2) BEDDING MATERIAL SHALL BE FOOT #67 STONE. 3) OVERLAP BE-BE IS REQUIRED. A R.O.S. PERMIT FOR ALL WORK WITH PUBLIC ROAD. THE R.O.S. PERMIT REQUIREMENTS SHALL SUPERSEDE THIS DETAIL.

***** CONTRACTOR SHALL UTILIZE BEST METHODS AND PRACTICES TO CONTROL GROUND WATER DURING ENTIRE EXCAVATION, INSTALLATION, BACKFILL AND COMPACTION. INSTALLATION OF PIPES IN WET AND/OR FLOODED FRENCH IS NOT ACCEPTABLE. PRIOR TO BEDDING AND COMPACTION, G.W. MUST BE ACCOMPLISHED IN WET AND/OR FLOODED FRENCH. ***** INSTALLATION OF ANY WATER, WASTEWATER, OR RECLAIM WATER LINE REQUIRES TO PASS UNDER OR BYPASSING CAUTION LIFTING OF ANY EXISTING CONCRETE CURB, GUTTER, OR SIDEWALK. TURNING UNDER IS NOT ALLOWED. ANY AFFECTED CONCRETE CURB, GUTTER, OR SIDEWALK SHALL BE CLEAN, FINISHED (ALL SECTIONS AFFECTED, 5 FT MINIMUM), FULL BACKFILL AND PROPER COMPACTION PERFORMANCE. CONCRETE REPLACEMENT REQUIRING A MINIMUM OF 5 FT BETWEEN EXPANSION JOINTS.

FOR:	UTILITIES DEPARTMENT	CITY OF NAPLES
DATE:	JAN. 2018	SHEET: 11-03
DRAWN:	DAD/AMH	DIR: UTILITIES
SCALE:	N.T.S.	DWG. U-03-18.DWG
PROJECT: P.I.P.E. B.E.D.D.I.N.G. & B.A.C.K.F.I.L.L.		
LOCATION: 500 RIVERSIDE CIRCLE, NAPLES, FL 34102		



NOTES:

EQUIPMENT PERFORMANCE:

THE STORMWATER TREATMENT UNIT SHALL ADHERE TO THE HYDRAULIC PARAMETERS GIVEN IN THE CHART BELOW AND PROVIDE THE REMOVAL EFFICIENCIES AND STORAGE CAPACITIES AS FOLLOWS:

- 1. PERFORMANCE OBJECTIVES: THE UNIT SHALL BE CAPABLE OF TREATING THE PEAK FLOW RATE LISTED BELOW.
- 2. PEAK TREATMENT FLOW: 15.0 CFS
- 3. SEDIMENT STORAGE CAPACITY: 4.85 CU. YD.
- 4. CONTINUOUS OR STORAGE CAPACITY: 520 GAL.
- 5. SEDIMENT SHALL BE STORED IN A ZONE THAT IS ISOLATED FROM THE MAIN FLOW PATH AND PROTECTED FROM RESTRAINTMENT BY A BENCHING SKIRT.
- 6. CONTRACTOR SHALL PROVIDE STRUCTURE WITH MANUFACTURED PRECAST BUOYANCY COLLAR. CONTRACTOR SHALL PROVIDE BUOYANCY CALCULATION. CALCULATIONS SHALL BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

DEFENDER PIPE CONNECTIONS:

- 1. PIPE OPENINGS WILL BE SIZED FOR RCP UNLESS NOTED OTHERWISE ON THE RETURNED SUBMITTAL. LARGE DIAMETER COUPLING REQUIRED TO CONNECT OUTLET PIPE TO OVERFLOW STUB.
- OVERFLOW PIPE STUB DIMENSIONS: O.D. = 24.00 IN, I.D. = 24.00 IN, STUB LENGTH = 6.00 IN
- 2. INLET PIPE ENTERS UNIT TANGENT TO INSIDE OF DEFENDER MANHOLE. CUT PIPE OFF AT 30 DEGREE ANGLE. (SEE INSTALLATION INSTRUCTIONS).
- 3. GROUT INLET AND OUTLET PIPES WITH NON-SHRINK GROUT TO ENSURE A WATERTIGHT CONNECTION.
- 4. BACKFILL STRUCTURES AND PIPES PER PROJECT SPECIFICATIONS.



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CITY OF NAPLES
STREETS AND STORMWATER DEPARTMENT
800 RIVERSIDE CIRCLE, NAPLES, FLORIDA 34102
PHONE: 239-253-5000 FAX: 239-253-5000

Notes:

Revision	By	App'd	TT Date

File Name: U-03-18.DWG	APP	ISS	LA	12/24/2018 11:49
	Dwn	Chk'd	Sign	

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KELLY BLAKE SMITH, PE 69876
Engineer Reg. No.

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CITY OF NAPLES

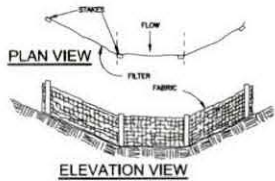
POLLUTION CONTROL STRUCTURE
AT CAMBER PARK

Title
DETAILS

Project No. 177310582 Scale
Project Phase Sheet 1 of 8 Drawing No.

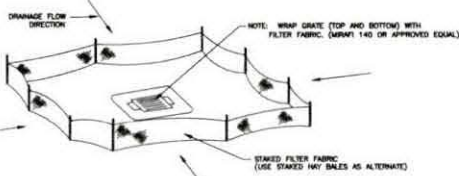
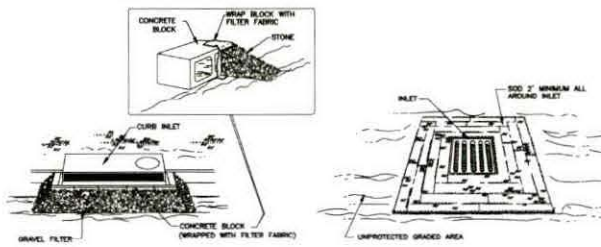
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7. MAINTENANCE
- REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORK DAY.
 - SEDIMENT SHALL BE REMOVED FROM SWAMP AREAS. THE SEDIMENT SHALL BE PLACED IN SUCH A MANNER THAT IT WILL NOT BROKE FROM THE SITE. THE SEDIMENT SHALL NOT BE DEPOSITED DOWNSTREAM FROM THE EMBANKMENT OR IN OR ADJACENT TO A STREAM OR FLOOD PLAIN.
 - AFTER CONSTRUCTION IS COMPLETED AND AREAS ARE SEEDED AND/OR SOOKED, MAINTENANCE IS LIMITED TO VISUAL INSPECTIONS ON A ROUTINE BASIS. ANY DAMAGE TO THE BERM SHALL BE REPAIRED AT ONCE AND RE-SOOKED AND/OR RE-SEEDING IF THE LEVEL OF WATER IS BEING MAINTAINED OVER THE EXPECTED DRAW DOWN TIME. THE OUTFALL SYSTEM SHALL BE CLEANED AND REPAIRED.

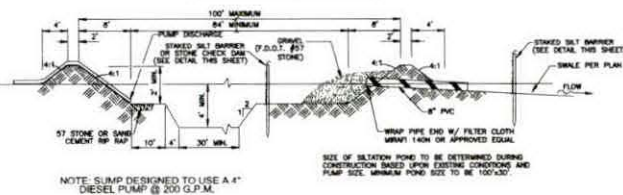


- FILTER BARRIERS MUST BE INSTALLED, AS INDICATED HEREIN, PRIOR TO CONSTRUCTION.
- FILTER BARRIERS SHALL NOT BE INSTALLED IN ANY CONFIGURATION THAT BLOCKS THE THROUGH OF ANY STORMWATER INLET.
- INSPECTIONS AND REPAIRS TO BARRIERS SHALL BE MADE DAILY.
- FILTER BARRIERS SHALL BE REMOVED UNTIL APPROVED BY ENGINEER.

STAKED SILT BARRIER
(DURING CONSTRUCTION ONLY)

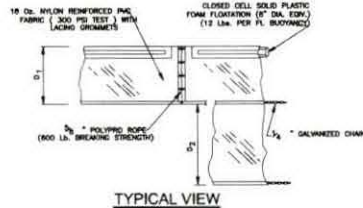
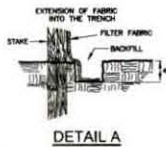
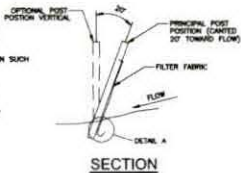


PROTECTION OF INLETS



SILTATION POND DETAILS

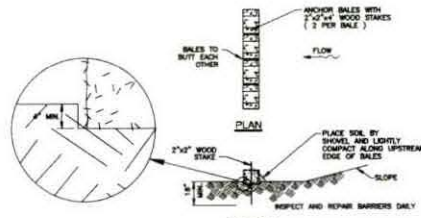
(REQUIRED DURING DEWATERING FOR SUMP EXCAVATION ONLY)



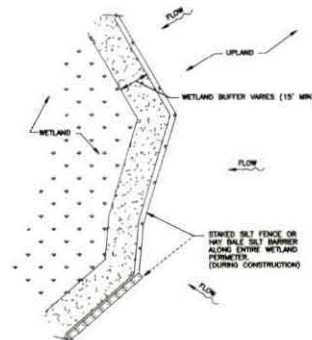
NOTES

- $D = 6'$ STANDARD (SINGLE PANEL FOR DEPTH 3' OR LESS), $D = 5'$ STANDARD (ADDITIONAL PANEL FOR DEPTH 3-5') CAPABLE TO REACH BOTTOM UP TO DEPTH OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.
- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH WHEN ADJACENT TO CONSTRUCTION ACTIVITIES.
- NUMBER AND SPACING OF ANCHORS DEPENDENT ON WATER VELOCITIES.
- BARRIERS TO REMAIN IN PLACE UNTIL APPROVED FOR REMOVAL BY ENGINEER.

FLOATING TURBIDITY BARRIER



HAY BALE SILT BARRIER



EROSION CONTROL NOTES

- GENERAL
 - THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES NEEDED TO INSTALL AND MAINTAIN EROSION CONTROL MEASURES FOR THE ENTIRE PROJECT PERIOD TO THE PLANS AND SPECIFICATIONS AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS.
- WETLAND PROTECTION
 - IN AREAS OF CONSTRUCTION ADJACENT TO WETLANDS, THE FOLLOWING SHALL BE PERFORMED:
 - THE ACTUAL WETLAND AND BUFFER ZONE LOCATIONS AS SHOWN ON THE PLANS MUST BE ESTABLISHED AND MAINTAINED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY ADJACENT TO WETLANDS.
 - PRIOR TO THE PLACEMENT OF ANY FILL MATERIAL ADJACENT TO WETLANDS OR BUFFER AREAS, A SILTATION BARRIER SHALL BE CONSTRUCTED.
 - NO FILL PLACING OF THE WETLANDS SHALL BE PERFORMED. WATER LEVELS IN THE WETLANDS SHALL BE MAINTAINED ACCORDING TO LEVELS EXISTING PRIOR TO SITE DISTURBANCE.
 - IN AREAS OF WETLANDS IN WHICH WORK IS TO BE PERFORMED, SUCH AREAS MUST BE CLOUTY STAKED AND ROPED OFF. ALONG SUCH LIMITS, A SILTATION BARRIER MUST BE CONSTRUCTED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF BARRIERS. BARRIERS SHALL REMAIN IN PLACE UNTIL ALL AREAS ARE STABILIZED.
 - THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON RESTORANCE OF WETLAND AREAS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ALL PROTECTED AREAS.
 - AREAS WHERE WORK SHALL BE PERFORMED SHALL BE STIPED OF SIGHTING MARKS AND LOGS AND SHALL BE RE-SEEDING OF SIGHTING AREAS OR IN LITTORAL ZONES.
- EARTH MOVING ACTIVITIES
 - THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE AND VEGETATION OF THE PROJECT SITE. ALL VEGETATION SHALL BE MAINTAINED AND PROTECTED TO REMAIN UNLESS OTHERWISE SPECIFIED. ALL TREES, NATIVE SHRUBS AND PLANTS SHALL BE PROTECTED AND SHALL BE PROTECTED FROM DAMAGE OR REMOVAL. ANY DAMAGE TO VEGETATION SHALL BE REPAIRED IMMEDIATELY. ALL DAMAGE CAUSED BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS AND EQUIPMENT.
 - THE FIRST STAGE OF THE EARTH MOVING ACTIVITY SHALL BE CONFINED TO THE EXCAVATION OF THE STORMWATER FACILITY.
 - EROSION SHOULD BE TAKEN FROM THE CONSTRUCTION AREAS AND SHOULD BE STABILIZED TO THE MAXIMUM EXTENT POSSIBLE. STABILIZATION SHOULD BE COMPLETED SO AS SHOULD BE MULCHED AND/OR SEEDED WHEN EXPOSED BEYOND THIRTY (30) DAYS.
 - GRADED AREAS ARE TO BE SEEDING AND/OR SOOKED WITHIN THIRTY (30) DAYS FOLLOWING EARTH MOVING OPERATIONS. IF THE TIME OF YEAR IS SUCH THAT SEEDING IS NOT FEASIBLE, PERMANENT SEEDING, A TEMPORARY MULCH AND/OR SEEDING SHOULD BE USED.
 - TEMPORARY EROSION BERM AND/OR BARRIERS SHALL BE REMOVED ONLY AFTER THE CONSTRUCTION OF THOSE AREAS DIRECTED TO THE BERM AND/OR BARRIERS HAVE BEEN COMPLETED.
 - THE SILT COLLECTION PONDS SHOULD BE REMOVED AND/OR RESEEDED FOR SAME. RESEEDING SHALL BE COMPLETED AND SEEDING OVERLAP THE AREA USED BY SAME.
- FILLS
 - LAND TO BE CUT OR FILLED SHOULD BE CLEARED OF TREES, STUMPS, ROOTS, BRUSH, ROCKS, LOGS AND DEBRIS.
 - FILL AREAS SHOULD BE SCARIFIED, KEED AND DRAINED.
 - FILL MATERIAL SHOULD BE FREE OF SOO, ROOTS, OR OTHER DECOMPOSABLE MATERIAL.
 - THE PLACING AND SPREADING OF FILL MATERIAL SHOULD BE STARTED AT THE LOWEST POINT.
 - GENERALLY, A 3:1 SLOPE SHOULD BE USED UNLESS SPECIFIC ENGINEERING DATA CALLS FOR STEEPER SLOPES. SLOPES OF 4:1 OR FLATTER ARE DESIRABLE FOR EROSION CONTROL AND MAINTENANCE.
 - FILLS SHOULD BE SEEDED AND/OR MULCHED IMMEDIATELY UPON COMPLETION OF FILL PLACEMENT.
 - WATER MANAGEMENT SYSTEMS SHOULD BE PROVIDED TO PREVENT WATER CONCENTRATION AND ERODING THE FACE OF THE SLOPE. KEEP SURFACE WATER OFF THE FACE OF THE SLOPE.
- CUTS
 - EMERGENS SHOULD BE CONSTRUCTED AT TOP OF THE SLOPES PRIOR TO CUTTING OPERATIONS TO CORRECT WATER FROM FACE OF SLOPE.
 - STEEPNES OF CUTS WILL DEPEND ON SOIL TYPE AND DESIGN. HOWEVER, CUT SLOPES OF 4:1 OR FLATTER ARE DESIRABLE FOR EROSION CONTROL AND STABILITY.
 - CUT SLOPES SHOULD BE SEEDED TO PROVIDE ACCESS FOR SEEDING AND MULCHING EQUIPMENT.
 - CUT SLOPES SHOULD BE SEEDED AND/OR MULCHED IMMEDIATELY AFTER REMOVAL OF EARTH.
- TEMPORARY SEDIMENT BASIN AND PERMANENT STORMWATER BASINS
 - SITE PREPARATION
 - AREAS UNDER THE EMBANKMENT AND IN OTHER AREAS OF THE SITE TO BE USED FOR THE STORAGE OF SEDIMENT SHALL BE CLEARED OF ALL BRUSH AND WEEDS. THE AREA MEASURED IN THE PLANS OF THE SPILLWAY SHALL BE CLEARED OF ALL BRUSH AND WEEDS.
 - CUT-OFF TRENCH
 - A CUT-OFF TRENCH WHICH POND DEPTHS ARE IN EXCESS OF THREE FEET SHALL BE EXCAVATED A MIN. 10' DEPTH FROM THE FACE OF THE SLOPE. THE TRENCH SHALL BE 12" WIDE AT THE TOP AND SHALL BE 12" WIDE AT THE BOTTOM. THE TRENCH SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE. THE TRENCH SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE. THE TRENCH SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE.
 - EMBANKMENT
 - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED SOURCE AREAS. IT SHALL BE CLEAN AND FREE OF DEBRIS. THE FILL SHALL BE PLACED IN LAYERS NOT EXCEEDING 12" PER LAYER. THE FILL SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. THE TRENCH SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE. THE TRENCH SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE.
 - PIPE SPILLWAYS
 - THE SPIES SHALL BE SECURELY ATTACHED TO THE BARREL OF THE OUTFALL PIPE. THE BARRIERS SHALL BE 12" HIGH AND 12" WIDE. THE BARRIERS SHALL BE 12" WIDE AT THE TOP AND 12" WIDE AT THE BOTTOM. THE BARRIERS SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE. THE BARRIERS SHALL BE 1:1 SLOPE TO THE FACE OF THE SLOPE.
 - EROSION POLLUTION CONTROL
 - EROSION POLLUTION CONTROL SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT SHALL BE COMPLIED WITH.



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CITY OF NAPLES
STREETS AND STORMWATER DEPARTMENT
200 WINDSOR DRIVE NAPLES, FLORIDA 34102
PHONE: 239-253-5000 FAX: 239-253-5005

Notes

Revision: _____ by: _____ date: _____

Date Issued	10/25/2023	APP	10/25/2023
Drawn		CHK	
Checked		APP	
Scale		DATE	

Permit-Seal

KELLY BLAKE SMITH PE 67876
Engineer Reg No.

Client/Project
CITY OF NAPLES

POLLUTION CONTROL STRUCTURE
AT CAMBER PARK

Best Management Practices

Project No. 177310582 Scale

Project Phase Sheet Drawing No.

BID SET 8 of 8 C-502

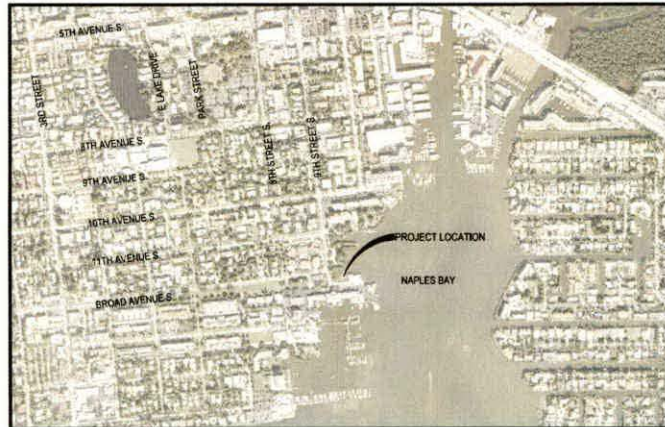
CITY OF NAPLES, FLORIDA

NAPLES BAY RESTORATION & WATER QUALITY IMPROVEMENTS AT THE COVE

CONSTRUCTION PLANS FOR

WATER QUALITY IMPROVEMENTS AT THE COVE OUTFALL

INDEX OF SHEETS		
DRAWING NUMBER	SHEET TITLE	SHEET DESCRIPTION
General		
1	C-001	COVER SHEET AND INDEX OF SHEETS
2	C-002	GENERAL NOTES / SEE PLAN
Improvements		
3	ER-101	DESIGNING CONCRETE SEE PLAN WATERL
4	ER-102	CHANNEL & LIVING SHORELINE SEE PLAN
5	ER-103	DREDGING & STAGING SEE PLAN AND MANGROVE MITIGATION PLAN
6	ER-201	CHANNEL SECTIONS
7	ER-301	TYPICAL SECTIONS AND DETAILS
8	ER-401	BEST MANAGEMENT PRACTICE PLAN AND DETAILS
Civil		
9	C-100	DEMOLITION PLAN
10	C-101	SEWERAGE PLAN
11	C-201	GUARDRAIL DETAILS
12	C-302	CONCRETE BARRIER WALL TRANSITION DETAILS
Landscape		
13	LS-000	LANDSCAPE GENERAL NOTES AND SITE DETAILS
14	LS-101	SEE PLAN
15	LS-201	SEE DETAILS
16	LS-300	SEE DETAILS
17	LS-302	SEE DETAILS
18	LP-000	LANDSCAPE GENERAL NOTES
19	LP-101	LANDSCAPE PLAN
20	LP-201	LANDSCAPE DETAILS
Irrigation		
21	IR-101	IRRIGATION PLAN
22	IR-201	IRRIGATION NOTES AND DETAILS
23	IR-302	IRRIGATION DETAILS
24	IR-303	IRRIGATION DETAILS
25	IR-304	IRRIGATION DETAILS
Structural		
26	S-001	STRUCTURAL NOTES AND DETAILS



LOCATION MAP



GOVERNING REGULATIONS & SPECIFICATIONS:

THE PROJECT DEVELOPMENT CODE;
CITY OF NAPLES;
COLLIER COUNTY;
FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT);
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP);
SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD);
UNITED STATES ARMY CORPS OF ENGINEERS (USACE);
IN THE EVENT OF A CONFLICT, THE MOST RESTRICTIVE APPLIES.

MAYOR
BILL BARNETT

VICE MAYOR
GARY PRICE

CITY COUNCIL
REG BUXTON
LINDA PENNIMAN
MICHELLE MCLEOD
TERRY HUTCHINSON
ELLEN SEIGEL

STREETS AND STORMWATER DIRECTOR
GREGG STRAKAULUSE, P. E.

