SHERIFF VEHICLE STORAGE GARAGE

INVITATION TO BID (ITB) Bid No. NC 19-024

Nassau County Board of County Commissioners Nassau County, Florida



PROJECT MANUAL CONTAINING BIDDING REQUIREMENTS CONTRACTOR'S PROPOSAL AGREEMENT GENERAL CONDITIONS SUPPLEMENTARY CONDITIONS AND SPECIFICATIONS

AUGUST 2019

PROJECT MANUAL

CONTAINING

BIDDING REQUIREMENTS

CONTRACTOR'S PROPOSAL

AGREEMENT

GENERAL CONDITIONS

SUPPLEMENTARY CONDITIONS

AND SPECIFICATIONS

FOR

SHERIFF VEHICLE STORAGE GARAGE
Bid Number NC19-024

Prepared for:

BOARD OF COUNTY COMMISSIONERS
Nassau County, Florida

Bid Documents AUGUST 2019

SHERIFF VEHICLE STORAGE GARAGE

TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

Section 00 11 10 - Advertisement for Bids

Section 00 21 15 - Instructions to Bidders

Section 00 41 15 - Bid Form

Section 00 43 15 - Bid Bond

Section 00 43 35 - Tabulation of Subcontractors & Suppliers

Section 00 44 55 - Florida Trench Safety Act Certification

Section 00 45 13 - Statement of Bidder's Qualifications

Section 00 45 19 - Non-collusion Affidavit

Section 00 45 20 - Drug-Free Workplace Certificate

Section 00 45 30 - Sworn Statement under Section 287.133(3)(a), Florida Statutes, on Public Entity Crimes

Section 00 45 35 - Bidder's Statement of Disputes, Litigation, Arbitration, and Surety Completion, Last Three (3) Years

Section 00 51 00 - Notice of Award

Section 00 52 15 - Agreement

Section 00 55 00 - Notice to Proceed

Section 00 61 15 - Performance Bond

Section 00 61 16 - Payment Bond

Section 00 62 76 - Application and Certificate for Progress Payment

Section 00 63 15 - Contractor's Request for Information

Section 00 63 36 - Field Order

Section 00 63 49 - Work Change Directive

Section 00 63 63 - Change Order Request Form

Section 00 65 16 - Certificate of Substantial Completion

Section 00 65 19 - Certificate of Final Completion

Section 00 65 20 - Waiver and Release of Lien upon Progress Payment

Section 00 65 21 - Waiver and Release of Lien upon Final Payment

Section 00 72 15 - General Conditions

Section 00 73 15 - Supplementary Conditions

DIVISION 01 - GENERAL REQUIREMENTS

Section 01 11 00 - Summary of Work

Section 01 22 50 - Measurement and Payment

Section 01 31 19 - Project Meetings

Section 01 33 00 - Submittal Procedures

Section 01 41 23 - Permits and Fees

Section 01 45 00 - Quality Control

Section 01 50 00 - Temporary Facilities and Controls

Section 01 55 26 - Traffic Control

Section 01 60 00 - Product Requirements

Section 01 71 23 - Field Engineering

Section 01 77 00 - Closeout Procedures

ATTACHMENT A

Plans and Drawings

ATTACHMENT B

Permits and Other Documentation

ATTACHMENT C

Nassau County As-Built requirements

EXHIBIT 1

General Information and Minimum Insurance Requirements

DIVISION 00

PROCUREMENT & CONTRACTING REQUIREMENTS

SECTION 00 11 10

ADVERTISEMENT FOR BIDS

PROJECT: Sheriff Vehicle Storage Garage

Bid Number NC19-024 Nassau County, Florida

COUNTY: Board of County Commissioners

Nassau County, Florida

96135 Nassau Place, Suite 1

Yulee, Florida 32097

ENGINEER: CPH, INC

500 WEST FULTON STREET SANFORD, FL 32771

THERE WILL BE NO PRE-BID MEETING/CONFERENCE FOR THIS PROJECT

BID DEADLINE: SEPTEMBER 11, 2019 AT 4:00 P.M.

BID OPENING: SEPTEMBER 12, 2019 AT 10:00 A.M., OR SOON THERE AFTER

Robert M. Foster Justice Center

Office of Ex-Officio Clerk

76347 Veterans Way, Suite 456

Yulee, Florida 32097

1.0 WORK DESCRIPTION

This project consists of the construction of a nine thousand five hundred seventy six square foot (9,576 sq.ft) metal storage building for the Sheriff's Administration Facility located at 77151 Citizens Circle in Yulee, Florida. The work to be performed is generally described as construction and includes:

- ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, CONCRETE
- ALL ELECTRICAL WILL BE HANDLED BY THE COUNTY AND IS EXCLUDED FROM THIS ITB.

It is understood that there are existing building design(s) that are prefabricated near to the size, shape, and overall layout as the building plans submitted with this ITB. If the plan would provide a substantial reduction in cost to the County the vendor may submit the plan with pricing in lieu of the plan contained in the ITB. Any plan submitted as a substitute must previously be certified as a permitted design for

construction in Nassau County or must be certified through County Planning before the bid will be tendered. Nassau County reserves the right to reject any substitute plan without cause.

The design plans are self-explanatory, Bidder will be bidding on both the Civil Site plan and Building plan as a single Lump Sum project. County will not accept a bid that does not include both. All building materials shall meet or exceed the specifications provide within the plans (attachments). All load ratings, wind speed ratings, along with concrete, plumbing, and metal specifications will meet or exceed specifications. Any plan submitted as a prefabricated substitute must meet or exceed the established plan specifications and be approved by the County.

All work shall be in accordance with the construction drawings, specifications, and contract documents.

2.0 RECEIPT OF BIDS

ALL BIDDERS must be qualified for the type of work for which the BID is submitted. **Bidders should note** that all bids must be delivered to the clerk's office. **Bidders must allow ample time to pass through the County security system when entering the building.** BIDS must be enclosed in an opaque envelope and marked:

SHERIFF VEHICLE STORAGE GARAGE BID NUMBER: NC19-024

BIDS SHALL BE ADDRESSED TO:

Board of County Commissioners, Nassau County Office of the Ex-Officio Clerk 76347 Veterans Way, Suite 456 Yulee, Florida 32097

3.0 CONTRACT DOCUMENTS

The CONTRACT DOCUMENTS, consisting of ADVERTISEMENT FOR BIDS, INFORMATION FOR BIDDERS, BID, BID BOND, AGREEMENT, GENERAL CONDITIONS, SUPPLEMENTAL GENERAL CONDITIONS (IF APPLICABLE), PAYMENT BOND, PERFORMANCE BOND, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, SPECIAL CONDITIONS and ADDENDA, may be examined at the following location:

Contract Management 96135 Nassau Place Suite 1 Yulee, Florida 32097

There are two ways to download the ITB documents. The documents are available on Onvia Demandstar at http://www.demandstar.com or you can download them from the County's Box.net site below:

https://app.box.com/s/wc6zmlih2nzqls6edswmu9s4drhneq7w

If you download the documents from the County's Box.net site, be sure to fill out the "Plan Holder Registration" form and return it back to Contract Management, as instructed on the registration form.

4.0 BONDS (BID, PERFORMANCE AND PAYMENT)

BIDS must be accompanied by a Certified Check or BID BOND of a reputable bonding company authorized to do business in the State of Florida in the amount of five percent (5%) of the total amount of the BID to guarantee that the Contractor will enter into a Contract in the form prescribed and will provide the required bond.

The successful BIDDER(s) must provide an acceptable contract PERFORMANCE BOND in the amount of one hundred percent (100%) of the Contract Price, and a PAYMENT BOND in the amount of one hundred percent (100%) of the Contract Price.

5.0 BID WITHDRAWAL

No BIDS may be withdrawn for a period of ninety (90) days after closing time scheduled for receipt of BIDS.

6.0 RIGHT TO REJECT

The COUNTY reserves the right to reject any and all BIDS and waive all informalities in whole or in part, with or without cause, and/or to accept the bid that, in its best judgment, will be for the best interest of Nassau County, Florida.

7.0 PUBLIC ENTITY CRIME

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

8.0 INFORMATION CONTACT

For further information or clarification, contact Grayson Hagins, Contract/Purchasing Manager at (904) 530-6040 or ghagins@nassaucountyfl.com.

9.0 DISABILITIES REQUIRING ACCOMMODATION

Persons with disabilities requiring accommodation in order to participate in this program or activity should contact the Office of the Ex-Officio Clerk to the Board of County Commissioners at (904) 548-4660 or Florida Relay Service at 1-800-955-8770 (v) or 1-800-955-8771 (TDD) at least seventy two hours in advance to request such accommodation.

10.0 PUBLIC MEETINGS AND PUBLIC RECORDS LAWS FOR GOVERNMENT CONTRACTING

Effective July 1, 2012

Pursuant to recent changes in Florida Statutes Chapter 119.071 (General Exemptions from inspection or copying of public records) the bid opening process is temporarily exempt from Public Records requirements, except bids received pursuant to a competitive solicitation for construction or repairs on a public building or public work. Information may be released to the public once the Board provides a notice of intended decision or 30 days after the bid opening, whichever is earlier.

Pursuant to recent changes in Florida Statutes Chapter 286.0113 (General exemptions from public meeting requirements) any portion of a meeting in which negotiations with a vendor is conducted as part of the "competitive negotiation" process at which a vendor makes an oral presentation or answers questions as part of the "competitive solicitation" process are exempt from public meeting requirements until the Board provides notice of an intended decision or until 30 days after bid opening, whichever is earlier. Any portion of a committee meeting at which negotiation strategies are discussed is exempt.

A complete record shall be made of any portion of an exempt meeting; no portion may be held off the record. The recording of and any records presented at the exempt meeting are exempt from FS119.071 until such time as the board provides notice of an intended decision or 30 days after opening the bids, proposals or final replies.

Please refer to Florida Statutes Chapter 119.071, Chapter 255.0518 and Chapter 286.0113 for further details.

NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS

Justin M. Taylor, Chair

ATTEST:

John A. Crawford Its: Ex-Officio Clerk

An Affirmative Action/Equal Opportunity Employer

SECTION 00 21 15

INSTRUCTIONS TO BIDDERS

ARTICLE 1 DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:
 - A. Bidder The individual or entity who submits a Bid directly to the County.
 - B. Issuing Office The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
 - C. Successful Bidder The lowest responsible Bidder submitting a responsive Bid to whom County (on basis of County's evaluation as herein provided) makes an award.

ARTICLE 2 COPIES OF BIDDING DOCUMENTS

- **2.01** Complete sets of Bidding Documents in the number and for the payment sum, if any, stated in the Advertisement or Invitation to Bid may be obtained from the Issuing Office.
- **2.02** Complete sets of Bidding Documents must be used in preparing Bids; neither the County nor Engineer of Record assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- **2.03** The County and Engineer of Record in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 QUALIFICATIONS OF BIDDERS

3.01 The County may make such investigations as necessary to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the County that such Bidder is properly qualified to carry out the

- obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.
- **3.02** To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for in Bidder's Qualification Statement.

ARTICLE 4 EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions

- A. The Supplementary Conditions identify:
 - Those reports or explorations and tests of subsurface conditions at or contiguous to the Site that Engineer of Record has used in preparing the Bidding Documents.
 - Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer of Record has used in preparing the Bidding Documents.
- B. Copies of the reports and drawings referenced in paragraph 4.01.A will be made available by the County to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to the County and Engineer of Record by the Utility Owner of such Underground Facilities, including the County, or others.

4.03 Hazardous Environmental Conditions

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that Engineer of Record has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by the County to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.06 of the General Conditions has been identified and established in paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
- 4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions other physical conditions and Underground Facilities, and possible changes to Bidding Documents due to offering or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings and Specifications or identified in the Contract Documents to be within the scope of Work appear in paragraph 4.06 of the General Conditions.
- 4.05 On request, the County will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.
- **4.06** Reference is made to Article 7 of the General Conditions for the identification of the general nature of other work that is to be performed at the Site by the County or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, the County will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.
- **4.07** It is the responsibility of each Bidder before submitting a Bid to:

- A. Examine and carefully study the Bidding Documents, including any Addenda and other related data identified in the Bidding Documents;
- B. Visit the site to become familiar with and satisfy Bidder as to the general, local and Site conditions that may affect cost, progress, and performance of the Work;
- C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;
- D. Carefully study all reports of explorations and tests or subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and carefully study all reports and drawings or a Hazardous Environmental Condition, if any, at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;
- E. Obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
- F. Agree at the time of submitting its Bid that no further examinations, investigations. explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- G. Become aware of the general nature of the work to be performed by the County and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. Correlate the information known to Bidder, information and observations obtained from visit to Site, reports and drawings identified in the Bidding

- Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- Promptly give Engineer of Record written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer of Record is acceptable to Bidder and;
- J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of Work.
- **4.08** Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of this contract. Insofar as possible the contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.
- 4.09 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder had given Engineer of Record written notice of all conflicts, errors, ambiguities and discrepancies that Bidder has discovered in the Bidding Documents and written resolutions thereof by Engineer of Record are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 PRE-BID CONFERENCE

5.01 There will not be a pre-bid conference for this ITB.

ARTICLE 6 SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by the County unless otherwise provided in the Bidding Documents.

ARTICLE 7 INTERPRETATIONS AND ADDENDA

7.01 No interpretation of the meaning of the plans, specification or other pre-bid documents will be made to any bidder orally. Every request for such interpretation shall be in writing, addressed to Contract Management and, to be given consideration, must be received at least seven calendar days prior to the date fixed for the opening of bids. Requests for additional information or clarifications will be received by letter, facsimile, or email. The request must contain the submitter's name, address, phone number, facsimile number, and email address and addressed to:

Grayson Hagins, Contract/Purchasing Manager Contract Management 96135 Nassau Place, Suite 1 Yulee, Florida 32097 (904) 530-6040

Email: ghagins@nassaucountyfl.com

- **7.02** Any and all such interpretations and any supplemental instructions will be in the form of written addenda not later than 72 hours prior to the date fixed for the opening of bids.
- **7.03** Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by the County or Engineer of Record.
- 7.04 It is the Bidder's responsibility to ensure that all addenda were received. The bidder should verify with the designated contact person prior to submitting a bid that all addenda have been received. Bidders are required to acknowledge the number of addenda received on the Bid Form, section 3.01 .A. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under the bid as submitted. All addenda so issued shall become part of the contract documents.

ARTICLE 8 BID SECURITY

8.01 A Bid must be accompanied by cash, certified check of the Bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the Bidder as principal and having as surety thereon a surety company approved by the County, in the amount of 5% of the Bid. Cash, checks and bid bonds will be returned to all except the three lowest bidders. After award by the Board, the remaining cash checks or bid bonds will be returned promptly after the County and the accepted bidder have executed the contract, or, if no award has been made within 30 days after the date of the opening of

- Bids, upon demand of the Bidder at any time thereafter, so long as notification of the acceptance of the Bid has not taken place.
- **8.02** Bid security of other Bidders whom the County believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) Substantially Completed and (b) also completed and ready for final payment are set forth in the Bid Form.

ARTICLE 10 LIQUIDATED DAMAGES

10.01 The successful bidder, upon failure or refusal to execute and deliver the contract and bonds required within 10 days after receipt of notice of the acceptance of the bid, shall forfeit to the County, as liquidated damages for such failure or refusal, the security deposited with the bid.

ARTICLE 11 SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute "orequal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by if acceptable to Engineer of Record, application for such acceptance will not be considered by Engineer of Record until after the Effective Date of the Agreement. The procedure for submission of any such application by and consideration by Engineer of Record is set forth in the General Conditions and may be supplemented in the General Requirements.

ARTICLE 12 SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to the County in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to the County a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each Subcontractor, Suppliers, individuals, or entity if requested by the County. If the County or Engineer of Record,

after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual or entity, the County may, before the Notice of Award is given request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

- 12.02 If apparent Successful Bidder declines to make any such substitution, the County may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which the County or Engineer of Record makes no written objection prior to giving of the Notice of Award will be deemed acceptable to the County and Engineer of Record subject to revocation of such acceptance after Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.
- **12.03** Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 PREPARATION OF BID

- **13.01** The Bid Form is included in the Bidding Documents.
- 13.02 Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his/her address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown on the form.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- **13.05** A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

- **13.06** A Bid by an individual shall show the Bidder's name and official address.
- **13.07** A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture must be shown below the signature.
- **13.08** All names shall be typed or printed in ink below the signatures.
- **13.09** The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- **13.10** The address and telephone number for communications regarding the Bid shall be shown
- 13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the State of Florida. The Bidder shall also be a state-certified Contractor in good standing and hold current registration with the Florida Construction Industry Licensing Board of the State Department of Professional Regulation. The type of license must be in a class that is related to the general nature of the construction to be performed on this project. The Bidder's State Contractor's license number for the State of the project shall be shown on the Bid Form.

ARTICLE 14 BASIS OF BID; EVALUATION OF BIDS

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Base Bid schedule. Bidders shall also submit lump sum prices for each of the items comprising the mandatory Bid Additives (or Alternates), if any.
- B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item, including any combination of the Additive Bid Alternates as selected by the County. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Terms and Conditions.
- C. Discrepancies between the multiplication or units or Work and the unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

- D. The County reserves the right to evaluate the bids on any base bidalternate/add on combination that is in the best interest of the County.
- 14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 11.02 of the General Conditions.

ARTICLE 15 SUBMITTAL OF BID

- **15.01** Each prospective Bidder is furnished one copy of the Bidding Documents.
- 15.02 A bid shall be submitted, <u>one original and two copies</u>, no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED".

ARTICLE 16 MODIFICATION AND WITHDRAWAL OF BID

- **16.01** A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time from the opening of Bids.
- 16.02 Any Bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No Bidder may withdraw a bid within 90 days after the actual date of the opening thereof.

ARTICLE 17 OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid. An abstract of the amounts of the base Bids and major alternatives, if any, will be made available to Bidders pursuant to s. 119.071 and s. 255.0518 (effective July 1, 2012), Florida Statutes.
- **17.02** The County may consider informal any Bid not prepared and submitted in accordance with the provisions thereof and may waive any informalities or reject any and all Bids.

ARTICLE 18 BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but the County may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 AWARD OF CONTRACT

- 19.01 The County reserves the right to reject any and/or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced or conditional Bids. The County further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. The County may also reject the Bid of any Bidder if the County believes that it would not be in the best interest of the Project to make an award to that Bidder. The County also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 In evaluating Bids, the County will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating Bidders, the County will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers: and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.05 The County may conduct such investigations as it deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.
- **19.06** If the contract is awarded, the County will award the Contract to Bidder whose Bid is in the best interests of the Project.

ARTICLE 20 CONTRACT SECURITY AND INSURANCE

- 20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth the County's requirements as to performance and payment Bonds and insurance. When the Successful Bidder delivers the executed Agreement to the County, such Bonds must accompany it.
- 20.02 Provisions for indemnification by Contractor is set forth in the Agreement, at Paragraph6.20 of the General Conditions, as amended by the Supplementary Conditions, and are incorporated here by reference.
- 20.03 Simultaneously, with delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond and bonds shall be a duly authorized surety company satisfactory to the County.
- **20.04** Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

ARTICLE 21 SIGNING OF AGREEMENT

- 21.01 When the County gives Notice of Intent to Award to the Successful Bidder, it shall be accompanied by the Agreement. Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to the County prior to the date set for Board approval and execution. The County shall deliver one fully signed counterpart to Successful Bidder.
- 21.02 The Board of County Commissioners has the right to approve or reject the recommendation of award. The Agreement is not valid unless fully executed by the Contractor and the Nassau County Board of County Commissioners.

SECTION 00 41 15

BID FORM

PROJECT IDENTIFICATION: SHERIFF VEHICLE STORAGE GARAGE

Bid Number NC19-024 Nassau County, Florida

BID DEADLINE: SEPTEMBER 11, 2019 BY 4:00 PM

THIS BID IS SUBMITTED TO: Board of County Commissioners, Nassau County

Robert M. Foster Justice Center Office of the Ex-Officio Clerk 76347 Veterans Way, Suite 456

Yulee, Florida 32097

1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the County in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

Company Name (typed or printed):	·	
Business address:		
Phone No.:	Fax No.:	
Contact Name:		
Contact Title:		
Contact email address:		

- 2.01 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of the County.
- **3.01** In submitting this Bid, Bidder represents, as set forth in the Agreement, that:
 - A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged:

Addendum No.	Addendum Date

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.
- E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies. and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect costs, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of the work to be performed by the County and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

- Bidder has given Engineer of Record written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer of Record is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- **4.01** Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over the County.
- **5.01** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

BID TAB SHERIFF VEHICLE STORAGE GARAGE

	Location/Description	Lump Sum Bid
	ide all necessary materials, labor, supervision, insurances	
	permits required for construction of the Sheriff's Vehicle	
	ge Garage as per the technical specifications, plans and	\$
	ings, and terms and conditions detailed in the bid	
	ments.	
	providing Substitute plan, please enter price here and	\$
provi	de more details below.	
LUMP	SUM BID TOTAL	
TOTAL	. AMOUNT	\$
		(Figures)
		(1.60.00)
	(Use Words)	
	,	
	(Substitute Plan Details)	
All sne	ecific cash allowances are included in the price(s) set forth	ahove and have been computed in
		above and have been compared in
accord	dance with paragraph 11.02 of the General Conditions.	
6.01	Bidder agrees that the Work will be substantially comple	te within calendar days after
	the date when the Contract Times commence to run as p	provided in paragraph 2.03 of the
	General Conditions, and completed and ready for final p	ayment in accordance with paragraph
	14.07.B of the General Conditions within calend	
	completion. Total contract time shall be calenda	
	beyond substantial completion, a day will be removed fr	om final completion so the total days
	equal calendar days.	

- **6.02** Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.
- **7.01** The following documents are attached to and made a condition of this Bid:
 - A. Bid Security in the form of a certified check of Bid Bond (Section 00 43 15)
 - B. Tabulation of Subcontractors & Suppliers (Section 00 43 35)
 - C. Florida Trench Safety Act Certification (Section 00 44 55)
 - D. Bidder's Qualification Statement (Section 00 45 13)
 - E. Non-collusion Affidavit (Section 00 45 19)
 - F. Drug-Free Workplace Certificate (Section 00 45 20)
 - G. Public Entity Crimes Statement
 - H. Statement of Disputes, Litigation & Surety Completion
 - I. Certificate of Insurance
- **8.01** The terms used in this Bid with initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SUBMITTED	on, 20	
State Contr	actor License No	·
If Bidder is:		
An Individu	<u>al</u>	
Nar	ne (typed or printed):	
Ву:		
	(Individual's S	Signature)
Doi	ng business as:	
	iness address:	
Pho	one No.:	Fax No.:
A Partnersh	i <u>p</u>	
Par	tnership Name:	
Ву:		
	(Signature of general partner	- attach evidence of authority to sign)
Nar	ne (typed or printed):	
Bus	iness address:	
Pho	one No.:	Fax No.:

	<u> </u>			
А	Cor	nor	'atı	იn

Corporation Name:	(SEAL)		
State of Incorporation:			
Type (General Business, Professional, Service, Limited Liability):			
Ву:			
(Signature - attach evidence of authority to sig	n)		
Name (typed or printed):			
Title:	(CORPORATE SEAL)		
Attest			
(Signature of Corporate Secretary)			
Business address:			
Phone No.: Fax No.:			
Date of Qualification to do business is			

A Joint Venture

Joint Venture Name:	
Ву:	
(Signature of joint venture p	partner - attach evidence of authority to sign)
Name (typed or printed):	
Title:	
Phone No.:	Fax No.:
Joint Venture Name:	
Ву:	
(Signature - attach	evidence of authority to sign)
Name (typed or printed):	
Title:	
Business address:	
Phone No.:	Fax No.:
Phone and FAX Number, and Addre	ess for receipt of official communications:

(Each joint venture must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in a manner indicated above.)

SECTION 00 43 15

BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER (Name and Address):	
SURETY (Name and Address of Principal Place of E	Business):
OWNER (Name and Address):	
BID	
Bid Due Date: Project (Brief Description Including Locati	on):
BOND	
Bond Number:	
Date (Not later than Bid due date):	
Penal Sum:	
(Words)	(Figures)
Surety and Bidder, intending to be legally bound he side hereof, do each cause this Bid Bond to be duagent, or representative.	nereby, subject to the terms printed on the reverse ly executed on its behalf by its authorized officer,
BIDDER	SURETY
(Seal)	(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
Ву:	Ву:
Signature and Title	Signature and Title
	(Attach Power of Attorney)
Attest:	Attest:
Signature and Title	Signature and Title

Note: Above addresses are to be used for giving required notice.

DAMAGES FORM

- 1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to the County upon default of Bidder any difference between the total amount of Bidder's Bid and the total amount of the Bid of the next lowest, responsible Bidder who submitted a responsive Bid as determined by the County for the work required by the Contract Documents, provided that:
 - 1.1. If there is no such next Bidder, and the County does not abandon the Project, then Bidder and Surety shall pay to the County the penal sum set forth on the face of this Bond, and
 - 1.2. In no event shall Bidder's and Surety's obligation hereunder exceed the penal sum set forth on the race of this Bond.
- 2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by the County) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
- 3. This obligation shall be null and void if:
 - 3.1. The County accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by the County) the executed Agreement required by the Bidding Documents arid any performance and payment bonds required b) the Bidding Documents, or
 - 3.2. All Bids are rejected by the County, or
 - 3.3. The County fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
- 4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from the County, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount clue.
- 5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by the County and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

- 6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
- 7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the slate in which the Project is located.
- 8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
- 9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
- 10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
- 11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 00 43 35

TABULATION OF SUBCONTRACTORS & SUPPLIERS

The undersigned states that the following is a full and complete list of the proposed subcontractors and suppliers on this Project and the class of work to be performed by each, and that such list will not be added to nor altered without written consent to the Owner through the Engineer.

	SUBCONTRACTOR OR SUPPLIER	CLASS OF WORK OR MATERIAL
	AND ADDRESS	
1		
_		
2	-	
-		
2		
3		
_		
4.		
_		
5		
_		
6		
-		
7.		
' · -		
-		
	BIDDER:	
	Bv:	
	Name:	
	Title:	
	Date:	

SECTION 00 44 55

FLORIDA TRENCH SAFETY ACT CERTIFICATION

Bidder acknowledges that included in the various items of the proposal and in the Total Bid Price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) as modified October 1, 2008. The Bidder further identifies the costs to be summarized below:

	Cost	
1. Trench Safety Act Compliance	\$	
2. Special Shoring	\$	
Identify method of compliance for Item #	‡1:	
Identify or attach a copy of Special Shorin	ng requirements for Item	ı #2:
The undersigned certifies that he/she is t for this project, and hereby gives written applicable trench safety standards specific Florida, 90-96.	assurance that Contract	or will comply with the
BIDDER:		
Ву:		
Name:		
Title:		
Sworn to and subscribed before me this _	day of	, 20
Notary Public		
My Commission Expires:		

SECTION 00 45 13

STATEMENT OF BIDDER'S QUALIFICATIONS

To:	Project:
Date	
ques the l	lowing experience record, as of date shown, shall be submitted to the County with the Bid Formons shall be answered fully. Bidders who have qualified to bid on other projects for this County with 12 months need not resubmit this form unless specifically requested by the County. The conterm will be considered confidential to the extent allowed by applicable laws and regulations.
Nam	of Bidder:
Busii	ss Address:
	Street
	City State Zip Code
1.	Number of years in business as a Contractor under the present:
	Business Name
	As Principal Contractor As a Sub-Contractor
2.	Class of work you are equipped to perform:
3.	Class of work you usually sublet:
4.	Have any members of your concern ever operated under any other business name? If so, give details:
5.	Have you ever failed to qualify as a responsible bidder? If so, give details.
6.	Have you ever refused to enter into a contract after the award is made to you? If so, give details
7.	Have you ever failed to complete any work? If so, give details:

		ncial institution ever ex	•		·			
	Give name and address of the County, type of work, and the contract amount of at least three projects completed in the last three years:							
	(2	L)	(2)		(3)			
Project C)wner:							
Owner P Manager				_				
Email:								
Phone N	o:							
Address:				_				
City, Stat	e, Zip:							
Type of V								
Contract	Amt: \$	\$		\$				
	Give name and addres	ss of the County, type of	work, and contract ar	mount of pro	ojects now in proces			
	Name	Addr	ess Typ	e of Work	Contract Amoun			
A					\$			
В					\$			
c		_			\$			
D					\$			
E					\$			
	ndicate your experier Questions 9 and 10, a	nce in the construction o	of work similar to this p	oroject (if no	t demonstrated by			
_								
-								
12. (Give construction exp	erience of principal indi	viduals of your organiz	ation:				
	Name	Position	Years of Experience	e Size ar	nd Type of Work			

A					
В					
C					
Are there a	any judgments, s	suits, or claims pe	ending against yo	ou? If so, give de	tail
Does your	organization ope	erate as a corpor	ation, partnersh	nip, or individual?	
A. If a corp	oration, when ir	ncorporated:			
In which st	ate incorporated	d:			
	title, and addres				
	Name		Title	Address	6
(1)					
General, Li	mited, or Associ	ated?			
List name,	address, and pro	oportional intere	st of parties:		
1	Name	Address		Proportional Inte	res
(1)					
(5)					

15. If requested prior to award of contract, provide to the County an accurate, up-to-date, condensed financial statement on a separate sheet attached to these qualifications of the individual, copartnership, or corporation.

The undersigned hereby declares and certifies that the foregoing is a true statement of the experience and condition of the organization, therein first given and that any agency or individual herein named authorized to supply any information as may be deemed necessary to verify this statement.

Signed	
Title	
Subscribed and sworn to before r	me this
day of	, 20
	Notary Public
C	ounty,
My Commission expires	

E.

this affiant.

SECTION 00 45 19

NONCOLLUSION AFFIDAVIT

ments for the work titled "," ments shall be provided to the County.
ments shall be provided to the County.
,

, being first duly sworn,
(officer's title)
hat has submitted the attached bid;
nformed respecting the preparation and contents of the attached bid and of the circumstances respecting such bid;
genuine and is not a collusive or sham bid;
said Bidder nor any of its officers, partners, owners, agents, representative or parties in interest, including this affiant, has in any way colluded, connived, or agreed, directly or indirectly with any other Bidder, firm, or ubmit a collusive or sham bid in connection with the contract for which the d has been submitted or to refrain from bidding in connection with such has in any manner, directly or indirectly, sought by agreement or collusion ication or conference with any other Bidder, firm, or person to fix the price the attached bid or of any other Bidder, or to fix any overhead, profit, or at of the bid price or the bid price of any other Bidder, or to secure through n, conspiracy, connivance, or unlawful agreement any advantage against the or any person interested in the proposed contract; and
t rn & e , colin rn o

The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners: employees, or parties in interest, including

	(Signed) _	 	
Subscribed and sworn to before me thisday of	20		
Notary Public			
My commission expires			

SECTION 00 45 20

DRUG FREE WORKPLACE CERTIFICATE

I, the undersigned, in accordance with Florida Statute 287.087, hereby certify that	
	c c: \
(print or type na	me of firm)

- Publishes a written statement notifying that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in the workplace named above, and specifying actions that will be taken against violations of such prohibition.
- Informs employees about the dangers of drug abuse in the workplace, the firm's policy of maintaining a drug free working environment, and available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug use violations.
- ➤ Gives each employee engaged in providing commodities or contractual services that are under bid or proposal, a copy of the statement specified above.
- Notifies the employees that as a condition of working on the commodities or contractual services that are under bid or proposal, the employee will abide by the terms of the statement and will notify the employer of any conviction of, plea of guilty or nolo contendere to, any violation of Chapter 1893, or any controlled substance law of the State of Florida or the United States, for a violation occurring in the work place, no later than five (5) days after such conviction, and requires employees to sign copies of such written statement to acknowledge their receipt.
- Imposes a sanction on, or requires the satisfactory participation in, a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
- Makes a good faith effort to continue to maintain a drug free work place through the implementation of a drug free work place program.

corporation complies fully with the requirements set forth h	
	Authorized Signature
_	Date Signed
State of:	
County of:	
Sworn to and subscribed before me this day of	, 20
Personally known or Produced Identification	
	(Specify type of Identification)
Notary Public	
My commission expires	

SECTION 00 45 30

SWORN STATEMENT UNDER SECTION 287.133(3)(a), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

(To be signed in the presence of a notary public or other officer authorized to administer oaths.)

STAT	E OF			
COU	NTY OF _			
by m		re me, the undersigned authori- uly sworn, made the following s	ty, personally appearedtatement:	, who being
	1.	The business address of	(firm name of Bidder/Contractor)	
is				
	2.	My relationship to		
is			(firm name of Bidder/Contractor)	
		(relationship such as sole pro	oprietor, partner, president, vice president)	

- 3. I understand that a public entity crime as defined in Section 287.133 of the Florida Statutes includes a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity in Florida or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or such an agency or political subdivision and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
- 4. I understand that "convicted" or "conviction" is defined by the statute to mean a finding of guilt or a conviction of a public entity crime, with or without adjudication or guilt, in any federal or state trial of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
- 5. I understand that "affiliate" is defined by the statute to mean (1) a predecessor or successor of a person or a corporation convicted of a public entity crime; or (2) an entity under control of any natural person with is active in management of the entity and who has been convicted of a public entity crime; (3) those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate; or (4) a person or corporation who knowingly

entered into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months.

6. Neither the Bidder/Contractor nor any officer, director, executive, partner, shareholder, employee, member or agent who is active in the management of the Bidder/Contractor, nor any affiliate of the Bidder/Contractor, has been convicted of a public entity crime subsequent to July 1, 1989.

(Draw a line through Paragraph 6 if Paragraph 7 below applies.)

7. There has been a conviction of a public entity crime by Bidder/Contractor, or an officer, director, executive, partner, shareholder, employee, member or agent of the Bidder/Contractor who is active in the management of the Bidder/Contractor or an affiliate of the Bidder/Contractor. A determination has been made pursuant to 287.133(3) by order of the Division of Administrative Hearings that it is not in the public interest of the name of the convicted person or affiliate to appear on the convicted vendor list. The name of the convicted person or affiliate is
A copy of the order of the Division of Administrative Hearings is attached to this statement.
(Draw a line through Paragraph 7 if Paragraph 6 above applies.)
(Signature)
Sworn to and subscribed before me in the State and County first mentioned above on the
day of, 20
Notary Public (affix seal
My commission expires

My commission expires :

SECTION 00 45 35

BIDDER'S STATEMENT OF DISPUTES, LITIGATION, ARBITRATION, AND SURETY COMPLETION, LAST THREE (3) YEARS

Name and Phone of Owner or Engineer Date of Name and Address of Representative **Project** Owner or Engineer Contract Amount <u>Status</u> (Signed) _____ Subscribed and sworn to before me this $_$ ____, 20 Print Name _____ Notary Public

SECTION 00 51 00

NOTICE OF AWARD

TO:											
	CONTRACT	OR			-						
	ADDRESS				-						
	CITY	STATE	ZIP		-						
PROJEC	T:										_
				NA	ME						
accept work	the Bid subr in response	nitted by _ e to its	County Comm Invitation to 2019. e Bid has been	Bid	(ITB),	Bid	No.	_ for t NC19	he abo -024,	ove desc opened	ribed I on
and Cer and rec contrac The Cle	tificate(s) of eipt of the fu tor. The bor	Insurance, vally executed and smust be dones not access to the dones not access to the dones are dones access to the done access to	e enclosed agr within ten (10) d agreement. T recorded with cept company	calend The bo In the	dar days nds are same t	from requi	the d red to O) day	ate of the second secon	this No corded d refer	otice of A at cost t enced he	ward o the erein.
the date	e of this Notic	ce, the Cour	and the Certific nty will be entit doned and void	led to						-	
Certific Officio	ates to the I Clerk, 76347	Nassau Cou Veterans W	cknowledged on the Board of Color of Co	County rida 32	/ Comn 2097. A	nissio Copy	ners, o must	c/o Jol be sen	nn A. (it to Na	Crawford	d, Ex-
Dated t	his	day		, 20	·						
	•	·	Commissione								
- · ·											

ACCEPTANCE OF NOTICE

Receipt of the	above Notice of Awa	rd is hereby acknowledged by	
this	day of	, 20	
DV.		TITLE.	
BY:		TITLE:	

SECTION 00 52 15

SAMPLE AGREEMENT (subject to change)

THIS AGREEMENT is dated as of the	day of	in the year 2019 by and between
		(County) and
		(Contractor).
County and Contractor, in consideration	of the mutual cove	nants hereinafter set forth, agree as follows:

ARTICLE 1 - WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

This project consists of the construction of a nine thousand five hundred seventy six square foot (9,576 sq.ft) metal storage building for the Sheriff's Administration Facility located at 77151 Citizens Circle in Yulee, Florida. The work to be performed is generally described as construction and includes:

- ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, CONCRETE
- ALL ELECTRICAL WILL BE HANDLED BY THE COUNTY AND IS EXCLUDED FROM THIS ITB.

It is understood that there are existing building design(s) that are prefabricated near to the size, shape, and overall layout as the building plans submitted with this ITB. If the plan would provide a substantial reduction in cost to the County the vendor may submit the plan with pricing in lieu of the plan contained in the ITB. Any plan submitted as a substitute must previously be certified as a permitted design for construction in Nassau County or must be certified through County Planning before the bid will be tendered. Nassau County reserves the right to reject any substitute plan without cause.

The design plans are self-explanatory, Bidder will be bidding on both the Civil Site plan and Building plan as a single Lump Sum project. County will not accept a bid that does not include both. All building materials shall meet or exceed the specifications provide within the plans (attachments). All load ratings, wind speed ratings, along with concrete, plumbing, and metal specifications will meet or exceed specifications. Any plan submitted as a prefabricated substitute must meet or exceed the established plan specifications and be approved by the County.

All work shall be in accordance with the construction drawings, specifications, and contract documents.

ARTICLE 2 - THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

SHERIFF VEHICLE STORAGE GARAGE Bid Number NC19-024 Nassau County, Florida

ARTICLE 3 - ENGINEER OF RECORD

3.01 The Project has been designed by <u>CPH, INC.</u>, who is to act as the County's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer of Record in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01 Time of the Essence

- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- B. The Contractor hereby agrees to commence work under this contract on a date to be specified in written "Notice to Proceed" of the County and to fully complete the project as specified in Section 4.02 of this Agreement.

4.02 Days to Achieve Substantial Completion and Final Payment

The Work will be sub	stantially completed within	days after the date	when the Contract
Times commence to	run as provided in Paragraph 2.0	3 of the General Con	ditions, and
completed and ready	y for final payment in accordance	with Paragraph 14.0	7 of the General
Conditions within	calendar days from the date	of substantial comple	etion. Total contract
time shall be c	alendar days; for everyday the w	ork goes beyond sub	stantial completion, a
day will be removed	from final completion so the total	al days equal ca	alendar days.

4.03 Liquidated Damages

The successful bidder, upon failure or refusal to execute and deliver the contract and bonds required within 10 days after receipt of notice of the acceptance of the contract, shall forfeit to the County, as liquidated damages for such failure or refusal, the security deposited with the bid.

ARTICLE 5 - CONTRACT PRICE

- 5.01 The County shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraph 25 "Payments to Contractor" of the General Conditions and Paragraphs 5.01A and 5.01 B below:
 - A. For all Work, at the prices stated in the Contractor's Bid, attached hereto as an exhibit.

	(use words)	(figures)
	indicated in Contractor's Bid (attached hereto as an	, ,
	separately identified item of Unit Price Work times t	he estimated quantity of that item as
В.	For all Unit Price Work, an amount equal to the sum	of the established unit price for each

As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classification are to be made by Engineer of Record as provided in paragraph 9.07 of the General Conditions. The final payment for all Unit Price Work shall be an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual completed and accepted quantity of each item. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by the County as provided in the General Conditions.

6.02 Progress Payments; Retainage

A. The County shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment once each month during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

- 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as Engineer of Record may determine or the County may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions:
 - a. 90% percent of the Work completed (with the balance being retainage)
 - b. <u>90%</u> percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- Upon Substantial Completion, the County shall pay an amount sufficient to increase
 total payments to Contractor to 95% percent of the Contract Price (with the balance
 being retainage), less such amounts as Engineer of Record shall determine or the County
 may withhold, for incomplete work and for other items in accordance with Paragraph
 14.02 of the General Conditions.

6.03 Final Payment

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, the County shall pay the remainder of the Contract Price as recommended by Engineer of Record as provided in said Paragraph 14.07.
- B. Final Release of Retainage and acceptance of the project must be approved by the Board of County Commissioners.

ARTICLE 7 - INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 0 percent per annum.

ARTICLE 8 - CONTRACTOR'S REPRESENTATIONS

- **8.01** In order to induce the County to enter into this Agreement Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.
- E. Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Bidding Documents, and safety precautions and programs incident thereto.
- F. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by the County and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. Contractor has given Engineer of Record written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer of Record is acceptable to Contractor.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement
 - 2. Project Manual (enumerated as follows):
 - a. Project Manual Table of Contents
 - b. General Conditions
 - c. Supplementary Conditions
 - d. Technical Specifications
 - e. Appendixes
 - f. Addenda, if any
 - 3. Exhibits to this Agreement (enumerated as follows):
 - a. General Information and Minimum Insurance Requirements
 - 4. Documentation submitted by Contractor prior to Notice of Award
 - 5. Drawing Index, if any
 - 6. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Payment Bond
 - b. Performance Bond
 - c. Certificate of Liability Insurance
 - d. Notice to Proceed
 - e. Work Change Directives
 - f. Change Orders
 - g. Certificate of Substantial Completion
 - h. Certificate of Final Inspection
 - i. Certificate of Engineer
 - j. Certificate of Final Completion
 - k. CONTRACTOR'S release of Performance Bond
 - I. Construction Drawings and plans/As-Built Drawings
 - m. Supplemental Agreements
 - n. CONTRACTOR'S Waiver of Lien (Partial)
 - o. CONTRACTOR'S Waiver of Lien (Final and Complete)
 - p. Subcontractor/Vendor's Waiver of Lien (Final and Complete)
 - q. Consent of Surety to Final Payment
 - r. Contractors Insurance Requirements, as set for in the Bid Documents
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

- C. There are no Contract Documents other than those listed above in this Article 9
- D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 Terms

A. Terms used in this Agreement will have the meanings indicated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

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

10.03 Successors and Assigns

A. The County and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the County and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 Other Provisions

A. Public Records Requirement:

The County is a public agency subject to Chapter 119, Florida Statutes. IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT (904) 530-6250, DMOODY@NASSAUCOUNTYFL.COM, 96161 NASSAU PLACE, YULEE, FLORIDA 32097. Under this agreement, to the extent that the contractor is providing services to the County, and pursuant to Section 119.0701, Florida Statutes, the contractor shall;

- Keep and maintain public records required by the public agency to perform the service.
- b. Upon request from the public agency's custodian of public records, provide the public agency 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 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 public agency.
- d. Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of the contractor or keep and maintain public records required by the public agency to perform the service. If the contractor transfers all public records to the public agency 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 public agency, upon request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the County and Contractor have signed this Agreement in triplicate. One counterpart each has been delivered to the County, Contractor, and Engineer of Record. All portions of the Contract Documents have been signed or identified by the County and Contractor or identified by Engineer of Record on their behalf.

This Agreement will be effective on the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver (which is the Effective Date of the Agreement).

CONTRACTOR
Signed:
Title:
Date:
[CORPORATE SEAL]
Attest:
Title:
Address for giving notices:
Phone:FAX:
License
(Where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Owner-Contractor Agreement.)

(If Contractor is a corporation or a partnership, attach evidence of authority to sign.)

SECTION 00 55 00

NOTICE TO PROCEED

TO:					_
	CONT	RACTOR			
	ADDR	ESS			-
	CITY		STATE	ZIP	_
PROJE	CT:	SHERIFF VEHIO Bid Number N Nassau Count	IC19-024	GARAGE	
	e hereb , 20		nmence worl	k in accordanc	ce with the Agreement dated
		ime for Substan encement.	tial Completi	on is	_ consecutive calendar days from the
		ime for Final Co mpletion.	mpletion is _	cons	secutive calendar days from the date of
The Co	ontract t	ime commences	s to run	, 20	·
The da	ate of Su	bstantial Compl	etion is	, 20	·
The da	ate of Fi	nal Completion i	s	, 20	
Nassaı	u Count	y Board of Count	ty Commissic	oners	
BY:					
TITLE:					
DATE:					

You are required to return an acknowledged copy of the Notice to Proceed to The Nassau County Board of County Commissioners, c/o John A. Crawford, Ex-Officio Clerk, 76347 Veterans Way, Suite 456, Yulee, Florida 32097.

ACCEPTANCE OF NOTICE

Receipt of	the above Notic	e to Proceed is hereby ack	nowledged
this	day of	, 20	
BY:			
TITLE:			

Modifications to this Bond Form:

SECTION 00 61 15

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):	SURETY (Name, and Address of Principal Place of Business):
OWNER (Name and Address):	
CONTRACT	
Effective Date of Agreement:	
Amount:	
Description (Name and Location):	
BOND	
Bond Number:	
Date (Not earlier than Effective Date of	
Agreement):	
Amount:	

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRAC	TOR AS PRINCIPAL		SURETY	(
		(Seal)			(Seal)
Contrac	tor's Name and Corporate Seal		Suret	y's Name and Corporate Seal	
Ву:			Ву:		
	Signature			Signature (Attach Power of Attorney)	
	Print Name			Print Name	
	Title			Title	
Attest:			Attest:		
	Signature			Signature	
	Title			Title	

Note: Provide execution by additional parties, such as joint ventures, if necessary.

EJCDC No. C-610 (2007 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

- 1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
- 2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 - 1. Surety in accordance with the terms of the Contract; or
 - 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
- 3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 - 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
- 4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond,

and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

- 5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:
 - 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
 - 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
 - 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.
- 6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.
- 7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.
- 8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- 9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.
- 10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
- 11. Definitions.

- 11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
- 11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
- 11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (Name, Address and Telephone)

Surety Agency or Broker:

Owner's Representative (Engineer or other party):

SECTION 00 61 16 PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):	SURETY (Name, and Address of Principal Place of Business):
OWNER (Name and Address):	
CONTRACT	
Effective Date of Agreement:	
Amount:	
Description (Name and Location):	
BOND	
Bond Number:	
Date (Not earlier than Effective Date of	
Agreement):	
Amount:	
Modifications to this Bond Form:	

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRA	ACTOR AS PRINCIPAL		SURET	Y	
		(Seal)			(Seal)
Contra	actor's Name and Corporate Sea	I	Sure	ty's Name and Corporate Seal	_
Ву:			Ву:		
	Signature			Signature (Attach Power of Attorney)	
	Print Name			Print Name	_
	Title			Title	
Attest:			Attest:		
	Signature			Signature	
	Title			Title	

Note: Provide execution by additional parties, such as joint ventures, if necessary.

EJCDC No. C-615(A) (2007 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

- 1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
- 2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
- 3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
- 4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- 4.2
- 4.3 Claimants who do not have a direct contract with Contractor:
 - 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 - 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 - 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
- 5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
- 6. Reserved.
- 7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
- 8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor

and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

- 9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
- 10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.
- 11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- 12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
- 13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.
- 14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

- 15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*)

Surety Agency or Broker:

Owner's Representative (*Engineer or other*):

SECTION 00 62 76

APPLICATION AND CERTIFICATE FOR PROGRESS PAYMENT

OWNER:	
CONTRACTOR:	
Purchase Order No.:	Project Title:
Engineer/Architect:	
Engineer/Architect Project No.:	Contract Number:
Progress Payment No.:	for Period to
1. Original Contract Sum	\$
2. Net Change by Change Orders	\$
3. Contract Sum to Date (Line 1 + Line 2)	\$
4. Work Completed to Date	\$
5. Amount Retained (Percent)	·
6. Total Earned Less Retainage (Line 4 min	us Line 5)
7. Less Previous Payments	\$
8. CURRENT PAYMENT DUE	\$
CE	RTIFICATION OF CONTRACTOR
account of Work done under the Contract CONTRACTOR'S legitimate obligations incuragement numbered 1 through included and work or otherwise listed in or covered payment free and clear of all Liens, security acceptable to OWNER indemnifying OWNER.	at (1) all previous progress payments received from OWNER on referred to above have been applied on account to discharge rred in connection with Work covered by prior Applications for usive; (2) title of all Work, materials and equipment incorporated in by this Application for Payment will pass to OWNER at time of y interests and encumbrances (except such as are covered by a Bond R against any such Lien, security interest or encumbrance); and (3) a tent is in accordance with the Contract Documents and is not
Contractor By:	Date
(Authorized Representative)	Title

CERTIFICATION OF ENGINEER / ARCHITECT

In accordance with the Contract Documents, based upon on-site observations by the undersigned or duly authorized representatives or assistants, the Engineer / Architect certifies to the Owner that to the best of its knowledge, information and belief, the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED:			\$
(Attach explanation if amount certifi	ied differs from the am	nount applied for)	
ENGINEER / ARCHITECT:			
Ву:			
	(Date)	(Firm)	
AF	FIDAVIT OF CONTRAC	TOR	
STATE OF			
COUNTY OF			
Before me this day personally appeared sworn, deposes and says:			_ who, being first duly
That he is the	_ of		, and the
Contractor on the following described public	works project:		
JOB DESCRIPTION:			
CONTRACTING AUTHORITY: Nassau Cou	inty Board of County C	<u>ommissioners</u>	_
That all persons who furnish labor, supplies on the CONTRACT have been paid, to dat AND FURTHER AFFIANT SAYETH NOT.		subcontractors.	uch improvements set
		J,	
WITNESS my hand and official seal, this	day of	, 20	
		Notary Public	
	1	My Commission Expires	:

Project Title:	County Purchase Order No.:
Progress Payment No :	Engineer / Architect Project No :

Item No.	Pay Item	Description of Item		ORIGINA	AL ESTIM	ATE	PREVIO COMP			1PLETED PERIOD	CC	MPLETED TO	DATE
			Unit	Qty. Bid	Unit Cost	Amount	Quan.	Amount	Quan.	Amount	Quan.	Amount	Percent Complete

CONTRACTOR'S REQUEST FOR INFORMATION

TO:		
	(CONTRACTOR) DATE:	
CONTRACTOR REQUEST FOR INFORM	MATION NO.:	
PROJECT NAME:		
CONTRACT NUMBER:	PURCHASE ORDER NO.:	
QUESTION:		
BY:	DATE:	
REPLY:		
BY:	DATE:	

FIELD ORDER

PROJECT:	REQUEST NO:
CONTRACT NO.:	PURCHASE ORDER NO.:
CONTRACTOR:	
•	ute promptly this Field Order which interprets the Contract nges in the Work without change in Contract Price or Contract
•	Contract Price or Contract Time is required, please submit a wner immediately and before proceeding with this Work.
Field Order:	
Attachments: (Listing of attache	d documents that support description)
1. Work Change Directive No	
2	
3	
4	
BY:	DATE:

WORK CHANGE DIRECTIVE

PROJECT:	REQUEST NO:
CONTRACT NO.:	PURCHASE ORDER NO.:
CONTRACTOR:	
You are directed to proceed promptly wit	th the following change(s):
Description:	
Purpose of Work Directive Change:	<u></u>
Attachments:	
	s) have affected the Contract Price or Contract Time, eon will involve one of the following methods of
Method of determining a change in Contr	ract Price:
[] Time and materials	
[] Unit prices	
[] Cost plus fixed fee [] Other	
Estimated increase (decrease) in Contract	Price: \$
	timated amount is not to be exceeded without further
authorization.	
Method of determining change in Contract	ct Time:
[] Contractor's records	
[] Owner's records	
[] Other	
Estimated increase (decrease) in Contract	: Time: days.

If the change involves an increase, the estimated time is authorization.	s not to be exceeded without further
AUTHORIZED BY:	DATE:

CHANGE ORDER REQUEST FORM

(instructions on 00 63 63-2)	No.
PROJECT	
DATE OF ISSUANCE EFFECTIVE D	ATE
NASSAU COUNTY BOARD OF COUNTY COMMISSIONER	RS
COUNTY Contract / Purchase Order No.: CONTRACTOR-	ENGINEER / ARCHITECT-
You are directed to make the following changes in the Control	
Attachments: (List documents supporting change)	
CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price	Original Contract Times
\$	Ready for Final Payment:(days and dates)
Net change from previous Change Orders Noto No	Net change from previous Change Orders No to No
\$	(days)
Contract Price prior to this Change Order	Contract Times Prior to this Change Order
\$	Substantial Completion:
	Ready for Final Payment:(days and dates)
Net Increase (decrease) of this Change Order	Net Increase (decrease) of this Change Order
\$	(days)
Contract Price with all approved Change Orders	Contract Times with all approved Change Orders
\$	
	Substantial Completion: Ready for Final Payment:
	(days and dates)
RECOMMENDED: APPROVED:	ACCEPTED:
By: By: COUNTY (Authorized	By:Signature) Contractor (Authorized Signature)
Date:	

CHANGE ORDER

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Contract Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating change order items to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed, any effect of a Change Order, thereon, should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order may be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer / Architect / Etc. initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from the County or both.

Once Engineer / Architect / Etc. has completed and signed the form, all copies should be sent to Contractor for approval. After approval by Contractor, all copies should be sent to the County for approval. Engineer should make distribution of executed copies after approval by the County.

If a change only applies to Contract Price or to Contract Times, cross out the part of the tabulation that does not apply.

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:	
Purchase Order No.:	Contract No.:
This Certificate of Substantial Completion app	lies to:
[] All work under Contract [] Portion of v	work described as follows:
• •	been inspected by authorized representatives of the c is hereby declared to be substantially complete in DATE
inclusive, and the failure to include an item in complete all the Work in accordance with the	irrected is attached hereto. This list may not be allit does not alter the responsibility of CONTRACTOR to Contract Documents. The items in the tentative list shall within days of the above date of Substantial
The date of Substantial Completion is the date	e upon which all guarantees and warranties begin.
SIGNED:	
NASSAU COUNTY CONSTRUCTION INSPECTO	R (if applicable)
Ву:	DATE:
NASSAU COUNTY PROJECT MANAGER	
Ву:	DATE:
NASSAU COUNTY DEPARTMENT REPRESENTA	ATIVE
Ву:	DATE:
ENGINEER OF RECORD:	
Ву:	DATE:
CONTRACTOR:	
Bv:	DATE:

TENTATIVE LIST OF ITEMS TO BE COMPLETED OR CORRECTED (PUNCH LIST)

Date:	Contract No.:	Purchase Order No.:
Project:		
This list may no		clude an item does not alter the responsibility of
NO:	<u>ITEN</u>	<u>1:</u>

on:

SECTION 00 65 19

CERTIFICATE OF FINAL COMPLETION

Project:	
Purchase Order No.:	Contract No.:
This Certificate of Final Completion applies to:	
CONTRACTOR and all Work is hereby declared to b	by authorized representatives of the COUNTY and the ecomplete in accordance with the Contract Documents
DATE	
SIGNED:	
NASSAU COUNTY CONSTRUCTION INSPECTOR (if	applicable)
Ву:	DATE:
NASSAU COUNTY PROJECT MANAGER	
Ву:	DATE:
NASSAU COUNTY DEPARTMENT REPRESENTATIVE	Ē
Ву:	DATE:
ENGINEER OF RECORD:	
By:	
CONTRACTOR:	
By:	DATE:

WAIVER AND RELEASE OF LIEN UPON PROGRESS PAYMENT

The undersigned lienor, in consideration of the progress paym	
, hereby waives and releases its lien and right to clain furnished through (date)	n a lien for labor, services or materials
to (customer)	
on the job of (COUNTY property)	
property:	
This waiver and release does not cover any retention of labor, date specified.	services, or materials furnished after the
Dated on , 20	
Lienor's Name	
Address	
Printed	

NOTE: This is a statutory form prescribed by Section 713.20, Florida Statutes.

WAIVER AND RELEASE OF LIEN UPON FINAL PAYMENT

The undersigned lienor, in consideration of the final payment in the amount of \$, hereby waives and releases its lien and right to claim a lien for labor, services or materials		
furnished through (date)	,	
to (customer)		
on the job of (COUNTY property)		
property:		
Dated on, 20	<u> </u>	
Lienor's Name		
Address		
Ву		
Printed		

NOTE: This is a statutory form prescribed by Section 713.20, Florida Statute

DIVISION 01

GENERAL REQUIREMENTS

SECTION 01 11 00

SUMMARY OF WORK

PART 1 THE WORK AND ITS PERFORMANCE

1.01 CHARACTER OF THE WORK

Unless otherwise expressly provided in the Contract Documents, the Work must be performed in accordance with best modern practice, with materials and workmanship of the highest quality to the satisfaction of the County.

1.02 DESCRIPTION OF THE PROJECT

A. The project title is: **Sheriff Vehicle Storage Garage**

Bid Number NC19-024 Nassau County, Florida

B. This project consists of the construction of a nine thousand five hundred seventy six square foot (9,576 sq.ft) metal storage building for the Sheriff's Administration Facility located at 77151 Citizens Circle in Yulee, Florida. The work to be performed is generally described as construction and includes:

- ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, FIRE PROTECTION, CONCRETE
- ALL ELECTRICAL WILL BE HANDLED BY THE COUNTY AND IS EXCLUDED FROM THIS
 ITB.

All building materials shall meet or exceed the specifications provide within the plans. All load ratings, wind speed ratings, along with concrete, plumbing, and metal specifications will meet or exceed specifications. Any plan submitted as a prefabricated substitute must meet or exceed the established plan specifications and be approved by the County.

All work shall be in accordance with the construction drawings, specifications, and contract documents.

C. The specification divisions and drawings are an integrated part of the contract documents and, as such, will not stand alone if used independently as individual sections, divisions, or drawings sheets. The drawings and specifications establish minimum standards of quality for

this project. They do not purport to cover all details entering into the design and construction of materials and equipment.

PART 2 WORKING HOURS

2.01 GENERAL

Work under this contract shall not be performed on County, State and/or national holidays or during such events as the Fernandina Beach Shrimp Festival, Nassau County School System FCAT (as identified at the pre-bid conference), except in time of emergency, and then only under written permission from the County who shall be the sole judge as to the urgency of that situation. Available workdays to perform work will not include night time work, weekend work, or work before 8:00 am. or after 5:00 pm (40 hours per work week).

Should the Contractor deem it necessary to work on Sundays, holidays, or beyond daylight hours in order to comply with his construction schedule or because of an emergency, the Contractor shall request permission of the County. If, in the opinion of the County, the need is bona fide, the contractor will authorize the Contractor to work such hours as may be necessary.

2.02 LANE CLOSURES (If applicable)

Lane closures will be allowed subject to Nassau County's Road Closure Policy.

2.03 REIMBURSEMENT FEES

Should the County approve work time beyond regular hours, the following hourly rates shall be applied as the County's reimbursement of Engineer of Record's fee to be paid by Contractor for expenses defined in Supplemental Conditions SC-6.02.C, SC-6.05.A.2.f, SC-6.17.E., SC-9.05.B and SC-13.03.A. ***FEES WILL BE PROVIDED WITH AN ADDENDUM, THESE ARE NOT CURRENT RATES***

A. Engineer	\$0
B. Project Manager	\$0
C. Construction Administrator	\$0
D. Inspector	\$0
E. Administrative Assistant	\$0
F. Consultant Construction Engineering Inspection (CEI)	

PART 3 ABBREVIATIONS

3.01 ORDINANCES, REGULATIONS, STANDARDS, AND CODES

Reference in the specifications to known standards, codes, specifications, etc., promulgated by professional or technical associations, institutions, and societies, is intended to mean the latest edition of each such standard adopted and published as of the date of the Invitation to Bid on this project except where otherwise specifically indicated. Each such standard referred to shall be considered a part of the specifications to the same extent as if reproduced herein in full. The following is a list of applicable documents that apply to this contract.

American Association of State Highway and Transportation Officials (AASHTO) formerly (AASHO)

American Concrete Institute (ACI)

American Institute of Steel Construction (AISC)

American Iron and Steel Institute (AISI)

American National Standards Institute (ANSI)

American Standards Association (ASA)

American Society of Mechanical Engineers (ASME)

American Society of Testing and Materials (ASTM)

American Water Works Association (AWWA)

American Welding Society (AWS)

Anti-Friction Bearing Manufacturer's Association (AFBMA)

Building Officials and Code Administrators International, Inc. (BOCA)

Construction Specifications Institute (CSI)

Federal Specifications (FS)

Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction, 2013 Edition (Standard Specifications)

Florida Department of Traffic Design Standards 2014 Edition (FDOT Index)

National Bureau of Standards (NBS)

National Electrical Manufacturer's Association (NEMA)

National Fire Protection Association (NFPA)

Portland Cement Association (PCA)

Occupational Safety and Health Act (Public Law 91-596), U.S. Department of Labor (OSHA)

Steel Structures Painting Council (SSPC)

Southern Standards Building Code (SSBC)

Underwriters' Laboratories, Inc. (UL)

United States of America Standards Institute (USASI)

Regulations of Florida Industrial Commission Regarding Safety

All local, state, county, or municipal building codes requirements of the Owner's Insurance

SECTION 01 22 50

MEASUREMENT AND PAYMENT

PART 1 GENERAL

Work under this Contract shall be paid as designated below under the appropriate items associated with the Bid Schedule. Payment shall be in accordance with Lump Sum bid by the Bidder in his proposal.

When Lump Sum prices are contained in the Bid Schedule, the Contractor shall provide a detailed schedule of values for Lump Sum cost acceptable to the Engineer of Record and the County, which will be used for estimating partial payment requests.

Contractual costs for work not specifically mentioned under a payment item and which are incidental to the overall conduct of the work shall be included in the individual items at the Contractor's option. No additional charges shall be made to the County for items not specifically mentioned under individual payment items. Examples of these types of costs include, but are not limited to, the following: bonds, insurance, permits, licenses, traffic control, dust control, clean-up, temporary access, temporary facilities, soil erosion control, temporary drainage, temporary offices, restoration of disturbed areas, temporary utilities, test pits locating existing utilities, temporary water and sewer, surveying, layout, and other items similar to above.

SECTION 01 31 19

PROJECT MEETINGS

1.01 PRECONSTRUCTION CONFERENCE

- A. A preconstruction conference will be scheduled after award of contract and prior to beginning work. This meeting shall be attended by Engineer of Record, the County, and an authorized representative of Contractor.
- B. Meeting will consider matters of contract administration and initial construction operations.
- C. Contractor shall submit proposed construction schedule prior to or at preconstruction conference; see Section 01 33 00.

1.02 PROGRESS MEETINGS

- A. Periodic progress meetings will be held at a time and place mutually agreed upon at preconstruction conference. A responsible representative of Contractor who can bind Contractor/subcontractor to decisions shall attend. A responsible representative of other subcontractors working on site shall also attend.
- B. Meetings will be held to coordinate and expedite progress of work and shall be conducted by Contractor. Contractor and each subcontractor on site shall submit a written report at each meeting indicating:
 - 1. Work progress since last meeting.
 - 2. Upcoming work sequences and schedules.
 - 3. Requests for information.
- Contractor shall record meeting minutes and shall distribute a written summary of items discussed to all parties involved in the project within 48 hours of each meeting. The written summary shall document all issues discussed and decisions reached at progress meeting.

SECTION 01 33 00

SUBMITTAL PROCEDURES

1.01 SUMMARY

A. Submit items to Engineer of Record for review as listed below and as required by the other Contract Documents. Refer to individual specification sections, General Conditions, Supplementary Conditions, and sections of Division 01 - General Requirements for submittal requirements.

1.02 CONSTRUCTION SCHEDULE

- A. Prior to or at preconstruction conference, submit two copies of a proposed schedule of operations. Coordinate activities of the various trades for orderly completion of the work. Coordinate activities with those of the County to schedule a minimum of temporary disruptions to continuing operations. Allow ample time for the County to alter operations as required.
- B. After acceptance of construction schedule, distribute copies to subcontractors and other parties required to comply with scheduled dates.
- C. When revisions to schedule are made, notify all parties of changes in writing.

1.03 SCHEDULE OF SUBMITTALS

- A. Within 10 days of acceptance of construction schedule, submit two copies of a schedule of submittals. Schedule shall list anticipated date for each required submittal and shall allow A/E reasonable time for reviews. Submit all submittals requiring Engineer of Record review within 30 days of acceptance of construction schedule.
- B. After acceptance of schedule of submittals, distribute copies to subcontractors and other parties required to comply with submittal dates.

1.04 SHOP DRAWINGS

A. Required shop drawings are designated under the various specification sections. Submit shop drawings for review prior to fabrication, delivery, or installation.

- Submit a minimum of five copies; two copies will be retained and the remainder returned to Contractor who shall keep one copy at project site.
- B. Fabrication and erection drawings may consist of a reproducible and two sets of prints; the reproducible copy will be returned to Contractor.
- C. Each brochure of shop drawings shall contain an index of contents and shall consist of layout details, schedules, setting instructions, manufacturer's literature, and other data specifically prepared for the work. Shop drawings shall be identified with project name, numbered consecutively, and bear the stamp of approval of Contractor as evidence of accuracy, compatibility, and conformance with contract requirements. Drawings not so stamped will be returned without being examined.
- D. Specific written notice shall be given of each variation that shop drawings may have from requirements of the Contract Documents.
- E. Partial submittals will not be considered; each portion of work shall be complete in one submittal.
- F. Shop drawings shall not be used in the work unless they have been reviewed and bear the stamp and signature of Engineer of Record. Shop drawings will only be reviewed for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Contractor shall be responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction, coordinating his or her work with that of all other trades, and performing all work in a safe and satisfactory manner. Corrections or comments made on shop drawings shall not relieve Contractor from compliance with requirements of Drawings and Specifications and shall not be considered an order for extra work.
- G. If information on previously reviewed shop drawings is altered, submit changes for review.

1.05 PRODUCT DATA

A. Required product data submittals are designated under the various specification sections. Submit product data for review in accordance with procedures for shop drawings.

- B. Product data shall consist of manufacturer's literature, illustrations, and brochures of catalog cuts; instructions for handling, storage, and installation; and specifications and design data. Where multiple options are indicated, identify specific options as required for this project.
- C. Products subject to product data review shall not be used in the work until they have been reviewed and bear the stamp and signature of Engineer of Record.

1.06 SAMPLES

- A. Prior to fabrication, delivery, or installation, submit samples as designated in the various specification sections; allow reasonable time for review and testing.
- B. Submit samples in sufficient quantity and of adequate size to show quality, type, and extremes of color range, finish, and texture. Submit a minimum of two sets of appearance and color samples. Label each sample stating material, description, project name, and Contractor's name. Expedite submittal of appearance and color samples following Notice to Proceed.
- C. Submit samples with transmittal letter requesting review; prepay transportation charges Samples shall become the County's property, unless otherwise designated.
- D. Samples will be reviewed for acceptability or selection of color, pattern, and texture only Compliance with specifications is the responsibility of Contractor.
- E. Order no materials subject to sample review until receipt of written notice of completion of review. Installed materials shall match reviewed samples. No review of samples shall be taken in itself to change contract requirements.

1.07 CERTIFICATES OF COMPLIANCE

- A. Submit two copies of certificates of compliance as designated in the various specification sections.
- B. Certificates shall be furnished by manufacturer, producer, or supplier of material or product and shall indicate that material or product conforms to or exceeds specified requirements. Include supporting reference data as appropriate. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer of Record.

1.08 PERMITS AND APPROVALS

A. Submit one copy of permits, code inspections, and agency approval documents, as designated in the various specification sections.

1.09 TEST REPORTS

A. Submit two copies of test reports as designated in the various technical specifications.

1.10 PROJECT RECORD DOCUMENTS

A. Keep a current set of documents at job site that are marked to show all changes made during construction. Dimension underground and concealed work and utilities from permanent reference points; record vertical distances. Submit project record documents upon completion of Work.

SECTION 01 41 23

PERMITS AND FEES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. County Responsibilities: The County has obtained permits, included in Attachment "B" of the bid documents
- B. Contractor responsibilities: Obtain and pay for all other permits and licenses required by authorities having jurisdiction, including but not limited to: land clearing permit, NPDES Notice of Intent and dewatering permit.
- C. Contractor shall be responsible to adhere to all provisions, requirements, and cost contained in all permits applicable to this project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

SECTION 01 45 00

QUALITY CONTROL

PART 1 GENERAL

1.01 CONTRACTOR QUALITY CONTROL PLAN

The Contractor is responsible for his own quality control and must comply with FDOT Specifications Section 105 Contractor Quality Control General Requirements. Nassau County will act as the Department in all issues relating to Quality Control.

1.02 SECTION INCLUDES

Certification and testing, examination by the County, quality assurance testing, and final approval or work.

1.03 CERTIFICATION AND TESTING

The materials and equipment used in the construction of the project shall be subject to adequate certification and testing in accordance with generally accepted standards, as required and defined in the Contract Documents.

1.04 CONTRACTOR TO PROVIDE

The Contractor shall provide all tools, testing apparatus, materials to be tested, and labor as necessary to provide certification required by the Contract Documents.

1.05 OUTSIDE AGENCY

If the Contract Documents, laws, ordinances, rules, regulation or orders of any pubic authority having jurisdiction require any work to be certified, tested, or approved by someone other than the County, the Contractor will give the Engineer of Record timely notice of readiness. The Contractor will then furnish the County the required certification and/or testing certificates for approval.

1.06 LIMIT OF APPROVALS

Certifications, tests, or approvals by the County, Engineer of Record, or others shall not relieve the Contractor from his obligations to perform the work in accordance with the requirements of the Contract Documents.

1.07 ACCESS TO WORK SITE

The County and his representative will at all times have access to the work. In addition, authorized representatives and agents of any participating federal or state agency shall be permitted access to all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the work.

PART 2 EXAMINATION BY THE COUNTY

2.01 ACCESS

The County contemplates and the Contractor agrees to thorough examination of the work at all times by the County and the Engineer of Record, including all labor performed and materials furnished, delivered, or intended to be used in the work, including manufacture, preparation, and testing. The Contractor shall not use any material which has not been tested and accepted. The Contractor shall keep the Engineer of Record advised of the progress of the work away from the site requiring certification of witnessing of tests to ensure that scheduling conflicts or delays do no develop.

2.02 ACCEPTANCE TESTS

Tests, or acceptance of any materials prior to shipment, shall not be deemed as a final acceptance of the materials. The County may require tests or analysis of any portion of the materials at any time. Any material which is found to be defective or which does not otherwise conform to the requirements of the specifications shall be rejected and removed forthwith from the site, as provided in the contract.

2.03 RIGHT TO EXAMINE WORK

The County and the Engineer of Record shall have the right to examine all materials and work done during any phase of construction, fabrication, or manufacture. The Contractor shall furnish all reasonable facilities and aid to the Engineer of Record and safe and convenient means for the examination of any part of the work. No work shall be closed or covered until it has been duly examined and approved.

PART 3 QUALITY ASSURANCE TESTING

3.01 DESCRIPTION

The Contractor is required to provide all testing as described in these specifications. Testing shall be completed by an independent testing laboratory retained by the Contractor and approved by the Engineer of Record. The Contractor is required to submit independent testing laboratory qualifications. Certifications, tests, or approvals by the County, Engineer of Record, or others shall not relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

3.02 CODES AND REGULATIONS TESTING

Testing will be in accordance with all pertinent codes and regulations and with selected standards of the American Society of Testing and Materials. The Engineer of Record shall process and distribute all required copies of test reports and related instruction to ensure all necessary retesting and/or replacement of materials with the least possible delay in progress of work.

3.03 RETESTING

When initial quality assurance tests indicate noncompliance with the Contract Documents, all subsequent retesting occasioned by the noncompliance shall be performed by the same testing laboratory and the costs thereof shall be borne by the Contractor.

3.04 COOPERATION WITH THE COUNTY'S TESTING LABORATORY

The County may perform any additional tests that he may deem necessary at his own expense. Representatives of the County's testing laboratory shall have access to the work at all times. The Contractor shall provide facilities for such access in order that the laboratory may properly perform its functions.

3.05 ADDITIONAL TESTING

If the County orders sampling, analysis, or tests of materials which are specified to be accepted on certification by the manufacturer, but which appear defective or not conforming to the requirements of the specifications, the Contractor shall bear all the costs of sampling, transportation, tests, and analyses if the material is in fact found defective or does not conform to the specifications. If the material is found to be sound and conforming to the specifications, the County will pay for the testing.

PART 4 FINAL APPROVAL

4.01 FINAL APPROVAL

Final approval of the Work shall be made by the County and the Engineer of Record shall be contingent upon the findings of a thorough examination of the Work. Such examination shall be made within ten (10) working days after receipt of the Contractor's written request. The Work will be accepted and deemed completed as of the date of such examination if, upon such examination, the Engineer of Record and the County find that no further Work remains to be done at the site. If the examination reveals items of Work still to be performed, the Contractor shall promptly perform them and request a re-examination. If upon any reinspection the Engineer of Record and the County determine that the Work is complete, the date of completion shall be deemed to be the actual date of such re-examination.