PLANS PREPARED FOR



City of Naples Streets and Stormwater Department
295 Riverside Circle, Naples, FL 34102
Tel. (239) 213-5016 Fax. (239) 213-5010 www.naplesgov.com

PLANS PREPARED BY



Stantec Consulting Services Inc.
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34108
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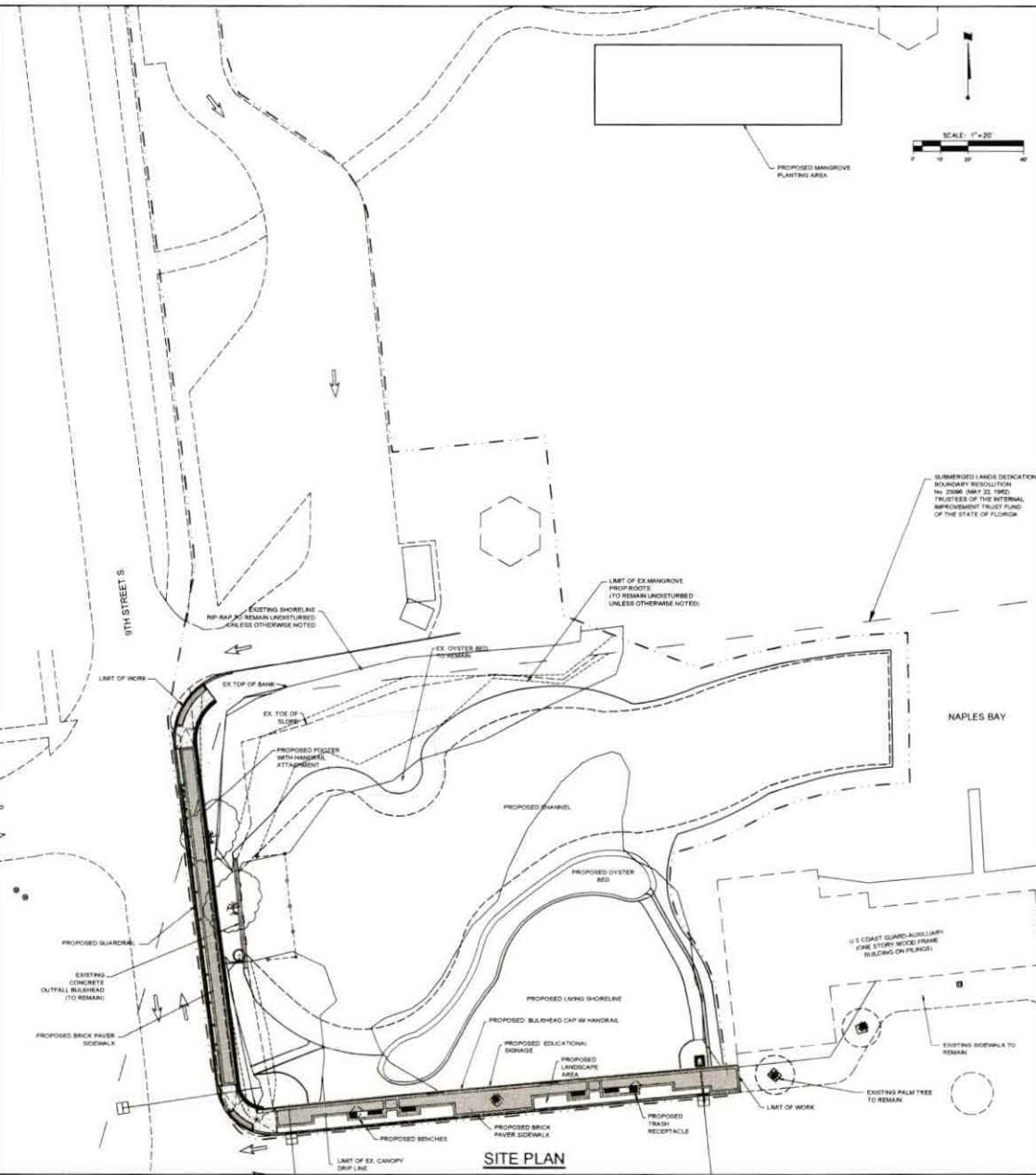
ATTENTION IS DIRECTED TO THE FACT THAT
THESE PLANS MAY HAVE BEEN REDUCED IN
SIZE BY REPRODUCTION. THIS MUST BE
CONSIDERED WHEN OBTAINING SCALED DATA.

STANTEC PROJECT NO. 177310582
OCTOBER 2018

R. QUINCE SELLERS, P.E. P.E. NO. 40974
DATE _____

GENERAL NOTES:

1. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE CITY/COUNTY. WHERE CONFLICTS OR OMISSIONS EXIST, THE CITY OF NAPLES STANDARDS SHALL DICATE. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE CITY OF NAPLES.
2. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING TO BE HELD BETWEEN THE CITY OF NAPLES STREETS AND STORMWATER DEPARTMENT, UTILITIES DEPARTMENT, PARKS DEPARTMENT, ENGINEER OF RECORD, CONTRACTOR, AND OTHER INTERESTED PARTIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS 01300 SUBMITTALS AND 01600 EQUIPMENT AND MATERIAL.
4. ALL MATERIALS SUPPLIED SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. ALL REQUESTS FOR MATERIAL SUBSTITUTION SHALL BE IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS 01600 EQUIPMENT AND MATERIAL.
5. CONTRACTOR SHALL CONTACT ALL CONCERNED UTILITIES (SUNSHINE STATE ONE CALL, 1-800-432-4770) FOR UTILITY LOCATES AT LEAST 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGH THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
7. ALL ELEVATIONS ARE DECIMAL FEET, BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD83).
8. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND BEFORE BEGINNING ANY CONSTRUCTION. NO CONSTRUCTION OR FABRICATION OF ANY ITEM SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED ALL PLANS AND ANY OTHER DOCUMENTATION FROM ALL OF THE PERMITTING AND ANY OTHER REGULATORY AUTHORITIES. ANY PENALTIES, STOP WORK ORDERS OR ADDITIONAL WORK RESULTING FROM THE CONTRACTOR BEING IN VIOLATION OF THE REQUIREMENTS ABOVE SHALL BE FULLY BORNE BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL SUBMIT ROW PERMIT APPLICATION THROUGH CITY OF NAPLES STREETS AND STORMWATER DIVISION SHOWING MAINTENANCE OF TRAFFIC AND ANY ROAD OR LANE CLOSURES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED ITEMS INCLUDING, BUT NOT LIMITED TO, DRIVEWAYS, SIDEWALKS, SIGNS, STORM CULVERTS, FENCES AND LANDSCAPING AS REQUIRED BY THE CITY, ENGINEER OF RECORD AND/OR GOVERNING ENTITIES.
11. ALL DISTURBED AREAS SHALL BE RESTORED, INCLUDING REGRADING, TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR REGRADING AND REPLANTING VEGETATION IN ALL AREAS DISTURBED BY THE CONSTRUCTION.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL CLEARED VEGETATION WITHIN FIVE (5) DAYS OF CLEARING AND GRUBBING WORK. SITE SHALL BE CLEANED PRIOR TO WEEKENDS.
14. CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES NEEDED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES. THESE MEASURES SHALL CONFORM TO THE PLANS AND SPECIFICATIONS AND ALL STATE AND LOCAL REQUIREMENTS.
15. ANY DISCREPANCIES IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE BIDDING OR COMMENCING WORK.
16. NO FIELD CHANGES OR DEVIATION FROM DESIGN SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE CITY OF NAPLES.
17. THE CONTRACTOR SHALL SCHEDULE INSPECTIONS AND TESTS WITH THE CITY OF NAPLES, AS REQUIRED, A MINIMUM OF 48 HOURS IN ADVANCE AND NOTIFY ENGINEER 48 HOURS IN ADVANCE.
18. NO CONNECTION TO OR ANY OTHER CONSTRUCTION SHALL BE PERFORMED ON AN EXISTING UTILITY MAIN OR STRUCTURE WITHOUT THE PRESENCE OF A CITY OF NAPLES UTILITY INSPECTOR.
19. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION PLANS AND ALL PERMITS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THREE (3) SETS OF RECORD DRAWINGS TO THE ENGINEER OF RECORD WITHIN TWO (2) WEEKS AFTER CONSTRUCTION HAS BEEN COMPLETED ON EACH PHASE.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY TESTING TO ENSURE THAT THE PROPER COMPACTION HAS BEEN ACHIEVED ON THE SUBGRADE, BASE AND ALL OTHER PERTINENT AREAS THAT HAVE BEEN COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH TESTING AND RETESTING OF THE AREAS AND SHALL PROVIDE THE OWNER AND THE ENGINEER WITH COPIES OF CERTIFICATION FROM THE TESTING COMPANY.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXISTING SITE CONDITIONS OF SOIL PRIOR TO N.T.P. CONSTRUCTION TO DETERMINE IF ANY OFF SITE MATERIALS WILL NEED TO BE IMPORTED TO ACHIEVE THE GRADES SPECIFIED ON THE PLANS.
22. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A REGISTERED FLORIDA PROFESSIONAL LAND SURVEYOR FOR LAYOUT OF ALL WORK AND RESTORING THE MONUMENTS AND PROPERTY CORNERS DISTURBED DURING CONSTRUCTION. PROOF OF REGISTRATION SHALL BE SUBMITTED TO THE ENGINEER.
23. ALL SHEETING AND BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WHO SHALL SUBMIT COMPLETE DESIGN CALCULATIONS AND WORKING DRAWINGS OF PROPOSED SHORING, SHEETING AND BRACING WHICH HAS BEEN PREPARED, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.



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PHONE: 239-733-5888 FAX: 239-733-5893

Notes

Revision	No.	Date	By	App'd

File Name: I:\PROJECTS\0395\DWG.dwg
 Title: 0395 - WATER QUALITY IMPROVEMENTS AT THE COVE OUTFALL
 Date: 11/14/2012
 User: R. QUINCE
 Plot Date: 11/14/2012

Permit-Set

R. QUINCE SELLERS, P.E. 49374
 Engineer Reg. No.

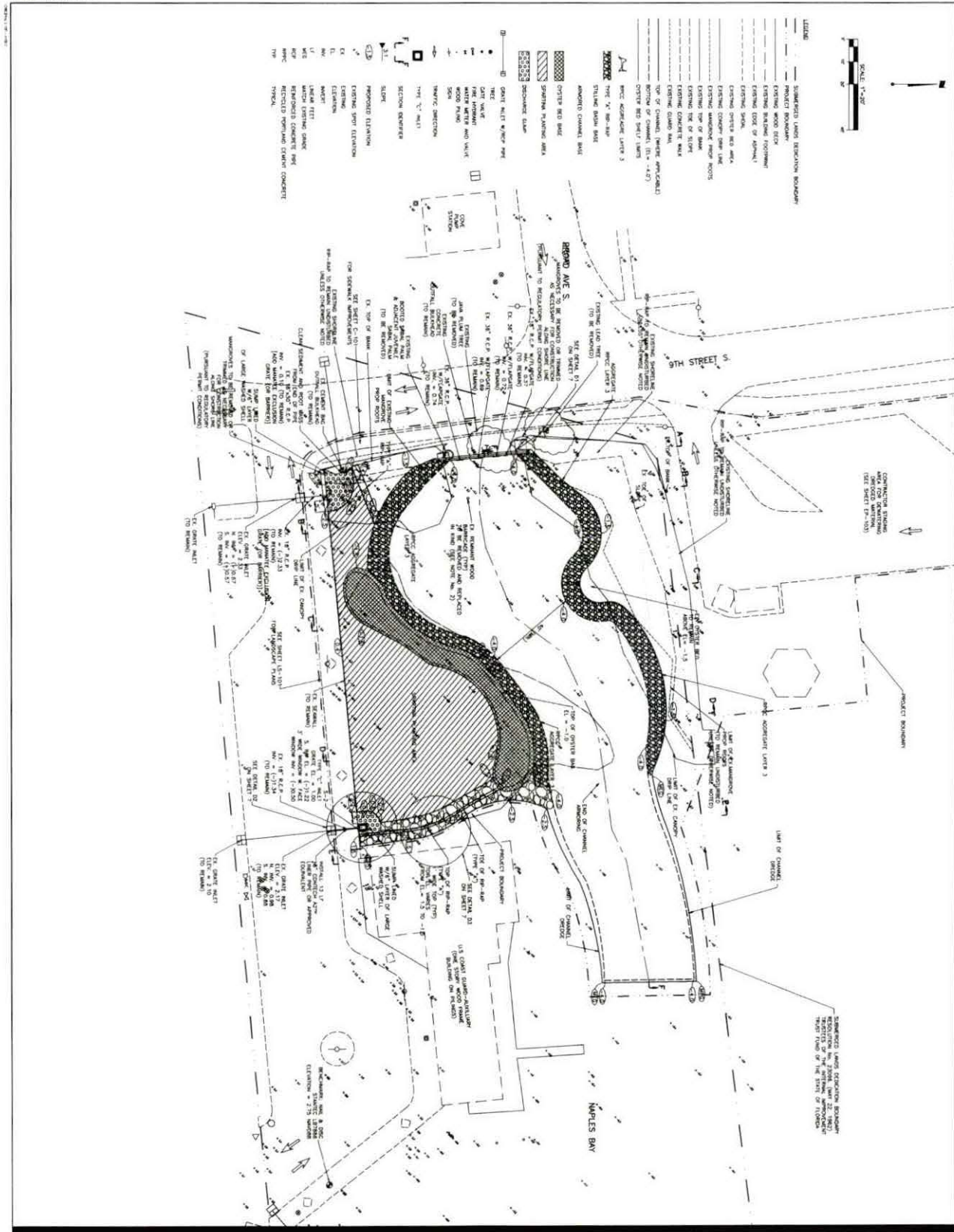
Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 GENERAL NOTES/SITE PLAN

Project No. 177310582 Scale 1" = 20'
 Project Phase Sheet Drawing No.

BID SET 2 of 26 G-002



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R. DANIEL SELLERS, P.E.
 License No. 12474
 State of Florida

NOTES

1. MAINTENANCE ROAD TO BE REMOVED AND NOT LANE OF TRAFFIC.
2. EXISTING MAINTENANCE ROAD TO BE REMOVED AND NOT LANE OF TRAFFIC.
3. EXISTING MAINTENANCE ROAD TO BE REMOVED AND NOT LANE OF TRAFFIC.
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10. EXISTING MAINTENANCE ROAD TO BE REMOVED AND NOT LANE OF TRAFFIC.

NO.	REVISION	DATE	BY	CHKD
1	ISSUED FOR PERMIT	11/17/2016	RDS	MSK
2	REVISED	11/17/2016	RDS	MSK
3	REVISED	11/17/2016	RDS	MSK
4	REVISED	11/17/2016	RDS	MSK
5	REVISED	11/17/2016	RDS	MSK
6	REVISED	11/17/2016	RDS	MSK
7	REVISED	11/17/2016	RDS	MSK
8	REVISED	11/17/2016	RDS	MSK
9	REVISED	11/17/2016	RDS	MSK
10	REVISED	11/17/2016	RDS	MSK

Client/Project: CITY OF NAPLES
 WATER QUALITY IMPROVEMENTS AT THE CANAL OUTFALL
 Channel & Living Shoreline Site Plan
 R. DANIEL SELLERS, P.E. 4/21/16
 Engineer: RDS
 Reg. No. 12474

Title: CHANNEL & LIVING SHORELINE SITE PLAN
 Project No.: 177310362
 Project Phase: Sheet
 Drawing No.: 4 of 26
 BD SET: EP-102



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 NAPLES, FLORIDA 34102
 PHONE: 239.441.1100 FAX: 239.441.1100

NOTES

1. ALL UTILITIES SHOWN ARE BASED ON THE CITY OF NAPLES RECORD DRAWINGS AND FIELD SURVEY DATA. THE CLIENT SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
2. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES ZONING ORDINANCES AND ANY APPLICABLE ORDINANCES.
3. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES DEVELOPMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
4. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES WATER AND SEWERAGE DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
5. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES PUBLIC WORKS DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
6. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES PUBLIC UTILITIES DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
7. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES PUBLIC SAFETY DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
8. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES PUBLIC HEALTH DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
9. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES PUBLIC WELFARE DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.
10. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF NAPLES PUBLIC UTILITIES DEPARTMENT REGULATIONS AND ANY APPLICABLE REGULATIONS.

REVISION

NO.	DATE	BY	REVISION

PERMIT DATA

NO.	DATE	BY	REVISION

ENGINEER

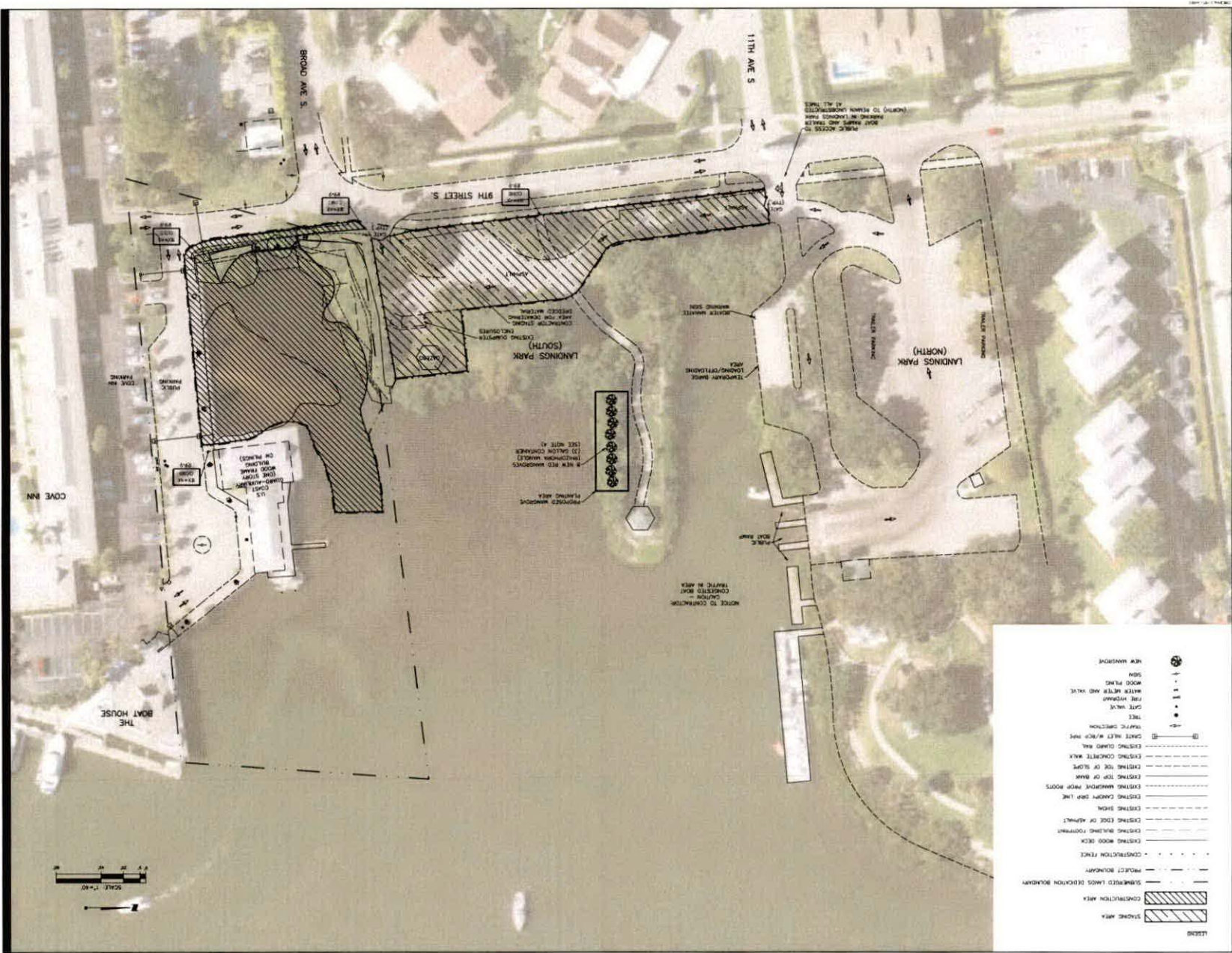
R. QUINCE SELLERS, P.E.
 #974
 Reg. No.

CITY PROJECT

CITY OF NAPLES
 WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

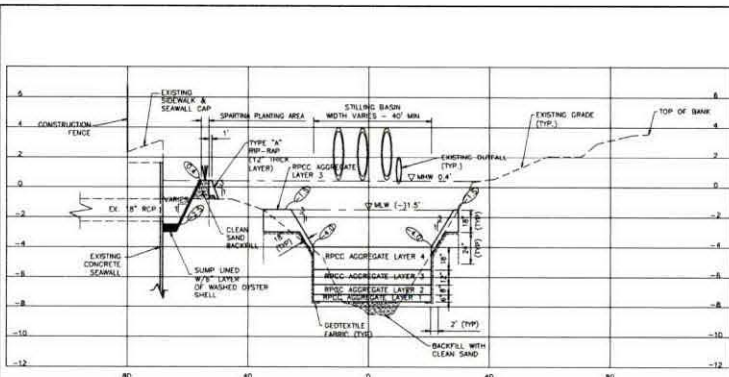
TITLE

DESIGNING A STAGING SITE PLAN
 AND MANHOOLE MITIGATION PLAN
 Project No. 177310582
 Scale: 1" = 40'
 Project Phase: Sheet
 Drawing No. 5 of 26
 BID SET: EP-103

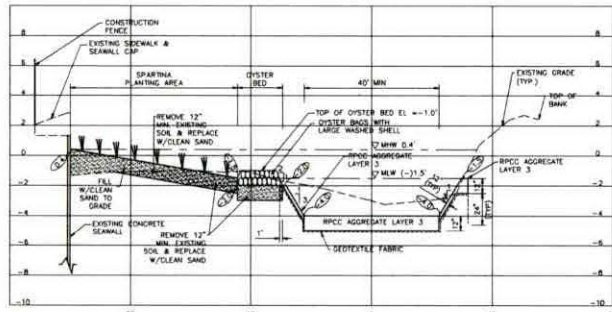


Notes

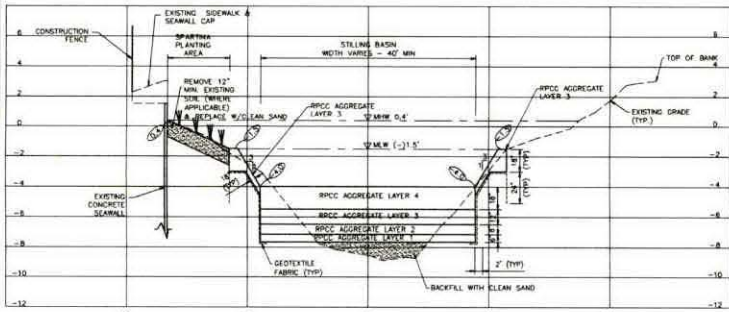
- EXISTING CONCRETE SEAWALL TO REMAIN UNDISTURBED.
- USE CLEAN SAND FOR BACKFILL. DO NOT REUSE DREDGE SPILL.
- DREDGE SPILL TO BE DISPOSED BY AN APPROVED LANDFILL CERTIFIED TO HANDLE CONTAMINATED SOILS.



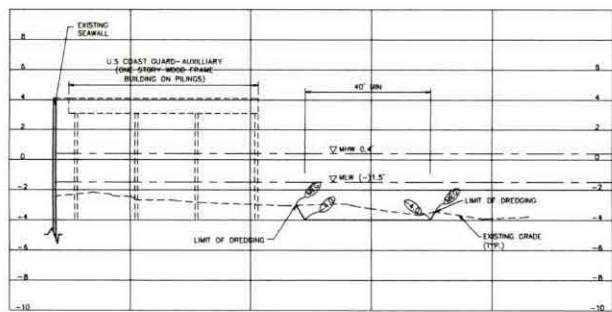
SECTION A-A
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 1"=4' (VERT.)



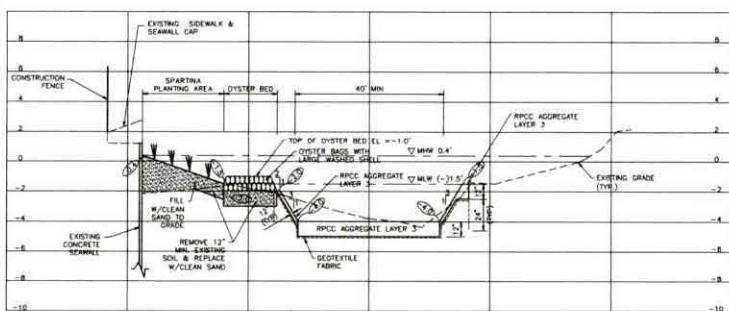
SECTION D-D
 1"=20' (HORZ.)
 1"=4' (VERT.)



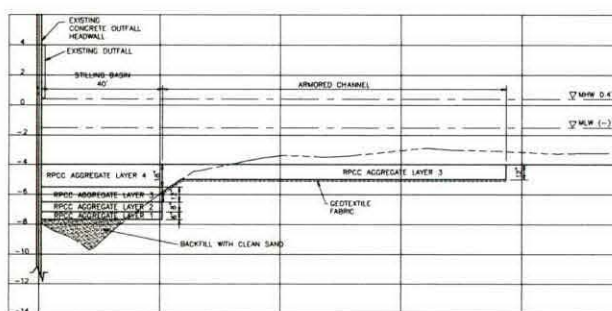
SECTION B-B
 1"=20' (HORZ.)
 1"=4' (VERT.)



SECTION E-E
 1"=20' (HORZ.)
 1"=4' (VERT.)



SECTION C-C
 1"=20' (HORZ.)
 1"=4' (VERT.)



SECTION F-F
 1"=20' (HORZ.)
 1"=4' (VERT.)

Revision	By	App'd	11/29/20

File Name	177310582-02-01.dwg	AL	ECB	11/29/20

Permit-Seal

P. QUINCE SELLERS, P.E. 49374
 Engineer Reg. No.

Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 CHANNEL SECTIONS

Project No.	Scale
177310582	AS NOTED
Project Phase	Sheet

BID SET 6 of 26 EP-201

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NAPLES, FLORIDA 34108 FAX: 231-234-2833

Notes

Revision	By	Appr.	Date

File Name	177310582-C-3010.dwg	NO	KCS	10/19/2016 10:41

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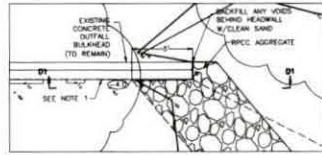
B. QUINCE SELLERS, P.E. 49374
Engineer Reg. No.

Client/Project
CITY OF NAPLES

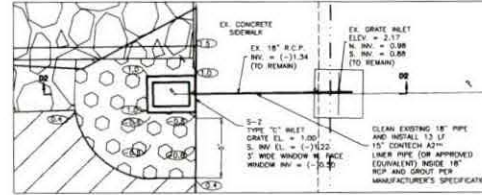
WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

Title
TYPICAL SECTIONS AND DETAILS

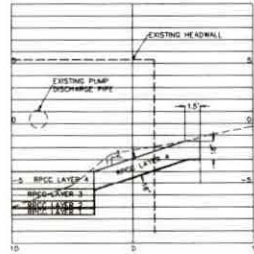
Project No.	Scale	
177310582	AS NOTED	
Project Phase	Sheet	Drawing No.
BID SET	7 of 26	EP-301



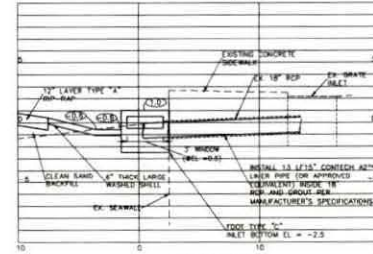
PLAN VIEW
SCALE 1"=1"



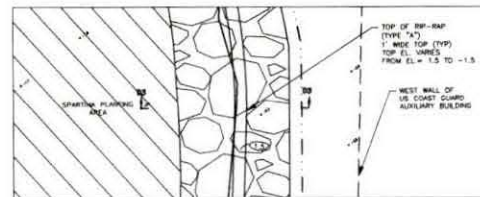
PLAN VIEW
SCALE 1"=1"



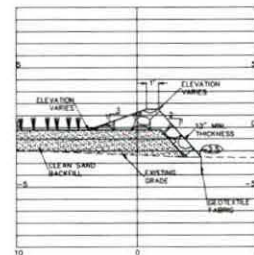
SECTION D1-D1
1"=5" (HORIZ.)
1"=5" (VERT.)
TYPICAL DETAIL D1



SECTION D2-D2
1"=5" (HORIZ.)
1"=5" (VERT.)
TYPICAL DETAIL D2



PLAN VIEW
SCALE 1"=1"



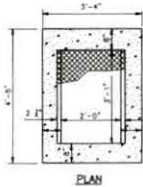
SECTION D3-D3
1"=5" (HORIZ.)
1"=5" (VERT.)
TYPICAL DETAIL D3

NOTES

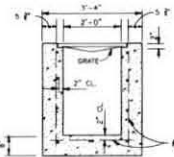
- CONTRACTOR SHALL REMOVE RUST FROM ALL EXPOSED REINFORCEMENT STEEL WITH WIRE BRUSH UNTIL UNCORRODED METAL IS EXPOSED (WHEN POSSIBLE). NO POWER TOOLS SHALL BE PERMITTED UNLESS APPROVED BY THE OWNER AND ENGINEER AFTER REVIEW OF A PLAN SUBMITTED BY THE CONTRACTOR. CONTRACTOR SHALL TAKE CARE NOT TO CAUSE ANY ADDITIONAL DAMAGE TO CONCRETE STRUCTURE. CONTRACTOR SHALL THEN COAT THE REMAINING EXPOSED REINFORCEMENT STEEL WITH COLD GALVANIZING SPRAY. CONTRACTOR SHALL FORM AND PLACE GRADE-TO-11 PLUS MORTAR ALONG WITH MANUFACTURER'S RECOMMENDED CONCRETE PRIMER TO CONCRETE EXPOSED REINFORCEMENT AND RESTORE HEADWALL TO LIKE NEW CONDITION.

NOTES

- INLET SHALL HAVE 3" DIA. HOLE AT THE BOTTOM OF THE BOX CLEAR OF THE PIPE CONSTRUCTION TO BE PLUGGED WHEN CONCRETE INSERT FORMED.
- U.S.A. GRATE NO. 5408 (GALVANIZED STEEL)
- 3/4" CHAMFER ALL EXPOSED EDGES
- 3000 PSI CONCRETE @ 28 DAYS SHALL BE USED THROUGHOUT
- POURED CONCRETE INSERT AFTER INLET & PIPE PLACED IN GROUND. 3000 PSI @ 28 DAYS.
- REINFORCING STEEL SHALL BE INTERMEDIATE GRADE BILLS WITH DEFORMATIONS CONFORMING TO ASTM A-615-18A. ALL STEEL SHALL BE 2" CLEAR UNLESS OTHERWISE NOTED.



PLAN



SECTION

F.D.O.T. TYPE "C" INLET
A1.2

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The Contractor shall verify and be responsible for all dimensions, N.O.D. and all other drawings, any errors or omissions shall be reported to Stantec without delay.
The Contractor shall be responsible for all design costs through use the procedure of Stantec. Instructions on use for any purchase items not indicated by Stantec, is indicated.



CITY OF NAPLES
STREET AND SEWERAGE DEPARTMENT
200 PROGRESS CIRCLE, NAPLES, FLORIDA 34102
PHONE: 239.274.3888 FAX: 239.274.3883

Notes

Revision	By	App'd	11/04/20

Permit-Seal

R. QUINCE SELLERS, P.E. 49374
Engineer Reg. No.

Client/Project
CITY OF NAPLES

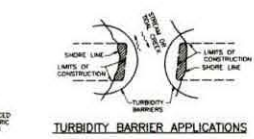
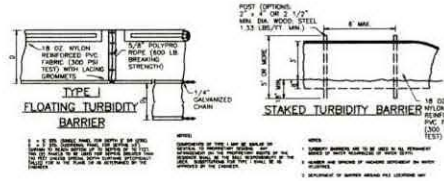
WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

Title
BEST MANAGEMENT PRACTICE PLAN AND DETAILS

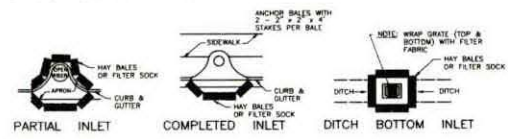
Project No. 177310582 Scale 1" = 40'
Project Phase Sheet Drawing No.

BID SET B of 26 EP-401

- NOTES:**
- THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE CONDITIONS OF THE REGULATORY AGENCY PERMITS AND HAVE COPIES OF THE PERMITS ON SITE. THE CONTRACTOR SHALL BEAR ALL RESPONSIBILITY AND COSTS FOR OBTAINING AND/OR MODIFYING ALL APPLICABLE NPDES PERMITTING AND FOR COMPLYING WITH ALL DISTRICT, FDP, AND USACE PERMITTING CONDITIONS.
 - THE CONTRACTOR SHALL STAGE CONSTRUCTION IN PHASES WHENEVER POSSIBLE TO MINIMIZE SOIL LOSS AND CONTROL EROSION.
 - THE CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION ENTRANCE TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEEP AS REQUIRED TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL TO OR FROM THE CONSTRUCTION SITE SHALL BE COVERED WITH A TARP/AULN.
 - THE CONTRACTOR SHALL COVER ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT AND SHALL USE WATER, STRAW MULCH, OR OTHER SUITABLE MATERIAL AS REQUIRED.
 - AT A MINIMUM, SILT FENCES, OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SIDE SLOPE AND DOWN SLOPE BOUNDARIES OF THE CONSTRUCTION AREA.
 - THE CONTRACTOR SHALL ERECT SILT FENCES, STAKED HAY BALES, STAKED TURBIDITY BARRIERS, AND FLOATING TURBIDITY BARRIERS PRIOR TO COMMENCEMENT OF EXCAVATION/GRADING ACTIVITY. FLOATING TURBIDITY BARRIERS MAY BE DEPLOYED IN SECTIONS AROUND ACTIVE CONSTRUCTION AND BE MOVED AS APPROPRIATE AS CONSTRUCTION AND RESTORATION IS COMPLETED.
 - REQUIRED EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED AND MAINTAINED AS REQUIRED THROUGHOUT THE DURATION OF THE CONSTRUCTION PROJECT.
 - ALL EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR IN COMPLIANCE WITH DISTRICT AND NPDES PERMIT REQUIREMENTS THROUGH THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL INSPECT THE EROSION CONTROL DEVICES WEEKLY AND WITHIN 4 HOURS AFTER EACH RAINFALL EVENT OF 0.5 INCHES OR MORE. ALL MAINTENANCE SHALL BE PERFORMED WITHIN 24 HOURS OF INSPECTION.
 - ALL PRACTICABLE AND NECESSARY EFFORTS SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL TO WALLETS, WETLANDS, AND OFFSITE AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
 - EROSION AND SEDIMENT CONTROL DEVICES (SILT FENCE, TURBIDITY BARRIERS, ETC.) ARE DEPICTED IN APPROXIMATE LOCATIONS AND SHALL BE ADJUSTED AS NECESSARY WITH THE APPROVAL OF THE DISTRICT REPRESENTATIVE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF ALL EROSION AND SEDIMENT CONTROL DEVICES AT THE COMPLETION OF THE PROJECT.
 - ALL EXCAVATION, AND ACCESS TO AND FROM CONSTRUCTION AREAS SHALL BE WITHIN THE LIMITS OF THE PROJECT AREA.

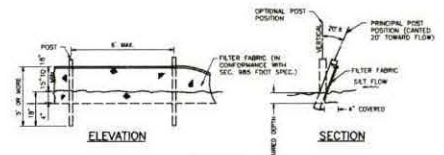


1. 1.8 LB OF WOVEN REINFORCED PVC FABRIC (500 PSI TENSILE STRENGTH)
2. 1/4" GALVANIZED CHAIN
3. 1/2" X 2" X 1/2" WOOD STAKES
4. 1/4" GALVANIZED CHAIN

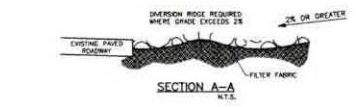


PROTECTION AROUND INLETS OR SIMILAR STRUCTURES
N.T.S.

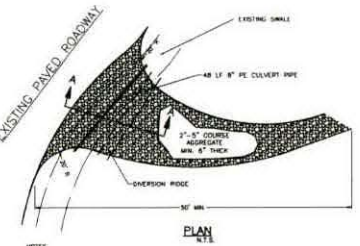
TURBIDITY BARRIERS
N.T.S.



TYPICAL SILT FENCE
N.T.S.

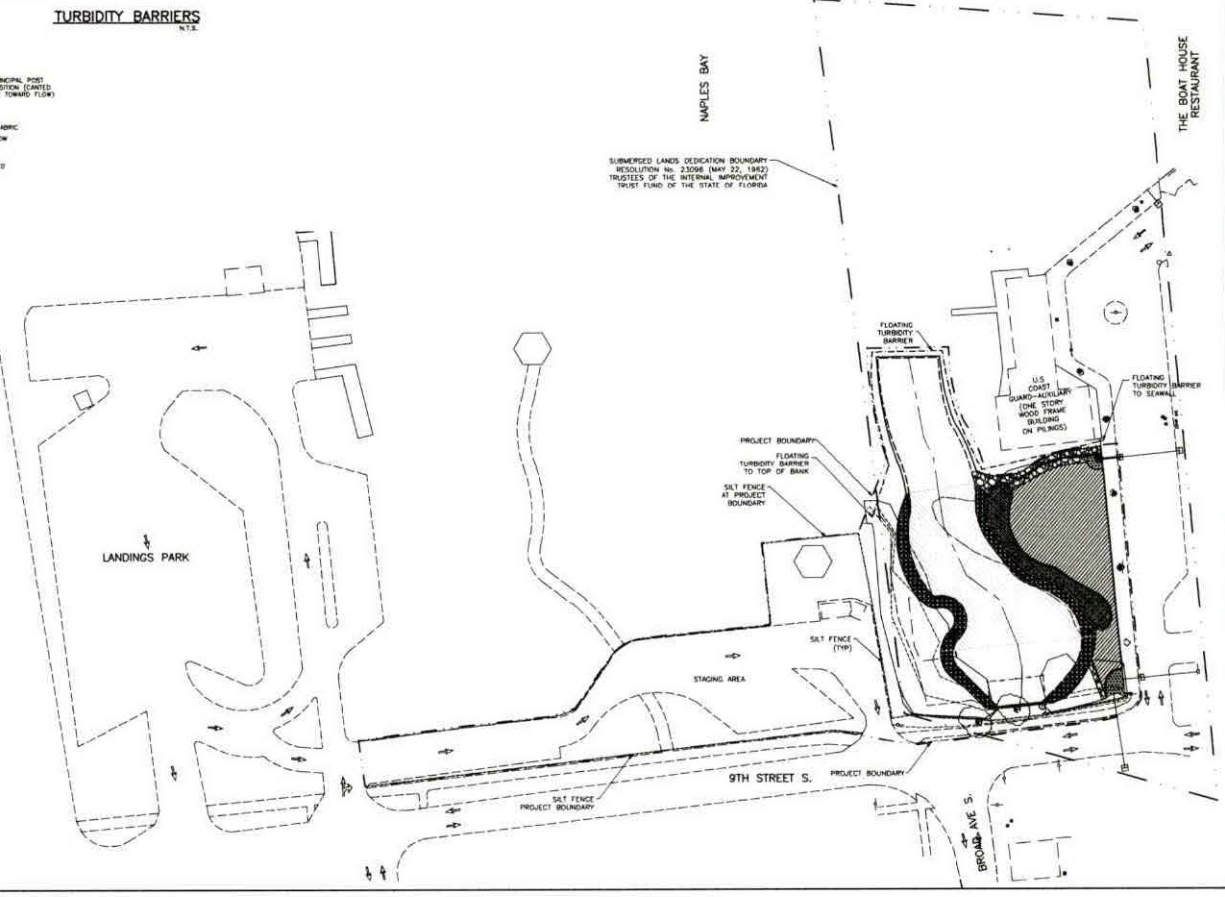


SECTION A-A
N.T.S.



TEMPORARY CONSTRUCTION ACCESS DETAIL
N.T.S.

- NOTES:**
- CONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION ACCESS (INCLUDING CROSSING CULVERTS) AND RESTORE DRAINAGE (INCLUDING REVERSE SLOPE) TO PRE-CONSTRUCTION ELEVATIONS. USE ALL BARE EARTH SURFACES. REPAIR ANY DAMAGE TO THE NORMAL ENTRANCE DRIVE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEARANCE OF ANY MEASURES USED TO TRAP SEDIMENT.



C:\Users\jquince\OneDrive\Documents\177310582\177310582.dwg
 2/17/2021 10:10:10 AM
 R. QUINCE SELLERS, P.E.
 49374
 11/04/20

STANTEC
 2020 North Lincoln Street
 Lincoln, Nebraska 68502
 TEL 402.478.4000
 WWW.STANTEC.COM

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THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF NAPLES AND THE STATE OF FLORIDA.

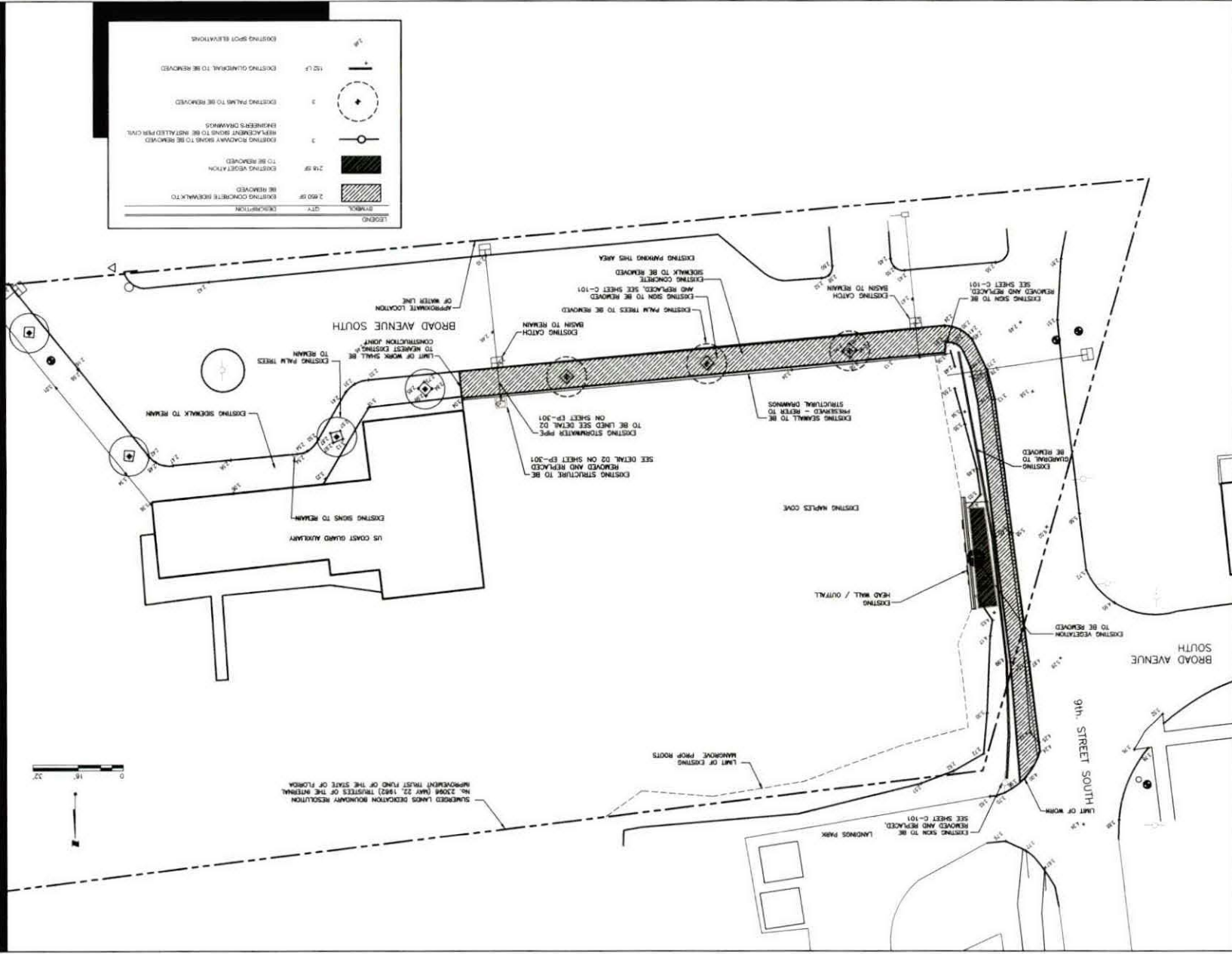
NO. 2008 JUNE 22, FIRST JUDGES OF THE INTERNAL IMPROVEMENT TRUST FUND OF THE STATE OF FLORIDA.