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

1.01 TEMPORARY ELECTRICITY

A. Contractor shall provide temporary electric service and distribution facilities as required for its own construction purposes. Provide portable power supply or make arrangements with local utility company for temporary service including service poles, driven ground, main service switch, transformer, and metering facilities. Pay for electrical energy consumed.

1.02 TEMPORARY LIGHTING

A. Contractor shall provide temporary lighting sufficient to enable its workers to complete work and to enable inspectors to check work, as required.

1.03 TEMPORARY WATER

A. Contractor shall be responsible for obtaining water for its needs. Pay cost of water used and meter rental, if applicable.

1.04 TEMPORARY SANITARY FACILITIES

A. Contractor shall provide temporary outside toilets sufficient for its own workers.

1.05 TEMPORARY FIRE PROTECTION

A. Contractor shall provide fire extinguishers and other fire protection equipment for all possible classes and types of fire.

1.06 PROTECTION OF WORK AND PROPERTY

- A. Observe safety provisions of applicable laws and regulations.
- B. Erect and maintain all required planking, barricades, guardrails, fences, safety lanterns, and temporary walkways of sufficient size, strength, and type necessary for protection of material storage, adjacent property, and new construction, as well as to prevent accidents to public and workers at job site.
- C. Notify the County if existing property interferes with work so that arrangements for proper protection can be made.
- D. Protect all work, materials, apparatus, and fixtures incorporated in work or stored on site against damage. At end of day, cover all new work likely to be damaged.
- E. Protect all finished construction until acceptance by the County. Repair damage to finished work to satisfaction of the County.

1.07 ENVIRONMENTAL CONTROLS

- A. Maintain erosion control measures to protect the project site and prevent sediment pollution of adjacent water courses and properties.
 - Install erosion control measures prior to start of construction and maintain them until final completion of work. Unless otherwise instructed, remove temporary erosion control measures prior to final application for payment.
 - 2. Strive to limit stripping of sod and vegetation to a period that will expose bare soil to the least possibility of erosion that construction requirements allow.
 - 3. Construct and maintain silt fence barriers, erosion bale barriers, or temporary diversions to receive runoff leaving site.
 - 4. Protect storm drain inlets by using silt fence barriers, erosion bale barriers, or equivalent.
 - 5. Remove at the end of each work day soils and sediment reaching public or private streets not part of the construction site.

- 6. Unless otherwise shown or specified, erosion control measures shall comply with the planning, design, and maintenance provisions of Section 104 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, 2013 Edition and Index Nos. 102 and 103 in the 2014 Roadway and Traffic Design Standards Manual.
- B. Provide controls to confine dust and dirt within project area. Thoroughly soak masonry and debris during demolition and loading operations. Water exposed soils or aggregates as required to prevent windblown dust.
- C. Provide noise control measures to limit the amount of noise and prevent nuisance. Properly equip all equipment with mufflers. Limit construction activities generating significant noise to normal working hours.

1.08 TRAFFIC CONTROL

- A. Conduct operations to ensure minimum interference with streets, driveways, walks, and adjacent facilities not part of construction project.
- B. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

1.09 CONSTRUCTION CLEANING

- A. Remove rubbish and debris from work area promptly upon its accumulation. Perform a broom cleaning of all appropriate surfaces weekly.
- B. Immediately clean-up spillages of oil, grease, or other liquids which could cause a slippery or otherwise hazardous situation or stain a finished surface.
- C. Form or scrap lumber shall have all nails withdrawn or bent over and shall be stacked, placed in trash bins, or removed from site.
- D. At completion of project, thoroughly clean, sweep, and wash work to remove foreign matter, spots, and soil from work and equipment under this contract. Remove temporary guards and protective coatings.

1.10 DISPOSAL

- A. Provide industrial type waste containers in number and size required or provide other acceptable methods of disposing of debris. Place containers at adequate locations to handle debris and have them emptied as required.
- B. No burning of rubbish or debris will be allowed at site.
- C. Store combustible waste in fire-resistive containers. Store hazardous wastes, such as caustics, acids, and harmful dusts, in appropriate covered containers. Dispose of wastes regularly.
- D. If a contractor does not remove rubbish or clean work as specified above, the County reserves right to have work done by others at Contractor's expense.

SECTION 01 60 00

PRODUCT REQUIREMENTS

1.01 PRODUCTS

A. Provide new, high quality products manufactured and conditioned for the particular application as recommended by manufacturer, unless otherwise noted. Transport, handle, store, and protect products as specified and in accordance with manufacturer's recommendations.

1.02 MANUFACTURER'S DIRECTIONS

A. Wherever work is to be performed or products are to be installed in accordance with manufacturer's instructions, furnish copies of printed instructions before installation.

1.03 SOURCE OF PRODUCTS

A. In order that ready availability of materials, parts, or components for repair, replacement, or expansion can be assured, original equipment and components shall be obtained where feasible from domestic sources which maintain a regular stock.

1.04 ACCEPTABLE MANUFACTURERS

A. Products, materials, and equipment identified by reference to a manufacturer's name, catalog number, or model are identified for the purpose of establishing a standard of quality, type, and function. Products first named in specifications are depicted for general descriptive purposes only. Any other product, material, or equipment which will perform adequately the duties imposed by the general design will be considered for substitution in accordance with the provisions below.

1.05 OPTIONS AND CHANGES

- A. Wherever options consisting of two or more choices are permitted for any product, procedure, or method, Contractor may select any of the named alternatives.
- B. Changes and revisions to Contract Documents may be made by Change Order, Field Order, or other procedure authorized under the Contract Documents.
- All other revisions not defined as options or changes shall be treated as Substitutions.
 (Options and changes will not be treated as Substitutions.)

1.06 BID PHASE SUBSTITUTIONS

A. Substitutions and alternatives proposed prior to the Bid Deadline shall be submitted in accordance with the Instructions to Bidders.

1.07 CONSTRUCTION PHASE SUBSTITUTIONS

- A. Substitutions proposed after Contract has been awarded shall be submitted for approval prior to their use. Consideration will be given only to proposed substitutions for those products named in the Contract Documents which are no longer available or cannot be provided within the Contract Time, or where standard products are no longer in conformance, or where the County's interests may be adversely affected.
- B. If substitutions are approved, Contractor assumes responsibility for any other changes in systems or for modifications required in other work to accommodate the substitution, regardless of approval of the substitution.
- C. Requests for substitution of alternate products shall be submitted with complete references to manufacturer's product identification and product data indicating composition, guarantee, availability, applicable standards or agency approvals met or exceeded, restrictions imposed on product, and manufacturer's recommended method of application or installation. Substitutions will be considered acceptable if the product will perform adequately the duties imposed by the general design and, in opinion of Engineer of Record, is of equal substance, quality, appearance, and function, unless the named item is necessary for interchangeability or if the named product has been demonstrated to be most cost-effective.

1.08 DEFECTIVE PRODUCTS

A. All products which do not conform to specified requirements shall be considered defective and shall be removed from the Work. If in place, faulty materials shall be corrected or replaced to meet specified requirements.

1.09 TRANSPORTATION AND HANDLING

A. Products shall be transported and handled in accordance with the Contract Documents and as defined below. Deliver in original packaging with manufacturer's brand, seals, and labels intact. Refer to individual sections of specifications for specific requirements.

- B. Arrange for product transportation as required for construction. Select means of transportation which will reasonably assure timely and safe arrival. Products shall be suitable for intended use upon arrival at project and shall be undamaged and free from defects.
- C. Select appropriate methods for handling products to preserve their integrity, quality, and function.

1.10 MATERIAL PROTECTION

- A. Protect materials in accordance with Section 01 50 00, specific requirements of individual sections of specifications, and according to manufacturer's recommendations.
- B. Provide and maintain watertight storage sheds with raised floors for storage of products that might be damaged by weather. Cement, lime, and other materials affected by moisture shall be stored on platforms.

1.11 STORAGE

- A. Confine storage of products to limits designated by the County. Do not bring products to site until needed for progress of work. Storage of products within buildings shall not exceed design capacity of structural system.
- B. The County assumes no responsibility for products stored on site. Contractor shall assume full responsibility for damage to stored products, except as covered by property insurance for the work under construction (see General and Supplementary Conditions).
- C. Contractor shall allot space to subcontractors for storage of products and erection of offices and tool sheds. Locate storage buildings, temporary sheds, and stockpiles to avoid interference with new and existing facilities; move sheds, storage platforms, and materials as necessary.
- D. Upon completion, restore areas disturbed by construction.

SECTION 01 71 23

FIELD ENGINEERING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Provide field engineering service for project as indicated on Drawings and specified in this Section.

1.02 QUALIFICATIONS OF SURVEYOR OR ENGINEER

A. Florida Registered Engineer or Land Surveyor.

1.03 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points are designated on Drawings. All elevations are based on the benchmarks shown on the plans. Establish all vertical and horizontal controls required for construction.
- B. Locate and protect control points prior to starting site work, and preserve permanent reference points during construction.
 - 1. Make no changes or relocations of such points without prior written notice to Engineer of Record and the County.
 - 2. Report to Engineer of Record and the County when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 - 3. Require surveyor to replace control points which may be lost or destroyed Establish replacements based on original survey control.
 - 4. Engineer of Record will identify existing control points and properly line corner stakes indicated on Drawings, as required.
 - Elevations are based on the National Geodetic Vertical Datum of 1988.

1.04 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of two (2) permanent bench marks on the project site, all referenced to data established by survey control points. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and lay out, by instrument and similar appropriate means.
 - 1. Site improvements.

- 2. Controlling lines and levels required for mechanical and electrical trades.
- C. Verify layouts by same methods from time to time.

1.05 RECORDS

- A. Maintain a complete, accurate log of control and survey work as it progresses.
- B. On completion of foundations and major site improvements, prepare a certified as-built survey showing finished dimensions, locations, angles and elevations of construction.
- C. Refer to Nassau County's As-Built Checklist.

1.06 SUBMITTALS

- A. Submit name and address of surveyor or professional engineer to Engineer of Record and the County.
- B. On request of Engineer of Record and the County, submit documentation to verify accuracy of field survey work.
- C. Submit certificate signed and sealed by a State of Florida Registered Engineer or Land Surveyor certifying that elevations and locations of improvements are in conformance with Contract Documents.

PART 2 - PRODUCTS (NOT USED)
PART 3 - EXECUTION (NOT USED)

SECTION 01 77 00

CLOSEOUT PROCEDURES

1.01 SUMMARY

A. Complete closeout procedures and final submissions as listed below and as required by the other Contract Documents. Refer to General Conditions regarding Substantial Completion, final completion, and final payment.

1.02 FACILITY START-UP

A. Submit test reports before requesting certification of Substantial Completion.

1.03 SUBSTANTIAL COMPLETION

- Contractor shall notify Engineer of Record when it considers the Work (or a portion of the Work which the County agrees to accept separately) to be substantially complete.
 Contractor's notice shall include a comprehensive list of items to be completed or corrected prior to final payment.
- B. Upon receipt of Contractor's list, Engineer of Record, the County, and Contractor shall make an inspection to verify that the Work is substantially complete.
 - If the County considers the Work to be substantially complete, the County will issue a
 Certificate of Substantial Completion along with a "Construction Acceptance
 Checklist" of items to be completed or corrected prior to final payment. Items on
 punch list shall be completed within 60 days. Required submittals (see below) shall be
 completed prior to or when requesting final payment.
 - If the County does not consider the work to be substantially complete, the County will
 inform Contractor of items that need to be completed or corrected before substantial
 completion. Contractor shall promptly complete these items and request a
 reinspection by the County.

1.04 FURNISHED PRODUCTS AND LOANED TOOLS

A. Prior to final payment, return all extra materials, unused parts, and equipment furnished by the County; return loaned tools and equipment.

1.05 FINAL COMPLETION

- A. Contractor shall notify Engineer of Record and the County when it considers all Work to be complete. Engineer of Record, the County, and Contractor shall make an inspection to verify that the Work is complete.
 - 1. If the County considers the Work to be complete, Contractor shall submit final Application for Payment.
 - If the County does not consider the Work to be complete, the County will inform
 Contractor of items that need to be completed or corrected before completion.
 Contractor shall promptly complete these items and request a reinspection by the
 County.

B. Prime Contractor is responsible for reviewing all Construction Acceptance Checklist items and verifying that each item is complete before requesting final inspection.

1.06 CHARGES FOR REINSPECTIONS

A. The County will inspect the Work (or a portion of the Work which the County agrees to accept separately) at substantial completion and at final completion. If the Work is not complete to the required level at either substantial completion or final completion, and a reinspection is required, Contractor shall reimburse the County for charges of the County and the County's consultants for performing the reinspection.

1.07 SUBMITTALS

- A. Submittals required before Contract Closeout are listed below:
 - 1. Contractor Lien Waiver
 - 2. Subcontractor Lien Waiver
 - 3. Consent of Surety to Final Payment
 - 4. Compliance with all permits and other governmental agencies
 - 5. Certification of Inspections "Certification Package"
 - 6. Warranties and Bonds
 - 7. As-Built Drawings
 - 8. Operation and Maintenance Manuals
 - 9. All other documents as required in the Contract Documents.

General Conditions

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by









AMERICAN COUNCIL OF ENGINEERING COMPANIE
ASSOCIATED GENERAL BIDDERS OF AMERICA
AMERICAN SOCIETY OF CIVIL ENGINEERS

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE

A Practice Division of the

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

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American Society of Civil Engineers 1801 Alexander Bell Drive, Reston, VA 20191-4400 (800) 548-2723 www.asce.org

Associated General Bidders of America 2300 Wilson Boulevard, Suite 400, Arlington, VA 22201-3308 (703) 548-3118 www.agc.org

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Article 1 –	Definitions and Terminology
1.01	Defined Terms
1.02	Terminology
	Preliminary Matters
2.01	Delivery of Bonds and Evidence of Insurance
2.02	Copies of Documents
2.03	Commencement of Contract Times; Notice to Proceed
2.04	Starting the Work
2.05	Before Starting Construction
2.06	Preconstruction Conference; Designation of Authorized Representatives
2.07	Initial Acceptance of Schedules
Article 3 –	Contract Documents: Intent, Amending, Reuse
3.01	Intent
3.02	Reference Standards
3.03	Reporting and Resolving Discrepancies
3.04	Amending and Supplementing Contract Documents
3.05	Reuse of Documents
3.06	Electronic Data
	Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental
	onditions; Reference Points
4.01	Availability of Lands
4.02	Subsurface and Physical Conditions
4.03	Differing Subsurface or Physical Conditions
4.04	Underground Facilities
4.05	Reference Points
4.06	Hazardous Environmental Condition at Site
	Bonds and Insurance
	Performance, Payment, and Other Bonds
	Licensed Sureties and Insurers
5.03	Certificates of Insurance
5.04	Bidder's Insurance
5.05	County's Liability Insurance
5.06	Property Insurance
5.07	Waiver of Rights

5.08	Receipt and Application of Insurance Proceeds
5.09	Acceptance of Bonds and Insurance; Option to Replace
5.10	Partial Utilization, Acknowledgment of Property Insurer
Article 6 –	Bidder's Responsibilities
6.01	Supervision and Superintendence
6.02	Labor; Working Hours
6.03	Services, Materials, and Equipment
6.04	Progress Schedule
6.05	Substitutes and "Or-Equals"
6.06	Concerning SubContractors, Suppliers, and Others
6.07	Patent Fees and Royalties
6.08	Permits
6.09	Laws and Regulations
6.10	Taxes
6.11	Use of Site and Other Areas
6.12	Record Documents
6.13	Safety and Protection
6.14	Safety Representative
6.15	Hazard Communication Programs
6.16	Emergencies
6.17	Shop Drawings and Samples
6.18	Continuing the Work
6.19	Bidder's General Warranty and Guarantee
6.20	Indemnification
6.21	Delegation of Professional Design Services
Article 7 –	Other Work at the Site
7.01	Related Work at Site
7.02	Coordination
7.03	Legal Relationships
	County's Responsibilities
8.01	Communications to Bidder
8.02	Replacement of Engineer
8.03	Furnish Data
8.04	Pay When Due
8.05	Lands and Easements; Reports and Tests
8.06	Insurance
8.07	Change Orders
8.08	Inspections, Tests, and Approvals
8.09	Limitations on County's Responsibilities
8.10	Undisclosed Hazardous Environmental Condition
8.11	Evidence of Financial Arrangements
8.12	Compliance with Safety Program

	Engineer of Record's Status During Construction
9.01	County's Representative
9.02	Visits to Site
9.03	Project Representative
9.04	Authorized Variations in Work
9.05	Rejecting Defective Work
9.06	Shop Drawings, Change Orders and Payments
9.07	Determinations for Unit Price Work
9.08	Decisions on Requirements of Contract Documents and Acceptability of Work
9.09	Limitations on Engineer of Record's Authority and Responsibilities
9.10	Compliance with Safety Program.
7.10	Compliance with surety 110gram.
Article 10 –	- Changes in the Work; Claims
	Authorized Changes in the Work
	Unauthorized Changes in the Work
	Execution of Change Orders
	Notification to Surety
	Claims
	- Cost of the Work; Allowances; Unit Price Work
	Cost of the Work
11.02	Allowances
11.03	Unit Price Work
Article 12 –	- Change of Contract Price; Change of Contract Times
	Change of Contract Price
	Change of Contract Times
12.02	Change of Contract Times
12.02	
12.02 12.03	Change of Contract Times Delays
12.02 12.03 Article 13 –	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work
12.02 12.03 Article 13 – 13.01	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects
12.02 12.03 Article 13 – 13.01 13.02	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work
12.02 12.03 Article 13 – 13.01 13.02 13.03	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period Acceptance of Defective Work
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 Article 14 –	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period Acceptance of Defective Work County May Correct Defective Work
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 Article 14 –	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period Acceptance of Defective Work County May Correct Defective Work
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 Article 14 – 14.01	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period Acceptance of Defective Work County May Correct Defective Work County May Correct Defective Work Payments to Bidder and Completion Schedule of Values
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 Article 14 – 14.01 14.01	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period Acceptance of Defective Work County May Correct Defective Work County May Correct Defective Work Payments to Bidder and Completion Schedule of Values Progress Payments
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 Article 14 – 14.01 14.02 14.03	Change of Contract Times. Delays
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.07 13.08 13.09 Article 14 – 14.01 14.02 14.03 14.04	Change of Contract Times Delays Tests and Inspections; Correction, Removal or Acceptance of Defective Work Notice of Defects Access to Work Tests and Inspections Uncovering Work County May Stop the Work Correction or Removal of Defective Work Correction Period Acceptance of Defective Work County May Correct Defective Work Payments to Bidder and Completion Schedule of Values Progress Payments Bidder's Warranty of Title. Substantial Completion
12.02 12.03 Article 13 – 13.01 13.02 13.03 13.04 13.05 13.06 13.07 13.08 13.09 Article 14 – 14.01 14.02 14.03 14.04 14.05	Change of Contract Times. Delays

14.07	Final Payment
	Final Completion Delayed
	Waiver of Claims
,	
Article 15 –	Suspension of Work and Termination
	County May Suspend Work
15.02	County May Terminate for Cause
15.03	County May Terminate For Convenience
	Bidder May Stop Work or Terminate
Article 16 –	Dispute Resolution
16.01	Methods and Procedures
Article 17 –	Miscellaneous
17.01	Giving Notice
	Computation of Times
17.03	Cumulative Remedies
	Survival of Obligations
	Controlling Law
	Headings

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
 - Addenda—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 - 2. *Agreement*—The written instrument which is evidence of the agreement between County and Bidder covering the Work.
 - 3. Application for Payment—The form acceptable to Engineer of Recordwhich is to be used by Bidder during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 - 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 - 6. *Bidder*—The individual or entity who submits a Bid directly to County.
 - 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 - 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 - 9. Change Order—A document recommended by Engineer of Record and/or Project Manager which is signed by Bidder and County and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

- 10. *Claim*—A demand or assertion by County or Bidder seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
- 11. *Contract*—The entire and integrated written agreement between the County and Bidder concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
- 12. Contract Documents—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Bidder submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
- 13. *Contract Price*—The moneys payable by County to Bidder for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
- 14. Contract Times—The number of days or the dates stated in the Agreement to:
 (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer of Record and/or Project Manager's written recommendation of final payment.
- 15. Cost of the Work—See Paragraph 11.01 for definition.
- 16. *County*—The individual or entity with whom Bidder has entered into the Agreement and for whom the Work is to be performed.
- 17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer of Record and/or Project Manager which graphically shows the scope, extent, and character of the Work to be performed by Bidder. Shop Drawings and other Bidder submittals are not Drawings as so defined.
- 18. Effective Date of the Agreement—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
- 19. Engineer of Record—The individual or entity named as such in the Agreement.

- 20. *Field Order*—A written order issued by Engineer of Record and/or Project Manager which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
- 21. General Requirements—Sections of Division 1 of the Specifications The General Requirements pertain to all Sections of the specifications. (see SC-1.01.21)
- 22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
- 23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
- 24. Laws and Regulations; Laws or Regulations—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- 25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
- 26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
- 27. *Notice of Award*—The written notice by County to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, County will sign and deliver the Agreement.
- 28. *Notice to Proceed*—A written notice given by County to Bidder fixing the date on which the Contract Times will commence to run and on which Bidder shall start to perform the Work under the Contract Documents.
- 29. *PCBs*—Polychlorinated biphenyls.
- 30. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

- 31. *Progress Schedule*—A schedule, prepared and maintained by Bidder, describing the sequence and duration of the activities comprising the Bidder's plan to accomplish the Work within the Contract Times.
- 32. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
- 33. *Project Manager* County employee overseeing project.
- 34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
- 35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
- 36. *Resident Project Representative*—The authorized representative of Engineer of Record who may be assigned to the Site or any part thereof.
- 37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
- 38. Schedule of Submittals—A schedule, prepared and maintained by Bidder, of required submittals and the time requirements to support scheduled performance of related construction activities.
- 39. Schedule of Values—A schedule, prepared and maintained by Bidder, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Bidder's Applications for Payment.
- 40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Bidder and submitted by Bidder to illustrate some portion of the Work.
- 41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by County upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by County which are designated for the use of Bidder.
- 42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

- 43. *SubContractor*—An individual or entity having a direct contract with Bidder or with any other SubContractor for the performance of a part of the Work at the Site.
- 44. Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer of Recordof Record and/or Project Manager, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
- 45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom County makes an award.
- 46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
- 47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Bidder or with any SubContractor to furnish materials or equipment to be incorporated in the Work by Bidder or SubContractor.
- 48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
- 49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
- 50. Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
- 51. Work Change Directive—A written statement to Bidder issued on or after the Effective Date of the Agreement and signed by County and recommended by Engineer of Record and/or Project Manager ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or

the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

52. <u>Surety-</u>The person, firm, or corporation which is bound by the contract bonds with and for Bidder (Principal); and which is held and firmly bound unto County for the conditions of obligations set forth in said bonds (see SC-1.01.52).

1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. Intent of Certain Terms or Adjectives:

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer of Record and/or Project Manager. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer of Record and/or Project Manager as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer of Record and/or Project Manager any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day:

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*:

- 1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or

- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
- c. has been damaged prior to Engineer of Record and/or Project Manager's recommendation of final payment (unless responsibility for the protection thereof has been assumed by County at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide:

- 1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
- 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
- 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
- 4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Bidder, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

- A. When Bidder delivers the executed counterparts of the Agreement to County, Bidder shall also deliver to County such bonds as Bidder may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Bidder and County shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Bidder and County respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. County shall furnish to Bidder up to ten five printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction. (see SC-2.02.A)

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. Bidder shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

- A. Preliminary Schedules: Within 10 days after the Effective Date of the Agreement At the Preconstruction Conference (unless otherwise specified in the General Requirements), Bidder shall submit to Engineer of Record and/or Project Manager for timely review (see SC-2.05.A):
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.
- B. Before any Work at the Site is started, Bidder shall deliver to the County, certificates of insurance that Bidder is required to purchase and maintain in accordance with Article 5. (see SC-2.05.B)

2.06 Preconstruction Conference; Designation of Authorized Representatives

- A. Before any Work at the Site is started, a conference attended by County, Bidder, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference County and Bidder each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.
- C. County may issue Notice to Proceed at the Preconstruction Conference. Bidder shall begin the Work within twenty-four (24) hours of the date given in the Notice to Proceed. If the Bidder does not start the Work within fourteen (14) calendar days after this date, County may, at his discretion, terminate Bidder in accordance with paragraph 15.02. (see SC-2.06.C)

2.07 Initial Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference attended by Bidder, Engineer, and others as appropriate will be held to review for acceptability to Engineer of Record as provided below the schedules submitted in accordance with Paragraph 2.05.A. Bidder shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Bidder until acceptable schedules are submitted to Engineer of Record and/or Project Manager. All schedules as set forth in Article 2 shall be submitted and accepted by the County and Engineer of Record and/or Project Manager within 30 days of NTP. Should any schedule not be accepted within 30 days of the NTP, it will be considered a breach of contract and reason for termination of the contract for cause in accordance with the General Conditions, Section 15.02. (see SC-2.07.A)
 - 1. The Progress Schedule will be acceptable to Engineer of Record and/or Project Manager if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer of Record and/or Project Manager responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Bidder from Bidder's full responsibility therefor.
 - 2. Bidder's Schedule of Submittals will be acceptable to Engineer of Record and/or Project Manager if it provides a workable arrangement for reviewing and processing the required submittals.

3. Bidder's Schedule of Values will be acceptable to Engineer of Record and/or Project Manager as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to County.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer of Record as provided in Article 9.

3.02 Reference Standards

- A. Standards, Specifications, Codes, Laws, and Regulations
 - 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of County, Bidder, or Engineer, or any of their SubContractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to County, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or SubContractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies:

- 1. Bidder's Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, Bidder shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Bidder shall promptly report in writing to Engineer of Record and/or Project Manager and the County any conflict, error, ambiguity, or discrepancy which Bidder discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer of Record and/or Project Manager before proceeding with any Work affected thereby.
- 2. Bidder's Review of Contract Documents During Performance of Work: If, during the performance of the Work, Bidder discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Bidder shall promptly report it to Engineer of Record and/or Project Manager in writing. Bidder shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
- 3. Bidder shall not be liable to County or Engineer of Record and/or Project Manager for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Bidder had actual knowledge thereof.

B. Resolving Discrepancies:

- 1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 - 1. A Field Order;
 - 2. Engineer of Record's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 - 3. Engineer of Record's written interpretation or clarification.

3.05 Reuse of Documents

- A. Bidder and any SubContractor or Supplier shall not:
 - have or acquire any title to or Countyship rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer of Record or its consultants, including electronic media editions; or
 - reuse any such Drawings, Specifications, other documents, or copies thereof
 on extensions of the Project or any other project without written consent of
 County and Engineer of Record specific written verification or adaptation by
 Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Bidder from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by County or Engineer of Record to Bidder, or by Bidder to County or Engineer of Record or Project Manager, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands

- A. County shall furnish the Site. County shall notify Bidder of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Bidder must comply in performing the Work. County will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Bidder and County are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in County's furnishing the Site or a part thereof, Bidder may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, County shall furnish Bidder with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and County's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Bidder shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment. Bidder shall obtain said land rights at his own expense and without liability to the County. Bidder shall not enter upon private property without first obtaining written permission from the rightful property County (see SC-4.01.C)

4.02 Subsurface and Physical Conditions

- A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. those reports known to County of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to County of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. Limited Reliance by Bidder on Technical Data Authorized: Bidder may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such

"technical data," Bidder may not rely upon or make any claim against County or Engineer of Record, or any of their officers, directors, members, partners, employees, agents, consultants, or SubContractors with respect to:

- the completeness of such reports and drawings for Bidder's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, and safety precautions and programs incident thereto; or
- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Bidder interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.
- C. In the preparation of Drawings and Specifications, Engineer of Record or Engineer of Record's Consultant relied upon the following reports(s) of explorations and tests of subsurface conditions at the site: Appendix A. (see SC-4.02.C)
- 4.03 Differing Subsurface or Physical Conditions
 - A. *Notice:* If Bidder believes that any subsurface or physical condition that is uncovered or revealed either:
 - 1. is of such a nature as to establish that any "technical data" on which Bidder is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
 - 2. is of such a nature as to require a change in the Contract Documents; or
 - 3. differs materially from that shown or indicated in the Contract Documents; or
 - 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Bidder shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify County and Engineer of Record in writing about such condition. Bidder shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer of Reccord's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer of Record will promptly review the pertinent condition, determine the necessity of County's obtaining additional exploration

or tests with respect thereto, and advise County in writing (with a copy to Bidder) of Engineer of Record's findings and conclusions.

C. Possible Price and Times Adjustments:

- 1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Bidder's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
- 2. Bidder shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Bidder knew of the existence of such conditions at the time Bidder made a final commitment to County with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Bidder prior to Bidder's making such final commitment; or
 - c. Bidder failed to give the written notice as required by Paragraph 4.03.A.
- 3. If County and Bidder are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither County, or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or SubContractors and Engineer of Record's Consultants shall not be liable to Bidder for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Bidder on or in connection with any other project or anticipated project. (see SC-4.03.C.3)

4.04 Underground Facilities

- A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to County or Engineer of Record by the County's of such Underground Facilities, including County, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 - 1. County and Engineer of Record shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
 - 2. the cost of all of the following will be included in the Contract Price, and Bidder shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the County's of such Underground Facilities, including County, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated:

- 1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Bidder shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the County of such Underground Facility and give written notice to that County and to County Engineer. Engineer of Record will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Bidder shall be responsible for the safety and protection of such Underground Facility.
- 2. If Engineer of Record concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy

in the Contract Documents and that Bidder did not know of and could not reasonably have been expected to be aware of or to have anticipated. If County and Bidder are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, County or Bidder may make a Claim therefor as provided in Paragraph 10.05.

4.05 Reference Points

A. County shall provide engineering surveys to establish reference points for construction which in Engineer of Record's judgment are necessary to enable Bidder to proceed with the Work. Bidder shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of County. Bidder shall report to Engineer of Record and/or Project Manager whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 Hazardous Environmental Condition at Site

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to County relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. Limited Reliance by Bidder on Technical Data Authorized: Bidder may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Bidder may not rely upon or make any claim against County or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or SubContractors with respect to:
 - 1. the completeness of such reports and drawings for Bidder's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Bidder interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Bidder shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings

- or Specifications or identified in the Contract Documents to be within the scope of the Work. Bidder shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Bidder, SubContractors, Suppliers, or anyone else for whom Bidder is responsible.
- D. If Bidder encounters a Hazardous Environmental Condition or if Bidder or anyone for whom Bidder is responsible creates a Hazardous Environmental Condition, Bidder shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify County and Engineer of Record and/or Project Manager (and promptly thereafter confirm such notice in writing). County shall promptly consult with Engineer of Record concerning the necessity for County to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer of Record, County shall take such actions as are necessary to permit County to timely obtain required permits and provide Bidder the written notice required by Paragraph 4.06.E.
- E. Bidder shall not be required to resume Work in connection with such condition or in any affected area until after County has obtained any required permits related thereto and delivered written notice to Bidder: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If County and Bidder cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Bidder, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Bidder does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then County may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If County and Bidder cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. County may have such deleted portion of the Work performed by County's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, County shall indemnify and hold harmless Bidder, SubContractors, and Engineer of Record, and the officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental

Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Bidder or by anyone for whom Bidder is responsible. Nothing in this Paragraph 4.06.G shall obligate County to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Bidder shall indemnify and hold harmless County and Engineer of Record, and the officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Bidder or by anyone for whom Bidder is responsible. Nothing in this Paragraph 4.06.H shall obligate Bidder to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

- 5.01 Performance, Payment, and Other Bonds
 - A. Bidder shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Bidder's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Bidder shall also furnish such other bonds as are required by the Contract Documents.
 - B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney in fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney in fact signed each bond. All Bonds shall be in the form prescribed by the contract Documents or

other form approved by County. All else notwithstanding, the terms of all Bonds shall be substantially in the form prescribed by Chapter 255, Florida Statutes. All Bonds shall be executed by Bidder and a corporate bonding company licensed to transact such business in the State of Florida and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. Bidder will cause the Bonds to be recorded with the Clerk of the Circuit Court in the county in which the Work is to be performed. Failure to execute bonds in the form prescribed may constitute non-responsiveness on the part of the Bidder. The expense for all Bonds shall be the Bidder's responsibility. (see SC-5.01.B)

C. If the surety on any bond furnished by Bidder is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Bidder shall promptly notify County and Engineer of Record and/or Project Manager and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by County or Bidder shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions. Certificates of insurance shall be issued by a company with a Best's rating of at least B+ authorized to do business in the State of Florida. County must approve non-rated insurers. If used, County shall be shown as Certificate Holder, Engineer of Record as Additional Insured and provide a 30-day cancellation notice.

5.03 *Certificates of Insurance*

- A. Bidder shall deliver to County, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by County or any other additional insured) which Bidder is required to purchase and maintain.
- B. County shall deliver to Bidder, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Bidder or any other additional insured) which County is required to purchase and maintain. Insurance policies written on a "Claims Made" form is not acceptable without County's approval. (see SC-5.03.B)

- C. Failure of County to demand such certificates or other evidence of Bidder's full compliance with these insurance requirements or failure of County to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Bidder's obligation to maintain such insurance.
- D. County does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Bidder.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Bidder's liability under the indemnities granted to County in the Contract Documents.
- F. <u>Umbrella Liability insurance is preferred, but an Excess Liability equivalent is acceptable.</u> Whichever type of coverage is provided, it shall not be more restrictive than the underlying insurance policy coverages, including, but not limited to the coverage Trigger, defense, notice of occurrence/accident/circumstances, notice of claim and extended reporting period. (see SC-5.03.F)
- G. No work shall commence under this contract until the required Certificate(s) have been provided. Work shall not continue after expiration (or cancellation) until new Certificate(s) have been provided. Non-continuance of work after expiration (or cancellation) of Certificate(s) will not constitute a delay beyond Bidder's control as defined in paragraph 12.03. (see SC-5.03.G)
- H. Bidder shall arrange for its insurers' policies to include, or be endorsed to include, a severability or interest/cross liability provision, so that County will be treated as if a separate policy were in existence, but without increasing the policy limits. (see SC-5.03.H)
- I. <u>Bidder's deductibles/self-insured retentions shall be disclosed to County and may be disapproved by the latter. They shall be reduced or eliminated at the option of County. Bidder is responsible for the amount of any deductible or self-insured retention. (see SC-6.03.I)</u>
- J. These insurance requirements shall not relieve or limit the liability of Bidder. County does not in any way represent that these types or amounts of insurance are sufficient or adequate to protect Bidder's interests or liabilities, but are merely minimums. (see SC-5.03.J)
- K. <u>Insurance required of Bidder or any other insurance of Bidder shall be considered primary, and insurance or self-insurance of County shall be considered excess, as may be applicable to claims that arise out of this contract. (see SC-5.03.K)</u>
- L. Receipt of Certificates or other documentation of insurance or policies or copies of policies by County, or by any of its representatives, which indicate less

- coverage than required does not constitute a waiver of the Bidder's obligation to fulfill the insurance requirements herein. (see SC-5.03.L)
- M. The Bidder shall either (a) require each SubContractor to produce and maintain the same coverage as required of the Bidder, or (b) insure the activities of SubContractors in his own policy. (see SC-5.03.M)
- N. These insurance requirements are minimums and may not be adequate to cover Bidder exposures. (see SC-5.03.N)

5.04 Bidder's Insurance

- A. Bidder shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Bidder's performance of the Work and Bidder's other obligations under the Contract Documents, whether it is to be performed by Bidder, any SubContractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Bidder's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Bidder's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Bidder, or
 - b. by any other person for any other reason;
 - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the Countyship, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:

- 1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) County and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
- 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
- 3. include contractual liability insurance covering Bidder's indemnity obligations under Paragraphs 6.11 and 6.20;
- 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to County and Bidder and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Bidder pursuant to Paragraph 5.03 will so provide);
- 5. remain in effect at least until final payment and at all times thereafter when Bidder may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
- 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Bidder shall furnish County and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to County and any such additional insured of continuation of such insurance at final payment and one year thereafter.
- C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the amounts shown in Exhibit 1 of the contract documents, or greater where required by Laws and Regulations. (see SC-5.04.C)

5.05 County's Liability Insurance

A. In addition to the insurance required to be provided by Bidder under Paragraph 5.04, County, at County's option, may purchase and maintain at County's

expense County's own liability insurance as will protect County against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

- A. Unless otherwise provided in the Supplementary Conditions, County shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the interests of County, Bidder, SubContractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 - 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 - 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 - 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by County prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 - 5. allow for partial utilization of the Work by County;
 - 6. include testing and startup; and
 - 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by County, Bidder, and Engineer of Record with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. County shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of County,

Bidder, SubContractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to County and Bidder and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. County shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Bidder, SubContractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Bidder, SubContractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Bidder requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, County shall, if possible, include such insurance, and the cost thereof will be charged to Bidder by appropriate Change Order. Prior to commencement of the Work at the Site, County shall in writing advise Bidder whether or not such other insurance has been procured by County.