APPROVED FOR THE CITY OF NAPLES
 CITY ENGINEER
 JOHN S. STEINBERG, P.E. (2017000000)



NOTES

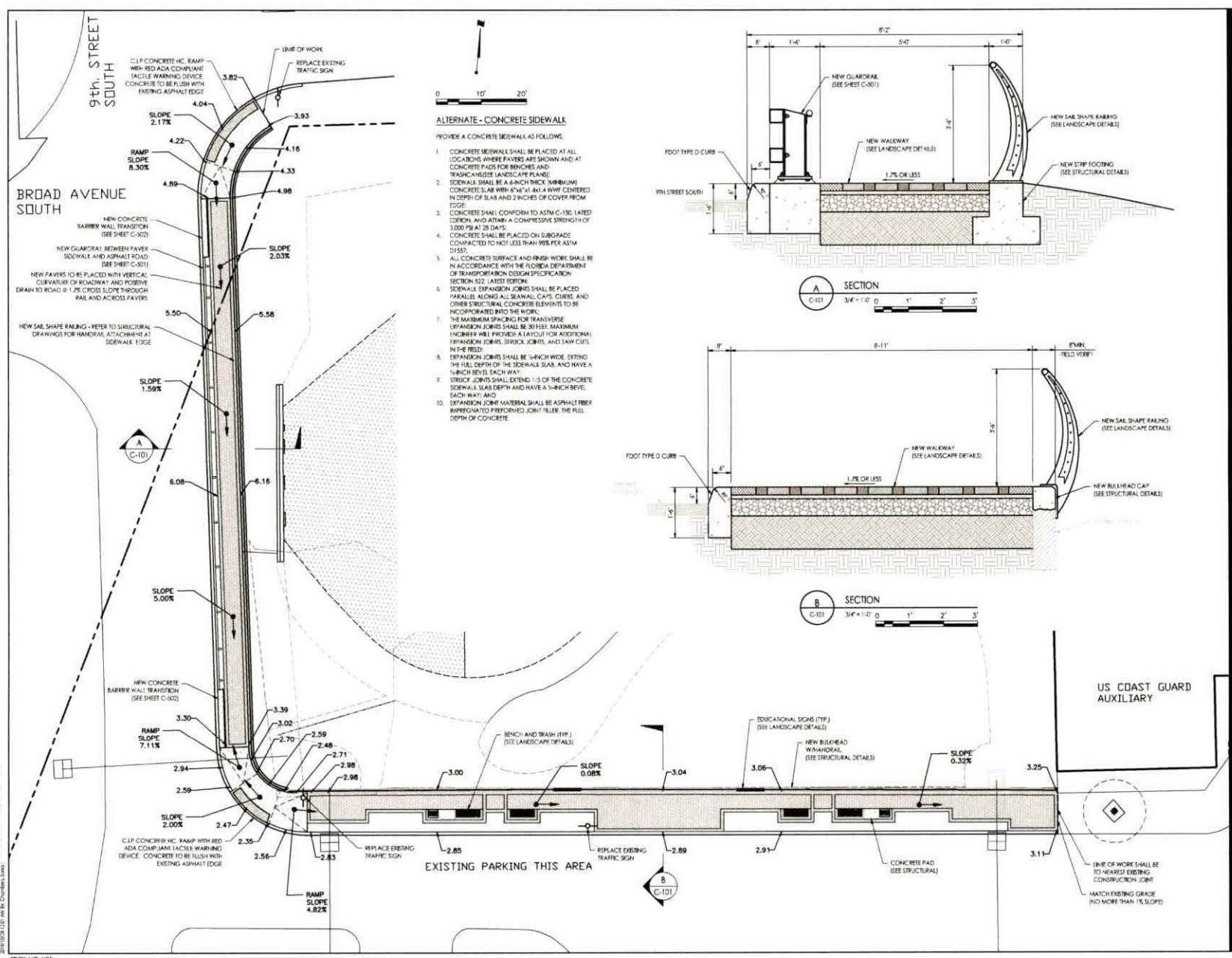
1. CONTRACTOR SHALL MAINTAIN VEHICLE AND PEDESTRIAN TRAFFIC THROUGHOUT THE DURATION OF CONSTRUCTION.
2. GENERAL CONTRACTOR TO PROVIDE GROUND PENETRATING RADAR EXAMINATION AT LOCATIONS OF EXISTING SEA WALL ALONG ITS FULL LENGTH AND WITHIN ALL PROPOSED PLANTER AREAS. GENERAL CONTRACTOR (OR I.C. DESIGNATED SUB-CONTRACTOR) SHALL MAP ALL SEA WALL TIE-BACK ANCHORS, DEAD MAN, ETC. FOUND AND SHOWN A PLAN AND PROVIDE THE LOCATION DATA TO THE CITY AND PROJECT ENGINEER PRIOR TO CONSTRUCTION AND/OR EXCAVATION ACTIVITIES.



8 QUINCE SELLERS P.E.
 Engineer
 Reg. No. 49774
 CITY OF NAPLES
 WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL
 DEMOLITION PLAN
 Project No. 17/210282
 Scale 1" = 16'-0"
 Project Phase Sheet
 Drawing No. C-100

Form No. 888C-02-10g

NO.	DATE	BY	REVISION



177310582.dwg
 10/20/17 10:00 AM
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 177310582.dwg
 10/20/17 10:00 AM

Revision	By	App'd	PK Approved

Date	Scale	Sheet	Order	Design	PK Approved
10/20/17	AS NOTED	10/20/17	10/20/17	10/20/17	10/20/17

Permit-Seal

R. QUINCE SELLERS, P.E. 49374
Engineer Reg. No.

Client/Project
CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

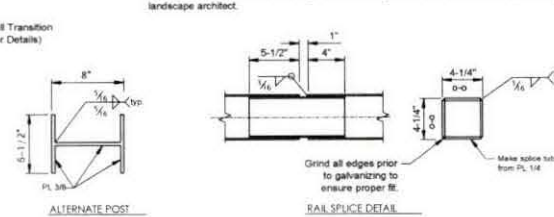
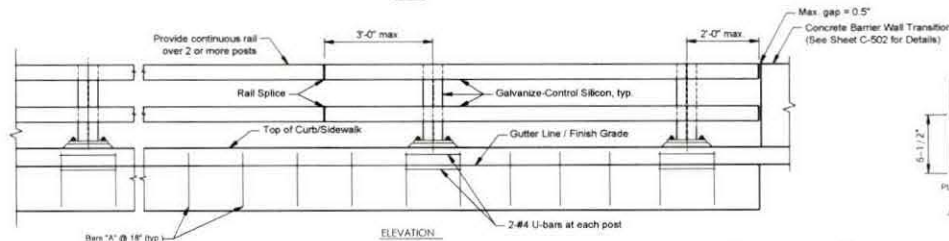
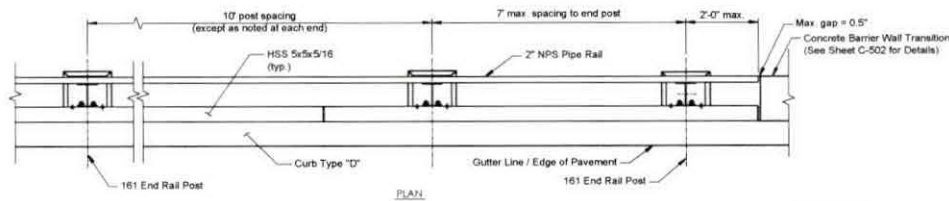
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SIDEWALK PLAN AND DETAILS

Project No. 177310582	Scale AS NOTED
Project Phase Sheet	Drawing No. C-101

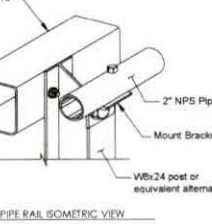
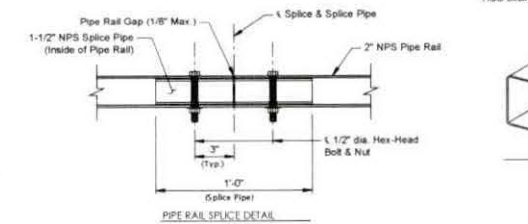
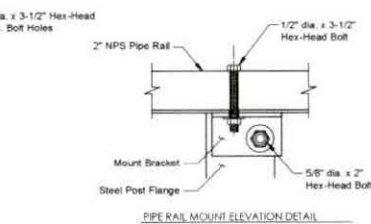
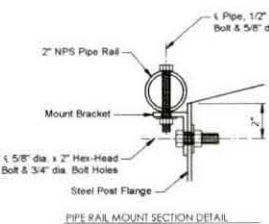
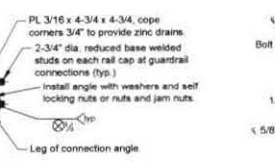
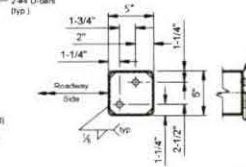
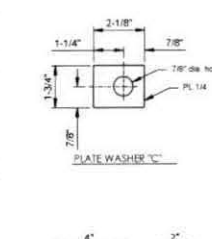
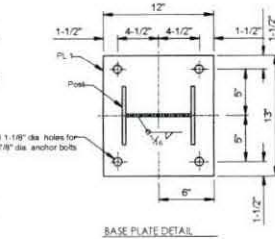
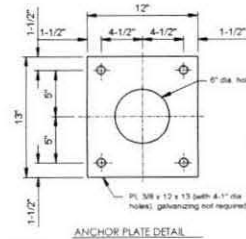
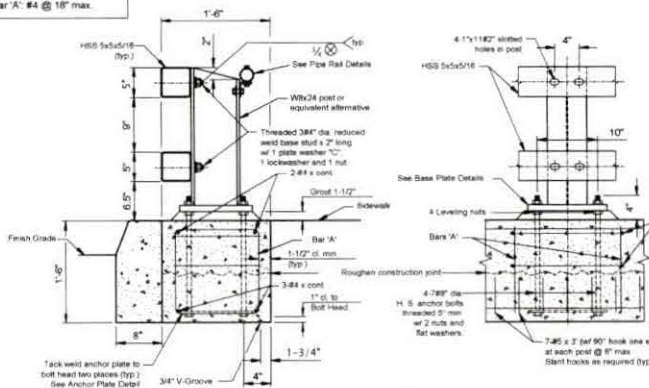


GENERAL NOTES

1. Provide steel posts and plates conforming to AASHTO M183 (ASTM A36) unless otherwise noted.
2. Provide High Strength anchor bolts (Grade 105)
3. Provide reinforcing steel conforming to ASTM A706 or AASHTO M31 (ASTM A615) Grade 60.
4. Provide concrete Class 3300 - 1-1/2 or 3/4
5. Construct railing conforming to the horizontal and vertical alignment of the structure. Install posts normal to grade in longitudinal direction and vertical in transverse direction.
6. Hot-dip galvanize all structural steel including fasteners after fabrication, except as noted.
7. Guardrail, pipe rail, posts, base plates, and anchor plates to receive powder coat application. Final color to be coordinated with city. Contractor to provide color selections for approval by landscape architect.



Bar 'A': #4 @ 18' max.



Revision	By	Check	Date	Description

Permit Seal

SATAR SHARAF, P.E. 75734
Engineer Reg No.

Client/Project
CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

Title
GUARDRAIL DETAILS

Project No. 177310582 Scale NTS
Project Phase Sheet Drawing No.

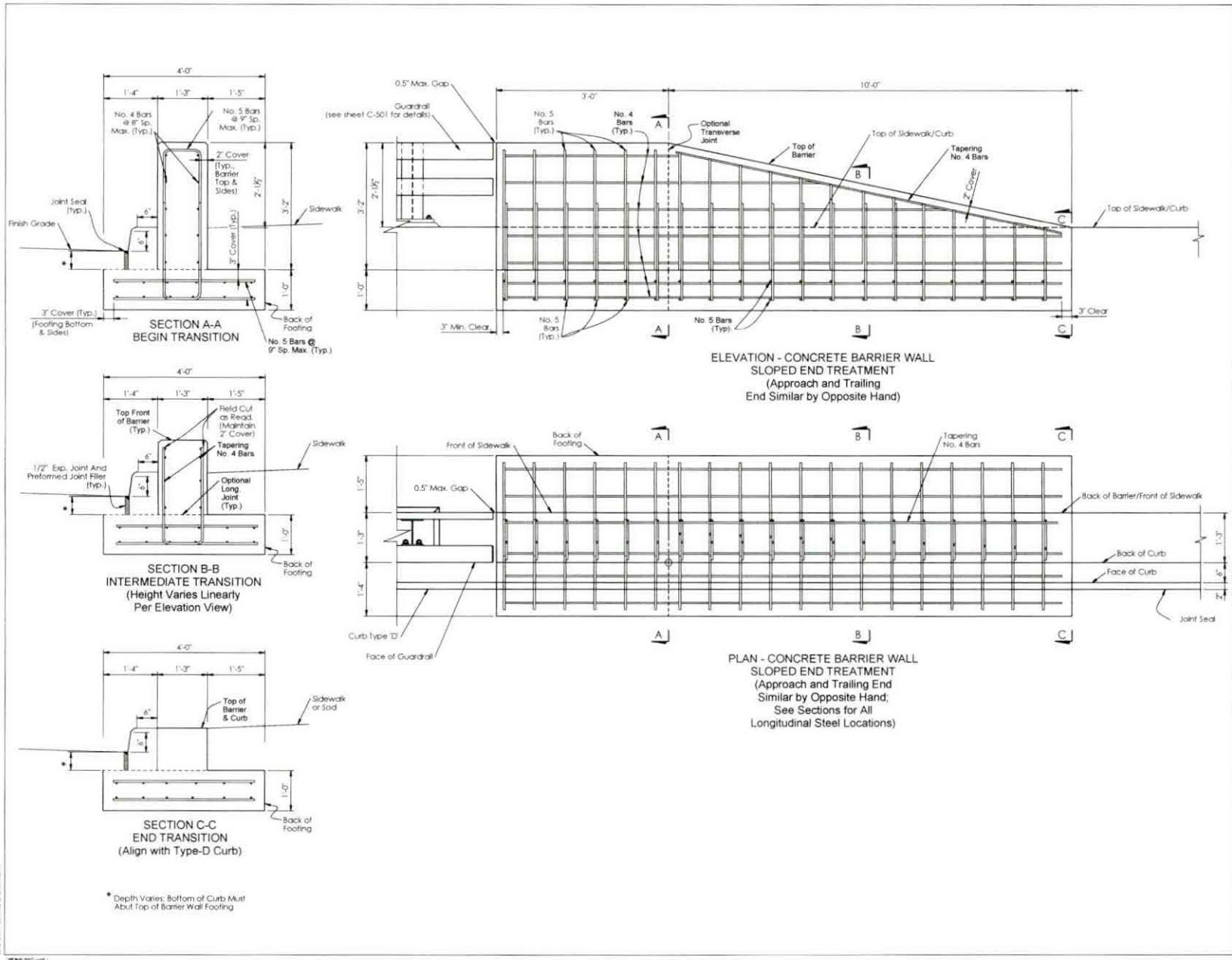
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 3300 Fuller Lane Suite 200
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Notes

1. PROVIDE 1/4" RADIIUS TROWEL FINISH ALONG ALL EDGES.
2. PROVIDE SPONGE FLOAT TO SANDED FINISH ALONG ALL SURFACES.



* Depth Varies; Bottom of Curb Must Abut Top of Barrier Wall Footing

Revision	No.	Date	By	Checked

SATIAR SHRIVALLI P.E. 75734
 Engineer Reg. No.

Client/Project
 CITY OF NAPLES

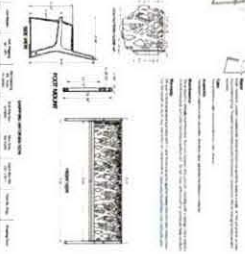
WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 CONCRETE BARRIER WALL TRANSITION
 DETAILS

Project No. 177310582 Scale NTS
 Project Phase Sheet Drawing No.



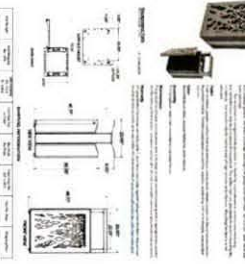
ANOVA
ANALYSIS OF VARIANCE
STATISTICAL SOFTWARE



6' CONTOUR BENCH



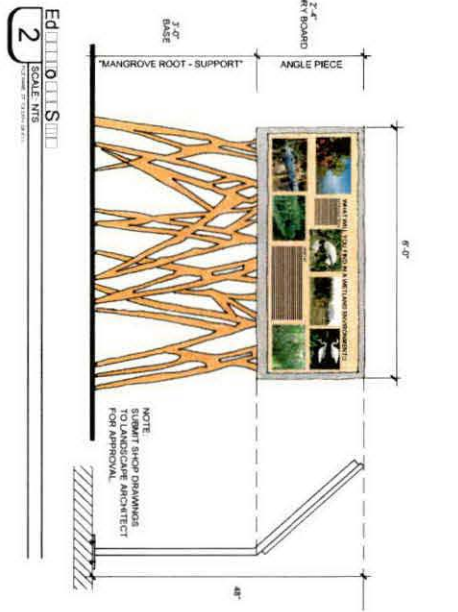
ANOVA
ANALYSIS OF VARIANCE
STATISTICAL SOFTWARE



45 GAL. TRASH RECEPTACLE

ARTIST'S SCALE 1

SCALE: 1/8" = 1'-0"



EDUCATIONAL SCALE 2

SCALE: 1/8" = 1'-0"

GENERAL CONSTRUCTION NOTES

1. THE LIMITS OF CONSTRUCTION ARE DEFINED BY THE PROJECT LIMIT LINES AS NOTED ON THE DRAWINGS.
2. THERE SHALL BE NO CHANGE IN ELEVATION FROM THESE PLANS UNLESS INDICATED OTHERWISE BY APPROVAL BY THE LANDSCAPE ARCHITECT.
3. ALL CONSTRUCTION SHALL INSTALL THEIR WORK IN CONFORMANCE WITH RELEVANT ORDINANCES, TRADE PRACTICES AND OTHER RELEVANT STANDARDS AND SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES.
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31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AUTHORITIES.



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The Contractor shall be responsible for providing the information to the City of Lakeland in accordance with the requirements of the City of Lakeland Ordinance 2009-01.



CITY OF LAKELAND
1000 NORTH MAIN STREET
SUITE 1000
DENVER, CO 80202
TEL: 303.440.2000
FAX: 303.440.2001
WWW.CITYOFLAKELAND.COM

OWNER SHALL BE RESPONSIBLE FOR PROVIDING GRAPHICAL RECORD FOR EDUCATIONAL BENCH.

NO.	DESCRIPTION	DATE	BY	CHECKED BY
1	OWNER SHALL BE RESPONSIBLE FOR PROVIDING GRAPHICAL RECORD FOR EDUCATIONAL BENCH.			

DATE	DESCRIPTION	BY	CHECKED BY

DATE	DESCRIPTION	BY	CHECKED BY

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DATE	DESCRIPTION	BY	CHECKED BY

PROJECT NO: 17210282
PROJECT NAME: WATER QUALITY IMPROVEMENTS AT THE COVE OUTFALL
DRAWING NO: 13 OF 26
SCALE: 1/8" = 1'-0"

GENERAL CONSTRUCTION NOTES AND SITE DETAILS

DATE: 1/2/2013
DRAWN BY: K. R. [unreadable]
CHECKED BY: [unreadable]
PROJECT NO: 17210282
PROJECT NAME: WATER QUALITY IMPROVEMENTS AT THE COVE OUTFALL
DRAWING NO: 13 OF 26
SCALE: 1/8" = 1'-0"

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CITY OF NAPLES
 STREETS AND ENGINEERING DEPARTMENT
 195 RIVERCIRCLE NAPLES, FLORIDA 34102
 PHONE: 239-253-3000 FAX: 239-253-5000

Notes

Revision	By	DATE	DESCRIPTION

Permit-Seal

KEYIN G. MANGAN, RLA LA 0001337
 Landscape Architect FL Lic. No.

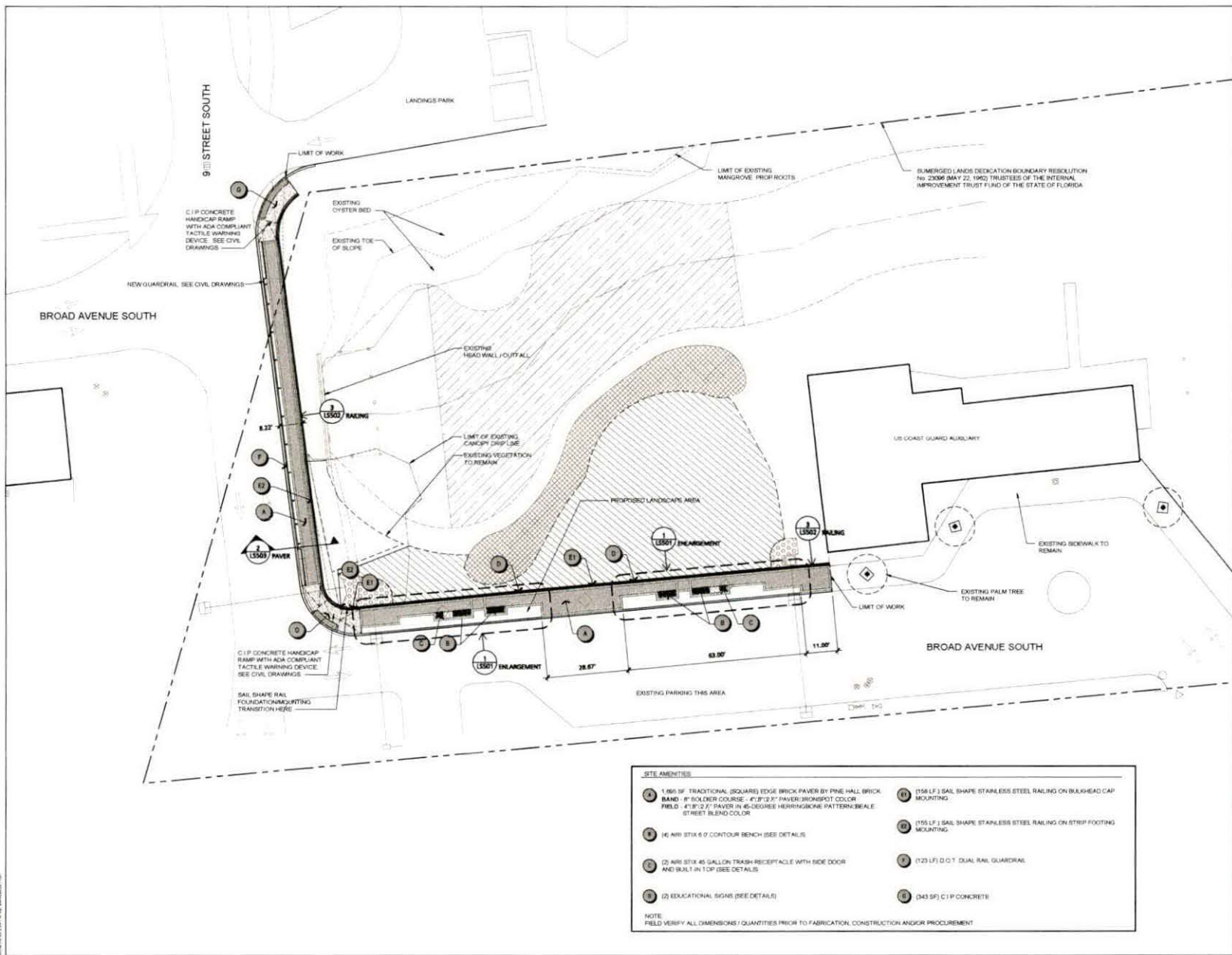
Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 SITE PLAN

Project No. 177310582
 Scale 1/16" = 1'-0"
 Project Phase Sheet Drawing No.

BID SET 14 of 26 LS101



- SITE AMENITIES**
- (1) 1,185 SF TRADITIONAL (SQUARE) EDGE BRICK PAVEMENT BY PINE HALL BRICK BAND - 8" SOLIDER COURSE - 4" (12.5") PAVER (IRONSPOT COLOR) FIELD - 4" (12.5") PAVER IN 45-DEGREE HERRINGBONE PATTERN (SHEAL - STREETS) BLEND COLOR
 - (2) 480 STIX 45 GALLON TRASH RECEPTACLE WITH SIDE DOOR AND BUILT IN TOP (SEE DETAILS)
 - (3) EDUCATIONAL SIGNS (SEE DETAILS)
 - (4) 158 LF 1" SAIL SHAPE STAINLESS STEEL RAILING ON BULKHEAD CAP MOUNTING
 - (5) 123 LF D.O.T. DUAL RAIL GUARDRAIL
 - (6) 155 LF 1" SAIL SHAPE STAINLESS STEEL RAILING ON STRIP FOOTING MOUNTING
 - (7) 123 LF 1" SAIL SHAPE STAINLESS STEEL RAILING ON STRIP FOOTING MOUNTING
 - (8) 155 LF 1" SAIL SHAPE STAINLESS STEEL RAILING ON STRIP FOOTING MOUNTING
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 - (50) 155 LF 1" SAIL SHAPE STAINLESS STEEL RAILING ON STRIP FOOTING MOUNTING
- NOTE: FIELD VERIFY ALL DIMENSIONS / QUANTITIES PRIOR TO FABRICATION, CONSTRUCTION AND/OR PROCUREMENT

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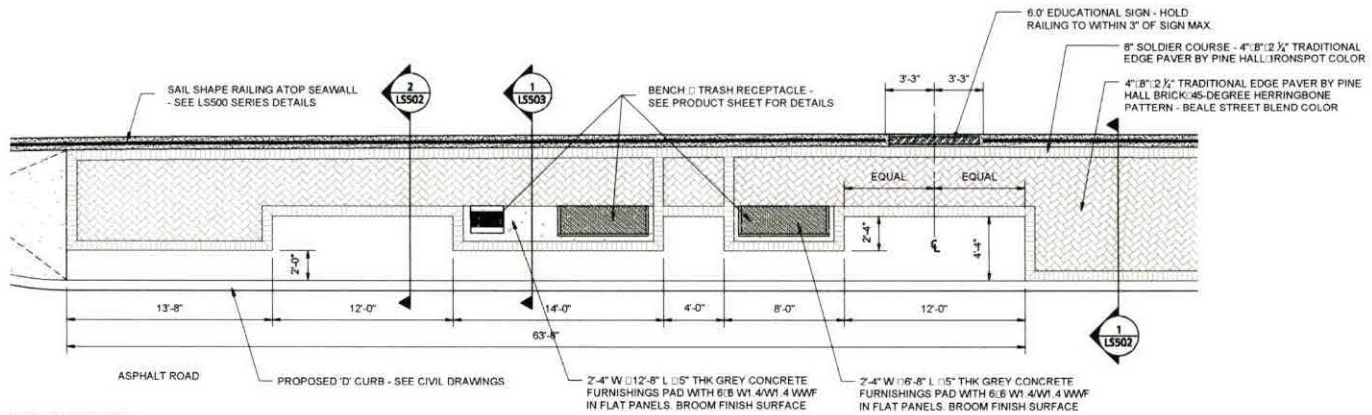
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 All 3rd party drawings, materials or products shall be reviewed for
 compliance with all applicable codes and regulations.
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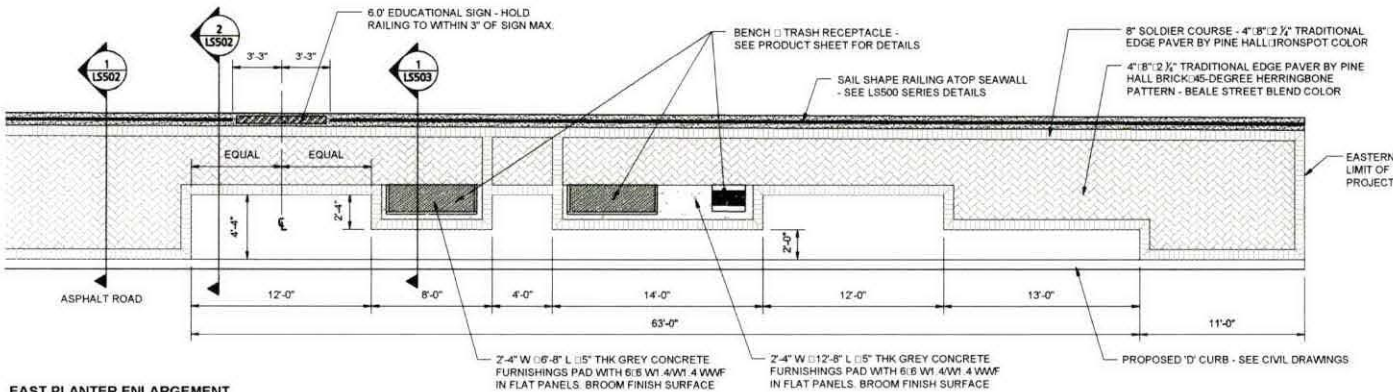


CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 700 HIGHLAND AVENUE, NAPLES, FL 34102
 PHONE: 239-213-5000 FAX: 239-213-5010

Notes



WEST PLANTER ENLARGEMENT



EAST PLANTER ENLARGEMENT

Legend

1	SCALE 1/4" = 1'-0"
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Revision	By	App'd	TY:MM:YY
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Job Name	0207 - Aug	Drawn	CPK/SL	Depth	TY:MM:YY
Permit/Seal					

KEVIN G. MANGAN, RLA LA 0001337
 Landscape Architect FL Lic. No.

Client/Project
 CITY OF NAPLES

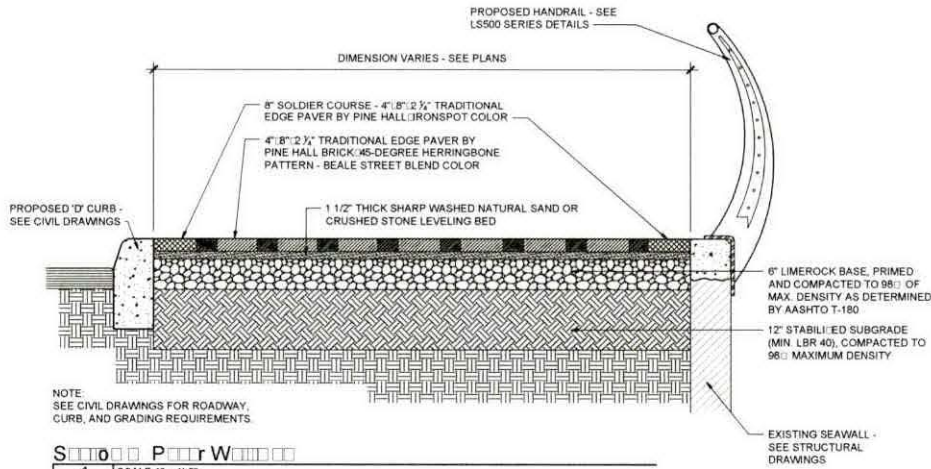
WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 SITE DETAILS

Project No.	Scale	
177310582	AS SHOWN	
Project Phase	Sheet	Drawing No.
BID SET	15 of 26	L5501

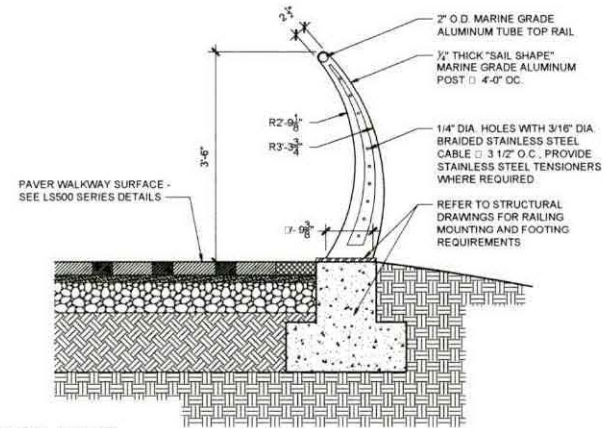


Notes

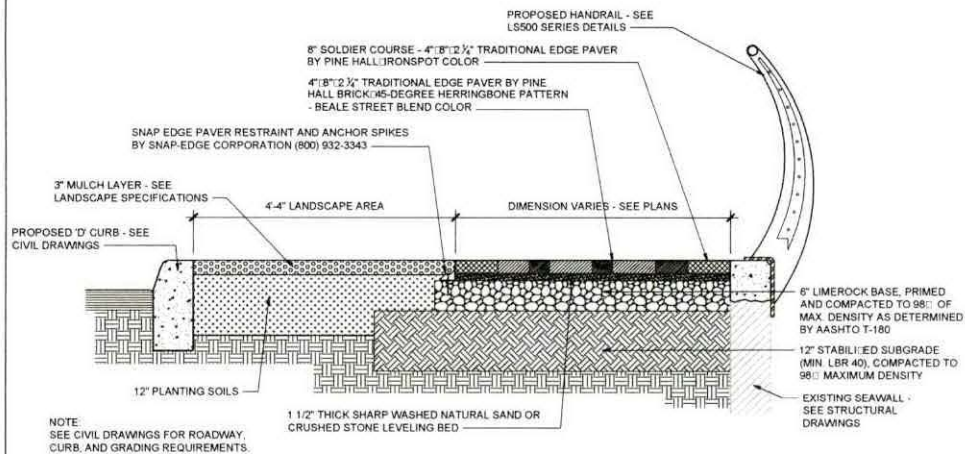


SECTION 1 PAVEMENT

SCALE 1" = 1'-0"

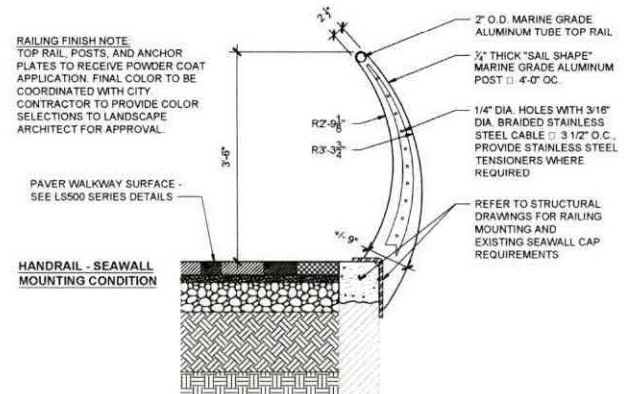


HANDRAIL - FOOTING MOUNTING CONDITION



SECTION 2 PAVEMENT / LANDSCAPE AREA

SCALE 1" = 1'-0"



HANDRAIL - SEAWALL MOUNTING CONDITION

- NOTES:
- SUBMIT SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL.
 - REFER TO STRUCTURAL DRAWINGS FOR STRUCTURAL REQUIREMENTS.
 - RAILING TO MEET LOAD TRANSFER IN COMPLIANCE WITH FBC-B 1607.8.1 AND FBC-B 1607.8.1.1, "HANDRAILS AND GUARDS" - LATEST EDITION.
 - CONTRACTOR SHALL GROUND ALL RAILINGS IN COMPLIANCE WITH NATIONAL ELECTRIC CODE AND APPLICABLE LOCAL CODES.

SECTION 3 HANDRAIL

SCALE 1" = 1'-0"

Revision	By	App'd	DATE

KEVIN G. MANGAN, RLA LA 0001337
Landscape Architect F.L.C. No.

Client/Project
CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

Title
SITE DETAILS

Project No.	Scale	
177310562	AS SHOWN	
Project Phase	Sheet	Drawing No.

BID SET 16 of 26 LS502

Stantec
 901 Ponce de Leon Blvd Suite 100
 Naples, Florida 34109-2707
 Tel. 739.449.4040
 www.stantec.com

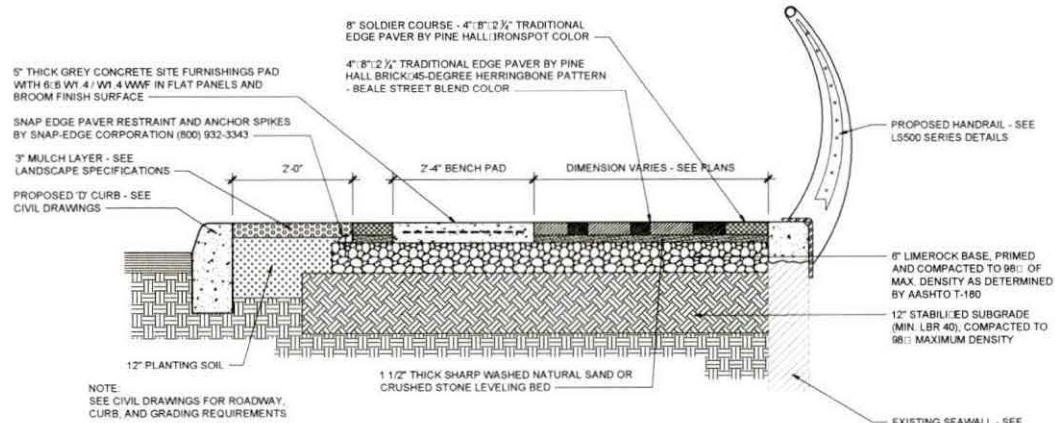
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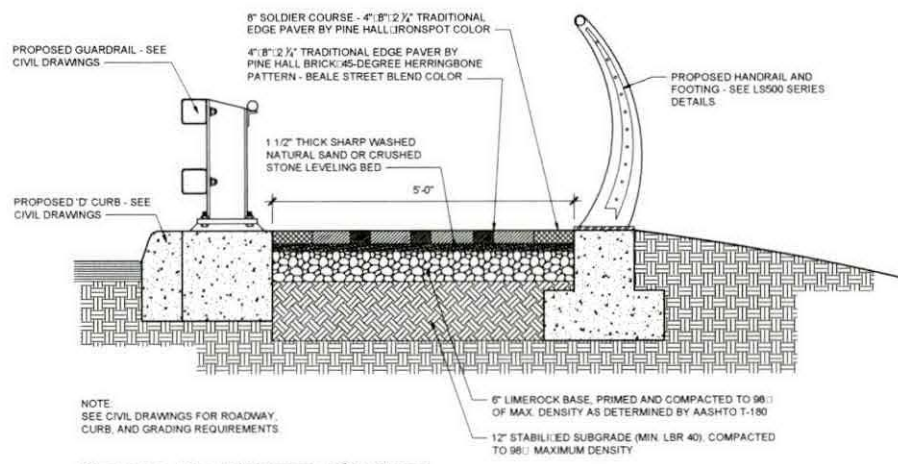


CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 995 SANDSIDE CIRCLE NAPLES, FLORIDA 34103
 PHONE: 239-253-5000 FAX: 239-253-5010

Notes



Section 1: Sidewalk / Bench Pad
 SCALE 1" = 1'-0"
 12/14/2011



Section 2: Sidewalk / Guardrail
 SCALE 1" = 1'-0"
 12/14/2011

Revision	By	Appr	PI 494132

KEVIN G. MANGAN, RLA LA 0001337
 Landscape Architect FL Lic. No.

Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 SITE DETAILS

Project No. 177310582 Scale AS SHOWN
 Project Phase Sheet Drawing No.