5.07 Waiver of Rights

A. County and Bidder intend that all policies purchased in accordance with Paragraph 5.06 will protect County, Bidder, SubContractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. County and Bidder waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in

addition, waive all such rights against SubContractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by County as trustee or otherwise payable under any policy so issued.

- B. County waives all rights against Bidder, SubContractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to County's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by County; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by County during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by County covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Bidder, SubContractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with County and made payable to County as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. County shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. County as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to County's exercise of this power. If such objection

be made, County as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, County as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, County as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either County or Bidder has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. County and Bidder shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly. If County has any objection to the coverage afforded by or other provisions of Bonds or insurance required to be purchased and maintained by Bidder in accordance with Article 5 on the basis of non-conformance with the Contract Documents, County shall so notify Bidder in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. Bidder shall provide to County such additional information in respect of insurance provided as County may reasonably request. (see SC-5.09.A)

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If County finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – BIDDER'S RESPONSIBILITIES

6.01 Supervision and Superintendence

- A. Bidder shall supervise, inspect, and direct 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. Bidder shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Bidder shall not be responsible for the negligence of County or Engineer of Record in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. County reserves the right to reject any means, methods, techniques, sequences or procedures proposed by Bidder which:
 - 1. <u>will constitute or create a hazard to the Work or to the persons or damage to property or existing utilities; or</u>
 - 2. <u>will not produce finished work in accordance with the terms of the contract</u> Documents.

County's failure to exercise his right to reject such means, methods, techniques, sequences or procedures shall not relieve the Bidder of his obligation to accomplish the result intended in the Contract Documents nor shall the exercise of such right create a cause of action for damages. (see SC-6.01.A)

B. At all times during the progress of the Work, Bidder shall assign a competent resident superintendent who shall not be replaced without written notice to County and Engineer of Record except under extraordinary circumstances.

6.02 Labor; Working Hours

- A. Bidder shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Bidder shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Bidder will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without County's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer of Record and/or Project Manager.
- C. Engineer of Record shall record time and costs required by Engineer of Record and Engineer of Record's Consultants to provide inspection services due to Bidder's working beyond regular working hours as defined in the General

Requirements. County's reimbursement for the charges shall be a deduction from Bidder's Partial Payment(s) in accordance with Section 01 11 00 Part 2.02. (see SC-6.02.C)

6.03 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Bidder shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of County. If required by Engineer, Bidder shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

- A. Bidder shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Bidder shall submit to Engineer of Record and/or Project Manager for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or

"or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer of Record and/or Project Manager for review under the circumstances described below.

- 1. "Or-Equal" Items: If in Engineer of Record's sole discretion an item of material or equipment proposed by Bidder is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer of Record as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer of Record's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer of Record determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Bidder certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the County or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items:

- a. If in Engineer of Record's sole discretion an item of material or equipment proposed by Bidder does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Bidder shall submit sufficient information as provided below to allow Engineer of Record to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of

- material or equipment will not be accepted by Engineer of Record and/or Project Manager from anyone other than Bidder.
- c. The requirements for review by Engineer of Record will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer of Record may decide is appropriate under the circumstances.
- d. Bidder shall make written application to Engineer of Record and/or Project Manager for review of a proposed substitute item of material or equipment that Bidder seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;

2) will state:

- a) the extent, if any, to which the use of the proposed substitute item will prejudice Bidder's achievement of Substantial Completion on time,
- b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with County for other work on the Project) to adapt the design to the proposed substitute item, and
- whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

- a) all variations of the proposed substitute item from that specified, and
- b) available engineering, sales, maintenance, repair, and replacement services; and
- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs

- of redesign and claims of other Bidders affected by any resulting change.
- e. Each action mentioned above required for review of proposed substitute items of material or equipment shall be followed in the order given. Failure to do so shall be cause for rejection of the proposed substitution. (see SC-6.05.A.2.e)
- f. Bidder shall reimburse County for the charges of Engineer of Record or Engineer of Record's Consultants for evaluation of substitutions. County's reimbursement for the charges shall be a deduction from the Bidder's Partial Payment(s). (see SC-6.05.A.2.f)
- B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Bidder may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer of Record. Bidder shall submit sufficient information to allow Engineer of Record, in Engineer of Record's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer of Record will be similar to those provided in Paragraph 6.05.A.2.
- C. Engineer of Record's Evaluation: Engineer of Record will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer of Record may require Bidder to furnish additional data about the proposed substitute item. Engineer of Record will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer of Record's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer of Record will advise Bidder in writing of any negative determination.
- D. *Special Guarantee:* County may require Bidder to furnish at Bidder's expense a special performance guarantee or other surety with respect to any substitute.
- E. Engineer of Record's Cost Reimbursement: Engineer of Record will record Engineer of Record's costs in evaluating a substitute proposed or submitted by Bidder pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer of Record approves a substitute so proposed or submitted by Bidder, Bidder shall reimburse County for the reasonable charges of Engineer of Record for evaluating each such proposed substitute. Bidder shall also reimburse County for the reasonable charges of Engineer of Record for making changes in the Contract Documents (or in the provisions of any other direct contract with County) resulting from the acceptance of each proposed substitute.

- F. *Bidder's Expense*: Bidder shall provide all data in support of any proposed substitute or "or-equal" at Bidder's expense.
- 6.06 Concerning SubContractors, Suppliers, and Others
 - A. Bidder shall not employ any SubContractor, Supplier, or other individual or entity (including those acceptable to County as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom County may have reasonable objection. Bidder shall not be required to employ any SubContractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Bidder has reasonable objection. Bidder shall not subcontract part(s) or the work, the aggregate cost of which is greater than 50 percent of the contract price, without prior written approval by County. Bidder shall cause appropriate provisions to be inserted in all subcontracts relative to the Work that bind SubContractors to Bidder by the terms of the Contract Documents insofar as applicable to the work of SubContractors and to give Bidder the same power as regards terminating any subcontract that County may exercise over Bidder under any provision of the Contract Documents. Nothing contained in the subcontract shall create any contractual relationship between SubContractor and County. Each SubContractor shall discharge all duties and responsibilities of Bidder to County covered by his subcontract. (see SC-6.06.A)
 - B. If the Supplementary Conditions require the identity of certain SubContractors, Suppliers, or other individuals or entities to be submitted to County in advance for acceptance by County by a specified date prior to the Effective Date of the Agreement, and if Bidder has submitted a list thereof in accordance with the Supplementary Conditions, County's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such SubContractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Bidder shall submit an acceptable replacement for the rejected SubContractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by County of any such SubContractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of County or Engineer of Recordto reject defective Work. SubContractors and Suppliers shall be identified on the form provided in the Bidding Requirements. (see SC-6.06.B)
 - C. Bidder shall be fully responsible to County and Engineer of Record for all acts and omissions of the SubContractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Bidder is responsible for Bidder's own acts and omissions. Nothing in the Contract Documents:

- shall create for the benefit of any such SubContractor, Supplier, or other individual or entity any contractual relationship between County or Engineer of Record and any such SubContractor, Supplier or other individual or entity; nor
- shall create any obligation on the part of County or Engineer of Record to pay
 or to see to the payment of any moneys due any such SubContractor, Supplier,
 or other individual or entity except as may otherwise be required by Laws
 and Regulations.
- D. Bidder shall be solely responsible for scheduling and coordinating the Work of SubContractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Bidder.
- E. Bidder shall require all SubContractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer of Record through Bidder.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Bidder in dividing the Work among SubContractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Bidder by a SubContractor or Supplier will be pursuant to an appropriate agreement between Bidder and the SubContractor or Supplier which specifically binds the SubContractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of County and Engineer. Whenever any such agreement is with a SubContractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Bidder and the SubContractor or Supplier will contain provisions whereby the SubContractor or Supplier waives all rights against County, Bidder, Engineer of Record, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and SubContractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any SubContractor or Supplier, Bidder will obtain the same.

6.07 Patent Fees and Royalties

A. Bidder shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of

the Work and if, to the actual knowledge of County or Engineer of Record, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by County in the Contract Documents.

- B. To the fullest extent permitted by Laws and Regulations, County shall indemnify and hold harmless Bidder, and its officers, directors, members, partners, employees, agents, consultants, and SubContractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Bidder shall indemnify and hold harmless County and Engineer of Record, and the officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, Bidder shall obtain and pay for all construction permits and licenses. County shall assist Bidder, when necessary, in obtaining such permits and licenses. Bidder shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. County shall pay all charges of utility County's for connections for providing permanent service to the Work. Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by County, unless otherwise specified. (see SC-6.08.A)

6.09 Laws and Regulations

A. Bidder shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither the County,

Engineer of Record and Project Manager shall be responsible for monitoring Bidder's compliance with any Laws or Regulations. <u>Bidder shall also cause all SubContractors to comply with all federal, state, county, and municipal laws, ordinances, rules, and regulations bearing on the conduct of the Work. (see SC-6.09.A)</u>

- B. If Bidder performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Bidder shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Bidder's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Bidder of Bidder's obligations under Paragraph 3.03. If Bidder observes that the Contract Documents are at variance with said laws, ordinances, rates, or regulations, Bidder shall promptly notify Engineer of Record and the County in writing, and any necessary changes shall be adjusted as provided in the Contract Documents. Bidder shall not proceed with the Work until so instructed by County. (see SC-6.09.B)
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If County and Bidder are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Bidder shall pay all sales, consumer, use, and other similar taxes required to be paid by Bidder in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

- A. Limitation on Use of Site and Other Areas:
 - Bidder shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Bidder shall assume full responsibility for any damage to any such land or area, or to the County or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

- 2. Should any claim be made by any such County or occupant because of the performance of the Work, Bidder shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Bidder shall indemnify and hold harmless County and Engineer, and the officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such County or occupant against County, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Bidder's performance of the Work.
- B. Removal of Debris During Performance of the Work: During the progress of the Work Bidder shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. Cleaning: Prior to Substantial Completion of the Work Bidder shall clean the Site and the Work and make it ready for utilization by County. At the completion of the Work Bidder shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading Structures:* Bidder shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Bidder subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Bidder shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer of Record for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer of Record for County. Annotations of record documents shall be legible, precise, and complete as determined by Engineer of Record and the County. (see SC-6.12.A)

6.13 Safety and Protection

- A. Bidder shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve SubContractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Bidder shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Bidder shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Bidder shall notify County's of adjacent property and of Underground Facilities and other utility County's when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Bidder shall comply with the applicable requirements of County's safety programs, if any. The Supplementary Conditions identify any County's safety programs that are applicable to the Work.
- D. Bidder shall inform County and Engineer of Record and/or Project Manager of the specific requirements of Bidder's safety program with which the County's and Engineer of Record's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Bidder, any SubContractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Bidder (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of County or Engineer of Record or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Bidder or any

- SubContractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Bidder's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer of Record and/or Project Manager has issued a notice to County and Bidder in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Bidder shall be responsible at all times for precautions to achieve the protection of all persons, including employees and property. Bidder shall make special effort to detect hazardous conditions and shall take prompt action where necessary to avoid accident, injury, or property damage. OSHA and all other applicable safety laws and ordinances shall be followed as well as American National Standards Institute Safety Standards. All accidents, injuries, claims, or potential claims shall be reported promptly to County. (see SC-6.13.G)

6.14 Safety Representative

A. Bidder shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Bidder shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Bidder is obligated to act to prevent threatened damage, injury, or loss. Bidder shall give Engineer of Record and/or Project Manager prompt written notice if Bidder believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer of Record determines that a change in the Contract Documents is required because of the action taken by Bidder in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Bidder shall submit Shop Drawings and Samples to Engineer of Record for review and approval in accordance with the accepted Schedule of Submittals (as

required by Paragraph 2.07). Each submittal will be identified as Engineer of Record may require.

1. Shop Drawings:

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer of Record the services, materials, and equipment Bidder proposes to provide and to enable Engineer of Record to review the information for the limited purposes required by Paragraph 6.17.D.

2. Samples:

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer of Record may require to enable Engineer of Record to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer of Record's review and approval of the pertinent submittal will be at the sole expense and responsibility of Bidder.

C. Submittal Procedures:

- 1. Before submitting each Shop Drawing or Sample, Bidder shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents:
 - determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Bidder's responsibilities for means, methods, techniques, sequences, and

procedures of construction, and safety precautions and programs incident thereto.

- 2. Each submittal shall bear a stamp or specific written certification that Bidder has satisfied Bidder's obligations under the Contract Documents with respect to Bidder's review and approval of that submittal.
- 3. With each submittal, Bidder shall give Engineer of Record specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer of Record for review and approval of each such variation.

D. Engineer of Record's Review:

- 1. Engineer of Record will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer of Record's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
- 2. Engineer of Record's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
- 3. Engineer of Record's review and approval shall not relieve Bidder from responsibility for any variation from the requirements of the Contract Documents unless Bidder has complied with the requirements of Paragraph 6.17.C.3 and Engineer of Record has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer of Record's review and approval shall not relieve Bidder from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

1. Bidder shall make corrections required by Engineer of Record and shall return the required number of corrected copies of Shop Drawings and submit,

- as required, new Samples for review and approval. Bidder shall direct specific attention in writing to revisions other than the corrections called for by Engineer of Record on previous submittals.
- 2. Bidder shall reimburse County for the charges of the County and the County's Consultants for costs generated as a result of more than two submittals of any one Shop Drawing or Sample being required for evaluation due to rejection for noncompliance of the original submittal or lace of information required by the Contract Documents. County's reimbursement for the charges shall be a deduction from Bidder's Partial Payment(s). (see SC-6.17.E.2)

6.18 Continuing the Work

A. Bidder shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with County. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as County and Bidder may otherwise agree in writing.

6.19 Bidder's General Warranty and Guarantee

- A. Bidder warrants and guarantees to County that all Work will be in accordance with the Contract Documents and will not be defective. Engineer of Record and its officers, directors, members, partners, employees, agents, consultants, and SubContractors shall be entitled to rely on representation of Bidder's warranty and guarantee.
- B. Bidder's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Bidder, SubContractors, Suppliers, or any other individual or entity for whom Bidder is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Bidder's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Bidder's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer of Record and/or Project Manager;
 - 2. recommendation by Engineer of Record or payment by County of any progress or final payment;

- 3. the issuance of a certificate of Substantial Completion by Engineer of Record and/or Project Manager or any payment related thereto by County;
- 4. use or occupancy of the Work or any part thereof by County;
- 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer of Record;
- 6. any inspection, test, or approval by others; or
- 7. any correction of defective Work by County.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Bidder shall indemnify and hold harmless County and Engineer, and the officers, directors, members, partners, employees, agents, consultants and SubContractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Bidder, any SubContractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable . (see SC-6.20.A)
- B. In any and all claims against County or Engineer of Record or any of their officers, directors, members, partners, employees, agents, consultants, or SubContractors by any employee (or the survivor or personal representative of such employee) of Bidder, any SubContractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Bidder or any such SubContractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Bidder under Paragraph 6.20.A shall not extend to the liability of Engineer of Record and their officers, directors, members, partners, employees, agents, consultants and SubContractors arising out of:

- 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
- 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.
- D. Neither Bidder nor County shall sell, transfer, assign, or otherwise dispose of the contract or any portion thereof, or any right, title, or interest therein, or any obligations thereunder, without written consent of the other party. (see SC-6.20.D)

6.21 Delegation of Professional Design Services

- A. Bidder will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Bidder's responsibilities for construction means, methods, techniques, sequences and procedures. Bidder shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Bidder by the Contract Documents, County and Engineer of Record will specify all performance and design criteria that such services must satisfy. Bidder shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. County and Engineer of Record shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided County and Engineer of Record have specified to Bidder all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer of Record's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer of Record's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Bidder shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. County may perform other work related to the Project at the Site with County's employees, or through other direct contracts therefor, or have other work performed by a utility County. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Bidder prior to starting any such other work; and
 - 2. if County and Bidder are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Bidder shall afford each other Bidder who is a party to such a direct contract, each utility County, and County, if County is performing other work with County's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Bidder shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Bidder shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Bidder may cut or alter others' work with the written consent of Engineer of Record and/or Project Manager the others whose work will be affected. The duties and responsibilities of Bidder under this Paragraph are for the benefit of such utility County and other Bidders to the extent that there are comparable provisions for the benefit of Bidder in said direct contracts between County and such utility County and other Bidders.
- C. If the proper execution or results of any part of Bidder's Work depends upon work performed by others under this Article 7, Bidder shall inspect such other work and promptly report to Engineer of Record and/or Project Manager in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Bidder's Work. Bidder's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Bidder's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

- A. If County intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various Bidders will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, County shall have sole authority and responsibility for such coordination.

7.03 Legal Relationships

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of County.
- B. Each other direct contract of County under Paragraph 7.01.A shall provide that the other Bidder is liable to County and Bidder for the reasonable direct delay and disruption costs incurred by Bidder as a result of the other Bidder's wrongful actions or inactions.
- C. Bidder shall be liable to County and any other Bidder under direct contract to County for the reasonable direct delay and disruption costs incurred by such other Bidder as a result of Bidder's wrongful action or inactions.

ARTICLE 8 – COUNTY'S RESPONSIBILITIES

8.01 *Communications to Bidder*

A. Except as otherwise provided in these General Conditions, County shall issue all communications to Bidder through Engineer.

8.02 Replacement of Engineer of Record

A. In case of termination of the employment of Engineer of Record, County shall appoint an Engineer of Record to whom Bidder makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer. (see SC-8.02)

8.03 Furnish Data

A. County shall promptly furnish the data required of County under the Contract Documents.

8.04 Pay When Due

A. County shall make payments to Bidder when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 Lands and Easements; Reports and Tests

A. County's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to County's identifying and making available to Bidder copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. County's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. County is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. County's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 Limitations on County's Responsibilities

A. The County shall not supervise, direct, or have control or authority over, nor be responsible for, Bidder's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Bidder to comply with Laws and Regulations applicable to the performance of the Work. County will not be responsible for Bidder's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

A. County's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 Evidence of Financial Arrangements

A. Upon request of Bidder, County shall furnish Bidder reasonable evidence that financial arrangements have been made to satisfy County's obligations under the Contract Documents.

8.12 Compliance with Safety Program

A. While at the Site, County's employees and representatives shall comply with the specific applicable requirements of Bidder's safety programs of which County has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEEROF RECORD'S STATUS DURING CONSTRUCTION

9.01 County's Representative

A. Engineer of Record and/or Project Manager will be County's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer of Record and/or Project Manager as County's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Engineer of Record will make visits to the Site at intervals appropriate to the various stages of construction as Engineer of Record deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Bidder's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of County, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer of Record will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer of Record's efforts will be directed toward providing for County a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer of Record will keep County informed of the progress of the Work and will endeavor to guard County against defective Work.
- B. Engineer of Record's visits and observations are subject to all the limitations on Engineer of Record's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer of Record's visits or observations of Bidder's Work, Engineer of Record will not supervise, direct, control, or have authority over or be responsible for Bidder's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Bidder to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

A. If County and Engineer of Record agree, Engineer of Record will furnish a Resident Project Representative to assist Engineer of Record in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If County designates another representative or agent to represent County at the Site who is not Engineer of Record's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 Authorized Variations in Work

A. Engineer of Record may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on County and also on Bidder, who shall perform the Work involved promptly. If County or Bidder believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 Rejecting Defective Work

- A. Engineer of Record will have authority to reject Work which Engineer of Record believes to be defective, or that Engineer of Record believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer of Record will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.
- B. Bidder shall reimburse the County for the charges of Engineer of Record and Engineer of Records's Consultants for any additional field observations, engineering analysis, correspondence, meetings, or other work due to non-complying or defective construction, materials, or equipment performed or furnished by the Bidder, SubContractors, or Suppliers. County's reimbursement for the charges shall be a deduction from the Bidder's Partial Payment(s). (see SC-9.05.B)

9.06 Shop Drawings, Change Orders and Payments

- A. In connection with Engineer of Record's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer of Record's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer of Record's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer of Record's authority as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work

A. Engineer of Record will determine the actual quantities and classifications of Unit Price Work performed by Bidder. Engineer of Record will review with Bidder the Engineer of Record's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer of Record's written decision thereon will be final and binding (except as modified by Engineer of Record to reflect changed factual conditions or more accurate data) upon County and Bidder, subject to the provisions of Paragraph 10.05.

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

- A. Engineer of Record and/or Project Manager will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between County and Bidder arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer of Record and/or Project Manager in writing within 30 days of the event giving rise to the question.
- B. Engineer of Record will, with reasonable promptness, render a written decision on the issue referred. If County or Bidder believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer of Record's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer of Record's written decision on the issue referred will be final and binding on County and Bidder, subject to the provisions of Paragraph 10.05.

- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer of Record will not show partiality to County or Bidder and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.
- 9.09 Limitations on Engineer of Record's Authority and Responsibilities
 - A. Neither Engineer of Record's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer of Record in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer of Record shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer of Record to Bidder, any SubContractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
 - B. Engineer of Record will not supervise, direct, control, or have authority over or be responsible for Bidder's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Bidder to comply with Laws and Regulations applicable to the performance of the Work. Engineer of Record will not be responsible for Bidder's failure to perform the Work in accordance with the Contract Documents.
 - C. Engineer of Record will not be responsible for the acts or omissions of Bidder or of any SubContractor, any Supplier, or of any other individual or entity performing any of the Work.
 - D. Engineer of Record's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
 - E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 Compliance with Safety Program

A. While at the Site, Engineer of Record's employees and representatives shall comply with the specific applicable requirements of Bidder's safety programs of which Engineer of Record has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

- A. Without invalidating the Contract and without notice to any surety, County may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Bidder shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If County and Bidder are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 Unauthorized Changes in the Work

A. Bidder shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 Execution of Change Orders

- A. County and Bidder shall execute appropriate Change Orders recommended by Engineer of Record and/or Project Manager covering:
 - 1. changes in the Work which are: (i) ordered by County pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or County's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer of Record pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Bidder shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Bidder's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. Engineer of Record's Decision Required: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer of Record for decision. A decision by Engineer of Record shall be required as a condition precedent to any exercise by County or Bidder of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. Notice: Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer of Record to the other party to the Contract promptly (but in no event later than 30 15 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer of Record and the other party to the Contract within 60 days after the start of such event (unless Engineer of Record allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer of Record and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer of Record allows additional time). (see SC-10.05.B)
- C. *Engineer of Record's Action*: Engineer of Record will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
 - 1. deny the Claim in whole or in part;
 - 2. approve the Claim; or
 - 3. notify the parties that the Engineer of Record is unable to resolve the Claim if, in the Engineer of Record's sole discretion, it would be inappropriate for

- the Engineer of Record to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer of Record does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer of Record's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon County and Bidder, unless County or Bidder invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

- A. Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Bidder in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Bidder will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by County, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
 - 1. Payroll costs for employees in the direct employ of Bidder in the performance of the Work under schedules of job classifications agreed upon by County and Bidder. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by County.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to

Bidder unless County deposits funds with Bidder with which to make payments, in which case the cash discounts shall accrue to County. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to County, and Bidder shall make provisions so that they may be obtained.

- 3. Payments made by Bidder to SubContractors for Work performed by SubContractors. If required by County, Bidder shall obtain competitive bids from SubContractors acceptable to County and Bidder and shall deliver such bids to County, who will then determine, with the advice of Engineer of Record, which bids, if any, will be acceptable. If any subcontract provides that the SubContractor is to be paid on the basis of Cost of the Work plus a fee, the SubContractor's Cost of the Work and fee shall be determined in the same manner as Bidder's Cost of the Work and fee as provided in this Paragraph 11.01.
- 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
- 5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Bidder's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Bidder.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Bidder or others in accordance with rental agreements approved by County with the advice of the Engineer of Record/and/or Project Manager, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. In no case shall rates exceed those published by the current edition of Data Quest Incorporated titled, Rental Rate Blue Book for Construction Equipment, and other procedures established by Florida Department of Transportation. (see SC-11.01.A.5.c)

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Bidder is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Bidder, any SubContractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Bidder in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Bidder, any SubContractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of County. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Bidder's fee. (see SC-11.01.A.5.f)
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance Bidder is required by the Contract Documents to purchase and maintain.
- j. The cost of specific consideration for the indemnifications set forth in paragraph 6.20. (see SC-11.01.A.5.j)
- k. The cost of compliance with current local, state and federal safety regulations. (see SC-11.01.A.5.k)
- B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
 - 1. Payroll costs and other compensation of Bidder's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Bidder, whether at the Site or in Bidder's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in

- Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Bidder's fee.
- 2. Expenses of Bidder's principal and branch offices other than Bidder's office at the Site.
- 3. Any part of Bidder's capital expenses, including interest on Bidder's capital employed for the Work and charges against Bidder for delinquent payments.
- 4. Costs due to the negligence of Bidder, any SubContractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Bidder's Fee:* When all the Work is performed on the basis of cost-plus, Bidder's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Bidder's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Bidder will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer of Record an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Bidder has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to County and Engineer.

B. Cash Allowances:

- 1. Bidder agrees that:
 - a. the cash allowances include the cost to Bidder (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Bidder's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash

allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance:

- 1. Bidder agrees that a contingency allowance, if any, is for the sole use of County to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer of Record and/or Project Managerto reflect actual amounts due Bidder on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Bidder will be made by Engineer of Record subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.
- D. County or Bidder may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Bidder differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Bidder believes that Bidder is entitled to an increase in Contract Price as a result of having incurred additional expense or County believes that County is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

- E. <u>If County objects to Bidder's quoted adjustment in Unit Price Work set forth in paragraph 11.03.D</u>, County may assign such work to its own forces or another Bidder.
- F. County reserves the right to delete any Unit Price Work without financial penalty incurred from Bidder.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer of Record and/or Project Manager and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Bidder's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Bidder's Fee:* The Bidder's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
 - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Bidder's fee shall be 15 percent;

- b. for costs incurred under Paragraph 11.01.A.3, the Bidder's fee shall be five percent;
- c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the SubContractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such SubContractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier SubContractor and Bidder will each be paid a fee of five percent of the amount paid to the next lower tier SubContractor;
- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Bidder to County for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Bidder's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Bidder's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer of Record and/or Project Manager and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.
- C. On the 21st of each month, or the next following business day, the Bidder shall submit to the County and Engineer of Record a request for weather days. Failure to submit the request forfeits the right to claim weather days for that period and any previous period. The County will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions or related adverse soil conditions that prevent the Bidder from productively performing controlling items of work resulting in:

(1) The Bidder being unable to work at least 50% of the normal work day on predetermined controlling work items due to adverse weather conditions.

No additional compensation will be made for delays caused by the effects of inclement weather. (see SC-12.02.C)

12.03 Delays

- A. Where Bidder is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Bidder, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Bidder shall include, but not be limited to, acts or neglect by County, acts or neglect of utility Countys or other Bidders performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If County, Engineer of Record, or other Bidders or utility County performing other work for County as contemplated by Article 7, or anyone for whom County is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Bidder shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Bidder's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Bidder's ability to complete the Work within the Contract Times.
- C. If Bidder is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility County not under the control of County, or other causes not the fault of and beyond control of County and Bidder, then Bidder shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Bidder's ability to complete the Work within the Contract Times. Such an adjustment shall be Bidder's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. County, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or SubContractors shall not be liable to Bidder for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Bidder on or in connection with any other project or anticipated project.
- E. Bidder shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Bidder. Delays attributable to and within the control of a SubContractor or Supplier shall be deemed to be delays within the control of Bidder.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which County or Engineer of Record and/or Project Manager has actual knowledge will be given to Bidder. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. County, Engineer of Record, their consultants and other representatives and personnel of County, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Bidder shall provide them proper and safe conditions for such access and advise them of Bidder's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Bidder shall give Engineer of Record and/or Project Manager timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. Bidder shall reimburse County for the charges of Engineer of Record and Engineer of Record's Consultants for all costs due to work not being ready for tests and/or inspections when the Bidder has notified Engineer of Record that work is ready for tests and/or inspections. Bidder shall reimburse County for all failed tests and subsequent retests. Reimbursement for the charges shall be a deduction from the Bidder's Partial Payment(s). (see SC-13.03.A)
- B. County shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- B. The Bidder shall obtain and employ an independent testing laboratory to provide the services specified herein and shall include all costs for these services in the contract price. The Bidder shall submit for approval by the County and Engineer, the independent testing laboratory, including qualifications.

Copies of all testing agency invoices submitted to the Bidder for payment shall be forwarded with the Bidder's request for partial payment. Invoices shall be submitted routinely throughout the project and shall be pertinent to the partial payment period under consideration. Testing agency invoices in excess of sixty (60) days old shall not be considered for payment. Invoices shall clearly indicate type and amount of test performed, unit and total cost, and shall indicate if the invoiced testing cost is a result of retests required due to the Bidder's failure to achieve specified requirements. The cost of retesting due to test failure will be borne by the Bidder. Payment to Bidder for testing shall not be made without the required itemized invoicing. (see SC-13.03.B)

- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Bidder shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer of Record and/or Project Manager the required certificates of inspection or approval.
- D. Bidder shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for County's and Engineer of Record's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Bidder's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to County and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Bidder without written concurrence of Engineer, Bidder shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Bidder's expense unless Bidder has given Engineer of Record and/or Project Manager timely notice of Bidder's intention to cover the same and Engineer of Record and/or Project Manager has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer of Record, it must, if requested by Engineer of Record, be uncovered for Engineer of Record's observation and replaced at Bidder's expense.
- B. If Engineer of Record considers it necessary or advisable that covered Work be observed by Engineer of Record or inspected or tested by others, Bidder, at Engineer of Record's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer of Record may require, that

- portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Bidder shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and County shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, County may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Bidder shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Bidder may make a Claim therefor as provided in Paragraph 10.05.

13.05 County May Stop the Work

A. If the Work is defective, or Bidder fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, County may order Bidder to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of County to stop the Work shall not give rise to any duty on the part of County to exercise this right for the benefit of Bidder, any SubContractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work

- A. Promptly after receipt of written notice, Bidder shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Bidder shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Bidder shall take no action that would void or otherwise impair County's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Bidder's use by County or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Bidder shall promptly, without cost to County and in accordance with County's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by County, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Bidder does not promptly comply with the terms of County's written instructions, or in an emergency where delay would cause serious risk of loss or damage, County may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Bidder.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Bidder's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, County (and, prior to Engineer of Record's recommendation of final payment, Engineer) prefers to accept it, County may do so. Bidder shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to County's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer of Record as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Bidder pursuant to this sentence. If any such acceptance occurs prior to Engineer of Record's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and County shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, County may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Bidder to County. (see SC-13.08.A)

13.09 County May Correct Defective Work

- A. If Bidder fails within a reasonable time after written notice from Engineer of Record and/or Project Manager to correct defective Work, or to remove and replace rejected Work as required by Engineer of Record in accordance with Paragraph 13.06.A, or if Bidder fails to perform the Work in accordance with the Contract Documents, or if Bidder fails to comply with any other provision of the Contract Documents, County may, after seven days written notice to Bidder, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, County shall proceed expeditiously. In connection with such corrective or remedial action, County may exclude Bidder from all or part of the Site, take possession of all or part of the Work and suspend Bidder's services related thereto, take possession of Bidder's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which County has paid Bidder but which are stored elsewhere. Bidder shall allow County, County's representatives, agents and employees, County's other Bidders, and Engineer of Record and Engineer of Record's consultants access to the Site to enable County to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by County in exercising the rights and remedies under this Paragraph 13.09 will be charged

against Bidder, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and County shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, County may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Bidder's defective Work. (see SC-13.09.C)

D. Bidder shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by County of County's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO BIDDER AND COMPLETION

14.01 Schedule of Values

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments:

- 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Bidder shall submit to Engineer of Record and/or Project Manager for review an Application for Payment filled out and signed by Bidder covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that County has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect County's interest therein, all of which must be satisfactory to County.
- 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Bidder stating that all previous progress payments received on account of the Work have been applied on account to discharge Bidder's legitimate obligations associated with prior Applications for Payment. Beginning with the second Application for Payment, each

Application shall include an affidavit of Bidder certifying that Bidder has disbursed to all SubContractors and suppliers having an interest in the contract their pro rata share of the payment out of previous progress payments received by Bidder for all work completed and materials furnished in the previous work period, less a retainage withheld by Bidder pursuant to an agreement with a SubContractor. Within 30 days of receipt for the final progress payment or any other payments received thereafter except the final payment, Bidder shall pay all SubContractors and suppliers having an interest in the contract their pro rata shares of the payment for all work completed and materials furnished. (see SC-14.02.A.2)

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

- 1. Engineer of Record and/or Project Manager will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to County or return the Application to Bidder indicating in writing Engineer of Record and/or Project Manager's reasons for refusing to recommend payment. In the latter case, Bidder may make the necessary corrections and resubmit the Application or direct Engineer of Record and/or Project Manager to present the Application to County with Engineer of Record and/or Project Manager's recommendation of partial payment. (see SC-14.02.B.1)
- 2. Engineer of Record and/or Project Manager's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer of Record to County, based on Engineer of Record and/or Project Manager's observations of the executed Work as an experienced and qualified design professional, and on Engineer of Record and/or Project Manager's review of the Application for Payment and the accompanying data and schedules and the Contract Documents (see SC-14.02.B2), that to the best of Engineer of Record and/or Project Manager's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

- c. the conditions precedent to Bidder's being entitled to such payment appear to have been fulfilled in so far as it is Engineer of Record and/or Project Manager's responsibility to observe the Work.
- d. <u>Bidder's other obligations under the Contract Documents have been fulfilled.</u> (see SC-14.02.B.2.d)
- 3. By recommending any such payment Engineer of Record and/or Project Manger will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer of Record in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Bidder to be paid additionally by County or entitle County to withhold payment to Bidder.
- 4. Neither Engineer of Record's review of Bidder's Work for the purposes of recommending payments nor Engineer of Record's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Bidder's failure to comply with Laws and Regulations applicable to Bidder's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Bidder has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to County free and clear of any Liens.
- 5. Engineer of Record and/or Project Manager may refuse to recommend the whole or any part of any payment if, in Engineer of Record and/or Project Manager's opinion, it would be incorrect to make the representations to County stated in Paragraph 14.02.B.2. Engineer of Record and/or Project Manager may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer of Record and/or Project Manager's opinion to protect County from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. County has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer of Record has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to County with Engineer of Record and/or Project Manager's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by County to Bidder.

D. Reduction in Payment:

- 1. County may refuse to make payment of the full amount recommended by Engineer of Record and/or Project Manager because:
 - a. claims have been made against County on account of Bidder's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Bidder has delivered a specific bond satisfactory to County to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling County to a set-off against the amount recommended; or
 - d. County has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
- 2. If County refuses to make payment of the full amount recommended by Engineer, County will give Bidder immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Bidder any amount remaining after deduction of the amount so withheld. County shall promptly pay Bidder the amount so withheld, or any adjustment thereto agreed to by County and Bidder, when Bidder remedies the reasons for such action.
- 3. Upon a subsequent determination that County's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due

as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Bidder's Warranty of Title

A. Bidder warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to County no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

- A. When Bidder considers the entire Work ready for its intended use Bidder shall notify County and Engineer of Record and/or Project Manager in writing that the entire Work is substantially complete (except for items specifically listed by Bidder as incomplete) and request that Engineer of Record and/or Project Manager issue a certificate of Substantial Completion.
- B. Promptly after Bidder's notification, County, Bidder, and Engineer of Record and/or Project Manager shall make an inspection of the Work to determine the status of completion. If Engineer of Record and/or Project Manager does not consider the Work substantially complete, Engineer of Record and/or Project Manager will notify Bidder in writing giving the reasons therefor.
- C. If Engineer of Record and/or Project Manager considers the Work substantially complete, Engineer of Record and/or Project Manager will deliver to County a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. County shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer of Record and/or Project Manager as to any provisions of the certificate or attached list. If, after considering such objections, Engineer of Record and/or Project Manager concludes that the Work is not substantially complete, Engineer of Record and/or Project Manager will, within 14 days after submission of the tentative certificate to County, notify Bidder in writing, stating the reasons therefor. If, after consideration of County's objections, Engineer of Record and/or Project Manager considers the Work substantially complete, Engineer of Record and/or Project Manager will, within said 14 days, execute and deliver to County and Bidder a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer of Record and/or Project Manager believes justified after consideration of any objections from County.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer of Record and/or Project Manager will deliver to County and Bidder a

written recommendation as to division of responsibilities pending final payment between County and Bidder with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless County and Bidder agree otherwise in writing and so inform Engineer of Record and/or Project Manager in writing prior to Engineer of Record and or Project Manager's issuing the definitive certificate of Substantial Completion, Engineer of Record and/or Project Manager's aforesaid recommendation will be binding on County and Bidder until final payment.

E. County shall have the right to exclude Bidder from the Site after the date of Substantial Completion subject to allowing Bidder reasonable access to remove its property and complete or correct items on the tentative list.

14.05 Partial Utilization

- A. Prior to Substantial Completion of all the Work, County may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which County, Engineer of Record and/or Project Manager, and Bidder agree constitutes a separately functioning and usable part of the Work that can be used by County for its intended purpose without significant interference with Bidder's performance of the remainder of the Work, subject to the following conditions:
 - 1. County at any time may request Bidder in writing to permit County to use or occupy any such part of the Work which County believes to be ready for its intended use and substantially complete. If and when Bidder agrees that such part of the Work is substantially complete, Bidder, County, and Engineer of Record and/or Project Manager will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
 - 2. Bidder at any time may notify County and Engineer of Record and/or Project Manager in writing that Bidder considers any such part of the Work ready for its intended use and substantially complete and request Engineer of Record and/or Project Manager to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, County, Bidder, and Engineer of Record and/or Project Manager shall make an inspection of that part of the Work to determine its status of completion. If Engineer of Record and/or Project Manager does not consider that part of the Work to be substantially complete, Engineer of Record and/or Project Manager will notify County and Bidder in writing giving the reasons therefor. If Engineer of Record and/or Project Manager considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance. (see SC.14.5.A.4)

14.06 Final Inspection

A. Upon written notice from Bidder that the entire Work or an agreed portion thereof is complete, Engineer of Recordwill promptly make a final inspection with County and Bidder and will notify Bidder in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Bidder shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment:

- 1. After Bidder has, in the opinion of Engineer of Record and/or Project Manager, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Bidder may make application for final payment following the procedure for progress payments.
- 2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against County that Bidder believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to County) of all Lien rights arising out of or Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by County, Bidder may furnish receipts or releases in full and an affidavit of Bidder that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which County might in any way be responsible, or which might in any way result in liens or other burdens on County's property, have been

paid or otherwise satisfied. If any SubContractor or Supplier fails to furnish such a release or receipt in full, Bidder may furnish a bond or other collateral satisfactory to County to indemnify County against any Lien.

- B. Engineer of Record and/or Project Manager's Review of Application and Acceptance:
 - 1. If, on the basis of Engineer of Record and/or Project Manager's observation of the Work during construction and final inspection, and Engineer of Record and/or Project Manager's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer of Record and/or Project Manager is satisfied that the Work has been completed and Bidder's other obligations under the Contract Documents have been fulfilled, Engineer of Record and/or Project Manager will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer of Record and/or Project Manager's recommendation of payment and present the Application for Payment to County for payment. At the same time Engineer of Record and/or Project Manager will also give written notice to County and Bidder that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer of Record and/or Project Manager will return the Application for Payment to Bidder, indicating in writing the reasons for refusing to recommend final payment, in which case Bidder shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to County of the Application for Payment and accompanying documentation, the amount recommended by Engineer of Record and/or Project Manager, less any sum County is entitled to set off against Engineer of Record and/or Project Manager's recommendation, including but not limited to liquidated damages, will become due and will be paid by County to Bidder.

14.08 Final Completion Delayed

A. If, through no fault of Bidder, final completion of the Work is significantly delayed, and if Engineer of Record and/or Project Manager so confirms, County shall, upon receipt of Bidder's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer of Record and/or Project Manager, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by County for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and

accepted shall be submitted by Bidder to Engineer of Record and/or Project Manager with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:
 - a waiver of all Claims by County against Bidder, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or whenever said failure occurs from Bidder's continuing obligations under the Contract Documents; and (see SC-14.09.A.1)
 - 2. a waiver of all Claims by Bidder against County other than those previously made in accordance with the requirements herein and expressly acknowledged by County in writing as still unsettled.
 - 3. The acceptance of final payment by Bidder designated and identified by Engineer of Record and/or Project Manager as final payment shall be and shall operate as a release to County of all claims and all liability to Bidder other than claims in stated amounts as may be specifically excepted by Bidder for all things done or finished in connection with the Work and for every act of County and others relating to or arising out of the Work. Any payment, however, final or otherwise, shall not release Bidder or Bidder's Surety(ies) from any obligations under the Contract Documents or Bonds. (see SC-14.09.A.3)

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 County May Suspend Work

A. At any time and without cause, County may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Bidder and Engineer of Record which will fix the date on which Work will be resumed. Bidder shall resume the Work on the date so fixed. Bidder shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Bidder makes a Claim therefor as provided in Paragraph 10.05.

15.02 County May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

- 1. Bidder's start the work in accordance with the Notice to Proceed or Bidder's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04) (see SC-15.02.A.1);
- 2. Bidder's disregard of Laws or Regulations of any public body having jurisdiction;
- 3. Bidder's repeated disregard of the authority of Engineer of Record; or
- 4. Bidder's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, County may, after giving Bidder (and surety) seven days written notice of its intent to terminate the services of Bidder:
 - 1. exclude Bidder from the Site, and take possession of the Work and of all Bidder's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Bidder (without liability to Bidder for trespass or conversion);
 - 2. incorporate in the Work all materials and equipment stored at the Site or for which County has paid Bidder but which are stored elsewhere; and
 - 3. complete the Work as County may deem expedient.
- C. If County proceeds as provided in Paragraph 15.02.B, Bidder shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by County arising out of or relating to completing the Work, such excess will be paid to Bidder. If such claims, costs, losses, and damages exceed such unpaid balance, Bidder shall pay the difference to County. Such claims, costs, losses, and damages incurred by County will be reviewed by Engineer of Record as to their reasonableness and, when so approved by Engineer of Reccord, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, County shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Bidder's services will not be terminated if Bidder begins within seven days of receipt of notice of intent to

- terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Bidder's services have been so terminated by County, the termination will not affect any rights or remedies of County against Bidder then existing or which may thereafter accrue. Any retention or payment of moneys due Bidder by County will not release Bidder from liability.
- F. If and to the extent that Bidder has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 County May Terminate For Convenience

- A. Upon seven days written notice to Bidder and Engineer of Record, County may, without cause and without prejudice to any other right or remedy of County, terminate the Contract. In such case, Bidder shall be paid for (without duplication of any items):
 - completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with SubContractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Bidder shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Bidder May Stop Work or Terminate

A. If, through no act or fault of Bidder, (i) the Work is suspended for more than 90 consecutive days by County or under an order of court or other public authority, or (ii) Engineer of Record and/or Project Manager fails to act on any Application for Payment within 30 days after it is submitted, or (iii) County fails for 45 days to pay Bidder any sum finally determined to be due, then Bidder may, upon seven days written notice to County and Engineer of Record and/or Project Manager, and provided County or Engineer of Record and/or Project Manager do not

- remedy such suspension or failure within that time, terminate the Contract and recover from County payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer of Record and/or Project Manager has failed to act on an Application for Payment within 30 days after it is submitted, or County has failed for 45 days to pay Bidder any sum finally determined to be due, Bidder may, seven days after written notice to County and Engineer of Record and/or Project Manaager, stop the Work until payment is made of all such amounts due Bidder, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Bidder from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Bidder's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

- A. Either County or Bidder may request mediation of any Claim submitted to Engineer of Record for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. County and Bidder shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer of Record's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, County or Bidder:
 - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 - 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

D. <u>Venue for any mediation shall be in Nassau County, Florida.</u> <u>Venue for any litigation shall be in state court in Nassau County, Florida.</u>

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Bidder.

17.05 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 Headings

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplemental Conditions

SECTION 00 73 15

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract have the meanings assigned to them in the General Conditions.

ARTICLE 1 DEFINITIONS AND TERMINOLOGY

SC-1.01.21 Amend the Defined Terms for *General Requirements* to The General Requirements pertain to all Sections of the specifications.

Add the following new paragraph immediately after paragraph 1.01.51:

SC-1 .01.52 SURETY – The person, firm, or corporation which is bound by the contract bonds with and for Bidder (Principal); and which is held and firmly bound unto County for the conditions of obligations set forth in said bonds.

ARTICLE 2 PRELIMINARY MATTERS

- SC-2.02.A Amend the first sentence of paragraph 2.02.A of the General Conditions by changing "up to ten" to "five".
- SC-2.05.A Amend the first sentence of paragraph 2.05.A of the General Conditions by changing "Within 10 days after the Effective Date of the Agreement" to "At the Preconstruction Conference".

Add the following new paragraph immediately after paragraph 2.05.A.3:

SC-2.05.B Before any Work at the Site is started, Bidder shall deliver to the County, certificates of insurance that Bidder is required to purchase and maintain in accordance with Article 5.

Add the following new paragraph immediately after paragraph 2.06.B:

SC-2.06.C County may issue Notice to Proceed at the Preconstruction Conference. Bidder shall begin the Work within twenty-four (24) hours of the date given in the Notice to Proceed. If the Bidder does not start the Work within fourteen (14) calendar days after this date, County may, at his discretion, terminate Bidder in accordance with paragraph 15.02.

Delete paragraph 2.07.A in its entirety and insert the following in its place:

SC-2.07.A All schedules as set forth in Article 2 shall be submitted and accepted by the County and Engineer of Record and/or Project Manager within 30 days of NTP. Should any schedule not be accepted within 30 days of the NTP, it will be considered a breach of contract and reason for termination of the contract for cause in accordance with the General Conditions, Section 15.02.

ARTICLE 4 AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRIONMENTAL CONDITIONS; REFERENCE POINTS

Add the following to the end of paragraph 4.01.C:

SC-4.01.C Bidder shall obtain said land rights at his own expense and without liability to the County. Bidder shall not enter upon private property without first obtaining written permission from the rightful property County.

Add the following new paragraph immediately after paragraph 4.02.B:

SC-4.02.C In the preparation of Drawings and Specifications, Engineer of Record or Engineer of Record's Consultants relied upon the following report(s) of explorations and tests of subsurface conditions at the Site: See Appendix A

NO GEOTECHINCAL LISTED

Amend the last sentence in paragraph 4.03.C.3 to read:

SC-4.03.C.3 However, County, Engineer of Record and Engineer of Record's Consultants shall not be liable to Bidder for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) sustained by Bidder on or in connection with any other project or anticipated project.

ARTICLE 5 BONDS AND INSURANCE

Delete paragraph 5.01.B in its entirety and insert the following in its place:

SC-5.01.B All Bonds shall be in the form prescribed by the Contract Documents or other form approved by County. All else notwithstanding, the terms of all Bonds shall be substantially in the form prescribed by Chapter 255, Florida Statutes. All Bonds shall be executed by Bidder and a corporate bonding company licensed to transact such business in the State of Florida and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. Bidder will cause the Bonds to be recorded with the Clerk of the Circuit Court in the county in which the Work is to be performed. Failure to execute bonds in the form prescribed may constitute non-responsiveness on the part of the Bidder. The expense for all Bonds shall be the

Add the following to the end of paragraph 5.02.A:

Bidder's responsibility.

SC-5.02.A Certificates of insurance shall be issued by a company with a Best's rating of at least B+ authorized to do business in the State of Florida. County must approve non-rated insurers. If used, County shall be shown as Certificate Holder, Engineer as Additional Insured and provide a 30-day cancellation notice.

Delete paragraph 5.03.B in its entirety and insert the following in its place:

SC-5.03.B Insurance policies written on a "Claims Made" form is not acceptable without County's approval.

Add the following new paragraphs immediately after paragraph 5.03.E:

- SC-5.03.F Umbrella Liability insurance is preferred, but an Excess Liability equivalent is acceptable. Whichever type of coverage is provided, it shall not be more restrictive than the underlying insurance policy coverages, including, but not limited to the coverage Trigger, defense, notice of occurrence/accident/circumstances, notice of claim and extended reporting period.
- SC-5.03.G No work shall commence under this contract until the required Certificate(s) have been provided. Work shall not continue after expiration (or cancellation) until new Certificate(s) have been provided. Non-continuance of work after expiration (or cancellation) of Certificate(s) will not constitute a delay beyond Bidder's control as defined in paragraph 12.03.
- SC-5.03.H Bidder shall arrange for its insurers' policies to include, or be endorsed to include, a severability or interest/cross liability provision, so that County will be

treated as if a separate policy were in existence, but without increasing the policy limits.

- SC-5.03.I Bidder's deductibles/self-insured retentions shall be disclosed to County and may be disapproved by the latter. They shall be reduced or eliminated at the option of County. Bidder is responsible for the amount of any deductible or self-insured retention.
- SC-5.03.J These insurance requirements shall not relieve or limit the liability of Bidder.

 County does not in any way represent that these types or amounts of insurance are sufficient or adequate to protect Bidder's interests or liabilities, but are merely minimums.
- SC-5.03.K Insurance required of Bidder or any other insurance of Bidder shall be considered primary, and insurance or self-insurance of County shall be considered excess, as may be applicable to claims that arise out of this contract.
- SC-5.03.L Receipt of Certificates or other documentation of insurance or policies or copies of policies by County, or by any of its representatives, which indicate less coverage than required does not constitute a waiver of the Bidder's obligation to fulfill the insurance requirements herein.
- SC-5.03. M The Bidder shall either (a) require each subcontractor to produce and maintain the same coverage as required of the Bidder, or (b) insure the activities of subcontractor in his own policy.
- SC-5.03.N These insurance requirements are minimums and may not be adequate to cover Bidder exposures.

Add the following new paragraphs immediately after paragraph 5.04.B:

SC-5.04.C The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the amounts shown in Exhibit 1 of the contract documents, or greater where required by Laws and Regulations.

Delete paragraphs 5.06 through 5.10 in their entirety except for paragraph 5.06.D and insert the following in place of 5.09.A:

SC-5.09.A If County has any objection to the coverage afforded by or other provisions of Bonds or insurance required to be purchased and maintained by Bidder in

accordance with Article 5 on the basis of non-conformance with the Contract Documents, County shall so notify Bidder in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. Bidder shall provide to County such additional information in respect of insurance provided as County may reasonably request.

ARTICLE 6 BIDDER'S RESPONSIBILITIES

Add the following to the end of paragraph 6.01.A:

- SC-6.01.A County reserves the right to reject any means, methods, techniques, sequences or procedures proposed by Bidder which:
 - will constitute or create a hazard to the Work or to the persons or damage to property or existing utilities; or
 - 2. will not produce finished work in accordance with the terms of the contract Documents.

County's failure to exercise his right to reject such means, methods, techniques, sequences or procedures shall not relieve the Bidder of his obligation to accomplish the result intended in the Contract Documents nor shall the exercise of such right create a cause of action for damages.

Add the following new paragraph immediately after paragraph 6.02.B:

SC-6.02.C Engineer of Record and/or Project Manager shall record time and costs required by Engineer of Record and/or Project Manager and Engineer of Record's Consultants to provide inspection services due to Bidder's working beyond regular working hours as defined in the General Requirements. County's reimbursement for the charges shall be a deduction from Bidder's Partial Payment(s) in accordance with Section 01 11 00 Part 2.02.

Add the following new paragraphs immediately after paragraph 6.05.A.2.d:

- SC-6.05.A.2.e Each action mentioned above required for review of proposed substitute items of material or equipment shall be followed in the order given. Failure to do so shall be cause for rejection of the proposed substitution.
- SC-6.05.A.2.f Bidder shall reimburse County for the charges of Engineer of Record and/or Project Manager or Engineer of Record's Consultants for evaluation of

substitutions. County's reimbursement for the charges shall be a deduction from the Bidder's Partial Payment(s).

Add the following to the end of paragraph 6.06.A:

SC -6.06.A Bidder shall not subcontract part(s) or the work, the aggregate cost of which is greater than 50 percent of the contract price, without prior written approval by County. Bidder shall cause appropriate provisions to be inserted in all subcontracts relative to the Work that bind Subcontractor to Bidder by the terms of the Contract Documents insofar as applicable to the work of Subcontractors and to give Bidder the same power as regards terminating any subcontract that County may exercise over Bidder under any provision of the Contract Documents. Nothing contained in the subcontract shall create any contractual relationship between Subcontractor and County. Each Subcontractor shall discharge all duties and responsibilities of Bidder to County covered by his subcontract.

Add the following to the end of paragraph 6.06.B:

SC-6.06.B Subcontractors and Suppliers shall be identified on the form provided in the Bidding Requirements.

Add the following to the end of paragraph 6.08.A:

SC-6.08.A Permits, licenses, and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by County, unless otherwise specified.

Add the following to the end of paragraph 6.09.A:

SC-6.09.A Bidder shall also cause all Subcontractors to comply with all federal, state, county, and municipal laws, ordinances, rules, and regulations bearing on the conduct of the Work.

Add the following to the end of paragraph 6.09.B:

SC-6.09.B If Bidder observes that the Contract Documents are at variance with said laws, ordinances, rates, or regulations, Bidder shall promptly notify Engineer of Record and the County in writing, and any necessary changes shall be adjusted as provided in the Contract Documents. Bidder shall not proceed with the Work until so instructed by County.

Add the following to the end of paragraph 6.12.A:

SC-6.12.A Annotations of record documents shall be legible, precise, and complete as determined by Engineer of Record and the County.

Add the following new paragraph after paragraph 6.13.D:

SC-6.13.G Bidder shall be responsible at all times for precautions to achieve the protection of all persons, including employees and property. Bidder shall make special effort to detect hazardous conditions and shall take prompt action where necessary to avoid accident, injury, or property damage. OSHA and all other applicable safety laws and ordinances shall be followed as well as American National Standards Institute Safety Standards. All accidents, injuries, claims, or potential claims shall be reported promptly to County.

Add the following new paragraph immediately after paragraph 6.17.E.1:

- SC-6.17.E.2 Bidder shall reimburse County for the charges of the County and the County's Consultants for costs generated as a result of more than two submittals of any one Shop Drawing or Sample being required for evaluation due to rejection for noncompliance of the original submittal or lack of information required by the Contract Documents. County's reimbursement for the charges shall be a deduction from Bidder's Partial Payment(s).
- SC-6.20.A Amend the first paragraph of 6.20.A of the General Conditions by changing "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court: or arbitration or other dispute resolution costs)" to "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs)".

Add the following new paragraph immediately after paragraph 6.20.C:

SC-6.20.D Neither Bidder nor County shall sell, transfer, assign, or otherwise dispose of the contract or any portion thereof, or any right, title, or interest therein, or any obligations thereunder, without written consent of the other party.

ARTICLE 8 COUNTY'S RESPONSIBILITIES

SC-8.02 Amend paragraph 8.02 of the General Conditions by striking out the following words: "to whom Bidder makes no reasonable objection."

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

Add the following new paragraph immediately after paragraph 9.05.A:

SC-9.05.B Bidder shall reimburse the County for the charges of Engineer of Record and Engineer of Record's Consultants for any additional field observations, engineering analysis, correspondence, meetings, or other work due to non-complying or defective construction, materials, or equipment performed or furnished by the Bidder, Subcontractors, or Suppliers. County's reimbursement for the charges shall be a deduction from the Bidder's Partial Payment(s).

ARTICLE 10 CHANGES IN THE WORK; CLAIMS

SC-10.05.B Amend the first sentence of paragraph 10.05.B of the General Conditions by changing "(but in no event later than 30 days)" to "(but in no event later than 15 days)".

ARTICLE 11 COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

Add the following to the end of paragraph 11.01.A.5.c:

- SC-11.01.A.5.c In no case shall rates exceed those published by the current edition of Data

 Quest Incorporated titled, Rental Rate Blue Book for Construction Equipment,
 and other procedures established by Florida Department of Transportation.
- SC-11.01.A.5.f Amend the first sentence of paragraph 11.01.A.5.f by striking out the following words: "(except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D)".

Add the following new paragraphs immediately after paragraph 11.01.A.5.i:

- SC-11.01.A.5.j The cost of specific consideration for the indemnifications set forth in paragraph 6.20.
- SC-11.01.A.5.k The cost of compliance with current local, state and federal safety regulations.

Add the following new paragraphs immediately after paragraph 11.03.D:

SC-11.03.E If County objects to Bidder's quoted adjustment in Unit Price Work set forth in paragraph 11.03.D, County may assign such work to its own forces or another Bidder.

SC-11.03.F County reserves the right to delete any Unit Price Work without financial penalty incurred from Bidder.

ARTICLE 12 CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

Add the following new paragraph immediately after paragraph 12.02.B:

SC-12.02.C On the 21st of each month, or the next following business day, the Bidder shall submit to the County and Engineer of Record and/or Project Manager a request for weather days. Failure to submit the request forfeits the right to claim weather days for that period and any previous period. The County will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions or related adverse soil conditions that prevent the Bidder from productively performing controlling items of work resulting in:

(1) The Bidder being unable to work at least 50% of the normal work day on pre-determined controlling work items due to adverse weather conditions.

No additional compensation will be made for delays caused by the effects of inclement weather.

ARTICLE 13 TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

Add the following to the end of paragraph 13.03.A:

SC-13.03.A Bidder shall reimburse County for the charges of Engineer of Record and Engineer of Record's Consultants for all costs due to work not being ready for tests and/or inspections when the Bidder has notified Engineer of Record that work is ready for tests and/or inspections. Bidder shall reimburse County for all failed tests and subsequent retests. Reimbursement for the charges shall be a deduction from the Bidder's Partial Payment(s).

Delete paragraph 13.03.B of the General Conditions and add the following in its place:

SC-13.03.B The Bidder shall obtain and employ an independent testing laboratory to provide the services specified herein and shall include all costs for these services in the contract price. The Bidder shall submit for approval by the County and Engineer, the independent testing laboratory, including qualifications.

Copies of all testing agency invoices submitted to the Bidder for payment shall be forwarded with the Bidder's request for partial payment. Invoices shall be submitted routinely throughout the project and shall be pertinent to the partial payment period under consideration. Testing agency invoices in excess of sixty (60) days old shall not be considered for payment, Invoices shall clearly indicate type and amount of test performed, unit and total cost, and shall indicate if the invoiced testing cost is a result of retests required due to the Bidder's failure to achieve specified requirements. The cost of retesting due to test failure will be borne by the Bidder. Payment to the Bidder for testing shall not be made without the required itemized invoicing.

- SC-13.08.A Amend the first sentence of 13.08.A by changing "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs)" to "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs)".
- SC-13.09.C Amend the first sentence of 13.09.C by changing "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs)" to "(including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs)".

ARTICLE 14 PAYMENTS TO BIDDER AND COMPLETION

Delete paragraph 14.02.A.2 in its entirety and insert the following in its place:

SC-14.02.A.2 Beginning with the second Application for Payment, each Application shall include an affidavit of Bidder certifying that Bidder has disbursed to all subcontractors and suppliers having an interest in the contract their pro rata shares of the payment out of previous progress payments received by Bidder for all work completed and materials furnished in the previous work period, less a retainage withheld by Bidder pursuant to an agreement with a subcontractor. Within 30 days of receipt for the final progress payment or any other payments received thereafter except the final payment, Bidder shall pay all subcontractors

and suppliers having an interest in the contract their pro rata shares of the payment for all work completed and materials furnished.

Add the following words to the end of paragraph 14.02.B.1:

"or direct Engineer to present the Application to County with Engineer's recommendation of partial payment."

SC-14.02.B.2 After the word "schedules", add the words "and the Contract Documents".

Add the following new paragraph immediately after paragraph 14.02.B.2.c:

SC-14.02.B.2.d Bidder's other obligations under the Contract Documents have been fulfilled.

Delete paragraph 14.05.A.4 in its entirety

Amend paragraph 14.09.A.1 to read:

SC-14.09.A.1 A waiver of all Claims by County against Bidder, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein whenever said failure occurs or from Bidder's continuing obligations under the Bidder Documents; and

Add the following new paragraph immediately after paragraph 14.09.A.2:

SC-14.09.A.3 The acceptance of final payment by Bidder designated and identified by Engineer of Record and/or Project Manager as final payment shall be and shall operate as a release to County of all claims and all liability to Bidder other than claims in stated amounts as may be specifically excepted by Bidder for all things done or finished in connection with the Work and for every act of County and others relating to or arising out of the Work. Any payment, however, final or otherwise, shall not release Bidder or Bidder's Surety(ies) from any obligations under the Contract Documents or Bonds.

ARTICLE 15 SUSPENSION OF WORK AND TERMINATION

SC-15.02.A. 1 After the word "Bidder's", add the words "start the work in accordance with the Notice to Proceed or Bidder's".

ARTICLE 16 DISPUTE RESOLUTION

Add the following new paragraph immediately after paragraph 16.01.C.3

SC-16.01.D Venue for any mediation shall be in Nassau County, Florida. Venue for any litigation shall be in state court in Nassau County, Florida.

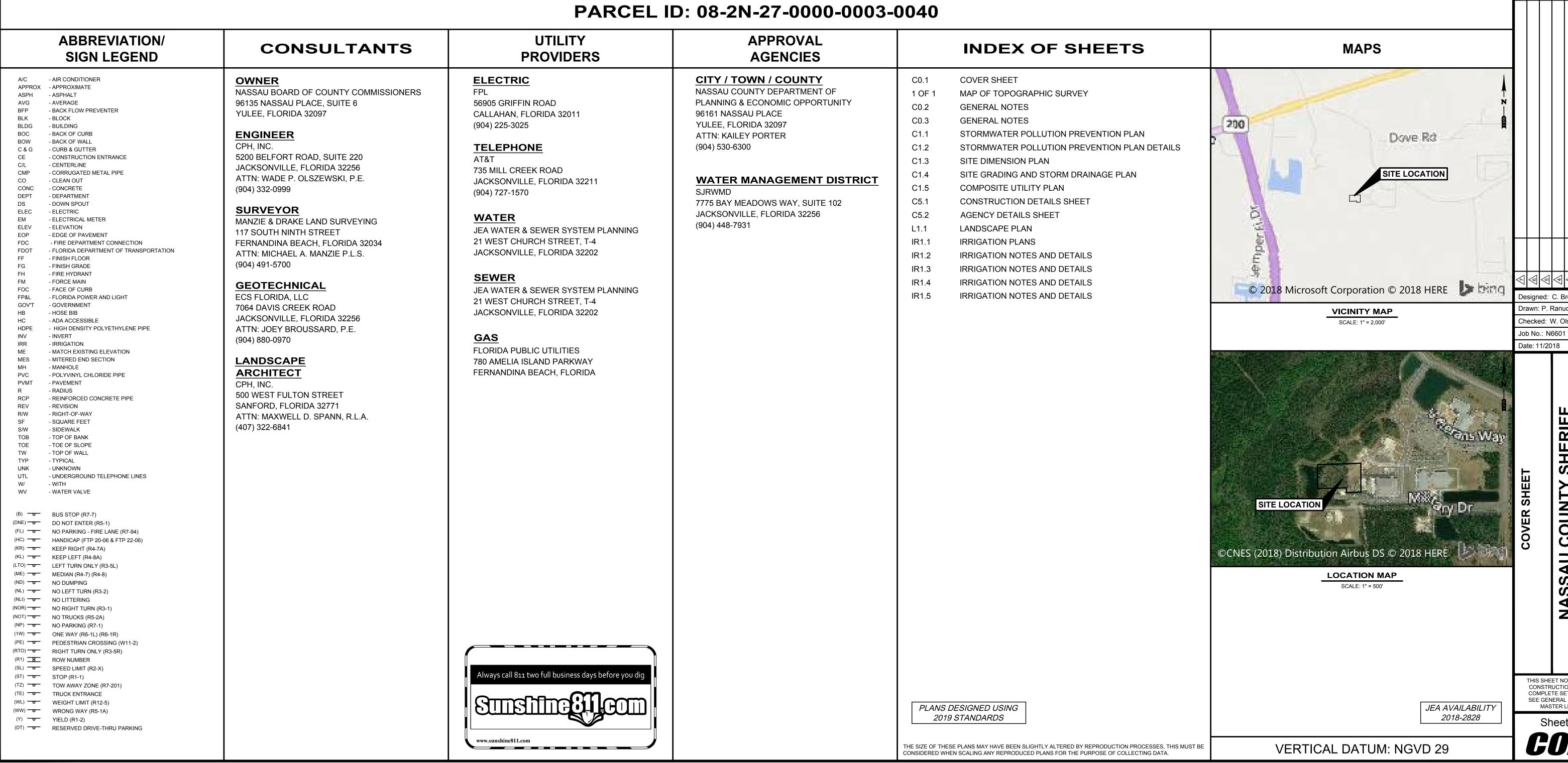
ATTACHMENT A

PLANS AND DRAWINGS

CONSTRUCTION PLANS FOR NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS

SHERIFF VEHICLE STORAGE GARAGE NASSAU COUNTY / FLORIDA **SECTION 8 - TOWNSHIP 2N SOUTH - RANGE 27E EAST**

7696 WILLIAM BURGESS ROAD



A Full Service A & E Firm

5200 Belfort Road, Suite 220 Jacksonville, FL 32256 Ph: 904.332.0999

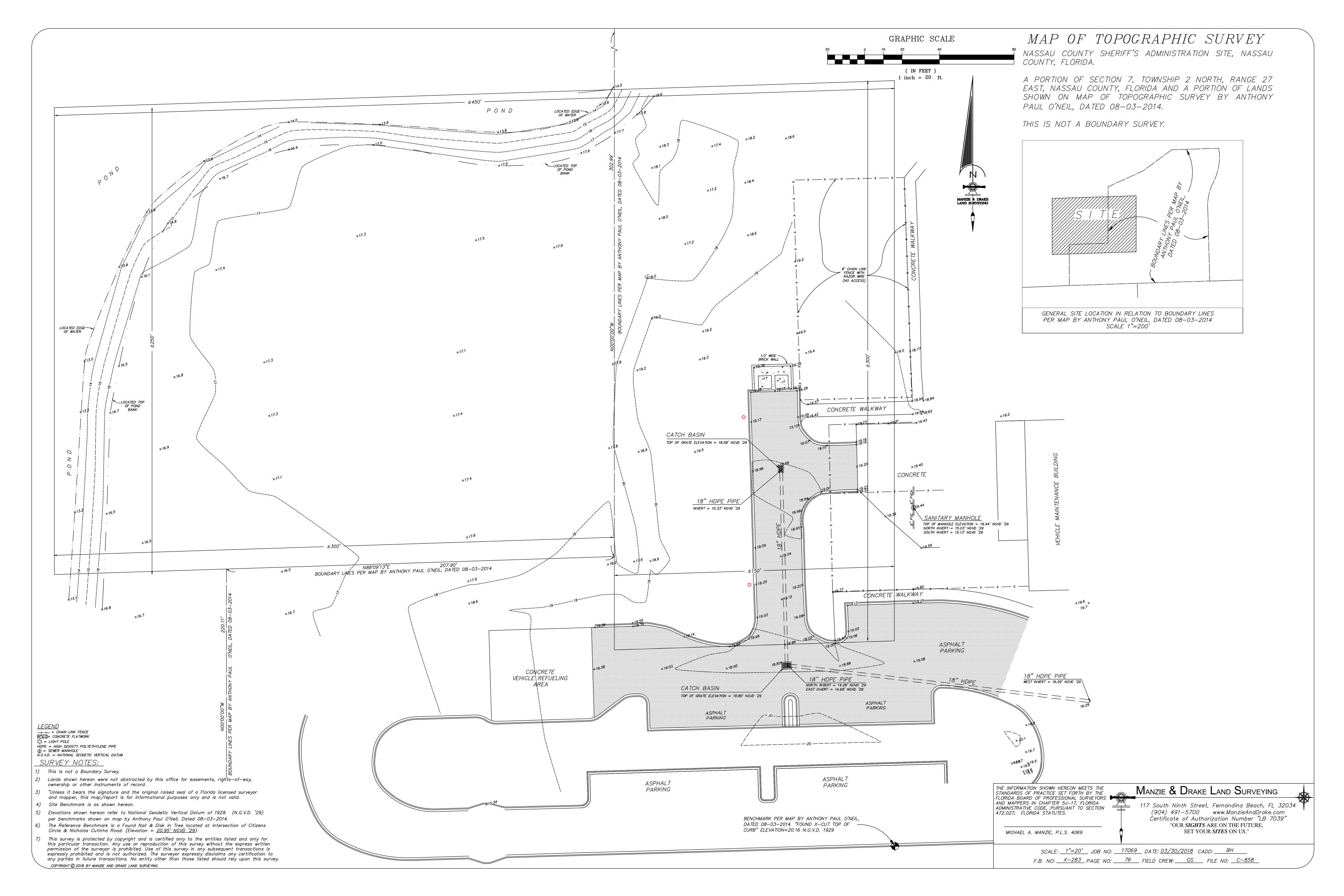
CPH, Inc. State of Florida Licenses Surveyor No. LB7143 Architect, No. AA2600092 Landscape No. LC000298

sealed by WADE P. OLSZEWSKI, P on the date adjacent to the seal. rinted copies of this document are r onsidered signed and sealed and th

Designed: C. Brown Drawn: P. Ranucci Checked: W. Olszewski

COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Sheet No.



GENERAL PROVISIONS

- 1. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL AVAILABLE REGULATORY AGENCY PERMITS AND LOCAL
- 2. CONTRACTOR, AS PART OF THE BASE BID, SHALL FIELD LOCATE ALL UNDERGROUND UTILITIES WITHIN THE PROJECT AREA WITHIN THE 30 DAYS OF PROJECT AWARD. CONTRACTOR SHALL REVIEW THE PLANS AND SHALL NOTE ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
- CONTRACTORS, AS PART OF THE BASE BID, SHALL PROVIDE ALL COORDINATION WITH UTILITY PROVIDERS TO PROVIDE FOR THE MATERIALS AND WORK NEEDED TO PROVIDE SERVICES TO THE PROJECT.
- 4. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE FOR ALL DEMOLITION OF ABOVE GROUND AND UNDERGROUND IMPROVEMENTS IN ORDER TO CONSTRUCT THE PROPOSED IMPROVEMENTS NOTED ON THE PLANS. UNLESS APPROVED IN
- WRITING FROM THE OWNER, ALL MATERIALS SHALL BE REMOVED FROM THE SITE AS PART OF THE BASE BID.
- ALL DETAILS AND REFERENCES TO FDOT REFER TO THE LATEST EDITION OF THE FDOT STANDARD PLANS.
- 6. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES, IN SUCH A MANNER AS TO AVOID CONFLICT AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH UTILITY REQUIREMENTS AS TO LOCATION AND SCHEDULING FOR TIE-INS/ CONNECTIONS PRIOR TO CONNECTING TO EXISTING UTILITIES.
- CONTRACTOR AND HIS SURVEYOR SHALL NOTE THE PROJECT BENCHMARK INFORMATION PROVIDED IN THE PLANS AND VERIFY PRIOR TO CONSTRUCTION.
- 3. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGE FROM SMALL AND LARGE CONSTRUCTION ACTIVITIES. IN ORDER TO MEET NPDES REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING, INSPECTING, MAINTAINING, AND REPORTING ON ALL ELEMENTS OF THE SWPPP, COMPLETING AND SUBMITTING THE REQUIRED NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) FORMS AS THE OPERATOR, AND PAYING ALL ASSOCIATED FEES. FOR PROJECTS LESS THAN 1 ACRE IN SIZE THAT ARE NOT REQUIRED TO COMPLY WITH THE NPDES GENERAL PERMIT, THE CONTRACTOR IS STILL RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO AND DURING CONSTRUCTION IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- 9. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- 10. BASE SURVEY INFORMATION INCLUDING BUT NOT LIMITED TO ELEVATIONS, EASEMENTS, RIGHTS OF WAY, AND OTHER TOPOGRAPHIC INFORMATION HAS BEEN PREPARED BY OTHER PROFESSIONALS. CPH, INC. ASSUMES NO RESPONSIBILITY FOR
- 1. THIS SET OF PLANS MAY CONTAIN DRAWINGS PREPARED BY OTHER PROFESSIONALS, WHICH CONTAIN THE NAME, ADDRESS, AND LOGO OF THE PROFESSIONAL. CPH. INC. IS NOT RESPONSIBLE FOR DRAWINGS PREPARED BY OTHER PROFESSIONALS.
- 2. THE CONTRACTOR SHALL SUBMIT ONE ELECTRONIC COPY OF SHOP DRAWINGS TO THE ENGINEER TO KEEP FOR THEIR RECORDS. THE ENGINEER WILL NOT PROVIDE FOR APPROVAL OF SHOP DRAWINGS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL MATERIALS FOR ACCURACY PRIOR TO ORDERING THE MATERIALS. ANY DISCREPANCIES IDENTIFIED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- 13. PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED IT SHALL BE REFERENCED BY LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY,
- 14. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING. AS A MINIMUM, TESTING SHALL INCLUDE A) PIPING AND STRUCTURAL EXCAVATION, BEDDING AND BACKFILL MATERIALS AND DENSITY TESTS; B) DETERMINATION OF COMPACTIVE EFFORT NEEDED FOR COMPLIANCE WITH THE DENSITY REQUIREMENTS; C) PORTLAND CEMENT CONCRETE AND ASPHALT PAVING QUALITY CONTROL TESTING INCLUDING DESIGN MIX REVIEW, MATERIALS, FIELD SLUMP AND AIR CONTENT, AND FIELD AND LAB CURED STRENGTH SAMPLES AND TESTING.
- 15. IN ADDITION TO QUALITY CONTROL TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION SPECIFICALLY REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.
- 16. ANY DESIGN OR TESTING LABORATORY UTILIZED BY THE CONTRACTOR SHALL BE AN INDEPENDENT LABORATORY ACCEPTABLE TO THE OWNER AND THE ENGINEER, APPROVED IN WRITING, AND COMPLYING WITH THE LATEST EDITION OF THE "RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATION", PUBLISHED BY THE AMERICAN COUNCIL
- 17. TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS.
- 18. THE ENTIRE PROJECT SITE SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE WORK. CLEAN ALL INSTALLED PIPELINES, STRUCTURES, SIDEWALKS, PAVED AREAS, ACCUMULATED SILT IN PONDS, PLUS ALL ADJACENT AREAS AFFECTED BY CONSTRUCTION, AS DIRECTED BY THE OWNER OR JURISDICTIONAL AGENCY. EQUIPMENT TO CLEAN THESE SURFACES SHALL BE SUBJECT TO APPROVAL BY THE OWNER.
- 19. ALL DISTRUBED AREAS WITHIN RIGHT OF WAYS SHALL BE SODDED.
- 20. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT BE LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
- 21. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
- 22. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINATE IS ENCOUNTERED DURING EXCAVATION.