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LANDSCAPE INSTALLATION/MAINTENANCE GENERAL NOTES

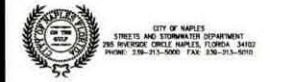
- 1. ALL MATERIALS SHALL MEET THE CODES AND STANDARDS OF THE CITY OF NAPLES, FLORIDA.
- 1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASES, ALL PLANT MATERIAL SHALL BE IN FULL AND STRICT ACCORDANCE TO FLORIDA NO. 1 GRADE, ACCORDING TO THE "GRADES AND STANDARDS", ET AL., PUBLISHED BY FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. PLANT MATERIALS IN SOME INSTANCES EXCEED NO. 1 GRADE IN ORDER TO MEET THE MINIMUM REQUIREMENTS OF THIS PROJECT AND INDIVIDUAL PLANT SPECIFICATIONS AS NOTED ON THE PLANT LIST. FLORIDA FANCY GRADES ARE REQUIRED FOR CERTAIN PALM TREES ON THIS PROJECT.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTS MEETING SPECIFICATION AS NOTED PRIOR TO INSTALLATION. CONTRACTOR SHALL IMMEDIATELY REMOVE ALL PLANT MATERIAL THAT AT ANY TIME DOES NOT CONFORM TO SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.
- 3. ALL ROOTBALLS SHALL CONFORM TO THE S.I.E. STANDARDS SET FORTH IN "AMERICAN STANDARDS FOR NURSERY STOCK" WHERE FLORIDA GRADES AND STANDARDS ARE SILENT ON ORNAMENTAL PLANT MATERIAL GRADES, THEN AMERICAN STANDARDS FOR NURSERY STOCK SHALL APPLY.
- 4. CONTRACTOR TO SUBMIT TO THE LANDSCAPE ARCHITECT THE GROWER'S AND/OR STATE INSPECTION CERTIFICATE FOR PLANT MATERIAL TWO (2) WEEKS BEFORE COMMENCEMENT OF THE PROCUREMENT PHASE.
- 5. PLANT MATERIAL DESIGNATED IN THE DRAWINGS TO REMAIN SHALL BE PROTECTED DURING TRANSPORT AND DELIVERY TO JOB SITE WITH SHADE CLOTH OR OTHER ACCEPTABLE MEANS OF WINDBURN PREVENTION. CONTRACTOR SHALL VERIFY ALL SPECIES, QUANTITY, AND INSTALL LOCATION INFORMATION AND CONFIRM WITH THE LANDSCAPE ARCHITECT PRIOR TO INITIATING PLANTING INSTALLATION.
- 6. ALL EXISTING PLANTING SHALL REMAIN INTACT AND UNDISTURBED UNLESS OTHERWISE NOTED ON THE PLANS. CONTRACTOR SHALL INSTALL A 6" HEIGHT CHAIN LINK FENCE AND/OR A 4' HEIGHT ORANGE NYLON POLYPROPYLENE TYPE FENCE AFFIXED WITH NAILS OR STAPLES TO STURDY POSTS (METAL FENCE STAKES OR 2"x4" WOOD, SET TO A DEPTH OF 2' MINIMUM) SURROUNDING ALL EXISTING VEGETATION AND/OR VEGETATION TO BE PROTECTED AND RELOCATED (SEE PLANS FOR LOCATIONS AND FENCE REQUIREMENTS). FENCE TO BE INSTALLED IN THE CRITICAL PROTECTION ZONE (DRIP LINE), THE AREA SURROUNDING A TREE WITHIN A CIRCLE DESCRIBED BY A RADIUS OF ONE (1) FOOT FOR EACH INCH OF TREE TRUNK DIAMETER MEASURED AT 54" ABOVE FINISHED GRADE (FOR GROUPS OF TREES, LOCATE FENCE BETWEEN TREES AND CONSTRUCTION ACTIVITY AT THE DRIP LINE). THE FENCE SHALL BE LOCATED TO PROTECT A MINIMUM OF 90% OF THE CRITICAL PROTECTION ZONE. SHRUBS AND GROUNDCOVER VEGETATION SHALL HAVE A MINIMUM 5' BUFFER BETWEEN FENCE AND CONSTRUCTION ZONE. NO CONSTRUCTION DEBRIS OF ANY KIND, TOOL/MATERIAL STORAGE, VEHICLES, CHEMICALS (DIRECTLY OR INDIRECTLY APPLIED), OR OTHER CONSTRUCTION ACTIVITY SHALL BE ALLOWED WITHIN THE ROOT ZONE AND/OR CRITICAL PROTECTION ZONE. PROTECT THE CRITICAL PROTECTION ZONE FROM ALL RUN-OFF OF CONTAMINATED LIQUIDS.
- 7. ANY SUBSTITUTIONS IN S.I.E. AND/OR PLANT MATERIAL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO PROCUREMENT AND/OR DELIVERY TO THE WORK SITE. ALL PLANTS WILL BE SUBJECT TO PROJECT SPECIFICATIONS, THESE NOTES, AND APPROVAL BY LANDSCAPE ARCHITECT BEFORE PLANTING CAN BEGIN.
- 8. LANDSCAPE CONTRACTOR SHALL FIELD STAKE THE LOCATION OF ALL PLANT MATERIAL PRIOR TO INITIATING INSTALLATION FOR THE REVIEW AND APPROVAL OF THE LANDSCAPE ARCHITECT TWO (2) DAYS PRIOR TO PLANTING.
- 9. ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED, AND MEET ALL REQUIREMENTS SPECIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING CONSTRUCTION. SHOULD THE CONTRACTOR CAUSE DAMAGE TO ANY UTILITIES, NECESSARY REPAIRS SHALL BE MADE AS QUICKLY AS PRACTICABLE, AT CONTRACTOR'S EXPENSE, UNDER SUPERVISION OF THE GENERAL CONTRACTOR AND/OR OWNER.
- 10. INSTALLATION - ALL PLANT MATERIAL SHALL BE INSTALLED IN A SOUND, WORKMANLIKE MANNER AND ACCORDING TO ACCEPTED GOOD PLANTING PROCEDURES AND ORNAMENTAL HORTICULTURAL PRACTICES/CODES WITH THE QUALITY OF PLANT MATERIALS AS HEREINAFTER DESCRIBED. ALL ELEMENTS OF LANDSCAPING SHALL BE INSTALLED SO AS TO MEET ALL APPLICABLE ORDINANCES AND CODE REQUIREMENTS OF THE STATE OF FLORIDA AND THE JURISDICTION THE INSTALLATION OCCURS WITHIN INCLUDING ALL BUILDING CODES AND THEIR APPENDICES.
- 11. TYPICALLY, SHRUB AND GROUNDCOVER PLANTINGS ARE SHOWN ON THE DRAWINGS AS MASS PLANTING BEDS. PLANTS SHALL BE PLACED ON A TRIANGULAR SPACING CONFIGURATION (STAGGERED SPACING) AS SHOWN IN THE PLANTING DETAILS. PLANT CENTER TO CENTER DIMENSIONS (O.C.) ARE LISTED IN THE PLANT LIST/SCHEDULE.
- 12. CONTRACTOR SHALL ASSURE FREE DRAINAGE AND PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION OF PLANT MATERIAL. CONTRACTOR SHALL FILL ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE THAT PROPER DRAINAGE AND PERCOLATION IS AVAILABLE. CORRECT IF REQUIRED TO ASSURE PERCOLATION. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ALL PLANTS LOST DUE TO INADEQUATE DRAINAGE CONDITIONS THAT MAY BE DETERMINED POST INSTALLATION BY THE LANDSCAPE ARCHITECT / OWNER.
- 13. TREES GROWN IN GROW BAGS OR GROW BAG TYPE MATERIAL MUST HAVE THE GROW BAG REMOVED ENTIRELY PRIOR TO PLANTING.
- 14. BALLED AND BURLAPPED MATERIAL SHALL HAVE THE TOP ONE HALF (1/2) OF THE BURLAP AROUND THE BASE OF THE TRUNK CUT AND PULLED BACK. DO NOT REMOVE BURLAP, WIRE CAGES, STRAPS, ETC. MUST BE CUT AND REMOVED PRIOR TO INSTALLATION.
- 15. CONTRACTOR TO REPLACE REJECTED PLANT MATERIAL WITHIN FIVE (5) BUSINESS DAYS OF NOTICE OF REJECTION.
- 16. CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, PLANTS LIST, GENERAL NOTES, PLANS AND THE PLANTING SPECIFICATIONS FOR COMPLETE LANDSCAPE PLANTING INSTRUCTIONS.
- 17. FERTILIZATION
 - PALMS:**
13-3-13 PLUS MINOR ELEMENTS - SLOW RELEASE
1/2 LB FERTILIZER PER 1/2 INCH CALIPER
 - SHRUBS AND GROUNDCOVERS:**
8-10-10 PLUS MINOR ELEMENTS - SLOW RELEASE
1/2 LB FERTILIZER PER 100 FT²
 - TREES:**
8-6-6 PLUS MINOR ELEMENTS - SLOW RELEASE
1/2 LB FERTILIZER PER 1/2 INCH CALIPER
 - TURF:**
16-4-8 PLUS MINOR ELEMENTS - SLOW RELEASE
1 LB FERTILIZER PER 1000 FT²
- NOTE:
THE COST FOR LANDSCAPE FERTILIZER AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE PER PLANT PRICE PROVIDED TO THE GENERAL CONTRACTOR / OWNER FOR CONTRACT BID AND MONTHLY DRAW PAY ITEMS.
- 18. SOIL PREPARATION AND SOIL MIX:
 - 1. APPLY ROUNDUP (MANUFACTURED BY MONSANTO CORP.) OR APPROVED HERBICIDE EQUAL ACCORDING TO MANUFACTURER'S RATE AND SPECIFICATION WITHIN LIMITS OF ALL AREAS TO BE PLANTED. PROTECT EXISTING PLANTS TO REMAIN FROM OVER-SPRAY OR SPRAY WITHIN ROOT ZONE. CONTRACTOR TO ENSURE TOTAL WEED ERADICATION.
 - 2. BEFORE REPLACING TOPSOIL, RAKE SUBSOIL SURFACE CLEAR OF STONES (1 INCH DIAMETER AND LARGER), DEBRIS, RUBBISH, AND REMAINING FROM REMOVED PLANT MATERIAL. ALL SOIL LINE AND GRADE TO MEET CIVIL ENGINEER GRADING PLANS.
 - 3. SCARIFY SUBSOIL TO A DEPTH OF 3 INCHES THEN APPLY TRONSTAR OR APPROVED PRE-EMERGENT HERBICIDE IN ACCORDANCE WITH MANUFACTURER'S RATE AND SPECIFICATIONS. FOLLOW MANUFACTURER'S RECOMMENDED WAITING PERIOD PRIOR TO NEW LANDSCAPE INSTALLATION.
 - 4. PLANTING SOIL MIX FOR TREES, SHRUBS, AND GROUNDCOVERS SHALL CONSIST OF A THOROUGHLY BLENDED MIXTURE OF:
 - ROYAL PALMS:**
60% CLEAN D.O.T. SAND
40% APPROVED TOPSOIL / SOLID WASTE COMPOST
 - TREES / ALL OTHER PALMS:**
90% CLEAN D.O.T. SAND
10% APPROVED TOPSOIL / SOLID WASTE COMPOST
 - SHRUBS AND GROUND COVERS:**
70% CLEAN D.O.T. SAND
30% APPROVED TOPSOIL / SOLID WASTE COMPOST

- NOTE:
CONTRACTOR TO SUBMIT 3RD PARTY LABORATORY SOIL TESTS OF THE SOIL MIXTURES LISTED ABOVE FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT. SOIL TEST TO IDENTIFY PH, MAJOR AND MINOR NUTRIENT MAKE-UPS, SOIL TEST RATINGS AND PROVIDE COMMENTS/ RECOMMENDATIONS OF THE LAB FOR ORNAMENTAL LANDSCAPE AMENDMENTS.
- 1. COMPOST MIX SHALL BE FREE OF DELETERIOUS MATERIALS THAT WOULD BE HARMFUL TO PLANT GROWTH, SHALL BE FREE OF NEMATODES, AND OTHER EXTRANEIOUS MATTER. SPREAD TOPSOIL MIXTURE TO MINIMUM DEPTH OF THREE (3) INCHES THROUGHOUT ALL SOG AREAS AND SIX (6) INCHES IN ALL SHRUB AND GROUNDCOVER BEDS. REMOVE ALL ROCKS AND OTHER OBJECTS OVER ONE (1) INCH IN DIAMETER.
- 2. SMOOTH ALL PREPARED TOPSOIL TO THREE (3) INCHES BELOW TOP OF SURROUNDING PAVEMENT EDGES. FINISH GRADE ALL PREPARED TOPSOIL AREAS TO A SMOOTH, EVEN SURFACE ASSURING POSITIVE DRAINAGE AWAY FROM THE STRUCTURES AND ELIMINATE ANY LOW AREAS WHICH MAY COLLECT WATER MEETING LINE AND GRADE AS SHOWN ON THE CIVIL ENGINEER'S PLANS.
- 3. SMOOTH TOPSOIL MIXTURE TO THREE (3) INCHES BELOW TOP OF SURROUNDING PAVEMENT EDGES IN AREAS TO BE SODDED.
- 4. TOPSOIL SHALL NOT BE EXTREMELY ACIDIC OR ALKALINE, NOR CONTAIN TOXIC SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. THE PH SHALL BE IN THE RANGE OF 5.5 TO 6.5. IF NECESSARY, THE CONTRACTOR SHALL APPLY THE APPROPRIATE SOIL AMENDMENTS ADJUSTING SOIL PH TO ASSURE A PH RANGE OF 5.5 TO 6.5.
- 5. GUYING / STAKING PRACTICES SHALL NOT PERMIT NAILS, SCREWS, WIRES, ETC., TO PENETRATE OUTER SURFACE OF TREE OR PALM. TREES OR PALMS REJECTED DUE TO THIS PRACTICE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 6. CONTRACTOR SHALL MULCH ALL PLANT MATERIAL THROUGHOUT AND COMPLETELY TO A CONSISTENT THREE (3) INCH DEPTH WITH CLEAN, WEED FREE MULCH IN DARK BROWN COLOR UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS: (WWW.GOMULCH.COM - "FLORIMULCH BROWN" OR APPROVED EQUAL. SAMPLES REQUIRED FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PROCUREMENT AND/OR INSTALLATION).
- 7. INSTALLATION PERIOD - THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING IN FULL, ALL PLANTING AREAS (INCLUDING WATERING, SPRAYING, MULCHING, MOWING, FERTILIZING, WEEDING, ETC.) UNTIL THE JOB IS ACCEPTED. IN FULL, AT THE END OF THE INSTALLATION PHASE BY THE OWNER AND LANDSCAPE ARCHITECT. CONTRACTOR SHALL REQUEST INSPECTION OF PROJECT IN WRITING AT END OF INSTALLATION PERIOD. LANDSCAPE ARCHITECT AND OWNER ACCEPTANCE SHALL BEGIN THE ESTABLISHMENT PERIOD. THE ENTIRE PROJECT WILL BE ACCEPTED AT ONE TIME AND WILL NOT BE ACCEPTED BY AREAS OR PHASED PARTS.
- 8. ESTABLISHMENT PERIOD - CONTRACTOR TO GUARANTEE, MAINTAIN, AND WATER PLANT MATERIAL FOR A NINETY (90) DAY ESTABLISHMENT PERIOD FOLLOWING DATE OF INSTALLATION PERIOD COMPLETION. CONTRACTOR SHALL REQUEST INSPECTION OF PROJECT IN WRITING AFTER NINETY (90) DAY ESTABLISHMENT PERIOD. LANDSCAPE ARCHITECT AND OWNER ACCEPTANCE SHALL BEGIN THE GUARANTEE PERIOD.
- 9. GUARANTEE PERIOD - IF ALL WORK IS SATISFACTORY AND COMPLETE IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT DOCUMENTS, THEN THE OWNER AND LANDSCAPE ARCHITECT SHALL DECLARE SUBSTANTIAL COMPLETION IN WRITING UPON WRITTEN REQUEST OF THE CONTRACTOR OF ACCEPTANCE OF THE WORKS AT THE END OF ESTABLISHMENT. ACKNOWLEDGEMENT OF SUBSTANTIAL COMPLETION CONSTITUTES THE BEGINNING OF THE ONE (1) YEAR GUARANTEE PERIOD.
- 10. ALL PLANT MATERIAL SHALL BE OF FLORIDA NO. 1 OR BETTER QUALITY AT TIME OF INSTALLATION AND SHALL BE MAINTAINED IN THIS SAME CONDITION UNTIL COMPLETION OF THE GUARANTEE PERIOD. DECLINE IN CONDITION OF PLANT MATERIAL DURING ANY PERIOD (INSTALLATION, ESTABLISHMENT, GUARANTEE) SHALL BE GROUNDS FOR REJECTION AND REPLACEMENT AS DETERMINED BY THE LANDSCAPE ARCHITECT AND OWNER AT THE CONTRACTOR'S EXPENSE.
- 11. REMOVAL OF ALL STAKING AND GUYING OF TREES AND PALMS AFTER GUARANTEE PERIOD SHALL BE THE RESPONSIBILITY OF THE OWNER UNLESS OTHERWISE AGREED UPON WITH THE CONTRACTOR IN WRITING.
- 12. IRRIGATION NOTES AND MINIMUM REQUIREMENTS:
 - 1. A FULLY AUTOMATIC IRRIGATION SYSTEM WITH A CONTROLLER AND APPLICABLE MOISTURE (RAIN) SENSOR LOCATED TO RECEIVE DIRECT RAINFALL SHALL BE PROVIDED. PROPOSED IRRIGATION SYSTEM TO BE RETROFIT AS ADDITIVE TO EXISTING LAYOUT, SUPPLY, ETC. AS APPLICABLE.
 - 2. ALL PLANTINGS SHALL HAVE 100% FULL COVERAGE WITH IRRIGATION. PROVIDE ONE BUBBLER PER TREE/ PALM AND DRIP OR SPRAY MECHANISMS FOR SHRUBS, GROUNDCOVER AND GRASSES/TURF - SEE IRRIGATION PLANS FOR DETAILED LAYOUT REQUIREMENTS.
 - 3. VALVE SIZING, DETAILING AND MAINLINE ROUTING MAY BE ADJUSTED BY THE LANDSCAPE ARCHITECT TO ACCOMMODATE THE NEEDS OF THE LANDSCAPE DESIGN IN THE FIELD.
 - 4. LANDSCAPE ARCHITECT MAY CHOOSE TO USE DRIP, BUBBLERS, STREAM BUBBLER, OR SPRAY IRRIGATION IN SHRUB AREAS AS REQUIRED BY FIELD CONDITIONS.
 - 5. THE IRRIGATION SYSTEM WILL OPERATE WITH SEPARATE VALVE ZONES FOR TURF AREAS AND SHRUB PLANTING AREAS WHERE EFFICIENCY OF SEPARATION ALLOWS THE CONTROLLER WILL BE SET TO OPERATE APPROPRIATE RUN TIMES FOR THE VARIOUS ZONES AND THEIR REQUIRED PRECIPITATION NEEDS IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES FOR IRRIGATION OF FLORIDA LANDSCAPES.
 - 6. THE IRRIGATION SYSTEM WILL BE INSTALLED TO MINIMIZE THE APPLICATION OF WATER TO IMPERVIOUS AREAS, ADJACENT PROPERTIES, AND EXISTING VEGETATION.
 - 7. IRRIGATION SHALL BE INSTALLED TO MEET OR EXCEED APPENDIX F - "PROPOSED CONSTRUCTION BUILDING CODES FOR TURF AND LANDSCAPE IRRIGATIONS SYSTEMS" OF THE FLORIDA BUILDING CODE, PLUMBING (LATEST EDITION), AND IN ACCORDANCE WITH ASTM D2855.



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Notes

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KEVIN G. MANGAN, P.L.A. LA 0001337
Landscape Architect FL Lic. No.

Client/Project
CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

Title
LANDSCAPE GENERAL NOTES

Project No. Scale
177310582 N/A

Project Phase Sheet Drawing No.

BID SET 18 of 26 LP000

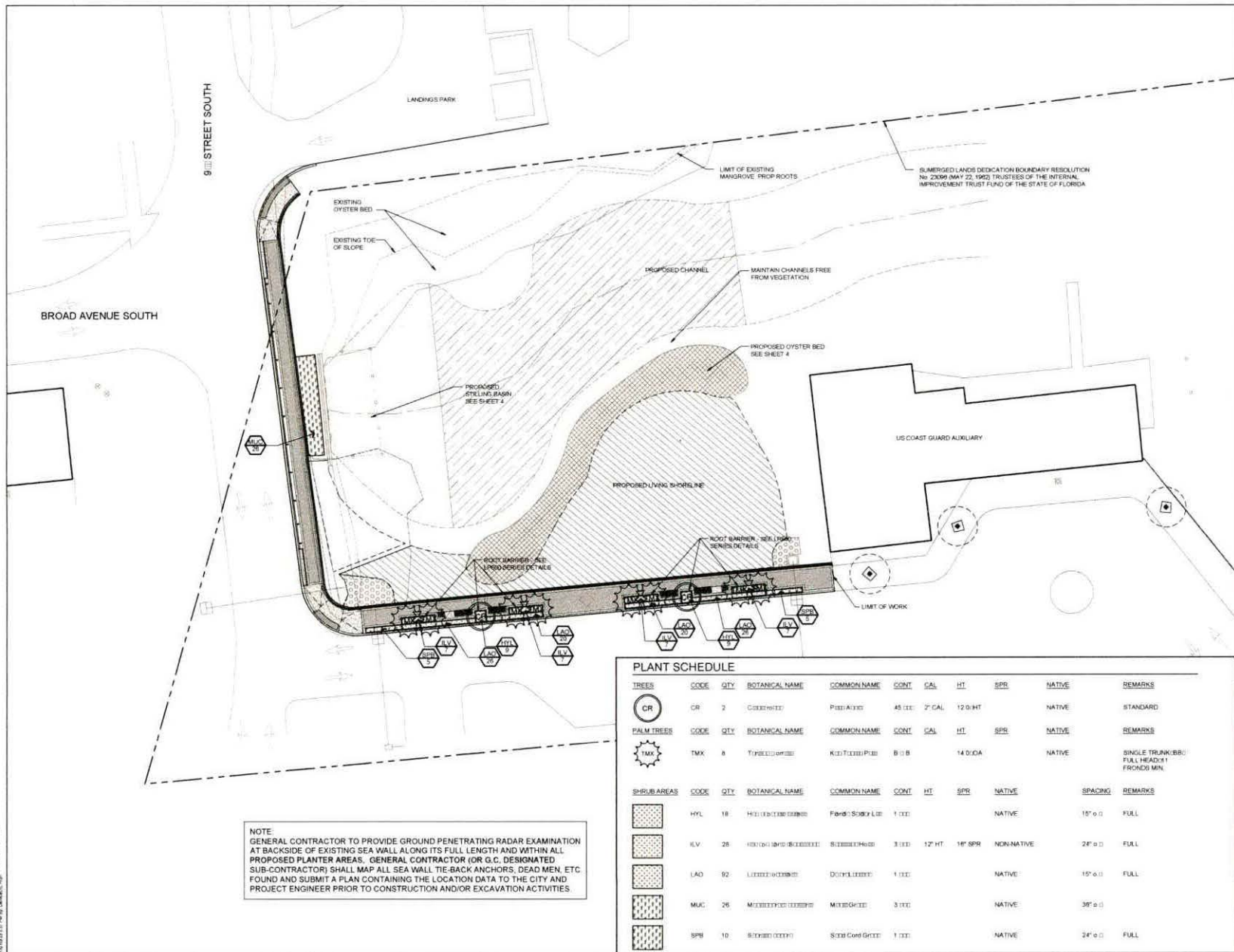
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CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 230 HANCOCK AVENUE, NAPLES, FLORIDA 34102
 PHONE: 239-213-5000 FAX: 239-213-5010

Notes



NOTE:
 GENERAL CONTRACTOR TO PROVIDE GROUND PENETRATING RADAR EXAMINATION AT BACKSIDE OF EXISTING SEA WALL ALONG ITS FULL LENGTH AND WITHIN ALL PROPOSED PLANTER AREAS. GENERAL CONTRACTOR (OR G.C. DESIGNATED SUB-CONTRACTOR) SHALL MAP ALL SEA WALL TIE-BACK ANCHORS, DEAD MEN, ETC. FOUND AND SUBMIT A PLAN CONTAINING THE LOCATION DATA TO THE CITY AND PROJECT ENGINEER PRIOR TO CONSTRUCTION AND/OR EXCAVATION ACTIVITIES.

Revision	By	Appr.	DATE

KEVIN G. MANGAN, P.L.A. LA 0001337
 Landscape Architect FL Lic. No.

Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 LANDSCAPE PLAN

Project No. 177310582 Scale 1/16" = 1'-0"
 Project Phase Sheet Drawing No.

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Notes

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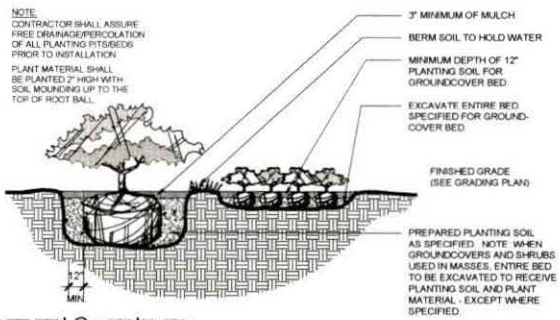
Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

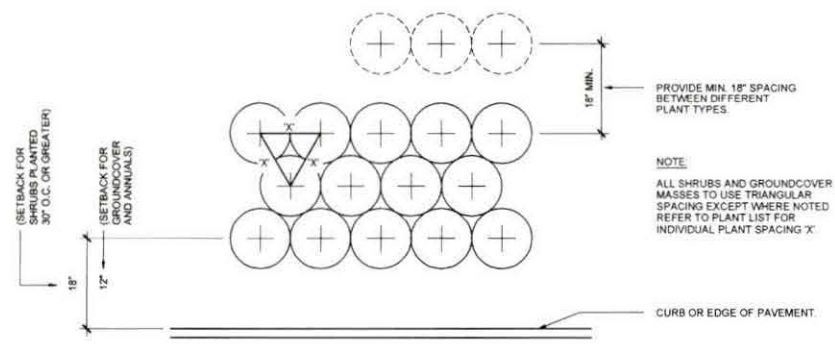
Title
 LANDSCAPE DETAILS

Project No. 177310582 Scale AS SHOWN
 Project Phase Sheet Drawing No.