UTILITY GENERAL NOTES

OF INDEPENDENT LABORATORIES.

- THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE.
- THE LOCATION, MATERIAL TYPE, AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.
- A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT THE SUNSHINE STATE ONE CALL CENTER BY DIALING "811" AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.
- 4. THE UTILITY PROVIDERS NOTED ON THE COVER SHEET HAVE PREVIOUSLY INDICATED THAT THEY MAY HAVE FACILITIES IN THE VICINITY OF THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL KEEP LOCATE TICKETS UP TO DATE AT ALL TIMES.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO COORDINATE NECESSARY RELOCATIONS OR OTHER CONSTRUCTION RELATED MATTERS WITH EACH UTILITY.
- 7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER AND THE ENGINEER.
- S. TYPICAL DETAILS AND PROPOSED CONSTRUCTION AS SHOWN ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE PROPOSED CONSTRUCTION TO SUIT FIELD CONDITIONS, PROVIDED IT COMPLIES WITH THE PROJECT SPECIFICATIONS AND APPROVAL IS RECEIVED FROM THE ENGINEER. WHERE SUCH PROPOSED REVISIONS DEVIATE FROM THE FDEP CONSTRUCTION PERMIT, THEN SUCH REVISIONS WILL ALSO REQUIRE APPROVAL FROM FDEP.
- FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, SIZE, MATERIAL TYPE, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPRESENT A DEPARTURE FROM THE CONTRACT DRAWING, OR (B) A NEED FOR RELOCATION OF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTOR'S CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- 10. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRE-TESTING PRIOR TO NOTIFICATION.

AS-BUILT DRAWING REQUIREMENTS

- AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER AT LEAST THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A FLORIDA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY. THE CONTRACTOR SHALL BE RESPONSIBLE TO IDENTIFY ALL AS-BUILT SURVEY REQUIREMENTS BY THE GOVERNING AGENCIES PRIOR TO START OF CONSTRUCTION TO ENSURE THAT AS-BUILT INFORMATION IS PROVIDED FOR. THE AS-BUILTS ARE TO BE SUBMITTED IN ACCORDANCE WITH THE NASSAU COUNTY AS-BUILT REQUIREMENTS CHECKLIST.
- 2. ALL RECORD DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR IN ACAD FORMAT USING CONSTRUCTION PLAN SHEETS

- PROVIDED BY THE ENGINEER. AS-BUILT INFORMATION SHALL BE FIELD VERIFIED, MEASURED, ADDED TO THE ACAD FILES OF THE CONSTRUCTION PLAN SHEETS PROVIDED BY THE ENGINEER, AND CERTIFIED, SIGNED AND SEALED BY THE CONTRACTOR'S LICENSED SURVEYOR WHO WILL BE RESPONSIBLE FOR THE ACCURACY OF ALL DIMENSIONS AND ELEVATIONS.
- 3. THE AS-BUILT INFORMATION IS TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
- A. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING BUT NOT LIMITED TO MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP AND INVERT ELEVATIONS.

B. DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.

- C. STORMWATER POND TOP OF BERM AND POND BOTTOM ELEVATIONS AND HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF TEN LOCATIONS PER POND, AT LOCATIONS DESIGNATED BY THE ENGINEER. TOP OF POND HORIZONTAL DIMENSIONS ARE ALSO TO BE TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.
- D. STORMWATER CONTROL STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS
- E. STORMWATER CONVEYANCE SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS, AND CROSS SECTIONS.F. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.
- G. VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.
- H. UTILITY PIPELINE TIED HORIZONTALLY TO EDGE OF PAVEMENT AND RIGHT-OF-WAY LINES, LOCATED EVERY 200-FT PLUS ALL
- I. PAVEMENT WIDTH AND ELEVATIONS AT THE CENTERLINE AND EDGE OF PAVEMENT EVERY 200 FEET PLUS AT ALL CHANGES IN LONGITUDINAL SLOPE, CROSS SLOPE, INLET LOCATIONS, AND AT ALL DRIVEWAY AND STREET INTERSECTIONS. FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.
- J. ALL PARKING AREAS AND SIDEWALK RAMPS DESIGNATED FOR HANDICAP ACCESS SHALL CONTAIN HORIZONTAL AND VERTICAL MEASUREMENTS IN ORDER TO VERIFY REQUIRED WIDTHS AND SLOPES HAVE BEEN MET.
- K. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.L. WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS
- M. WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.
- N. ANY ADDITIONAL INFORMATION REQUIRED BY GOVERNING AGENCIES.

ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.

- 4. IN CASES WHERE THE OWNER DETERMINES PARTIAL CLEARANCES FROM PERMITTING AGENCIES ARE BENEFICIAL TO THE OWNER FOR COMPLETED PORTIONS OF THE PROJECT, PROVIDE PRELIMINARY AS-BUILT DRAWINGS (ACAD FORMAT) TO THE ENGINEER FOR ITS USE IN PREPARING THE PARTIAL CLEARANCE APPLICATIONS FOR THE OWNER.
- 5. COMPLETE AS-BUILT DRAWINGS THAT ARE FOUND TO BE SATISFACTORY AS A RESULT OF THE ENGINEER'S REVIEW WILL BE USED AS THE BASIS FOR THE FINAL PROJECT RECORD DRAWINGS PREPARED BY THE ENGINEER USING THE CONTRACTOR PROVIDED AS-BUILT DRAWINGS PLUS ENGINEER ADDED INFORMATION.

TRAFFIC CONTROL

- 1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND BARRICADES, AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN AND INSTALLED TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. IN GENERAL, ROADWAY AND DRIVEWAY LANE CLOSURES ARE PROHIBITED DURING CONSTRUCTION UNLESS SPECIFICALLY DETAILED ON THESE PLANS. IN THE EVENT IT IS DETERMINED THAT ROADWAY AND DRIVEWAY LANE CLOSURES WILL BE ALLOWED, THE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T.
- 2. ALL TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 102-600 AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL TRAFFIC CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION.
- 3. MOT SHOULD ALSO BE IN ACCORDANCE WITH NASSAU COUNTY ROAD CLOSURE POLICY
- INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.
- 5. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.
- 6. WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST.
- 7. ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.
- 8. THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.
- WHEN WORK OCCURS WITHIN 15-FT OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2-FT FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 102-600 AND 102-602.
- 10. TYPE I OR TYPE II BARRICADES AT 20-FT CENTERS SHALL BE PLACED AND MAINTAINED ALONG THE EDGE OF THE ROAD WHEREVER DROP-OFFS OR OTHER HAZARDS EXIST AND TO BLOCK ENTRANCE INTO COMPLETED OR PARTIALLY COMPLETED PAVEMENTS UNTIL SUCH PAVEMENTS ARE OPEN TO PUBLIC USE.

SITE PREPARATION

- 1. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
- 2. STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK
- 3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.
- 4. WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO ALLOW TREES AND SHRUBS TO REMAIN IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: NEW ROADWAY CONSTRUCTION TREES AND SHRUBS TO REMAIN WHERE LOCATED MORE THAN 15 FEET FROM THE BACK OF CURB, OR OUTSIDE THE LIMITS OF EXCAVATION OR FILL AREAS, WHICHEVER IS FURTHER. UTILITY PIPELINE CONSTRUCTION TREES AND SHRUBS TO REMAIN OUTSIDE A 15 FOOT WIDE PATH, CENTERED ON THE PIPEL INF.
- 5. TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD
- 6. AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.
- CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENCROACH UPON OR OTHERWISE OBSTRUCT THE WORK.
- 8. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES.
- 9. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.

10. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE

DEWATERING

- 1. DESIGN AND PROVIDE A DEWATERING SYSTEM USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE A DEWATERING SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL GROUNDWATER IN A MANNER THAT PRESERVES STRENGTH OF FOUNDATION SOILS, DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. WHERE NECESSARY TO THESE PURPOSES, LOWER WATER LEVEL IN ADVANCE OF EXCAVATION, UTILIZING WELLS, WELL POINTS, OR SIMILAR POSITIVE METHODS. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF 2 FEET BELOW EXCAVATIONS. PROVIDE PIEZOMETERS IF DIRECTED BY THE ENGINEER TO DOCUMENT THE GROUNDWATER LEVEL IS BEING MAINTAINED.
- CONTROL, BY ACCEPTABLE MEANS, ALL WATER REGARDLESS OF SOURCE AND BE FULLY RESPONSIBLE FOR DISPOSAL OF THE WATER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SUPPLEMENTAL MEASURES TO CONTROL SEEPAGE, GROUNDWATER, OR ARTESIAN HEAD.
- DEWATERING DISCHARGE FROM THE SITE SHALL COMPLY WITH ALL NPDES GENERAL PERMIT REQUIREMENTS AND STATE WATER QUALITY STANDARDS. PROVIDE ALL TESTING AND PERMITTING REQUIRED AND COMPLY WITH ALL TREATMENT OR DISPOSAL METHODS REQUIRED TO MEET ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
- 4. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES. SUMPS SHALL BE LOCATED OUTSIDE OF LOAD BEARING AREAS SO THE BEARING SURFACES WILL NOT BE DISTURBED. WATER CONTAINING SILT IN SUSPENSION SHALL NOT BE PUMPED INTO SEWER LINES OR ADJACENT STREAMS. DURING NORMAL PUMPING, AND UPON DEVELOPMENT OF WELL(S), LEVELS OF FINE SAND OR SILT IN THE DISCHARGE WATER SHALL NOT EXCEED 5 PPM.
- 5. IF DEWATERING EQUIPMENT NEEDED EXCEEDS ANY OF THE FOLLOWING: 1) 6" PUMP VOLUTE; 2) 100,000 GPD TOTAL 24 HOUR (1 DAY) DEWATERING, AND; 3) 1,000,000 GPD PUMP CAPACITY, THE CONTRACTOR SHALL BE REQUIRED TO PERMIT THE DEWATERING SYSTEM WITH THE WATER MANAGEMENT DISTRICT.

- 6. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, OR ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.
- 7. WHEN CONSTRUCTION IS COMPLETE, REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.

GRADING

- SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO
 ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN
 COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO
 DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
- 2. ALL PROPOSED ELEVATIONS ON THE PLANS WITHIN PAVED AREAS ARE SHOWN AT PAVEMENT, UNLESS OTHERWISE NOTED.
- 3. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.
- 4. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE GRADER OPERATIONS.
- 5. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.

EXCAVATION, TRENCHING, AND FILL

- THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (FS 553.60-553.64). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
- 2. ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.
- 3. POND CONSTRUCTION SHALL RESULT IN THE FINISHED POND HAVING SIDE SLOPES AND DIMENSIONS THAT ARE IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT THESE REQUIREMENTS HAVE BEEN MET. IF THE CONSTRUCTED SIDE SLOPES ARE STEEPER THAN THE REQUIRED SIDE SLOPES, OR THE POND VOLUME IS NOT WITHIN THREE (3) PERCENT OF THE DESIGN VOLUME, THE CONTRACTOR SHALL BE REQUIRED TO MAKE CORRECTIONS TO THE POND AT NO ADDITIONAL COST TO THE OWNER.
- 4. FIELD DENSITY TESTING FREQUENCIES: A) ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING, MINIMUM 2 TESTS EACH LAYER; B) ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES; C) ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH; D) ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL; E) ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.
- 5. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.
- A. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SM, SW, SP; UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.
- B. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, OH, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.
- 6. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.
- 7. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.
- 8. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.
- 9. SHEETING, SHORING, AND BRACING USED FOR THE SUPPORT OF EXCAVATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF FLORIDA.
- 10. ALL EXCAVATIONS SHALL BE MADE BY OPEN CUT UNLESS OTHERWISE INDICATED. SLOPE SIDES OF TRENCHES IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE RECOMMENDATIONS CONTAINED WITHIN THE PROJECT GEOTECHNICAL
- 11. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED FOR INDICATED FLOW LINES AND INVERT ELEVATIONS. OVER EXCAVATE TRENCHES A MINIMUM OF 2 FEET WHERE EXCAVATIONS OCCUR WITHIN UNSUITABLE SOILS, AND REPLACE OVER EXCAVATED MATERIAL WITH SUITABLE SOILS.
- 12. TRENCH BOTTOMS AND THE BOTTOMS OF ALL STRUCTURES SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH TWO FEET BELOW THE BOTTOM OF THE TRENCH OR STRUCTURE.
- 13. ALL BEDDING, FILL, AND BACKFILL MATERIAL SHALL BE SUITABLE SOILS OR FLOWABLE FILL. WHERE TRENCH OR EXCAVATION IS WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, PLACE BACKFILL IN LAYERS OF 8 INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL AND BACKFILL IN LAYERS OF 12 INCH LOOSE DEPTH.
- 14. MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T180): BACKFILL AND FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS = 98 PERCENT; BACKFILL AND FILL PLACED WITHIN PUBLIC ROAD RIGHT-OF-WAY AND UTILITY EASEMENTS = 95 PERCENT; BACKFILL AND FILL PLACED WITHIN POND AND ROAD EMBANKMENT = 95 PERCENT; BACKFILL AND FILL PLACED IN ALL OTHER AREAS = 90 PERCENT.

RIPRAP

ALL RIPRAP CONSTRUCTION SHALL MEET THE REQUIREMENTS OF SECTION 530 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.

UTILITY SEPARATION REQUIREMENTS

- 1. THE HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER, STORM SEWER, WASTEWATER FORCE MAINS, STORMWATER FORCE MAINS, RECLAIMED WATER MAINS AND ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- A. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF FIVE FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, VACUUM TYPE SANITARY SEWER AND RECLAIMED WATER MAIN.
- B. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN THE OUTSIDE OF WATER MAINS AND THE OUTSIDE OF GRAVITY SANITARY SEWERS CAN BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST EIGHTEEN INCHES ABOVE THE TOP OF THE SEWER.
- C. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF TEN FEET FROM ALL PARTS OF ANY EXISTING OR PROPOSED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
- 2. THE VERTICAL SEPARATION BETWEEN WATER MAINS AND SANITARY AND STORM SEWER, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- A. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OUTSIDE OF THE SEWER. WHERE IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, THEN THE WATER MAIN CAN CROSS UNDER THESE TYPES OF PIPELINE SYSTEMS PROVIDED THE OUTSIDE OF THE WATER MAIN IS AT LEAST 18 INCHES BELOW THE OUTSIDE OF THE PIPELINE. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST FIVE FEET FROM VACUUM TYPE SANITARY SEWER OR STORM SEWER JOINTS, AND AT LEAST TEN FEET FROM GRAVITY SANITARY SEWER JOINTS.
- B. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED RECLAIMED WATER MAINS, WASTEWATER FORCE MAINS AND STORMWATER FORCE MAINS. WHETHER THE WATER MAIN CROSSES OVER OR UNDER THESE TYPES OF PIPELINE SYSTEMS, THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES FROM THE OUTSIDE OF THE EXISTING OR PROPOSED RECLAIMED WATER MAIN, WASTEWATER FORCE MAIN AND STORMWATER FORCE MAIN. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST FIVE FEET FROM RECLAIMED WATER MAIN JOINTS AND STORMWATER FORCE MAIN JOINTS, AND AT LEAST TEN FEET FROM THE JOINTS OF WASTEWATER
- 3. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE.
- 4. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST:
- A. FIVE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER.
 B. TEN FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN.
- C. TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.

WATER AND RECLAIMED WATER DISTRIBUTION SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE WATER AND RECLAIMED WATER SYSTEMS SHOWN ON THESE PLANS IS JEA. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF NASSAU COUNTY.

- UNDER PAVEMENT AND IN COUNTY ROADWAY ROW, THE MINIMUM DEPTH REQUIREMENT UNDER PAVEMENT IS 42" AND 36" IN UNPAVED AREAS FOR SEWER AND WATERMAINS.
- 3. BURIED DUCTILE IRON PIPE SHALL COMPLY WITH THE FOLLOWING PRESSURE CLASS (PC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 12" DIAMETER AND SMALLER = PC 350; B) 14" THROUGH 24" DIAMETER = PC 250; C) 30" THROUGH 64" DIAMETER = PC 200.
- 4. DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.
- 5. PVC PIPE SHALL BE NATIONAL SANITATION FEDERATION (NSF) APPROVED. PIPE SHALL HAVE MARKINGS ON EACH SECTION SHOWING CONFORMANCE TO THE ABOVE SPECIFICATIONS. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900 OR C905 THE BELL SHALL BE INTEGRAL WITH THE PIPE AND OF EQUAL OR GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
- ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON, CONFORMING TO ANSI/AWWA C110/A21.10 OR ANSI/AWWA
 C153/A21.53. ALL FULL BODY (C110/A21.10) FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS
 (C153/A21.53) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
- 7. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED AND COATED. INTERIOR LINING SHALL BE STANDARD THICKNESS CEMENT MORTAR LINING PER ANSI/AWWA C104/A21.4. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL BE A PETROLEUM ASPHALTIC COATING IN ACCORDANCE WITH ANSI/AWWA C110/A21.10. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DFT TNEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TNEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
- 8. MECHANICAL AND PUSH ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASKETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT
- 9. RESTRAINED JOINTS FOR DUCTILE IRON PIPE BELL JOINTS SHALL BE AMERICAN FAST GRIP GASKET, MCWANE SURE GRIP 350 GASKET, U.S. PIPE FIELD LOK 350 GASKET, OR EBAA IRON MEGA LUG SERIES 1100HD. RESTRAINED JOINTS FOR DUCTILE IRON PIPE AND FITTING MECHANICAL JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1100, STAR GRIP SERIES 3000, OR TYLER UNION TUF-GRIP SERIES TLD. LOCKING BELL JOINT RESTRAINT SHALL BE AMERICAN FLEX RING JOINT, AMERICAN LOK-RING JOINT, OR U.S. PIPE TR-FLEX. RESTRAINED JOINTS FOR PVC PIPE MECHANICAL JOINTS SHALL BE TYLER UNION SERIES 2000 TUF GRIP TLP, JCM SUR-GRIP BELL RESTRAINER, FORD UNI-FLANGE SERIES 1500 CIRCLE LOCK, OR EBAA IRON MEGA LUG SERIES 2000PV. RESTRAINED JOINTS FOR PVC PIPE PUSH ON JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1500 OR SERIES 1600 (C900 PVC), SERIES 2800 (C905 PVC), FORD UNI-FLANGE SERIES 1390, OR SMITH-BLAIR BELL-LOK SERIES 165. PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWINGS, WHICHEVER IS GREATER.
- 10. POLYETHYLENE PIPE AND TUBING SHALL BE COLOR CODED BLUE (POTABLE WATER) OR PURPLE (RECLAIMED WATER). PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. JOINTS IN SDR-PR PE PIPE SHALL BE BUTT HEAT FUSION OR SOCKET HEAT FUSION TYPE. FITTINGS SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE OF THE SAME SDR OR LESS. PROVIDE ADAPTERS AS REQUIRED TO JOIN PE PIPE TO PIPE, FITTINGS AND FOLIPMENT OF OTHER MATERIALS.
- 11. SERVICE SADDLES SHALL MEET THE REQUIREMENTS OF AWWA C800 AND SHALL CONSIST OF EPOXY COATED DUCTILE IRON BODIES IN ACCORDANCE WITH ASTM A536, WITH DOUBLE STAINLESS STEEL STRAPS, BOLTS, WASHERS AND NUTS. STAINLESS STEEL SHALL BE TYPE 304, AND NUTS ARE TO BE TEFLON COATED. THE DUCTILE IRON BODY IS TO BE FUSION BONDED NYLON COATED, MINIMUM THICKNESS 12 MILS, OUTLET OF SADDLE IS TO HAVE NPT THREADS. SERVICE SADDLES SHALL BE MANUFACTURED BY FORD. MUELLER. OR SMITH-BLAIR.
- 12. ALL SERVICES SHALL INCLUDE THE FOLLOWING: CURB STOPS, UNIONS AS REQUIRED, CORPORATION STOPS. CONFORMANCE WITH AWWA C800 AND C901 IS REQUIRED. THE CONTRACTOR SHALL CUT "W" IN THE TOP CURB OF EACH WATER SERVICE AND A "V" AT ALL VALVE LOCATIONS. CUT W'S AND V'S SHALL BE HIGHLIGHTED WITH BLUE PAINT.
- 13. UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS AND RECLAIMED WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE AND RECLAIMED WATER SERVICE TO THE CORPORATION STOP.
- UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL VALVES TWO INCHES AND SMALLER SHALL BE ALL BRASS OR BRONZE; VALVES OVER TWO INCHES SHALL BE IRON BODY, FULLY BRONZE OR BRONZE MOUNTED.
 VALVES 4 INCHES AND LARGER SHALL BE LINED AND COATED. BURIED AND EXPOSED VALVES SHALL BE COATED INSIDE AND OUT WITH A RUST INHIBITING EPOXY PRIMER, FOLLOWED BY AN EPOXY COATING MEETING THE REQUIREMENTS OF AWWA C550, APPLIED AT THE FACTORY. THE INTERIOR OF VALVES WITH A CAST IRON OR DUCTILE IRON BODY SHALL BE COATED WITH AN

EPOXY PROTECTIVE COATING MEETING NSF INTERNATIONAL STANDARD 61 AND AWWA C550. AFTER INSTALLATION, EXTERIOR

SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DFT

TNEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT

TNEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE

LOCAL UTILITY.

16. ALL VALVES 12" AND SMALLER SHALL BE GATE VALVES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. GATE VALVES 3 INCHES TO 12 INCHES SHALL CONFORM TO AWWA C509 OR AWWA C515. THE VALVES SHALL BE IRON BODY, CAST IRON FULLY ENCAPSULATED MOLDED RUBBER WEDGE COMPLYING WITH ASTM D2000, NON-RISING STEM WITH O-RING SEALS. VALVES

SHALL OPEN COUNTERCLOCKWISE

CONTINUITY.

- 17. TAPPING SLEEVES ARE TO BE 18-8 TYPE 304 STAINLESS STEEL AND STAINLESS STEEL OUTLET, AS MANUFACTURED BY JCM OR APPROVED EQUAL. TAPPING VALVES SHALL BE RESILIENT SEATED GATE VALVES AND SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509. TAPPING VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500, CLOW SERIES F-6100, OR MUELLER SERIES A2361.
- 18. VALVES 14" AND LARGER SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH, TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504, CLASS 150. VALVE BODY SHALL BE MECHANICAL JOINT END TYPE VALVE CONSTRUCTED OF CAST IRON OR DUCTILE IRON. DISC SHALL BE ONE PIECE CAST DESIGN WITH NO EXTERNAL RIBS TRANSVERSE TO FLOW. DISC SHALL BE CAST IRON OR DUCTILE IRON. THE RESILIENT SEAT SHALL MATE WITH A 304 OR 316 STAINLESS STEEL SURFACE.

19. VALVE SEATS SHALL BE MECHANICALLY RETAINED, AND MAY BE INSTALLED ON EITHER THE BODY OR DISC. O-RING SEATS ON

VALVE DISCS ARE UNACCEPTABLE. SEATS FOR VALVES 14" DIAMETER AND LARGER SHALL BE FULLY FIELD REPLACEABLE

VALVE BODY. VALVE BOXES CAST INTO CONCRETE OR ASPHALT SURFACING SHALL HAVE BRASS COVERS. ALL VALVE BOX

COVERS SHALL BE INTERNALLY CHAINED TO VALVE BOXES WITH AN APPROXIMATELY 18 INCH GALVANIZED CHAIN. VALVE BOX

- WITHOUT THE USE OF SPECIAL TOOLS. OPERATORS OF THE ENCLOSED TRAVELING-NUT TYPE SHALL BE PROVIDED UNLESS OTHERWISE INDICATED.

 20. ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER WITH A MINIMUM THICKNESS OF 3/16 INCH CAST IRON. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH COVER. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN TO PERMIT MOVEMENT OF THE TOP SECTION WITHOUT TRANSMITTING FORCES ONTO THE
- COVERS SHALL BE CAST WITH THE INSCRIPTION "WATER" OR "RECLAIMED WATER".

 21. PVC PIPES SHALL BE COLOR CODED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS) AND STENCILED (0.75-INCH LETTERING ON THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION) "POTABLE WATER MAIN" OR "RECALIMED WATER MAIN"
- AS APPLICABLE.

 22. INSTALL IDENTIFICATION TAPE ALONG ALL DUCTILE IRON PIPE AND PVC PIPE, MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. APPLY TAPE TO SURFACE OF PIPE, CONTINUOUSLY EXTENDING FROM JOINT TO JOINT. TAPE COLOR AND LETTERING SHALL BE BLACK PRINTING ON BLUE BACKGROUND (WATER MAINS), BLACK PRINTING ON PURPLE BACKGROUND (RECLAIMED WATER MAINS). PLACE TAPE AS FOLLOWS: 2" 8" PIPE CENTER ALONG TOP HALF OF PIPE; 10" 18" PIPE PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A
- THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.

 23. INSTALL WARNING TAPE ALONG ALL PIPELINES, PLACED 2 FEET ABOVE PIPE. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE. TAPE SHALL BE COLORED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS) WITH BLACK LETTERING, CODED AND WORDED "CAUTION: WATER MAIN BURIED BELOW", OR "CAUTION: RECLAIMED WATER MAIN BURIED BELOW", AS
- 24. INSTALL LOCATING WIRE ALONG ALL PVC PIPELINES. WIRE SHALL BE COLOR-CODED 10 GAUGE CONTINUOUS INSULATED WIRE. COLOR CODING SHALL BE SIMILAR TO WARNING TAPE COLORS. INSTALL LOCATOR WIRE ALONG ALL PRESSURIZED PIPELINES 2" AND LARGER. LOOP WIRE INTO ALL VALVE BOXES. LOOPING TO OCCUR EVERY 500 FEET MINIMUM. WHERE THERE ARE NO VALVE BOXES TO ALLOW LOOPING, PROVIDE ACCESS BOXES PER CITY REQUIREMENTS. CHECK WIRE FOR ELECTRICAL
- 25. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS OR APPROVED JOINT DEFLECTION. BENDING OF PIPE, EXCEPT COPPER AND POLYETHYLENE, IS PROHIBITED. JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
- AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.

 27. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF

26. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER

LEAKS.

28. ALL SERVICE LINES SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS

SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE

- 29. THE SEQUENCE OF TESTING AND DISINFECTION SHALL BE AS FOLLOWS: 1) CONDUCT PRESSURE AND LEAKAGE TESTING; 2) PERFORM FLUSHING PER UTILITY REQUIREMENTS AND AWWA C651; 3) DISINFECT THE WATER MAIN, INCLUDING VALVES AND FITTINGS; AND 4) DECHLORINATE AND FLUSH AFTER DISINFECTION.
- 30. APPLY HYDROSTATIC TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI (FIRE MAINS), OR 150 PSI (RECLAIMED WATER MAINS) FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST
- 31. APPLY LEAKAGE TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI (FIRE MAINS) OR 150 PSI (RECLAIMED WATER MAINS).
 MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE
 TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE
 INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT
 TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED
 ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
- 32. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
- 33. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L = SDP/148000 WHERE L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.



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5200 Belfort Road, Suite 220
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Ph: 904.332.0999

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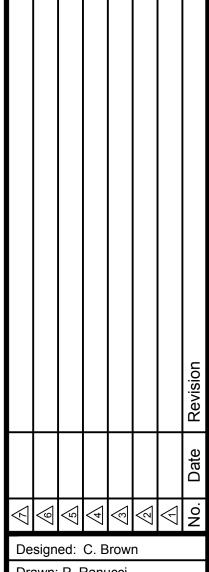
Surveyor No. LB7143

Architect, No. AA26000926

Engineer No. 3215

Landscape No. LC000298

This item has been digitally signed and sealed by WADE P. OLSZEWSKI, P.E on the date adjacent to the seal. Printed copies of this document are no considered signed and sealed and the signature must be verified on any electronic copies.



Designed: C. Brown
Drawn: P. Ranucci
Checked: W. Olszewski
Job No.: N6601

Date: 11/2018

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NTY SHERIFF AGE GARAGE

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THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS.
SEE GENERAL NOTES FOR

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MASTER LEGEND.

- 34. ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.
- 35. PRIOR TO DISINFECTION, CONDUCT FULL DIAMETER FLUSHING OF PIPELINE IN SECTIONS IN ORDER TO REMOVE ANY SOLIDS OR CONTAMINATED MATERIAL THAT MAY HAVE BECOME LODGED IN THE PIPE.
- 36. OBTAIN A MINIMUM FLUSHING VELOCITY OF 2.5 FEET PER SECOND PER AWWA C651.
- 37. ALL TAPS REQUIRED FOR FLUSHING AND THE TEMPORARY OR PERMANENT RELEASE OF AIR AS NEEDED FOR FLUSHING SHALL BE PROVIDED BY THE CONTRACTOR.
- 38. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651. THE DISCHARGE LOCATIONS FOR THE CHLORINATED WATER SHALL BE APPROVED BY THE OWNER. NEUTRALIZE THE CHLORINE RESIDUAL BY MEANS OF A REDUCING AGENT IN ACCORDANCE WITH AWWA C651.
- 39. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. ALL BACTERIOLOGICAL TESTING SHALL BE PERFORMED BY A STATE CERTIFIED LABORATORY CONTRACTED BY THE CONTRACTOR. PROPER CHAIN OF CUSTODY PROCEDURES MUST BE FOLLOWED AND SAMPLES SHALL ONLY BE COLLECTED BY CERTIFIED LABORATORY PERSONNEL. COPIES OF ALL TESTING RESULTS AND ALL RELATED CORRESPONDENCE FROM THE TESTING LAB SHALL BE SUBMITTED TO THE OWNER, UTILITY, AND ENGINEER.

FIRE PROTECTION SYSTEMS

- COMBUSTIBLE CONSTRUCTION CANNOT OCCUR UNTIL PROPER DOCUMENTATION HAS BEEN SUBMITTED TO THE LOCAL FIRE MARSHAL. DOCUMENTATION SHALL SHOW THAT HYDRANTS HAVE BEEN INSTALLED, TESTED, AND ARE IN PROPER WORKING
- INSTALL ALL FIRE LINE PIPING AT A MINIMUM 36 INCHES OF COVER.
- THE CONTRACTOR INSTALLING THE UNDERGROUND FIRE PROTECTION PIPING SHALL HOLD A CLASS I, II, OR LEVEL V CERTIFICATION AS ISSUED BY THE STATE OF FLORIDA, AS REQUIRED BY FS 633.021(5).
- ALL FIRE PROTECTION SPRINKLER SYSTEMS INSTALLED SHALL COMPLY WITH NFPA 13, AND SHALL BE MONITORED BY A COMPANY LISTED AS A CENTRAL STATION.
- HYDRANTS SHALL CONFORM TO AWWA C502 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE
- ALL HYDRANTS SHALL BE OF BREAKABLE TYPE. WITH THE BREAKABLE SECTION LOCATED SLIGHTLY ABOVE THE FINISH GROUND LINE. HYDRANTS SHALL CONTAIN TWO-TWO AND A HALF INCH (2-1/2") HOSE CONNECTIONS AND ONE-FOUR AND A HALF INCH (4-1/2") STEAMER CONNECTIONS WITH NATIONAL STANDARD FIRE HOSE COUPLING SCREW THREADS, FIVE AND ONE QUARTER INCH (5-1/4") VALVE OPENING, SIX INCH (6") DIAMETER MECHANICAL JOINT INLET, ONE AND ONE-HALF INCH (1-1/2") PENTAGON OPERATING NUT. THE HYDRANTS SHALL OPEN COUNTERCLOCKWISE.
- ALL HYDRANTS SHALL BE PAINTED IN AN APPROVED MANNER WITH THE PRIMER PAINT BEING KOPPER'S "GLAMORTEX" NO. 622 RUST PRIMER AND THE FINISH PAINT SHALL BE TWO COATS OF ENAMEL OR SPECIAL COATING TO COLOR AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
- BLUE PAVEMENT REFLECTORS (CAT EYES) SHALL BE PLACED IN THE CENTERLINE OF THE DRIVING LANE DIRECTLY IN FRONT OF ALL FIRE HYDRANTS. THERE SHALL BE NO TREES, SHRUBS, OR LANDSCAPING PLANTED AROUND THE FIRE HYDRANTS OR IN AREAS DESIGNATED AS FIRE LANES.
- NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST: THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER; SIX FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN: AND TEN FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS. DRAINFIELDS. AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.
- 0. THE SEQUENCE OF TESTING AND DISINFECTION SHALL BE AS FOLLOWS: 1) CONDUCT FIRE FLOW, PRESSURE AND LEAKAGE TESTING; 2) PERFORM FLUSHING PER UTILITY REQUIREMENTS AND AWWA C651; 3) DISINFECT THE WATER MAIN, INCLUDING VALVES AND FITTINGS: AND 4) FLUSH AFTER DISINFECTION.
- 1. THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 1250 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.
- 2. APPLY HYDROSTATIC TEST PRESSURE OF 200 PSI (FIRE MAINS) FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.
- 13. APPLY LEAKAGE TEST PRESSURE OF 200 PSI (FIRE MAINS) MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
- 4. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTARI E PIPING IN CONFLICT WITH POTARI E WATER LINES
- 15. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L = SDP/148000 WHERE L = MAXIMUM PERMISSIBLE LEAKAGE RATE IN GALLONS PER HOUR. THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED: S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
- 16. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, HYDRANTS.
- 7. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION. THOSE OF THE AUTHORITY SHALL GOVERN. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651.

SANITARY SEWER SYSTEMS

- IE ENTITY THAT WILL OPERATE AND MAINTAIN THE SEWER SYSTEM SHOWN ON THESE PLANS IS JEA. THE CONTRACTO L MEET ALL THE REQUIREMENTS OF NASSAU COUNTY.
- UNDER PAVEMENT AND IN COUNTY ROADWAY ROW, THE MINIMUM DEPTH REQUIREMENT UNDER PAVEMENT IS 42" A UNPAVED AREAS FOR SEWER AND WATERMAINS.
- . JOINTS SHAN MEET THE REQUIREMENTS OF ASTM D3212 USING RUBBER GASKETS CONFORMING TO ASTM F FITTINGS SHALL CONFORM TO THE SAME REQUIREMENTS AS THE PIPE. PROVIDE ADAPTERS AS REQUIRED TO JOIN PVC PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS. SOLVENT CEMENT SHALL BE AS RECOMMENDED BY THE PIPE MANUFACTURER.
- SEWER PIPE SHALL BE COLOR CODED GREEN, STENCILED "SEWER LINE" (2" LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).
- INSTALL ADHESIVE IDENTIFICATION TAPE ALONG PIPELINE. TAPE SHALL BE MINIMUM THICKNESS 4 MILS. WIDTH 6 INCHES. LETTER SIZE 1 INCH. TAPE COLOR AND LETTERING SHALL BE "SEWER LINE", BLACK PRIMITING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" - 8" PINE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
- INSTALL WARNING TAPE ALONG ALL SEWER PIPELINES. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE, COLORED GREEN WITH BLACK LETTERING CODED AND NORDED "CAUTION: SEWER BURIED BELOW". INSTALL ALONG PIPELINE, 2 FEET ABOVE PIPE, MINIMUM OF 1 FOOT BELOW GRAD
- CONNECTIONS TO EXISTING SEWER SHALL BE CONDUCTED IN SUCH A MANNER THAT THE EXISTING SEWER REMAINS IN OPERATION. PROVIDE BY PASS PUMPING OF EXISTING FLOWS OR COLLECT AND LEGALLY DISPOSE OF EXISTING SEWER FLOW AS NEEDED TO ACCOMMODATE CONSTRUCTION WHILE REEPING FASTING SEWER IN SERVICE.
- PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED MINES AND MANHOLES. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WO IS TO BE INSPECTED OR TESTED.
- 0. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE
- 11. ALL SERVICE LATERALS SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
- 2. PROVIDE LIGHT SOURCE AND MIRRORS FOR LAMPING OF SEWER. ANY SEWER IN WHICH THE DIRECT LIGHT OF A LAMP CANNOT BE VIEWED IN EITHER DIRECTION, FULL CIRCLE, BETWEEN ADJACENT MANHOLES SHALL BE CONSIDERED UNSATISFACTORY. UNLESS THE LINE IS DESIGNED WITH HORIZONTAL DEFLECTIONS, AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION.
- 13. CONDUCT LOW PRESSURE AIK TESTING (4.0 PSI INITIAL PRESSURE) OF INSTALLED SEWER PINING IN ACCORDANCE WITH ASTM F1417. MAXIMUM ALLOWAR E LEAKAGE IS 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE AREA BEING TESTED. ALLOWABLE AID PRESSURE DROP DURING THE TEST IS 0.5 PSIG. MINIMUM REQUIRED TEST TIME (DURATION) IS: A) 4" PIPE = 1 MIN 53 SEC; B) PIPE = 2 MIN 50 SEC, OR 0.427 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; C) 8" PIPE = 3 MIN 47 SEC, OR 0.760 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; D) 10" PIPE = 4 MIN 43 SEC, OR 1.187 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; E) 12" PIPE = 5 MIN 40 SEC, OR 1.709 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER.
- 4. CONDUCT DEF CTION TESTING OF PIPELINE AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 AAYS. MAXIMUM ALLOWABLE PIPE DEFLECTION IS 5%. MEASURE DEFLECTION BY MANUALLY PULLING A MANDREL THROUGH THE PIPE. THE MINIMUM MANDREL OUTER DIAMETER SHALL BE IN ACCORDANCE WITH THE FOLLOWING: 6" SEWER = 5.45" MANAREL; 8" SEWER = 7.28" MANDREL; 10" SEWER = 9.08" MANDREL; 12" SEWER = 10.79" MANDREL; 15" SEWER = 13.20" MANDREL; 18" SEWER = 16.13" MANDRÉL; 21" SEWER = 19.00" MANDREL; 24" SEWER = 21.36" MANDREL; 27" SEWER = 24.06" MANDREL.
- ECTION TESTING IS CONSIDERED SATISFACTORY IF THE MANDREL CAN BE PULLED BY HAND THROUGH THE PIPE BYING STED. IF THE MANDREL CANNOT BE PULLED THROUGH THE PIPE, REPLACE OR CORRECT THE PIPE AND RETEST UNTI TESTING IS SATISFACTORY. ANY PIPE REMOVED OR CORRECTED DUE TO FAILING DEFLECTION TESTING SHALL ALSO BI RE-TESTED FOR LEAKAGE.

FORCE MAIN SYSTEMS

- THE ENTITY THAT WILL OPERATE AND MAINTAIN THE FORCE MAIN SYSTEM SHOWN ON THESE PLANS IS JEA. THE CONTRACT OR SHALL MEET ALL THE REQUIREMENTS OF NASSAU COUNTY.
- ISTALL ALL FORCE MAINS AT A MINIMUM 36 INCHES OF COVER.
- DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE
- 4. PVC APE JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900 OR C905 THE BELL SHALL BE INTEGRAL WITH THE PIPE AND OF EQUAL OR GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
- 5. ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON. CONFORMING TO ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.33. ALL FULL BODY (C110/A21.10) FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS (C153/A21.58) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
- 6. ■INTERIOR LINING FOR PIPES AND FITTINGS SHALL BE EITHER MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS MOMINAL) OF CERAMIC EPOXY LINING, AS MANUFACTURED UNDER THE NAME OF "PROTECTO 401", OR MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS NOMINAL) OF FUSION BONDED EPOXY AND POLYETHYLENE LINING, AS MANUFACTURED UNDER THE NAME OF ". OR EQUAL. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL BE A PETROLEUM ASPHALTIC "POLYBOND P COATING IN ACCORDANCE WITH ANSI/AWWA C110/A21.10. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALL ATION, EXTERIOR SURFACES SHALL AE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL DF TNEMEC COLOR HI-AUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL, AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TNEMEC ENDURASHIELD SERIES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
- 7. MECHANICAL AND PUSHON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASIMETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT BE USED.
- 8. RESTRAINED JOINTS FOR DUCTILE IRON PIPE BELL JOINTS SHALL BE AMERICAN FAST GRIP GASKET, MCWANE SURE GRIP 350 GASKET, U.S. PIPE FIELD LON 350 GASKET, OR EBAA IRON MEGA LUG SERIES 1100HD. RESTRANED JOINTS FOR DUCTILE IRON PIPE AND FITTING MECHANICAL JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1100, STAR ORIP SERIES 3000, OR TYLER UNION TUF-GRIP SERIES TLD. LOCKING BELL JOINT RESTRAINT SHALL BE AMERICAN FLEX RING JOINT. AMERICAN LOK-RING JOINT. OR U.S. PIPE TR-FLEX. RESTRAINED JOINTS FOR PVC PIPE MECHANICAL JOINTS SHALL BE TYLER UNION SERIES 2000 TUF GRIP TLP, JCM SUR-GRIP BELL RESTRAINER, FORD UNI-FLANGE SERIES 1500 CIRCLE LOCK, OR BAA IRON MEGA LUG SERIES 2000PV. RESTRAINED JOINTS FOR PVC PIPE PUSH ON JOINTS SHALL BE EBAA IRON MEGA LUG SERIES 1500 OR SERIES 1600 (C900 PVC). SERIES 2800 (C905 PVC), FORD UNIFLANGE SERIES 1390, OR SMITH-BLAIR BELL-LOK SERIES 165. PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWING, WHICHEVER IS GREATER.
- D. INTERIOR LINING FOR VALVES 4 INCH AND LARGER SHALL BE EITHER MINIMUM 40 MINS DRY FILM THICKNESS (60 MILS NOMINAL) OF CERAMIC EPOXY LINING. AS MANUFACTURED UNDER THE NAME OF "PROTECTO 401". OR MINIMUM 40 MILS DRY FILM THICKNESS (60 MILS NOMINAL) OF FUSION BONDED EPOXY AND POLYETHYLENE LINING. AS MANUFACTURED UNDER THE NAME OF "POLYBOND PLUS", OR EQUAL. EXTER OR COATING FOR BURIED VALVES SHAPE BE RUST INHIBITING EPOXY PRIMER, FOLLOWED BY A COAL TAR EPOXY, TOTAL MINIMUM DRY FILM THICKNESS OF 16 MILS, APPLIED AT THE FACTORY. EXTERIOR COATING OF EXPOSED VALVES SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER. MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH A TWO COAT SYSTEM. THE FIRST COAT (INTERMEDIATE COAT) SHALL BE 4.0-10.0 MIL OFT TNEMEC COLOR HI-BUILD EPOXOLINE II SERIES N69 OR APPROVED EQUAL AND THE FINAL COAT SHALL BE 2.0-3.0 MIL DFT TNEMEC ENDURASHIELD SER/ES 73 OR APPROVED EQUAL. THE FINAL COAT PAINT COLOR SHALL BE AS SELECTED BY THE LOCAL UTILITY.
- 10. ALL FORCE MAIN VALVES SHALL BE CAST IRON SQITABLE FOR WASTEWAYER SERVICE WITH PRESSURES UP TO 250 PSIG, AND SHALL BE QUARTER-TURN, NON-LUBRICATED, ECCENTRIC TYPE WITH RESILIENT FACED PLUG, MANUFACTURED AND TESTED IN ACCORDANCE WITH AWWA C517. PORT AREAS OF NOT LESS THAN 100% OF PIPE AREA SHALL BE SUPPLIED ON ALL VALVES. STANDARD PLUG VALVES SHALL BE CLOW F5412 / F5413, VALMATIC 5600 / 5800, DEZURIK SERIES PEC, M&H 1820, PRATT PV, OR APPROVED EQUAL.
- 11. TAPPING SLEEVES ARE TO BE 18-8 TYPE 304 STAINLES STEEL AND STAINLESS STEEL OUTLET, AS MANUFACTURED BY JCM OR APPROVED EQUAL. TAPPING VALVES SHALL BE RESILIENT SEATED GATE VALVES AND SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509. TAPPING VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500, CLOW SERIES F-6100, OR MUELLER SERIES A2361.
- 12. AIR RELEASE VALVES SHALL BE COMBINATION CAPABLE OF OIS CHARGING ACCUMULATED AIR IN THE LINE WHILE THE LINE IS OPERATING UNDER A PRESSURE OF 150 PSI. FLOAT MATERIAY SHALL BE STAINLESS STEEL. AIR RELEASE VALVES SHALL HAVE A STAINLESS STEEL BODY AND SHALL BE MANUFACTURED BY ARI (NO. ARI-D-020) OR VENT-O-MAT RGX SERIES. ENCLOSURES FOR AIR RELEASE VALVES SHALL BE POLYETHYLENE WITH STANLESS STEEL HARDWARE, AND SHALL BE PROVIDED WITH A TAMPER PROOF LOCKING DEVICE. ENCLOSURES SHALL BE AS NANUFACTURED BY WATER PLUS CORPORATION (MODEL 182635) OR APPROVED EQUAL, AND SHALL HAVE VENTS AND SHALL BE GREEN IN COLOR.
- 13. ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER WITH A MINIMUM THICKNESS OF 3/16 INCH CAST IRON. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH COVER. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN TO PERMIT MOVEMENT OF THE TOP SECTION WITHOUT TRANSMITTING FORCES ONTO THE VALVE BODY. VALVE BOXES CAST INTO CONCRETE OR ASPHALT SURFACING SHALL HAVE BRASS COVERS. ALL VALVE BOX COVERS SHALL BE INTERNALLY CHAINED TO VALVE BOXES WITH AN APPROXIMATELY 18 INCH GALVANIZED CHAIN. VALVE BOX COVERS SHALL BE CAST WITH THE INSCRIPTION "FEWER".
- 14. PVC PIPE SHALL BE COLOR CODED GREEN AND STENCILED (0.75-INCH LETTERING ON THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION) "SEWER FORCE MAIN".
- 15. INSTALL IDENTIFICATION TAPE ALONG ALL DUCTILE IRON PIPE AND PVC PIPE, MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. TEXT TO BE "SEWER FORCE MAIN". $\,$ APPLY TAPE TO SURFACE OF PIPE. CONTINUOUSLY EXTENDING FROM JOINT TO JOINT. TAPE COLOR AND LETTERING SHALL BE BLACK PRINTING ON GREEN BACKGROUND. PLACE TAPE AS FOLLOWS: 2" - 8" PIPE - CENTER ALONG TOP HALF OF PIPE; 10" - 18" PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20" PIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
- 16. INSTALL WARNING TAPE ALONG ALL PIPELINES, PLACED 2 FEET ABOVE PIPE. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE. TAPE SHALL BE COLORED BROWN WITH BLACK LETTERING, CODED AND WORDED "CAUTION: FORCE MAIN BURIED
- 17. INSTALL LOCATING WIRE ALONG ALL PVC PIPELINES. WIRE SHALL BE COLOR-CODED 10 GAUGE CONTINUOUS INSULATED WIRE. COLOR CODING SHALL BE SIMILAR TO WARNING TAPE COLORS. INSTALL LOCATOR WIRE ALONG ALL PRESSURIZED PIPELINES 2" AND LARGER. LOOP WIRE INTO A L VALVE BOXES. LOOPING TO OCCUR EVERY 500 FEET MINIMUM. WHERE THERE ARE NO VALVE BOXES TO ALLOW LOOPING, PROVIDE ACCESS BOXES PER UTILITY REQUIREMENTS CHECK WIRE FOR ELECTRICAL CONTINUITY.
- 18. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS OR APPROVED JOINT DEFLECTION. BENDING OF PIPE. EXCEPT COPPER AND POLYETHYLENE, IS PROHIBITED. JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
- 19. TEST PROCEDURES SHAL∐ BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED
- 20. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAKEST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE
- 21. APPLY HYDROSTATIC TEST PRESSURE OF 100 PSI FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TES $^{f t}$ REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.
- 22. APPLY LEAKAGE TEST PRESSURE OF 100 PSI. MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NO BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
- 23. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR AURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LENKAGE
- RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L = SDP/148000 WHERE L = MAXIMUM PERMISSIBLE LEANAGE E. IN GALLONS PER HOUR. THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED: S = LENGTH OF LINE TESTED FLET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE; AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE SIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING $^\circ$ DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
- ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.

PAVING, SIDEWALKS, AND CURBING

- 1. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. LATEST EDITION AND NASSAU COUNTY ROADWAY AND DRAINAGE STANDARDS
- 2. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESSES SHALL BE IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS.
- 3 SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS AS SHOWN ON THE CONSTRUCTION PLANS. HANDICAPPED RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS AND SHALL BE IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION. LATEST EDITION.
- 4. CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.
- 5. FIELD COMPACTION DENSITY. STABILITY. AND THICKNESS TESTING FREQUENCIES OF SUB-BASE, BASE, AND ASPHALT SHALL BE TESTED ONCE EVERY 300 LINEAR FEET OF PAVING PER 24-FT WIDE STRIP. STAGGERED LEFT. CENTER AND RIGHT OF CENTERLINE. WHERE LESS THAN 300 LINEAR FEET OF SUB-BASE, BASE, AND ASPHALT IS PLACED IN ONE DAY, PROVIDE MIN. OF ONE TEST FOR EACH PER DAY'S CONSTRUCTION AT A LOCATION DESIGNATED BY THE ENGINEER. ASPHALT EXTRACTION GRADATION SHALL BE TESTED FROM GRAB SAMPLES COLLECTED ONCE EVERY 1800 SQUARE YARDS OF ASPHALT DELIVERED TO THE SITE (OR A MINIMUM OF ONCE PER DAY)

PRECAST STRUCTURES AND APPURTENANCES

- 1. ALL MANHOLES SHALL BE PRECAST CONSTRUCTION. THE MINIMUM SIZE DIAMETER OF MANHOLES SHALL BE 48" FOR SEWER LINES 21" IN DIAMETER OR LESS. INTEGRALLY CAST STEPS WITHIN PRECAST STRUCTURES ARE NOT ALLOWED.
- BASES SHALL BE ONE-PIECE PRECAST BASE SECTIONS CONSISTING OF INTEGRALLY CAST SLAB. BOTTOM RING SECTION AND CONCRETE FLOW CHANNELS. BASE SECTIONS SHALL HAVE INTEGRAL INVERTS WITH GASKETS TO MATCH THE PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL INVERT ANGLES. PROVIDE OUTLET STUBS WITH JOINTS TO
- RISERS SHALL BE PRECAST REINFORCED CONCRETE PER ASTM C478, MANUFACTURED USING SULFATE RESISTANT CEMENT (ASTM C150, TYPE II). RISERS SHALL BE 48-INCH DIAMETER UNLESS OTHERWISE INDICATED AND SHALL HAVE A MINIMUM WALL
- 4. GASKETS FOR SEATING PRECAST SECTIONS SHALL BE COLD ADHESIVE PREFORMED PLASTIC GASKETS CONFORMING TO FDOT SPECIFICATION 942-2, UNLESS OTHERWISE INDICATED.
- 5. UNLESS OTHERWISE INDICATED, CONE TOP SECTIONS SHALL BE PRECAST, ECCENTRIC TYPE WITH 24-INCH DIAMETER TOP OPENING CONFORMING TO ASTM C478. PROVIDE 8-INCH MINIMUM THICKNESS FLAT SLAB TOPS WITH ECCENTRIC 24 INCH DIAMETER OPENING. UNLESS OTHERWISE INDICATED.
- PROVIDE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO THE MANHOLE. CONNECTION OF CONCRETE PIPE TO THE MANHOLE SHALL BE MADE WITH NON-SHRINK METALLIC GROUT. CONNECTION OF DUCTILE IRON OR PVC PIPE TO THE MANHOLE SHALL PROVIDE A WATERTIGHT CONNECTION PER ASTM C923. WHERE CONNECTORS ARE USED. THEY SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER. THE USE OF ADHESIVES OR LUBRICANTS FOR INSTALLATION OF RUBBER CONNECTORS IS
- FRAMES AND COVERS SHALL BE GREY IRON PER ASTM A48, CLASS 30B AND SHALL BE U.S. FOUNDRY TYPE 227AS, TRAFFIC BEARING (AASHTO H-20 LOADING), UNLESS OTHERWISE NOTED IN THE DRAWINGS. CASTINGS SHALL BE SMOOTH, CLEAN, FREE FROM BLISTERS, BLOWHOLES, AND SHRINKAGE. RAISED LETTERING ON COVERS SHALL BE "STORM", "SEWER", OR AS DETAILED
- 8. PROVIDE INLETS, FRAMES, AND GRATES IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. ALL FRAMES AND INLET GRATES
- 9. ALL INLET GRATES SHALL BE SECURED BY CHAIN AND EYEBOLT TO THE TOP OF THE STRUCTURE.

SHALL BE PRODUCTS OF U.S. FOUNDRY & MANUFACTURING CORPORATION, OR EQUAL.

- 10. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISHED GRADE. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN GRASSED AREAS SHALL BE 4" ABOVE FINISHED GRADE (UNLESS NOTED OTHERWISE).
- 11. ALL MANHOLES AND CLEAN OUTS CONSTRUCTED WITHIN PAVED AREAS SHALL BE INSTALLED WITH TRAFFIC BEARING RINGS AND COVERS.
- 12. MANHOLE COATINGS AND FINISHES SHALL BE:
- A. SANITARY SEWER MANHOLE INTERIOR BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.
- B. INTERIOR OF MANHOLES WHICH RECEIVE FORCE MAIN DISCHARGE INTEGRALLY ATTACHED INTERIOR LINER, FULL HEIGHT, FIBERGLASS LINER. LINER THICKNESS TO BE IN ACCORDANCE WITH THE DRAWINGS.
- C. EXTERIOR BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.

STORM SEWER SYSTEMS

- REINFORCED CONCRETE PIPE (RCP) JOINTS SHALL COMPLY WITH ASTM C443 AND FDOT SPECIFICATION SECTION 430, AND RUBBER GASKETS SHALL COMPLY WITH FDOT SPECIFICATION SECTION 942. MINIMUM COVER OVER THE PIPE, INCLUDING COVER OVER THE BELL OF THE PIPE WHERE APPLICABLE, SHALL BE 30 INCHES.
- 2. RCP PIPE SHALL NOT BE SHIPPED FROM MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF 5 DAYS HAVE PASSED SINCE THE MANUFACTURING OR REPAIR OF THE PIPE HAS BEEN COMPLETED
- UNDERDRAIN PIPE SHALL BE PERFORATED POLYVINYL CHLORIDE PIPE IN ACCORDANCE WITH ASTM F758. FILTER FABRIC UNDERDRAIN SOCK SHALL BE TYPE D-3 IN ACCORDANCE WITH SPECIFICATIONS SECTION 985.
- 4. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH FDOT INDEX NO. 199, TYPE D-3, A.O.S. 70-100. INSTALL IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 430-001. PROVIDE MINIMUM 12" 5. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO
- PREVENT DISPLACEMENT. MINIMUM COVER OVER POLYETHYLENE PIPE SHALL BE AS FOLLOWS: A) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS SUITABLE SOILS AS DEFINED IN THE GENERAL NOTES: MINIMUM COVER SHALL BE 36 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER; B) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS MANUFACTURED AGGREGATES CLASS 1A OR 1B AS DEFINED IN ASTM D2321: MINIMUM COVER SHALL BE 30 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER.
- 6. INSTALL UNDERDRAINS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 440. INSTALL CLEANOUTS AS SHOWN ON THE
- 7. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND STRUCTURES.

SIGNS AND PAVEMENT MARKINGS

- 1 ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS.
- 2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911 4" x 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND FDOT STANDARD PLANS INDEX 706-001.
- PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 971. NON-REFLECTIVE WHITE TRAFFIC PAINT. TWO COATS.
- 4. ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
- 5. INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE.
- 6. THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO
- 7. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SIGNS, BASES, ANCHOR BOLTS, CONDUITS, WIRING, ETC
- 8. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.

9. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

- TEEL CASING PIPE SHALL CONFORM TO ASTM A139, GRADE "B" WITH MINIMUM YIELD STRENGTH OF $35,\!000$ PSI. $\,$ INTERIO) NG OF PIPE SHALL BE A COAL TAR LINING CONFORMING TO AWWA C203. EXTERIOR COATING OF PIPE SHALL BE MUX COATS OF HEAVY DUTY COAL TAR BASE COATING BUILT UP TO 30 MILS TOTAL DRY THICKNESS AND APPLIED IN ACCORDANCE WITH THE COATING MANUFACTURER'S RECOMMENDATIONS.
- EACH SPACE SHALL BE 12 INCHES WIDE AND MANUFACTURED OF MINIMUM 14 GAUGE TYPE 304 STAINLESS MEEL OR 14 GAUGE STEEL WITH FUSION BONDED PVC COATING. SPACERS SHALL BE LINED WITH A 90 MIL PVC LINER. ALL NUTS AND BOLTS SHALL BE T-304 S MINLESS STEEL. EACH SPACER SHALL HAVE A MINIMUM OF 4 RUNNER SUPPORTS MANUFACTURED OF A HIGH MOLECULAR WEIGH POLYMER PLASTIC. THE RUNNER SUPPORTS SHALL BE T304 STAINLESS STEEL, MINIMUM 10 GAUGE, OF ADEQUATE HEIGHT TO ROSITION THE CARRIER PIPE IN THE CENTER OF CASING WITH A MINIMUM TOP CLEARANCE OF 0.5
- ADD ON SECTIONS OF CASING RIPE SHALL BE FULL-RING WELDED TO THE PRECEDING LENGTH, DEVELOPING WATER-TIGHT TOTAL PIPE-STRENGTH JOINTS. ALL WELDING OF STEEL PIPE SHALL BE DONE BY COMPETENT, EXPERIENCED WELDERS. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C206.
- CASING PIPE WALL MINIMUM WALL THICKNESS SHALL BE AS FOLLOWS: 16" THROUGH 24" = 0.250"; 30" = 0.312"; 36" = 0.375"; 42" AND 48" = 0.500". AT RAILROAD CROSSINGS CASING PIPE WALL THICKNESS SHALL BE AS FOLLOWS: 16" THROUGH 18" = 0.250"; 20" = 0.281"; 24" = 0.312"; 30" = 0.406"; 36" = 0.400". UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS, THE MINIMUM CASING PIPE DIAMETER SHALL BE BASED ON THE SIZE OF THE CARRIER PIPE NOMINAL DIAMETER AS FOLLOWS: WHERE CARRIER IS 6", THEN MINIMUM CASING IS 18"; WHERE CARRIER IS 6", THEN MINIMUM CASING IS 20"; WHERE CARRIER IS 10", THEN MINIMUM CASING IS 24"; WHERE CARRIER IS 12" OR 16", THEN MINIMUM CASING IS 30"; WHERE CARRIER IS 20", THEN MINIMUM CASING IS 36".
- BORED INSTALLATIONS SHALL HAVE A HOLE DIAMETER WHICH SHALL NOT EXCEED THE O.D. OF THE CASING PIPE (INCLUDING COATING) BY MORE THAN ONE INCH. WHERE UNSTABLE SOIL ONDITIONS ARE FOUND TO EXIST, BORING OPERATIONS SHALL TAL NO THE FACILITY BEING CROSSED, IF EXCESSIVE VOIDS OR TOO BE CONDUCTED IN SUCH MANNER AS NOT TO BE DETRIMENT LARGE A BORED HOLE RESULTS, OR IT IS NECESSARY TO ABANDONA BORED HOLE, PROMPT REMEDIAL MEASURES SHALL BE TAKEN BY THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CONTROLLING AGENCY OF THE FACILITY
- 6. CORRECT LINE AND GRADE SHALL BE MAINTAMED. ADD ON SECTIONS OF CASING PIPE SHALL BE FULL RING WELDED TO THE PRECEDING LENGTH, DEVELOPING WATERTIGHT TOTAL PIPE STRENGTH JOINTS. FOLLOWING PLACEMENT OF THE CARRIER PIPE, MASONRY PLUGS SHALL BE INSTALLED AT EACH OPEN END, WITH A WEEP HOLE INSTALLED NEAR THE BOTTOM OF THE
- 7. UNLESS OTHERWISE SHOWN ON THE PLANS, INSTALL CASING AT MINIMUM OF 36-INCH COVER.
- 8. CARRIER PIPES INSIDE OF STEEL CASING PIPE SHALL BE SUPPORTED BY CASING SPACERS. CARRIER PIPE JOINTS INSIDE OF STEEL CASING PIPE SHALL BE RESTRAINED. 9. SPACERS ALONG DUPTILE IRON CARRIER PIPE SHALL BE PLACED NO MORE THAN 2 FEET FROM THE END OF THE CASING, WITH
- SUBSEQUENT SPACER PLACEMENT AT INTERVALS OF NO MORE THAN 10 FEET. G PVC CARRIER PIPE SHALL BE PLACED NEAR THE SPIGOT END OF EACH SEGMENT OF PIPE. WHEN THE JOINT 10. SPACERS IS COMPLETE, THE SPACER SHALL BE IN CONTACT WITH THE JOINT RESTRAINT ASSEMBLY SO THAT THE SPACER PUSHES THE ASSEMBLY. SUBSEQUENT SPACER PLACEMENT ALONG PVC PIPE SHALL BE AT INTERVALS OF NO MORE THAN 6
- USE OF WOOD SKIDS IN LIEU OF SPACERS IS NOT ALLOWED.
- THE CARRIER MAY BE PUSHED OR PULLED (DEPENDING UPON PIPING MATERIAL, JOINT TYPE AND METHOD OF PIPE SUPPOR †

INTO THE CASING AS PIPE LENGTHS ARE ASSEMBLED. THE CARRIER SHALL BE ADEQUATELY BLOCKED ALL AROUND TO PREVENT ANY MOVEMENT AND TO ATTAIN THE SPECIFIED GRADE FOR GRAVITY LINES. THE PROPOSED METHOD OF CARRIER PIPE INSTALLATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING THE CROSSING.

ORIZONTAL DIRECTIONAL DRILLING

- POLYETHYLENE PIPE AND FITTINGS FOR POTABLE WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C906, STANDARI ODE DESIGNATION STANDARD CODE DESIGNATION PE 3408. PIPE 4-30 INCH DIAMETER SHALL BE DR11, PC 160. THE ANUFACTURER SHALL CERTIFY THAT THE MATERIALS USED TO MANUFACTURE PIPE AND FITTINGS MEET THESE QUIREMENTS. THE PIPE SIZING SHALL BE IN ACCORDANCE WITH DUCTILE IRON SIZING SYSTEM (DIOD). PIPE USING T NEWER ASTM DESIGNATIONS FOR THE MATERIAL IS ACCEPTABLE, PROVIDED IT IS STAMPED "PE3408/PE4710 - AWWA C906" OR 408/PE3608/PE4710 - AWWA C906".
- 2. POLY THYLENE PIPE AND FITTINGS FOR RECLAIMED WATER, SEWER FORCE MAIN, OR STORM SEWER SHALL BE IN ACCORDANCE WITH AWWA C906. STANDARD CODE DESIGNATION PE 4710. DR 11, 200 PSI, THE MANUFACTURER SHALL CERTIFY THAT THE MATERIALS USED TO MANUFACTURE PIPE AND FITTINGS MEET THESE REQUIREMENTS. THE PIPE SIZING SHALL BE IN ACCORDANCE WITH DUCTILE IRON PIPE SIZING SYSTEM (DIPS)
- 3. POLYETH LENE PIPE AND TUBING USED FOR SERVICE LINES 1/2-3 INCH DIAMETER SHALL BE POLYETHYLENE IN A CORDANCE WITH AWWA C901, STANDARD CODE DESIGNATION PE 4710, SDR 9 (OUTSIDE DIAMETER BASED DIMENSION RATIO), 250 PSI. PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. PIPE AND TUBING SHALL BE COLOR CODED BLUE FOR POTABLE WATER, PURPLE FOR RECLAIMED WATER, AND GREEN FOR SANITARY SEV
- 4. POLYETHYLENE MECHANICAL JOINT ADAPTERS AND FLANGE ADAPTERS SHALL BE MANUFACTURED IN ACCORDANCE WITH MECHANICAL JOINT ADAPTERS SHALL BE FITTED WITH GLAND RINGS PRESSURE RATED EQUAL TO OR GREATER AWWA C906. THAN THE MATING PIPE, AND SHALL BE MADE WITH SUFFICIENT THROUGH-BORE LENGTH TO BE CLAMPED IN A HEAT FUSION JOINING MACHINE WITHOUT THE USE OF SUB-END HOLDER. THE SEALING SURFACE OF THE FLANGE ADAPTER SHALL BE MACHINED WITH A SERIES OF SMALL V-SHAPED GROOVES TO PROVIDE GASTKETLESS SEALING, OR TO RESTRAIN THE GASKET AGAINST BLOW-C
- HDPE PIPE TERMINATIONS SHALL BE FITTED WITH A MECHANICAL JOINT ADAPTER KIT THAT WILL ENABLE THE HDPE PIPE TO BE JOINED WITH MECHANICAL JOINT FITTINGS. THE ADAPTER SHALL BE AWWA COMPLIANT, AND THE PRESSURE RATING FOR THE ADAPTER SHALL MATCH THE PRESSURE RATING FOR THE HDPE PIPE. MECHANICAL JOINT ADAPTERS SHALL BE MANUFACTURED IN STANDARD DIPS SIZES FOR CONNECTING DIPS SIZED POLYETHYLENE PIPE TO MECHANICAL JOINT FITTINGS, SHALL CONTAIN A STANLESS STEEL REINFORCING COLLAR AND AWWA C110 DUCTILE IRON GLAND RING, GASKET AND EXTRA LENGTH T-BOLTS.
- 6. GLANDS, BOLTS, AND GASKETS SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA C153. BOLTS AND NUTS SHALL BE GRADE 2 OR HIGHER.
- 7. ALL POLYETHYLENE PIPE SNALL BE BLACK, AND SHALL CONTAIN A CONTINUOUS COLORED STRIPE, 2 INCHES WIDE, LOCATED AT NO GREATER THAN 90 DEGREE INTERVALS AROUND THE PIPE. STRIPE COLOR SHALL BE ENTHER BLUE (WATER MAINS). PURPLE (RECLAIMED WATER MAINS), GREEN (SANITARY SEWER AND FORCE MAINS) OR BLACK (NO STRIPE - STORM SEWER).
- 8. TRACER WIRE SHALL BE COLON-CODED 10 GAUGE CONTINUOUS INSULATED WIRE. WITH HIPPE JACKET (MIN. THICKNESS OF 45 MILS) SPECIFICALLY MANUFACTURED FOR USE IN HORIZONTAL DIRECTIONAL DRILL INSTAULATIONS. THE COLOR OF THE WIRE JACKET SHALL BE SIMILAR TO PIRELINE IDENTIFICATION COLORS. INSTALL TRACER WIRE ALONG POLYETHYLENE PIPE PRIOR TO PULLING THROUGH BORE HOLE. TAPE WIRE TO PIPE EVERY 5 FEET MINIMUM ALONG THE PIPELINE. AFTER PULLING PIPE, CLEAN EXPOSED ENDS FOR INSTALLATION OF FITTINGS, TEST TRACER WIRE FOR CONTINUITY
- 9. HIGH DENSITY POLYETHYLENE PIPE SHALL BE HEAT FUSED AND TESTED AS PER MANUFACTURER'S GUIDELINES BEFORE INSTALLATION IN THE BORE HOLE.
- 10. BRANCH CONNECTIONS TO THE MAIN SHALL BE MADE WITH POLYETHYLENE SADDLE FITTINGS OR MECHANICAL JOINT DUCTILE IRON TEES.
- 11. JOINTS BETWEEN PLAIN END POLYETHYLENE PIPES AND POLYETHYLENE FITTINGS SHALL BE MADE BY BUTT FUSION, AND JOINTS BETWEEN THE POLYETHYLENE MAIN AND SADDLE BRANCH POLYETHYLENE FITTINGS SHALL BE MADE USING SADDLE FUSION USING ONLY PROCEDURES THAT ARE RECOMMENDED BY THE PIPE AND FITTING MANUFACTURER. EXTERNAL AND INTERNAL BEADS SHALL NOT BE REMOVED
- 12. CONNECT POLYETHYLENE PIPE TO HYDRANTIS, VALVES, AND DUCTILE IRON FITTINGS USING A MECHANICAL JOINT ADAPTER WITH A GLAND RING. PLACE GLAND RING BEHIND ADAPTER PRIOR TO FUSING. FUSE USING AN ELECTROFUSION COUPLING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. AFTER FUSING, CONNECT TO MECHANICAL JOINT. RESTRAIN ALL NON-POLYETHYLENE PIPE AND PRESSURE TEST CONNECTIONS AS REQUIRED IN INDIVIDUAL PIPELINE GENERAL NOTES.
- 13. CONNECT POLYETHYLENE PIPE TO ABOVE GRADE VALVES AND FITTINGS USING MECHANICAL FLANGE ADAPTERS. THE FLANGE ADAPTERS ARE TO BE SELF-RESTRAINED.
- 14. INSTALL ALL MECHANICAL JOINTS AND FLANGE CONNECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURE. AT LEAST 1 HOUR AFTER INITIAL ASSEMBLY, FLANGE CONNECTIONS SHALL BE RE-TIGHTENED FOLLOWING THE TIGHTENING PATTERN AND TORQUE STEP RECOMMENDATIONS OF THE MANUFACTURER. THE FINAL TIGHTENING TORQUE SHALL BE 100 FT-LBS OR LESS AS RECOMMENDED BY THE MANUFACTURER.
- 15. THE SIZE OF THE HORIZONTAL DIRECTIONAL DRILL RIG USED SHALL BE THE INDUSTRY STANDARD SIZE NEEDED BASED ON
- DRILLING DISTANCE, PIPE DIAMETER, AND SOIL CONDITI 16. AT ROAD CROSSINGS WITHIN FDOT RIGHT-OF-WAY, THE MINIMUM COVER SHALL BE 10 TIMES THE REAMER SIZE IN INCHES UNDER THE PAVED SURFACE. ANY PROPOSED CHANGES TO THE DEPTH AND LENGTH OF THE DIRECTIONAL BORE FROM WHAT
- IS SHOWN ON THE DRAWINGS MUST BE APPROVED BY THE INSINEER IN WRITING, PRIOR TO COMMENCEMENT OF DRILLING. 17. AT ROAD CROSSINGS WITHIN PUBLIC OR PRIVATE RIGHT-OF ₩AY THAT IS NOT FDOT RIGHT-OF-WAY. THE MINIMUM COVER SHALL BE AS INDICATED IN THE DRAWINGS. IN NO CASE SHALL MAINS 4" AND LARGER HAVE LESS THAN 4 FEET COVER AT ROAD CROSSINGS. ANY PROPOSED CHANGES TO THE DEPTH AND LENGTH OF THE DIRECTIONAL BORE FROM WHAT IS SHOWN ON THE DRAWINGS MUST BE APPROVED BY THE ENGINEER IN WRITING, PRIOR TO COMMENCEMENT OF DRILLING.
- 18. IN ROAD RIGHT-OF-WAY IN NON-PAVED AREAS, THE MINIMUM DIRECTIONAL BORE DEPTH SHALL BE 4 FEET MINIMUM AND 8 FEET MAXIMUM (TYPICAL DEPTH OF 4-6 FEET), AS INDICATED ON THE DRAWINGS.
- 19. AS-BUILT VARIANCE FROM THE DESIGN BORE PATH SHALL BE WITHIN 2 FEET IN THE HORIZONTAL PLANE. VERTICALLY, INSTALL AT ROAD CROSSINGS AT THE MINIMUM DEPTH SPECIFIED HEREIN, AND INSTALL AT A MAXIMUM DEPTH OF NO MORE THAN 3-FT DEEPER THAN THE SPECIFIED MINIMUM DEPTH. AN PROPOSED CHANGE TO THE LENGTH OF THE DIRECTIONAL DRILLED PIPELINE MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. FINAL ACCEPTANCE INCLUDING FINAL PAYMENT OF DIRECTIONAL BORED PIPELINES WILL NOT BE MADE UNTIL DIRECTIONAL BORE LOGS HAVE BEEN SUBMITTED AND THE INFORMATION ON THE BORE LOGS DOCUMENTS THE DEPTH OF THE INSTALLED PIPELINE IS IN ACCORDANCE WITH THESE
- 20. BACK REAMING SHALL BE CONDUCTED TO ENLARGE AND PREPARE THE BORE HOLE FOR PIPE INSTALLATION. MINIMIZE POTENTIAL DAMAGE FROM SOIL DISPLACEMENT OR SETTLEMENT BY LIMITING THE RATIO OF THE BORE HOLE TO THE PRODUCT SIZE. THE SIZE OF THE BACK REAMER BIT OR PILOT BIT, IF NO BACK REAMING IS REQUIRED, SHALL BE LIMITED RELATIVE TO THE PRODUCT DIAMETER TO BE INSTALLED AS FOLLOWS:: 4" PIPE = 8" BIT; 6" PIPE = 10" BIT; 8" PIPE = 12" BIT; 10" PIPE = 14" BIT; 12" AND LARGER PIPE = BIT TO BE PIPE OUTSIDE DIAMETER PLUS 6 INCHES. NOTE THESE REAMER SIZES ARE APPROXIMATE. SHOULD THE DIRECTIONAL DRILL CONTRACTOR CHOOSE TO USE A LARGER REAMER SIZE, THE LARGER SIZE COULD RESULT IN THE NEED FOR A DEEPER AND LONGER BORE. THE RESULTING INCREASED BORE LENGTH AND OR DEPTH SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
- 21. ENSURE ADEQUATE REMOVAL OF SOIL CUTTINGS AND STABILITY OF THE BORE HOLE BY MONITORING THE DRILLING FLUIDS SUCH AS THE PUMPING RATE, PRESSURES, VISCOSITY AND DENSITY DURING THE PLOT BORE, BACK REAMING AND PIPE INSTALLATION. OBTAIN THE ENGINEER'S APPROVAL OF THE LOCATION AND ALL CONDITIONS NECESSARY TO CONSTRUCT RELIEF HOLES TO RELIEVE EXCESS PRESSURE AND ENSURE THE PROPER DISPOSITION OF DRILLING FLUIDS IS MAINTAINED.
- 22. MINIMIZE HEAVING DURING PULL BACK. THE PULL BACK RATE USED SHALL MAXIMIZE THE REMOVAL OF SOIL CUTTINGS WITHOUT BUILDING EXCESS DOWN HOLE PRESSURE. CONTAIN EXCESS DRILLING FLUIDS AT ENTRY AND EXIT POINTS UNTIL THEY ARE RECYCLED OR REMOVED FROM THE SITE OR VACUUMED DURING DRILLING OF ERATIONS. ENTRY AND EXIT PITS ARE TO BE OF SUFFICIENT SIZE TO CONTAIN THE EXPECTED RETURN OF DRILLING FLUIDS AND SOIL CUTTINGS.
- 23. ENSURE THAT ALL DRILLING FLUIDS ARE DISPOSED OF OR RECYCLED IN A MANNER ACCEPTABLE TO THE APPROPRIATE LOCAL, STATE, OR FEDERAL REGULATORY AGENCIES. IF IN THE DRILLING PROCESS IT BECOMES ENIDENT THAT THE SOIL IS CONTAMINATED, CONTACT THE ENGINEER IMMEDIATELY. DO NOT CONTINUE DRILLING WITHOUT THE ENGINEER'S APPROVAL. 24. INSTALL THE CARRIER IN THE BORE HOLE WITHIN THE SAME DAY THAT THE PRE-BORE IS COMPLETED TO ENSURE STABILITY.