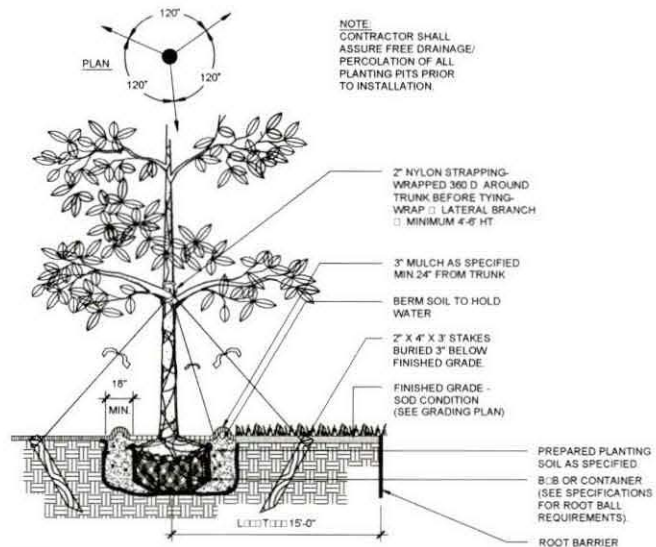
BID SET 20 of 26 LP501



Str d Gro d o r
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 (PL 06/13/22) (2022)

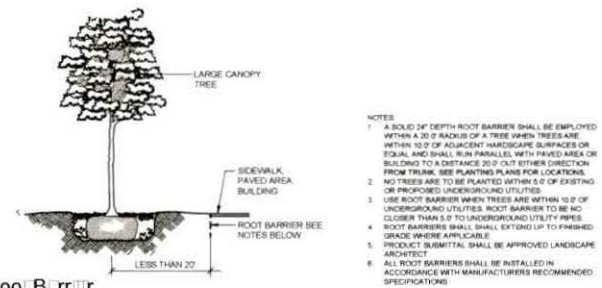


T P S D r
3 SCALE: 1" = 1'-0"
 (PL 06/13/22) (2022)



- NOTES:**
 1. SEE LP100 AND LP500 SERIES DRAWINGS FOR ROOT BARRIER REQUIREMENTS AND LOCATIONS.
 2. KEY THATCH PALMS AND PITCH APPLE TREES TO HAVE A MINIMUM OF THREE (3) POINTS OF BRACING

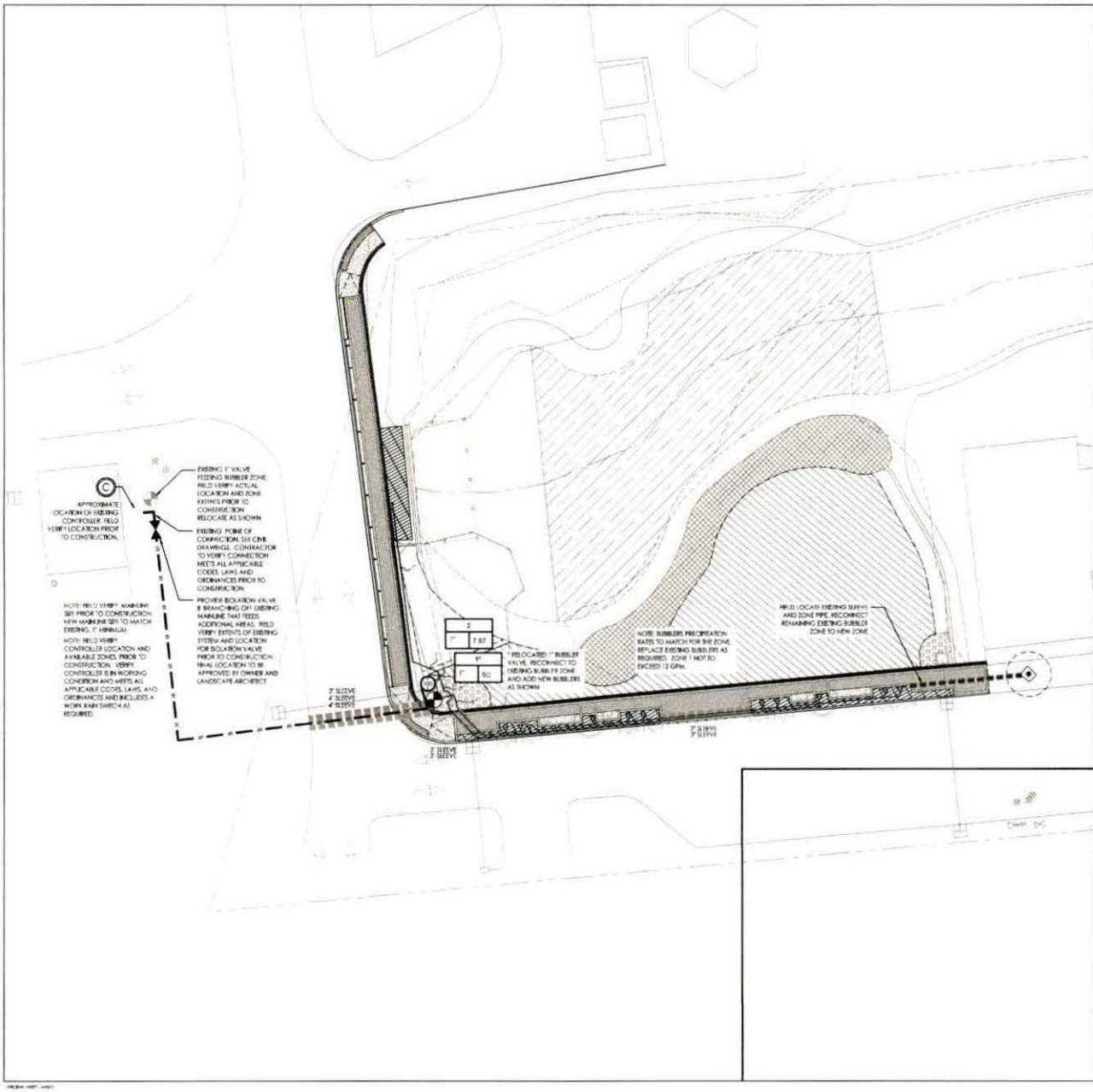
Tr
2 SCALE: NTS
 (PL 06/13/22) (2022)



- NOTES:**
 1. A SOLID 3" DEPTH ROOT BARRIER SHALL BE EMPLOYED WITHIN A 30" OF RADIUS OF A TREE WHEN TREES ARE WITHIN 10' OF ADJACENT HARDSCAPE SURFACES OR EQUALS AND SHALL RUN PARALLEL WITH PAVED AREA OR BUILDING TO A DISTANCE 20" OUT EITHER DIRECTION FROM TRUNK (SEE PLANTING PLANS FOR LOCATIONS).
 2. NO TREES ARE TO BE PLANTED WITHIN 5' OF EXISTING OR PROPOSED UNDERGROUND UTILITIES.
 3. USE ROOT BARRIERS WHEN TREES ARE WITHIN 10' OF UNDERGROUND UTILITIES. ROOT BARRIER TO BE NO CLOSER THAN 5" TO UNDERGROUND UTILITY PIPES.
 4. ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE WHERE APPLICABLE.
 5. PRODUCT SUBMITTAL SHALL BE APPROVED LANDSCAPE ARCHITECT.
 6. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED SPECIFICATIONS.

Ro B r r
4 SCALE: NTS
 (PL 06/13/22) (2022)

15:11/2022 11:45:10 AM 177310582 - Water Quality Improvements at the Cove Outfall - LP501.dwg
 177310582 - Water Quality Improvements at the Cove Outfall - LP501.dwg
 177310582 - Water Quality Improvements at the Cove Outfall - LP501.dwg



PLAN SYMBOLS LEGEND

- ⊕ RAINBIRD 1401 AT 0.25 GPM OR 1402 AT 0.50 GPM AT 30 PSI, SERIES BUBBLER
NOTE: BUBBLERS TO MATCH PRECIPITATION / FLOW RATES ACROSS ZONE. ADJUST OR REPLACE EXISTING BUBBLERS AS REQUIRED OR AS FIELD DIRECTED BY LANDSCAPE ARCHITECT.
- ⊘ EXISTING 1" ELECTRIC VALVE. FIELD VERIFY VALVE IS IN WORKING ORDER PRIOR TO RELOCATION. CLEAN, REPAIR AND/OR REPLACE AS REQUIRED.
- ⊙ RAINBIRD XCI-100-PRB-LC SERIES ELECTRIC VALVE.
- ⊖ EXISTING IRRIGATION CONTROLLER. LOCATION, VERIFY CONTROLLER HAS A RAIN SWITCH AND ALL REQUIRED COMPONENTS ARE IN WORKING ORDER AND COMPLY WITH ALL APPLICABLE CODES, LAWS, AND ORDINANCES.
- ⚡ ISOLATION VALVE. INSTALL VALVE IN RAINBIRD VB SERIES VALVE BOX WITH LOCKABLE LID.
- PROPOSED SCHEDULE 40 PVC MAIN LINE, SIZE TO MATCH EXISTING.
- ▨ SCHEDULE 40 PVC SLEEVE, MIN 2" ID THE SIZE OF THE PIPE.
- CLASS 200 PVC LATERAL LINE, SIZE AS SHOWN.
- ▧ RAINBIRD XFD-09-12 DRIPLINE WITH OF DRIPLINE HEADERS, NOTE INSTALL PER ALL MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS. DO NOT EXCEED MAXIMUM DRIPLINE LATERAL LENGTHS TO BE INSTALLED IN 12' ROWS, SEE DETAILS.

IRRIGATION VALVE KEY

ZONE ID	
SIZE	GPM

NOTES

1. IRRIGATION TO PROVIDE 100% HEAD TO HEAD COVERAGE
2. IRRIGATION TO BE SEPARATED INTO HYDROZONES SUCH THAT ALL SCID AND SHRUB AREAS SHALL BE IRRIGATED SEPARATELY.
3. IRRIGATION TO BE INSTALLED PER THE FLORIDA BUILDING CODE APPENDIX F, PLUMBING, PROPOSED CONSTRUCTION BUILDING CODE FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS.
4. IRRIGATION TO BE INSTALLED PER ALL APPLICABLE CODES, LAWS AND ORDINANCES.
5. IRRIGATION TO BE INSTALLED IN ACCORDANCE WITH ASTM D2655 USING BOTH GLUE AND PRIMER.
6. IN THE EVENT ROOTS EQUAL TO OR GREATER THAN 3/4" IN DIAMETER WITHIN THE DRIP LINE / ROOT PLATE OF A TREELAND MUST BE PRUNED. IT SHOULD BE DONE UNDER THE SUPERVISION OF AN ISA CERTIFIED ARBORIST. ALL PRUNING TO MEET OR EXCEED ANSI A300, TYPICAL.
7. MAINLINE ROUTE AND PROPOSED TREES AND PALMS TO BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
8. CONTRACTOR TO FOLLOW ALL FDEP REGULATIONS WHEN WORKING WITH RECLAIMED WATER.



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Notes

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 Landscape Architect FL Lic. No.

Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

Title
 IRRIGATION PLAN

Project No. 177310582	Scale 1/16" = 1'-0"
Project Phase BID SET	Sheet 21 of 26
	Drawing No. IR101



SYSTEM PERFORMANCE NOTES

1. IRRIGATION SYSTEM AS SHOWN IS DESIGNED TO OPERATE ON POTABLE WATER MAIN PROVIDING A MINIMUM FLOW OF 15 GPM AND A MINIMUM PRESSURE OF 40 PSI AT THE POINT OF CONNECTION.
CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION OF ANY CONSTRUCTION IF AVAILABLE FLOW AND PRESSURE OF WATER MAINS ARE NOT AS SHOWN. AFFECT PERFORMANCE OF SYSTEM.
MINIMUM PRESSURE REQUIREMENTS: 40 PSI AT POINT OF CONNECTION
30 PSI AT BASE OF BUBBLER
35 PSI AT DRIP VALVE
2. HEAD LOSS IN THE LINE OR HEAD INFORMATION PROVIDED HEAD SHALL BE ADJUSTED TO ACCOMMODATE HEAD VARIATIONS WHILE MAINTAINING 10 PSI HEAD TO HEAD COVERAGE AND MINIMUM COVERAGE AT EACH POINT AND BUBBLERS.
3. LATERAL PIPE SHALL BE SIZED SO THAT WATER VELOCITY DOES NOT EXCEED 5 FEET PER SECOND. MAXIMUM GPM PER PIPE SIZE AS FOLLOWS:

3/4" PIPE	8 GPM
1" PIPE	12 GPM
1 1/4" PIPE	20 GPM
1 1/2" PIPE	28 GPM
2" PIPE	42 GPM
2 1/2" PIPE	62 GPM
3" PIPE	82 GPM
4. 1/2" PIPE SHALL NOT BE USED FOR LATERAL PIPE EXCEPT FOR 3-1/2" HEADS.
5. ALL BOOTS TO BE INSTALLED USING JOINT PER MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS. BOOTS SHALL NOT BE INSTALLED OVER PIPE.

GENERAL NOTES

1. DO NOT BEGIN CONSTRUCTION UNLESS ALL UNDERGROUND UTILITIES HAVE BEEN LOCATED AND MARKED. CALL 811 AS REQUIRED BY THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT, CHAPTER 356, N. B. OR DA STARTER. AVOID DAMAGE TO ALL UTILITIES HAND PROTECT AS REQUIRED.
2. IRRIGATION SYSTEM TO BE INSTALLED PER ALL APPLICABLE CODES, LAWS AND ORDINANCES, TYPICAL.
3. IRRIGATION SYSTEM TO BE INSTALLED PER FLORIDA BUILDING CODE APPROX F PLUMBING, PROPOSED CONSTRUCTION BUILDING CODES FOR TIER AND LANDSCAPE IRRIGATION SYSTEMS.
4. INSTALL MAINLINE PIPE WITH A MINIMUM COVER OF 18" OF COVER IN NON-VEHICULAR AREAS AND MINIMUM SLEEVES AT A MINIMUM DEPTH OF 24" OF COVER UNDER VEHICULAR AREAS. ALL LATERAL PIPES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18" OF COVER. NOTE THESE ARE MINIMUM REQUIREMENTS THAT APPLY TO PIPES AND LIDS IN SEE. SEE FOOT REQUIREMENTS AND FLORIDA BUILDING CODE APPROX F WHICH REFERENCE CODE CONSTRUCTION SERVICE CODE 452.02. WHEN APPLICABLE CODE REQUIREMENTS CONTRADICT THE ABOVE REQUIREMENTS, ALL APPLICABLE CODE REQUIREMENTS INCLUDING BUT NOT LIMITED TO FOOT, SEE CODE APPROX AND FLORIDA BUILDING CODE APPROX F SHALL TAKE PRECEDENCE.
5. SLEEVES SHALL BE PLACED UNDER PAVEMENT AS SHOWN ON PLANS AND SHALL BE A MINIMUM OF 24" FROM THE IRRIGATION PIPES. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. THE SMALLEST LATERAL PIPE SIZE TO A SINGLE SPRAY OR ROTOR HEAD SHALL BE 3/4".
6. ALL LOCATIONS WHERE JOINTS TO BE MADE IN COMPLIANCE WITH ASTM D2875 USING BOTH PRIMER AND GULIE.
7. REFER TO THE LANDSCAPE PLANS WHEN DETERMINING TO AVOID TREE AND SHRUB LOCATIONS.
8. WHERE POSSIBLE DO NOT TRENCH UNDER EXISTING 4" FOOT PLATE OF EXISTING STEEL. SHOULD BE NECESSARY THE OWNERS REPRESENTATIVE SHALL BE REQUIRED TO LOCATE PROPOSED IRRIGATION WORK. SOME LINES BEHIND HOUSES, OF USE IN AN AREA TO BE TRENCHED THROUGH AND UNDER FOOT THE PROPERTY OWNER. IF CUTTING HOLES NECESSARY HOLES SHALL BE OF GREATER THAN 3/4" IN DIAMETER. IN THE EVENT THAT FOOT PIPING SHOULD BE REQUIRED, IT SHOULD BE DONE UNDER THE SUPERVISION OF AN ARCHITECT OR ENGINEER AND BEST MANAGED PRACTICES AND BE DONE IN COMPLIANCE WITH ALL APPLICABLE CODES, LAWS AND ORDINANCES.
9. ALL SPRAY HEADS IN THE ROWZ ZONE SHALL BE EITHER 8" OR 12" POPUP AS INDICATED ON THE PLANS.
10. ALL POINT-UP SPRAY HEADS SHALL BE INSTALLED USING AN 18" PVC REX PIPE OR SPRING JOINT CONNECTION. ALL ROTOR HEADS SHALL BE INSTALLED USING SPRING JOINTS. CONTRACTOR SHALL NOT USE SPRING PIPE.
11. ALL HEADS SHALL BE INSTALLED 12" FROM ANY WALL AND A MINIMUM OF 36" FROM ANY SIDEWALK, PATH OR ROAD.
12. ALL HEADS SHALL BE STAKED WITH A 4" X 4" WOOD DOWEL AND SECURED WITH NYLON STRAP CABLE TIES. STRIPS AND DOWNES SHALL BE PAINTED AT EACH END OUTDOOR IN RESISTANT PAINT.
13. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO DETERMINE THE EXACT HEIGHT OF ANY 12" POPUP THAT IS SHOWN IN A SHRUB BED OR TRE.
14. ALL IRRIGATION CONTROL VALVES, GATE VALVES AND QUICK COUPLERS SHALL BE INSTALLED IN VALVE BODIES.
15. FINAL LOCATION OF THE AUTOMATIC CONTROL VALVE SHALL BE APPROVED BY THE OWNER.
16. CONTROL WIRE SHALL BE 18 AWG DIRECT BURIAL, COMMON WIRE TO BE 12 AWG DIRECT BURIAL. WIRE TO BE COLORED RED FOR CONTROL WIRE AND WHITE FOR COMMON WIRE. NO CROSS CONNECTION BETWEEN CONTROL WIRE SHALL BE ALLOWED. WIRE SPICES SHALL BE MADE ONLY IN VALVE BODIES USING PARAFLEX BOOT OR 3/4" OR WATERPROOF CONNECTIONS.
17. ELECTRICAL SERVICE TO ALL EQUIPMENT SHALL BE PROVIDED TO A JUNCTION BOX AT THE EQUIPMENT LOCATION. BY OTHER, NOT A PART OF THE CONTRACT. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION FROM THE JUNCTION BOX TO ALL EQUIPMENT.
18. MAIN SWITCH SHALL BE PLACED ON A SEPARATE STRUCTURE WITH A MINIMUM CLEARANCE OF FIVE FEET (5') FROM EQUIPMENT, FEET OF COVER ON OBTUSIONS AND ABOVE THE ROOF OF SPRINKLER COVERAGE.
19. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FURNISH BATTERY WIRE AND EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING WEIRS, WALLS, STRUCTURES, PLANT MATERIALS AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OR REPLACEMENT OF ALL ITEMS DAMAGED BY THE WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF SLEEVES AND PIPING THROUGH WALLS UNDER ROADWAYS AND PARKING, ETC.
20. ANY TYPES OF VALVES SHOWN OUTSIDE THE PROPERTY LINE OR OUTSIDE OF A LANDSCAPE AREA AND SHOWN THERE FOR DESIGN CLARITY ONLY, ALL PIPING AND VALVES SHALL BE INSTALLED ON THE PROPERTY AND WITHIN LANDSCAPE AREAS.
21. DO NOT MIX LINES. INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OVERLAP IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR INTERFERENCE IN AREA OBSTRUCTIONS (S) THAT IMPER NOT HAVE BEEN CONSIDERED BY THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THE IRRIGATION IS NOT PERFORMED THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REWORK.
22. CONTRACTOR SHALL PERFORM PRESSURE AND VOLUME TEST ON IRRIGATION WATER SOURCE OVER A CONTINUOUS 24 HOUR PERIOD PRIOR TO THE BEGINNING OF ANY CONSTRUCTION OF ANY CONSTRUCTION. TEST THE AVAILABLE SUPPLY AND BE AVAILABLE TO MEET THE DEMAND OF THE IRRIGATION SYSTEM AS DESIGNED. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT PRIOR TO CONNECTION FOR DESIGN HORICONS.
23. THE IRRIGATION CONTRACTOR SHALL FURNISH AND ADJUST ALL SPRINKLER HEADS AND VALVES TO PROVIDE OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY (20" WINDS, STRIPS, WALLS, ETC.) IN ORDER TO ACCOMMODATE THE IRRIGATION CONTRACTOR MAY SUBMIT VARIATIONS TO BE INSTALLED IN PLACE OF THE SPECIFIED RATED ARC HEADS WHERE NECESSARY. PRESSURE COMPENSATING DESIGN MAY ALSO BE USED TO PROVIDE STRIKE CLEARANCE.
24. THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING SET IN AN AUTOCAD FORMAT SHOWING THE IRRIGATION INSTALLATION AND PROVIDE BOTH THE CAD FILE AND A PDF FILE TO THE OWNER. A CAD FILE OF THE ORIGINAL PLANS WILL BE OBTAINED FROM THE LANDSCAPE ARCHITECT FOR A REF. THE AS-BUILT DRAWING SHALL LOCATE ALL MAINLINE AND VALVE BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES. NOTE THIS IS A MINIMUM REQUIREMENT. CONTRACTOR TO PROVIDE AS-BUILT DRAWING TO THE CITY OF NAPLES AS REQUIRED BY OTHER CONTRACT AND/OR BY ANY OTHER ALL APPLICABLE CODES, LAWS AND STATUTES AS REQUIRED.
25. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP.
26. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
27. REMOVE ALL UNBUILT AND UNALLOWED IRRIGATION LINES.
28. ALL VALVES TO BE LOCATED IN SHOWN AREAS AS COMPARED TO TIER AREAS WHEN POSSIBLE.

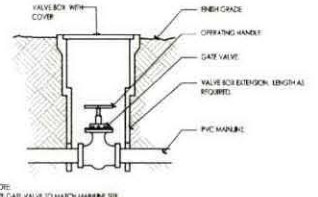
DRIP IRRIGATION NOTES

1. NOTE: INSTALL RAINBIRD DRIP LINE USING RAINBIRD LAST IN COMPRESSION FITTING.
2. NOTE: INSTALL A RAINBIRD MEDICAL TAP BE PLUMB CAP AT THE END OF ALL LATERAL LINES.
3. NOTE: INSTALL A GATE VALVE APPROX 12" FROM THE WORK CONTROL VALVE.
4. NOTE: ALL VALVES WILL BE ADJUSTED TO BE IN THE RANGE WITHIN LANDSCAPE AREA WHEN POSSIBLE. LINES CROSSING FROM ONE LANDSCAPE AREA TO ANOTHER PER AND EQUIPMENT SHOWN IN PAVED AREAS FOR CLARITY ONLY.
5. NOTE: DWP TYPING LATOR SCHEMATIC. LATOR ALL AREAS TO HAVE DRIP IRRIGATION PER ALL MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS.
6. NOTE: FLOWS INDICATED FOR VALVES ARE ESTIMATED BASED UPON THE HEADINGS. ACTUAL FLOW MAY VARY. AT NO TIME SHOULD THE FLOW WITHIN THE PVC LATERAL EXCEED 5 FEET PER SECOND.
7. NOTE: INSTALL RAINBIRD TO OPERATION INDICATOR ON EACH ZONE FOR ALL MANUFACTURER RECOMMENDATIONS AND SPECIFICATIONS.

VALVE CHART, NEW ZONES

VALVE NUMBER	TYPE	SIZE	GPM
1"	BUBBLER	1"	34
2"	DRIP	1"	7.37

NOTE: CONTROLLER REQUIRES FAIR SHUT OFF SWITCH. RAINBIRD 850-CE4
NOTE: CONTROLLER TO HAVE 1/4" W/12 MODULE



1 GATE VALVE DETAIL
SCALE: 1/2" = 1'

PLAN SYMBOLS LEGEND

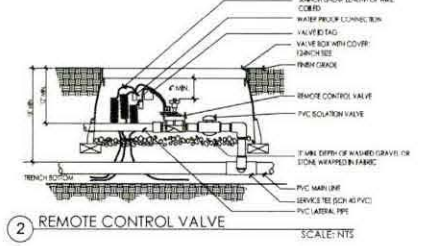
- BUBBLER:** 1/2" AT 30 PSI, SERIES BUBBLER. NOTE: BUBBLERS TO MATCH PRECIPITATION FLOW RATES ACROSS LINE. ADJUST OR REPLACE EXISTING BUBBLERS AS REQUIRED OR AS FIELD DIRECTED BY LANDSCAPE ARCHITECT.
- ELECTRIC VALVE:** EXISTING 1" ELECTRIC VALVE, FIELD VERIFY VALVE TO BE WORKING ORDER PRIOR TO RELOCATION. CLEAN, REPAIR AND/OR REPLACE AS REQUIRED.
- RAINBIRD 100-100-PRB-LC SERIES:** ELECTRIC VALVE.
- EXISTING IRRIGATION CONTROLLER:** LOCATION, VERIFY CONTROLLER HAS A MAIN SWITCH AND ALL REQUIRED COMPONENTS ARE IN WORKING ORDER AND COMPATIBLE WITH ALL APPLICABLE CODES, LAWS AND ORDINANCES.
- ISOLATION VALVE:** INSTALL VALVE IN RAINBIRD V8 SERIES VALVE BOX WITH LOCKABLE LID.
- PROPOSED SCHEDULE 40 PVC MAINLINE:** SIZE TO MATCH EXISTING.
- SCHEDULE 40 PVC SLEEVE:** MIN. 2" IS THE SIZE OF THE PIPE.
- CLASS 200 PVC LATERAL LINE:** SIZE AS SHOWN.
- RAINBIRD XFD-00-12 DRIP LINE:** WITH QR ORDERLINE HEADINGS. NOTE: INSTALL PER ALL MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS. DO NOT EXCEED MAXIMUM DRIP LINE LATERAL LENGTHS TO BE INSTALLED IN 12" ROWS. SEE DETAILS.

IRRIGATION VALVE KEY

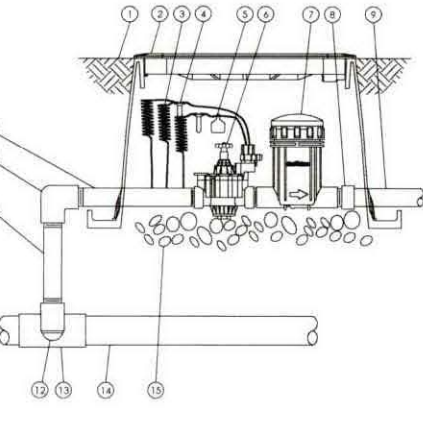
ZONE ID	SIZE	GPM
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NOTES

1. IRRIGATION TO PROVIDE 100% HEAD TO HEAD COVERAGE.
2. IRRIGATION TO BE SEPARATED INTO HYDROZONES SUCH THAT ALL SOIL AND SHRUB AREAS SHALL BE IRRIGATED SEPARATELY.
3. IRRIGATION TO BE INSTALLED PER THE FLORIDA BUILDING CODE APPROX F PLUMBING, PROPOSED CONSTRUCTION BUILDING CODE FOR TIER AND LANDSCAPE IRRIGATION SYSTEMS.
4. IRRIGATION TO BE INSTALLED PER ALL APPLICABLE CODES, LAWS AND ORDINANCES.
5. RAINBIRD TO BE INSTALLED IN ACCORDANCE WITH ASTM D2875 USING BOTH GULIE AND PRIMER.
6. IF THE EXISTING ROOTS EQUAL TO OR GREATER THAN 3/4" IN DIAMETER WITHIN THE DRIP LINE / FOOT PLATE OF A TREE MUST BE PROTECTED BY SHIELDING UNDER THE SUPERVISION OF AN EXERCISE ARCHITECT. ALL PRELIMINARY TO BE FIELD DIRECTED AND TYPICAL.
7. MAINLINE BODIES AND PROPOSED TRENCHES AND PIPES TO BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
8. CONTRACTOR TO FOLLOW ALL TOP REGULATIONS WHEN WORKING WITH RECYCLED WATER.



2 REMOTE CONTROL VALVE
SCALE: 1/2" = 1'



3 1" LIGHT COMMERCIAL CONTROL ZONE KIT 100-PRB-LC
SCALE: 1/2" = 1'

1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD V8-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. ID TAG
6. REMOTE CONTROL VALVE: RAIN BIRD 100-100-PRB-LC KIT (INCLUDED IN CZK-100-PRB-LC KIT)
7. PRESSURE REGULATING BASKET FILTER; RAIN BIRD PRB-100 (INCLUDED IN CZK-100-PRB-LC KIT)
8. PVC SCH 40 FEMALE ADAPTOR
9. LATERAL PIPE
10. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
11. PVC SCH 40 ELL
12. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
13. PVC SCH 40 TEE OR ELL
14. MAINLINE PIPE
15. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

Notes

Revision	By	App'd	DATE

KEVIN G. MANGAN, RIA LA 0001337
Landscape Architect R.L.U.C. No.

Client/Project
CITY OF NAPLES

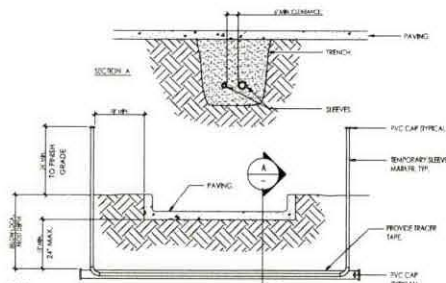
WATER QUALITY IMPROVEMENTS AT THE COVE OUTFALL

Title
IRRIGATION NOTES AND DETAILS

Project No	Scale	
177310582	NIS	
Project Phase	Sheet	Drawing No.
BID SET	22 of 26	IR501



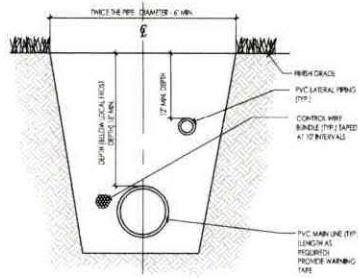
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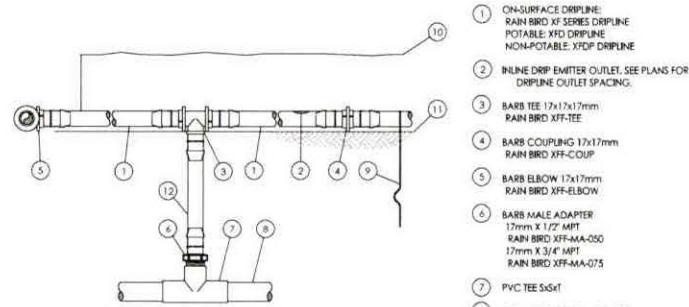
NOTE:

1. IRRIGATION SLEEVES SHALL BE CLASS 200 PIPE FOR 4\"/>

2 IRRIGATION SLEEVING DETAIL SCALE: NTS



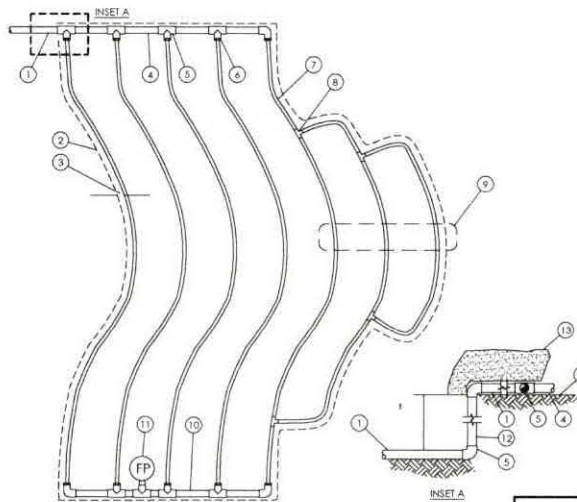
3 TYPICAL TRENCH CROSS SECTION SCALE: NTS



NOTES:

1. PLACE THE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. SAVE YOUR HANDS. USE THE RAIN BIRD FITTING-TOOL, XF INSERTION TOOL FOR FITTING ASSEMBLY.

1 XFD ON SURFACE DRIPLINE RISER ASSEMBLY SCALE: NTS



NOTES:

1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. PLACE THE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
4. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
5. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

4 XFD ON SURFACE DRIPLINE ODD CURVES LAYOUT SCALE: NTS

- 1 ON-SURFACE DRIPLINE:
RAIN BIRD XF SERIES DRIPLINE
POTABLE: XFD DRIPLINE
NON-POTABLE: XFDP DRIPLINE
- 2 INLINE DRIP EMITTER OUTLET. SEE PLANS FOR DRIPLINE OUTLET SPACING.
- 3 BARB TEE 17x17x17mm
RAIN BIRD XFF-TEE
- 4 BARB COUPLING 17x17mm
RAIN BIRD XFF-COUP
- 5 BARB ELBOW 17x17mm
RAIN BIRD XFF-ELBOW
- 6 BARB MALE ADAPTER
17mm X 1/2\"/>

- 7 PVC TEE 5x5x1
- 8 PVC LATERAL SUPPLY HEADER
- 9 TIE DOWN STAKE:
RAIN BIRD TDS-050 WITH BEND (TYPICAL)
- 10 MULCH
- 11 FINISH GRADE
- 12 RAIN BIRD XF SERIES BLANK TUBING LENGTH AS REQUIRED
- 1 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 2 PERIMETER OF AREA
- 3 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2\"/>

Inlet Pressure psi	XFD Dripline Maximum Lateral Lengths (Feet)					
	12\"/>					
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	155	314	250	424	322
20	318	167	353	274	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	440	290	576	455	780	514

Revision	By	App'd	DATE

Permit-Set	Date	Drawn	Diagn	17 JAN 20

KEVIN G. MANGAN, RLA LA 0001337
Landscape Architect FL LIC. No.

Client/Project
CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
AT THE COVE OUTFALL

Title
IRRIGATION DETAILS

Project No. Scale
177310582 NTS

Project Phase Sheet Drawing No.

Stantec
 5801 Paddock Bay Blvd Suite 300
 Naples, Florida 34108-2705
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 www.stantec.com

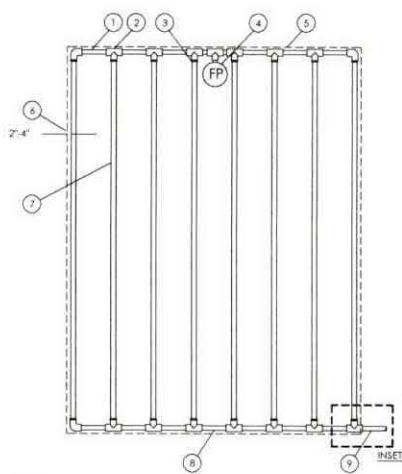
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CITY OF NAPLES
 STREETS AND STORMWATER DEPARTMENT
 290 RIVERCHASE CIRCLE NAPLES, FLORIDA 34102
 PHONE: 239-213-5000 FAX: 239-213-5010

Notes

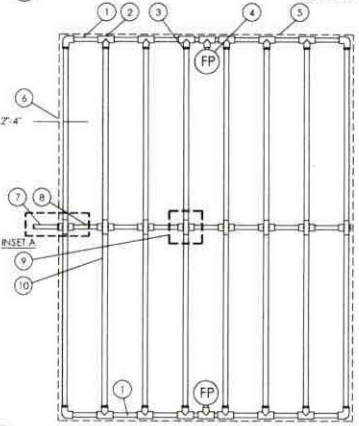


- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARBS X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 4 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFD FLUSH POINT"
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2'-4" FROM PERIMETER OF AREA
- 7 ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE
- 8 PVC SUPPLY HEADER
- 9 PVC DRIP MANIFOLD FROM RAIN BIRD CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 10 PVC SCH 40 TEE OR EL

Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	340	220	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

- NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
 2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
 3. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

1 XFD ON SURFACE DRIPLINE END FEED LAYOUT
 SCALE: NTS

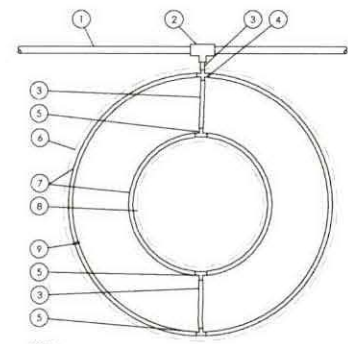


- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARBS X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 4 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFD FLUSH POINT"
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2'-4" FROM PERIMETER OF AREA
- 7 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 8 PVC SUPPLY MANIFOLD
- 9 CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL) SEE INSET A
- 10 ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL)
- 11 BARBS X FEMALE FITTING: RAIN BIRD XFD-TA-075 FITTING
- 12 3/2" PVC NIPPLE, LENGTH AS NECESSARY

Inlet Pressure psi	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	340	220	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

- NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
 2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
 3. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

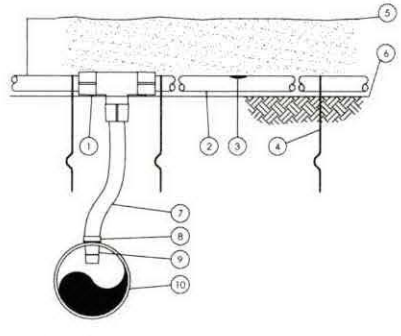
3 XFD ON SURFACE DRIPLINE CENTER FEED LAYOUT
 SCALE: NTS



- 1 PVC DRIP MANIFOLD PIPE
- 2 PVC SCH 40 TEE OR EL
- 3 RAIN BIRD XF SERIES BLANK TUBING
- 4 BARBS CROSS INSERT FITTING: RAIN BIRD XFD-CROSS
- 5 BARBS TEE INSERT FITTING: RAIN BIRD XFF-TEE
- 6 PROJECTED CANOPY LINE OF TREE
- 7 ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (PLACE AS SHOWN (LENGTH AS REQUIRED))
- 8 ROOT BALL
- 9 TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED. SEE NOTES 2-3 BELOW)

- NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE AND TREE CANOPY. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
 2. PLACE TIE-DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
 3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

2 XFD ON SURFACE DRIPLINE AROUND TREE
 SCALE: NTS



- 1 EASY FIT COMPRESSION TEE: RAIN BIRD MDCFT-EE
- 2 ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE
- 3 INLINE DRIP EMITTER OUTLET
- 4 TIE-DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (TYPICAL)
- 5 MULCH
- 6 FINISH GRADE
- 7 RAIN BIRD XF SERIES BLANK TUBING
- 8 RATCHET CLAMP (INCLUDED WITH ADAPTER)
- 9 INSERT ADAPTER FOR PVC PIPE: RAIN BIRD XFD-INVPC
- 10 PVC LATERAL PIPE MINIMUM 1/2" IN DIAMETER

- NOTES:
1. PLACE TIE-DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
 2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

4 XFD ON SURFACE DRIPLINE INSERT ADAPTER
 FOR 1-1/2" OR LARGER PVC SCALE: NTS

Revision	By	App'd	Date

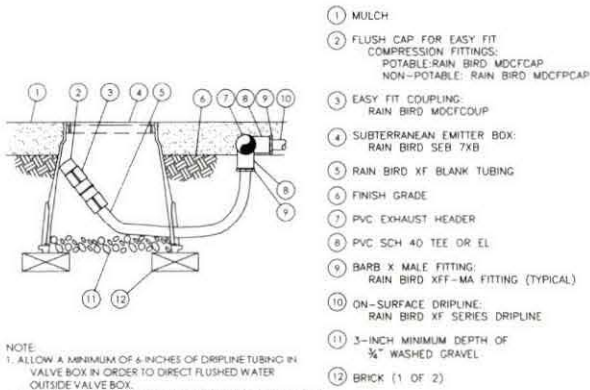
KEVIN G. MANGAN, RLA LA 0001337
 Landscape Architect FL LIC. No.

Client/Project
 CITY OF NAPLES

WATER QUALITY IMPROVEMENTS
 AT THE COVE OUTFALL

IRRIGATION DETAILS

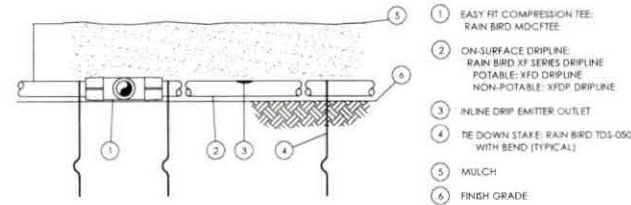
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177310582	NTS	
Project Phase	Sheet	Drawing No.



NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

1 XFD ON SURFACE DRIPLINE FLUSH POINT FOR 1-1/2" OR LARGER PVC

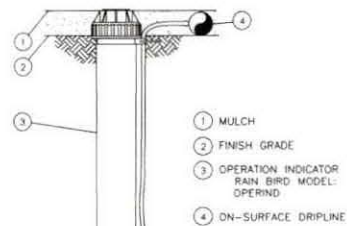
SCALE: NTS



NOTES:
1. PLACE TE-DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

2 XFD ON SURFACE DRIPLINE AT GRADE

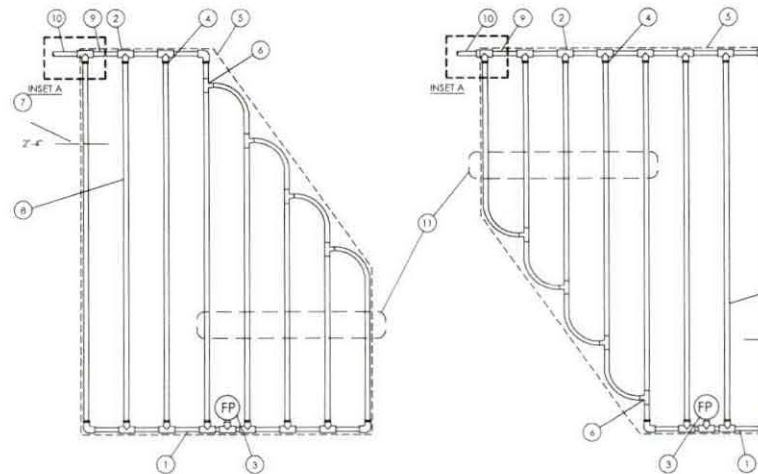
SCALE: NTS



NOTE:
1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 1/4 PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

3 XFD ON SURFACE DRIPLINE OPERATION INDICATOR

SCALE: NTS



NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. WHEN USING 1/2"MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

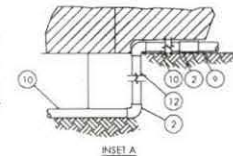
4 XFD ON SURFACE DRIPLINE IRRIGULAR SHAPED LAYOUT

SCALE: NTS

- PVC EXHAUST HEADER
- PVC SCH 40 TEE OR EL (TYPICAL)
- FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "YD FLUSH POINT"
- BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- PERIMETER OF AREA
- BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFF-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
- PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL)
- PVC SUPPLY MANFOLD
- PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- PVC SCH 40 RISER PIPE

XFD Dripline Maximum Lateral Lengths (Feet)

Inlet Pressure psi	12" Spacing		16" Spacing		24" Spacing	
	Normal Flow (gph)	Max Flow (gph)	Normal Flow (gph)	Max Flow (gph)	Normal Flow (gph)	Max Flow (gph)
15	273	155	314	230	424	322
20	318	169	353	294	508	368
30	360	200	413	350	586	414
40	393	255	465	402	652	474
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