25. IF AN OBSTRUCTION IS ENCOUNTERED DURING BORING WHICH PREVENTS COMPLETION OF THE INSTALLATION IN

DISCRETION OF THE ENGINEER. IF PIPE CANNOT BE WITHDRAWN AND ENGINEER APPROVES ABANDONING THE PIPE IN PLACE, CUT PIPE OFF AT LEAS 7/3 FEET BELOW GROUND SURFACE, FILL ANNULAR SPACE AND PIPE WITH EXCAVATABLE FLOWABLE FILL AND CAP ENDS OF PIPE WITH BLIND FLANGE.

26. IN THE EVENT OF FAILURE TO INSTALL PIPE, RETAIN POSSESSION OF PIPE AND REMOVE IT FROM THE SITE. UPON APPROVAL

OF THE ENGINEER, FILL THE ABANDONED BORE HOLE WITH EXCAVATABLE FLOWABLE FILL. SUBMIT ANEW INSTALLATION

ACCORDANCE WITH THE PRAWINGS AND SPECIFICATIONS, EITHER REMOVE THE PIPE OR ABANDON THE PIPE IN PLACE AT THE

- PROCEDURE AND REVISED PLANS TO THE ENGINEER FOR APPROVAL BEFORE RESUMING WORK AT ANOTHER LOCATION. 27. IF THE SUBMITTED BORING LOGS INDICATE THE INSTALLED ALIGNMENT DOES NOT MEET VERTICAL OR HORIZONTAL ALIGNMENT REQUIREMENTS, THE BORING IS CONSIDERED A FAILURE, AND THE DIRECTIONAL BORED PIPILINE SHALL BE
- EITHER RE-BOR DOR OTHERWISE REMEDIED AT THE DISCRETION OF THE OWNER. 28. IF, DURING CONSTRUCTION, DAMAGE IS OBSERVED TO THE FACILITY, CEASE ALL WORK UNTIL RESOLUTION TO MINIMIZE FURTHER DAMAGE AND A PLAN OF ACTION FOR RESTORATION IS OBTAINED AND APPROVED BY THE ENGINE
- POTABLE WATER MAINS IN ACCORDANCE WITH AWWA C651. ALL POLYETHYLENE WATER MAINS, FORCE MAINS, AND RECLAMED WATER MAINS ARE TO BE PRESSURE TESTED. SUBJECT PIPELINE TO BE TESTED TO A 4 HOUR EXPANSION PHASE PRIOR TO COMMENCING LEAKAGE TESTING PIPELINE EXPANSION SHALL BE ACCOMPLISHED BY APPLYING ATIC TEST PRESSURE OF 150 PSI (WATER MAINS, RECLAIMED WATER MAINS) OR 100 PSI (FORCE MAINS). IN ORDER TO HYDROST COMPENSATE FOR THE INITIAL EXPANSION OF THE PIPELINE, ADD SUFFICIENT MAKE-UP WATER AT HOURLY INTERVALS TO O THE REQUIRED TEST PRESSURE. AT THE END OF THE FOURTH HOUR, THE TEST PHASE IS TO COMMENCE
- 30. CONDICT FIELD LEAK TESTING IN ACCORDANCE WITH ASTM F2164 AND AS INDICATED HEREIN. THE ASTM F2164 DELINED ONE HOUR TEST AND PASSING TEST CRITERIA (NO VISIBLE LEAKS AND THE PRESSURE IS MAINTAINED WITHIN 5% OF THE TEST PRESSURE) DOES NOT APPLY TO THIS PROJECT. THE TEST PHASE SHALL CONSIST OF A TWO HOUR PRESSURE TEST AS REQUIRED BY THE ENGINEER. AT THE END OF THE TEST PHASE, MEASURE THE AMOUNT OF MAKEUP WATER REQUIRED TO REIURN TO THE TEST PRESSURE. THE PIPELINE PASSES THE PRESSURE TEST IF THE MAKEUP WATER REQUIRED DOE CEED THE FOLLOWING: 6" MAINS - ALLOWABLE MAKEUP WATER IS 0.6 GAL/100 FT OF PIPELINE TESTED; 8" MAINS -.LOWABLE MAKEUP WATER IS 1.0 GAL/100 FT OF PIPELINE TESTED: 12" MAINS - ALLOWABLE MAKEUP WATER IS 2.3 GAL $oldsymbol{\Lambda}$ 00 FT PIPELINE TESTED: 16" MAINS - ALLOWABLE MAKEUP WATER IS 3.3 GAL/100 FT OF PIPELINE TESTED.
- IF ANY DEFECTS OR LEAKS ARE REVEALED, THEY SHOULD BE CORRECTED AND THE PIPELINE RETESTED AFTER A MINIMUM HOUR RECUPERATION PERIOD BETWEEN TESTS. TOTAL TESTING CONDUCTED ON A SECTION OF PIPELINE SHALL NOT EXCELED 8 HOURS WITHIN A 24 HOUR PERIOD.
- ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNEF SHALL BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.

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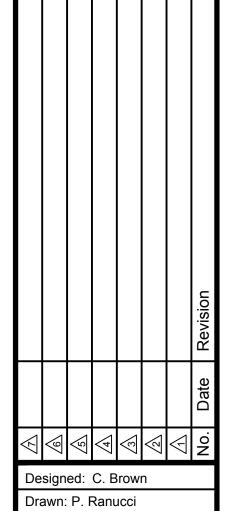
Jacksonville, FL 32256 Ph: 904.332.0999 Plans Prepared By: CPH, Inc.

State of Florida Licenses

Engineer No. 3215 Surveyor No. LB7143 Architect, No. AA26000926 Landscape No. LC000298

his item has been digitally signed ar sealed by WADE P OLSZEWSKI P on the date adjacent to the seal. rinted copies of this document are n considered signed and sealed and the signature must be verified on any

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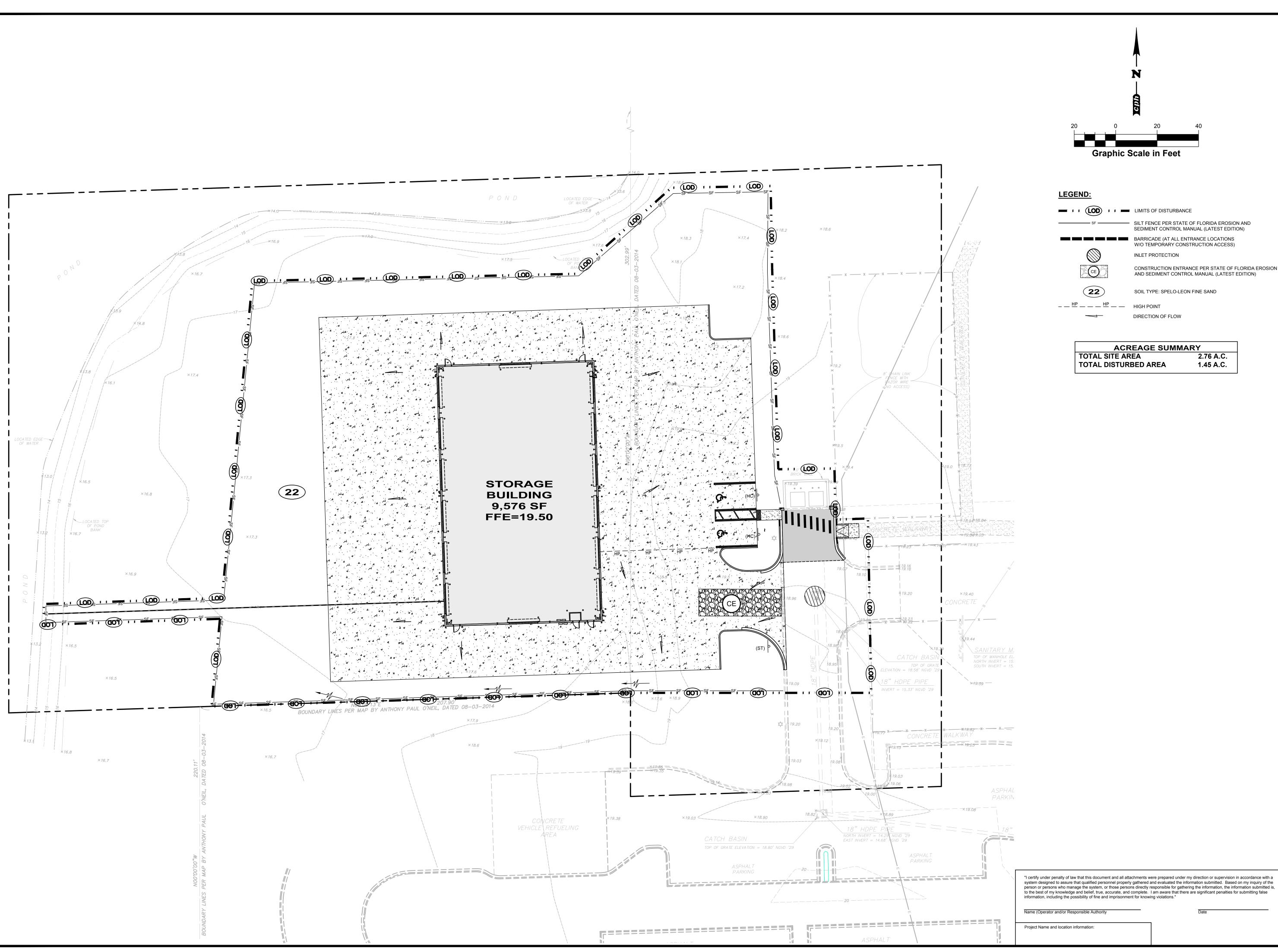
Checked: W. Olszewski

Job No.: N6601

Date: 11/2018

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CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.





LIMITS OF DISTURBANCE SILT FENCE PER STATE OF FLORIDA EROSION AND

SEDIMENT CONTROL MANUAL (LATEST EDITION) BARRICADE (AT ALL ENTRANCE LOCATIONS W/O TEMPORARY CONSTRUCTION ACCESS)

INLET PROTECTION

DIRECTION OF FLOW

CONSTRUCTION ENTRANCE PER STATE OF FLORIDA EROSION AND SEDIMENT CONTROL MANUAL (LATEST EDITION)

SOIL TYPE: SPELO-LEON FINE SAND _ _ <u>HP</u> _ _ _ <u>HP</u> _ _ HIGH POINT

> ACREAGE SUMMARY TOTAL SITE AREA

2.76 A.C. 1.45 A.C.

Plans Prepared By: CPH, Inc. State of Florida Licenses: Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926 Landscape No. LC000298

This item has been digitally signed an sealed by WADE P. OLSZEWSKI, P.I on the date adjacent to the seal. rinted copies of this document are no considered signed and sealed and the

signature must be verified on any electronic copies.

Designed: C. Brown Drawn: P. Ranucci Checked: W. Olszewski

CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Sheet No.

THE SITE IS LOCATED AT SHERIFF'S ADMINISTRATION SITE, IN NASSAU COUNTY, FLORIDA SECTION 8, TOWNSHIP 02 NORTH, RANGE 27 EAST LATITUDE: 30° 36'39.26"N LONGITUDE: 81°38'02.52"W

B. SITE CONDITIONS & ACTIVITIES NARRATIVE THE EXISTING CONDITION OF THE SITE IS "VACANT LAND". DURING CONSTRUCTION THE SITE WILL BE CLEARED AND GRUBBED. THIS PROJECT WILL HAVE NO

WETLANDS/BUFFERS NO WETLANDS OR BUFFERS ARE ASSOCIATED WITH THIS PROJECT

MAJOR EFFECT ON ANY THE ABUTTING PROPERTIES.

<u>SWPPP INTENT</u>

THE INTENT OF THIS SWPPP IS TO COMPLY WITH THE INTENT OF THE GENERIC PERMIT AND TO PREVENT THE RELEASE OF SOILS, TRASH, CHEMICALS, TOXINS AND OTHER POLLUTANTS, BY WATER, AIR, VEHICLE TRANSPORT OR OTHER MEANS THAT CAN IMPACT STORM WATER QUALITY. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GENERIC PERMIT AND RETAIN ON-SITE FOR FUTURE REFERENCE. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT, AND ENSURE THAT THE BMP'S ARE INSTALLED AND THE EXECUTION OF THE WORK IS PERFORMED TO MEET THE INTENT OF THE GENERIC PERMIT AND THE SWPPP.

POTENTIAL SOURCES OF POLLUTION

THE POTENTIAL SOURCES OF POLLUTION THAT MAY REASONABLY BE EXPECTED TO AFFECT THE QUALITY OF STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY INCLUDE: SEDIMENT, PESTICIDES, FERTILIZER, PLASTER, CLEANING SOLVENTS, ASPHALT, CONCRETE, GLUE, ADHESIVES, PAINTS, CURING COMPOUNDS, WOOD PRESERVATIVES, HYDRAULIC OIL FLUIDS, GASOLINE, DIESEL FUEL AND KEROSENE

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION HAS BEEN DEVELOPED AS A GUIDE FOR THE CONTRACTOR. THE CONTRACTOR SHALL SEQUENCE THE CONSTRUCTION AS NEEDED BASED ON BEST MEANS AND METHODS IN ORDER TO BE IN COMPLIANCE WITH STATE AND LOCAL REQUIREMENTS. THE INSTALLATION OR REMOVAL OF BMPS FARTH DISTURBANCE GRADING TEMPORARY STABILIZATION AND PERMANENT STABILIZATION SHALL BE IMMEDIATELY NOTED IN THE SWPPP IMPLEMENTATION LOG. ALL TEMPORARY BMPS SHALL BE REPAIRED AND MAINTAINED UNTIL STABILIZATION HAS OCCURRED AND THERE IS NO RISK OF DISCHARGE TEMPORARILY SEED, IMMEDIATELY AND THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.

- 1 POST A COPY OF THE NOLOR LETTER FROM EDEP CONFIRMING COVERAGE LINDER THE GENERIC PERMIT, AND THE NAME AND PHONE NUMBER OF THE CONTRACTOR'S REPRESENTATIVE RESPONSIBLE FOR EROSION AND SEDIMENTATION CONTROL INSTALLATION AND MAINTENANCE ON A 24 HOUR BASIS.
- INSTALL PERIMETER CONTROLS IMMEDIATELY DOWNSTREAM OF THE PLANNED LOCATION OF THE CONSTRUCTION EXIT INSTALL STABILIZED CONSTRUCTION EXIT.
- INSTALL PERMITER CONTROLS. THE CONTRACTOR SHALL INSTALL THE REMAINING BMPS AS SHOWN AND AS REQUIRED TO MEET PERMIT REQUIREMENTS. SOME BMP INSTALLATIONS MAY NOT BE POSSIBLE AT THE BEGINNING OF THE PROJECT BUT MUST BE INSTALLED AS SOON AS POSSIBLE TO ENSURE COMPLIANCE.
- INSTALL TEMPORARY STAGING AND STORAGE AREAS. CONSTRUCT AND STABILIZE THE SEDIMENT BASINS AND SEDIMENT TRAPS WITH APPROPRIATE OUTFALL STRUCTURES, IF REQUIRED. CONSTRUCT AND STABILIZE HYDRAULIC CONTROLS (DITCHES, SWALES, DIKES, CHECK DAMS, ETC.), IF REQUIRED.
- BEGIN DEMOLITION, CLEARING AND GRUBBING OPERATIONS AS APPLICABLE. BEGIN CONSTRUCTION OF SITE IMPROVEMENTS.
- PAVE SITE AND STABILIZE PER PLAN. 1. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER SITE HAS ACHIEVED FINAL STABILIZATION. 12. SUBMIT NOTICE OF TERMINATION (NOT) ONCE ALL CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED PER PLAN.

A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FILE "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES" (DEP FORM 62-621.300(4)(B) OR LATEST VERSION) TO FDEP TO THE FOLLOWING ADDRESS OR THROUGH THE FDEP ON-LINE SYSTEM AT LEAST TWO (2) DAYS BEFORE COMMENCEMENT OF CONSTRUCTION:

NPDES STORMWATER NOTICES CENTER, MS #2510 FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA

THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (NOT) WITHIN 14 CALENDAR DAYS AFTER THE SITE HAS ACHIEVED FINAL STABILIZATION (I.E. ALL DISTURBED SOILS AT THE SITE HAVE BEEN FINAL STABILIZED). TEMPORARY BMPS HAVE BEEN REMOVED. AND STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE SITE AUTHORIZED BY THE PERMIT HAVE BEEN ELIMINATED

AN ENVIRONMENTAL RESOURCE PERMIT IS REQUIRED FOR THE PROJECT. CONTRACTOR SHALL PROVIDE THE PERMIT INFORMATION ON THE NOI APPLICATION.

MS4 OPERATOR NAME (IF ANY): XXXXX

THE CONTRACTOR SHALL PROVIDE A COPY OF THE NOI AND SUBSEQUENT NOT OR THE ACKNOWLEDGEMENT LETTERS FOR THE NOI OR NOT TO THE MS4 WITHIN 7 DAYS OF RECEIPT. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE MS4 TO ENSURE THAT ALL SPECIFIC REQUIREMENTS ARE MET.

- B. WHERE PRACTICAL, STORMWATER SHALL BE CONVEYED BY SWALES. SWALES SHALL BE CONSTRUCTED AS SHOWN ON PLANS.
- C. EROSION CONTROL MEASURES SHALL BE EMPLOYED TO MINIMIZE TURBIDITY OF SURFACE WATERS LOCATED DOWNSTREAM OF ANY CONSTRUCTION ACTIVITY. WHILE THE VARIOUS MEASURES REQUIRED WILL BE SITE SPECIFIC, THEY SHALL BE EMPLOYED AS NEEDED IN ACCORDANCE WITH THE FOLLOWING
- I. IN GENERAL, EROSION SHALL BE CONTROLLED AT THE FURTHEST PRACTICAL UPSTREAM LOCATION. II. NEW AND EXISTING STORMWATER INLETS AND OUTFALL STRUCTURES SHALL BE PROTECTED DURING CONSTRUCTION. PROTECTION MEASURES SHALL BE EMPLOYED IMMEDIATELY AS REQUIRED DURING THE VARIOUS STAGES OF CONSTRUCTION. III. PERIMETER EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL FINAL SITE STABILIZATION HAS BEEN ESTABLISHED
- D. CLEARING AND GRUBBING OPERATIONS SHALL BE CONTROLLED SO AS TO MINIMIZE UNPROTECTED ERODIBLE AREAS EXPOSED TO WEATHER. GENERAL EROSION CONTROL BMP'S SHALL BE EMPLOYED TO MINIMIZE SOIL EROSION AND OFF-SITE SEDIMENTATION. WHILE THE VARIOUS TECHNIQUES REQUIRED WILL BE SITE AND PLAN SPECIFIC, THEY SHOULD BE EMPLOYED PRIOR TO ANY CONSTRUCTION ACTIVITY.
- E. THE CONTRACTOR SHALL FURNISH, INSTALL PER THE SEQUENCE OF CONSTRUCTION, MAINTAIN AND SUBSEQUENTLY REMOVE, ALL NECESSARY TEMPORARY
- BMPS. THE CONTRACTOR WILL FURNISH AND INSTALL ALL NECESSARY PERMANENT BMPS. F. THE CONTRACTOR SHALL ADJUST, ADD OR MODIFY BMPS AS NECESSARY TO COMPLY WITH THE INTENT OF THE GENERIC NPDES PERMIT AND THE SWPPP FOR
- NO ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER PRIOR TO ADJUSTING. ADDING OR MODIFYING BMPS THAT AFFEC THE HYDRAULICS OF THE SITE OR BEFORE ADDING BMPS NOT DETAILED IN THE SWPPP
- G. THE CONTRACTOR IS ADVISED THAT THE CONTRACT DRAWINGS ONLY INDICATE EROSION, SEDIMENT, AND TURBIDITY CONTROLS AT LOCATIONS DETERMINED IN THE DESIGN PROCESS, HOWEVER, THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS NECESSARY TO PREVENT THE POSSIBILITY OF SILTING ANY ADJACENT LOWLAND PARCEL OR RECEIVING WATER.
- H. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL EROSION CONTROL MEASURES SHOWN ON THE PLANS. THE EROSION CONTROL SYSTEM DESCRIBED WITHIN THE CONSTRUCTION DOCUMENTS SHOULD BE CONSIDERED TO REPRESENT THE MINIMUM ACCEPTABLE STANDARDS FOR THIS PROJECT, ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDENT UPON THE STAGE OF CONSTRUCTION. THE SEVERITY OF THE RAINFALL EVENT AND/OR AS DEEMED NECESSARY AS A RESULT. OF ON-SITE INSPECTIONS BY THE OWNER, THEIR REPRESENTATIVES, OR THE APPLICABLE JURISDICTIONAL AUTHORITIES. THESE ADDITIONAL MEASURES (IF NEEDED) SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER. IT SHOULD BE NOTED THAT THE MEASURES IDENTIFIED ON THIS PLAN ARE ONLY SUGGESTED BEST MANAGEMENT PRACTICES (BMPS). THE CONTRACTOR SHALL PROVIDE POLLUTION PREVENTION AND EROSION CONTROL MEASURES AS SPECIFIED IN FDOT INDEXES #100 THROUGH #102 AND AS NECESSARY FOR EACH SPECIFIC APPLICATION. IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO ASSURE THAT THE STORMWATER DISCHARGE FROM THE SITE DOES NOT EXCEED THE TOLERANCES ESTABLISHED BY ANY OF THE APPLICABLE JURISDICTIONAL AUTHORITIES.
- THE CONTRACTOR SHALL KEEP THE SWPPP CURRENT AT ALL TIMES. THE CONTRACTOR SHALL SIGN AND DATE ANY CHANGES TO THE SWPPP AND KEEP THEM AS ATTACHMENTS TO THE ORIGINAL PLAN. WHENEVER ANY OF THE FOLLOWING EVENTS OCCUR, THE CONTRACTOR SHALL UPDATE THE SWPPP WITHIN 7 DAYS: I. THERE IS A CHANGE IN DESIGN, CONSTRUCTION OPERATION OR MAINTENANCE THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE FROM THE PROJECT II. THERE IS A NEW DISCHARGE POINT OUR OUTFALL
- III. THERE IS A CHANGE IN THE LOCATION OF A DISCHARGE POINT OF OUTFALL IV. AN INSPECTION REVEALS THAT BMPS ARE INEFFECTIVE AT ELIMINATING OR MINIMIZING POLLUTANTS IN THE STORMWATER DISCHARGED FROM THE SITE.
- V. THERE IS A NEW SUBCONTRACTOR IMPLEMENTING ANY PORTION OF THE SWPPP VI. A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR GREATER THAN A REPORTABLE QUANTITY OCCURS DURING A 24-HOUR
- J. THE CONTRACTOR SHALL ENSURE THAT THE CONTRACTOR AND ALL SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING SWPPP CONTROL MEASURES FILL OUT THE CONTRACTOR / SUBCONTRACTOR CERTIFICATION TABLE INCLUDED IN THIS SWPPP.
- K. THE CONTRACTOR SHALL COMPLETE THE CONSTRUCTION SEQUENCE TABLE INCLUDING IN THIS SWPPP PRIOR TO PROCEEDING WITH THE INSTALLATION OF BMPS AND PRIOR TO GROUND DISTURBING ACTIVITIES. THE CONTRACTOR SHALL COMPLETE THE TABLE WITH ANTICIPATED DATES IN WHICH THE BMP WILL BE UTILIZED OR THE ACTIVITY WILL OCCUR.

PROFILE VIEW OF INSTALLED FILTER SACK

GEOTEXTILE BAG INLET PROTECTION DETAIL

TURBIDITY

CAN NO LONGER BE SEEN

4. INSPECT PER REGULATORY EQUIREMENTS.

ARE A CONCERN.

INCHES.

GRATED INLET BOX.

GRATED INLET BOX.

PARENT OPENING SIZE

A. TURBIDITY REDUCTION TO NO MORE THAN 29 NTUs ABOVE BACKGROUND LEVEL PRIOR TO DISCHARGE OFF SITE.

B. CONTRACTOR TO FILE FOR A FDEP NOTICE OF INTENT (NOI) WITHIN 14 DAYS OF CONSTRUCTION COMPLETION.

I. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT

3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS

5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE

6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36

7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE

. EXTRA CARE SHALL BE TAKEN TO ENSURE REGULAR MAINTENANCE OF FILTER

SACKS USED IN RIGHT OF WAY TO ENSURE ADEQUATE DRAINAGE CAPACITY.

2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR

EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.

A STABILIZATION MEASURES SHALL BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED AND WILL REMAIN UNDISTURBED FOR 7 DAYS OR MORE. STABILIZE BY COVERING WITH ADEQUATE AMOUNTS OF MULCH OVER SEED AND PERIODICALLY WATER TO PROMOTE AND MAINTAIN GROWTH OF THE TEMPORARY GROUNDCOVER, OR BY THE USE OF AN APPROPRIATE ALTERNATIVE BMP.

B. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED IMMEDIATELY AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED.

C. ALL GRASS SLOPES CONSTRUCTED STEEPER THAN 4H:1V SHALL BE SODDED IMMEDIATELY AFTER FINAL GRADE IS ESTABLISHED.

A. BARE EARTH AREAS SHALL BE WATERED DURING CONSTRUCTION AS NECESSARY TO MINIMIZE THE TRANSPORT OF FUGITIVE DUST. IN NO CASE SHALL FUGITIVE DUST BE ALLOWED TO LEAVE THE SITE UNDER CONSTRUCTION.

B. AS REQUIRED AFTER COMPLETION OF CONSTRUCTION, BARE EARTH AREAS SHALL BE VEGETATED.

AT ANY TIME BOTH DURING AND AFTER SITE CONSTRUCTION THAT WATERING AND/OR VEGETATION ARE NOT EFFECTIVE IN CONTROLLING WIND EROSION AND/OR TRANSPORT OF FUGITIVE DUST, OTHER METHODS AS ARE NECESSARY FOR SUCH CONTROL SHALL BE EMPLOYED. THESE METHODS MAY INCLUDE ERECTION OF DUST CONTROL FENCES.

A. THE CONTRACTOR SHALL ENSURE THAT ALL WASTE AND DEBRIS ARE MANAGED DAILY SUCH THAT THEY WILL NOT IMPACT STORMWATER OR LEAVE THE PERMITTED AREA, AND DISPOSED OF PROPERLY IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND

- B. THE CONTRACTOR SHALL ENSURE THAT ALL CHEMICALS, OILS, FUELS, HAZARDOUS WASTE, UNIVERSAL WASTE AND TOXIC SUBSTANCES ARE PROPERLY MANAGED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. THE CONTRACTOR SHALL ENSURE THAT WASTE IS NOT DISCHARGED FROM THE SITE, AND DOES NOT IMPACT
- C. THE CONTRACTOR SHALL PROVIDE APPROPRIATE AND ADEQUATE WASHOUT FACILITIES TO ENSURE THAT CHEMICALS AND WASTE IS NOT DISCHARGED FROM THE SITE, AND DO NOT IMPACT STORMWATER OR GROUNDWATER. (E.G. CONCRETE/MASONRY WASHOUT, PAINT WASHOUT, EIFS, ETC.) THE CONTRACTOR SHALL CLEAN UP SPILLS PROMPTLY AND ENSURE THAT WASHOUT AREAS ARE
- D. THE CONTRACTOR SHALL PROVIDE ADEQUATE SANITARY FACILITIES FOR SITE PERSONNEL MAINTAIN THROUGHOLIT CONSTRUCTION AND PROVIDE FOR PROPER DISPOSAL IN ACCORDANCE WITH APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. SANITARY
- E A SPILL CONTROL AND CONTAINMENT KIT (CONTAINING FOR EXAMPLE ABSORBENT MATERIAL SUCH AS KITTY LITTER OR SAWDUST ACID BASE NEUTRALIZING AGENT BROOMS DUST PANS MOPS RAGS GLOVES GOGGLES PLASTIC AND METAL TRASH CONTAINERS ETC.) SHALL BE PROVIDED AT THE CONSTRUCTION SITE AND IT'S LOCATION(S) SHALL BE IDENTIFIED WITH LEGIBLE SIGNAGEAND A. THE SPILL CONTROL AND CONTAINMENT KIT SHALL BE OF SUFFICIENT QUANTITIES AND APPROPRIATE CONTENT TO CONTAIN A

SPILL FROM THE LARGEST ANTICIPATED PIECE OF EQUIPMENT AND FROM THE LARGEST ANTICIPATED QUANTITIES OF PRODUCTS

F. WHEN A SPILL OF REPORTABLE QUANTITIES IS DISCOVERED ON THE SITE. THE CONTRACTOR SHALL CLEAN UP ALL SPILLED MATERIALS. AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITIES IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS, THE OWNER AND PROJECT ENGINEER. THE CONTRACTOR SHALL RETAIN CLEANUP INFORMATION AS WELL AS DISPOSAL MANIFESTS WITH THEIR SWPPP

PROPERLY MAINTAINED TO PROVIDE ADEQUATE VOLUME TO PREVENT OVERFLOW

EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN LOCATIONS WHERE IT COULD BE WASHED AWAY BY HIGH WATER OR STORM WATER RUNOFF. STOCKPILED MATERIAL SHALL BE COVERED OR ENCIRCLED WITH SEDIMENT CONTAINMENT DEVICES.

- B. HEAVY CONSTRUCTION EQUIPMENT PARKING AND MAINTENANCE AREAS SHALL BE DESIGNED TO PREVENT OIL, GREASE, AND LUBRICANTS FROM ENTERING SITE DRAINAGE FEATURES INCLUDING STORMWATER COLLECTION AND TREATMENT SYSTEMS. CONTRACTORS SHALL PROVIDE BROAD DIKES OR SILT SCREENS AROUND, AND SEDIMENT SUMPS WITHIN, SUCH AREAS AS REQUIRED TO CONTAIN SPILLS OR OIL, GREASE, LUBRICANTS, OR OTHER CONTAMINANTS. CONTRACTOR SHALL HAVE AVAILABLE, AND SHALL USE. ABSORBENT FILTER PADS TO CLEAN UP SPILLS IMMEDIATELY AFTER ANY OCCURRENCE
- C. THE CONTRACTOR SHALL ENSURE THAT ALL TOXIC / HAZARDOUS SUBSTANCES AND CHEMICALS ARE PROPERLY STORED, OUT OF THE WEATHER, AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL ENSURE THAT THESE PRODUCTS ARE STORED AND USED IN SUCH A MANNER THAT WILL NOT NEGATIVELY IMPACT STORMWATER, GROUNDWATER OR PROTECTED SPECIES.
- D. THE CONTRACTOR SHALL ENSURE THAT ALL MATERIALS, EQUIPMENT, DEBRIS, WASTE, TRAILERS, AND OTHER SUPPORT RELATED ITEMS ARE CONTAINED WITHIN THE PERMITTED LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL ENSURE THAT THE STORAGE AND USE OF SUCH ITEMS DOES NOT NEGATIVELY IMPACT STORMWATER OR GROUNDWATER.

OFFSITE VEHICLE TRACKING

A. THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION EXIT IS USED BY ALL VEHICLES AND EQUIPMENT ENTERING OR LEAVING THE JOBSITE. THE CONTRACTOR SHALL MONITOR AND MAINTAIN THE CONSTRUCTION EXIT TO ENSURE THAT NO SOILS ARE TRACKED OFFSITE BY TIRES OR TRACKS, AND THAT NO SOILS ARE SPILLED BY TRUCKS OR EQUIPMENT LEAVING THE SITE. ALL TRACKED OR SPILLED SOILS SHALL BE SHOVELED OR SWEPT FROM THE ROADWAY AND RETURNED TO THE SITE. WATER SHALL NOT BE USED TO CLEAN THE SOILS FROM THE ROADWAY UNLESS THE WATER AND SOILS ARE RECOVERED BY THE USE OF A VACUUM TRUCK OR SIMILAR DEVICE.

FERTILIZERS, HERBICIDES AND PESTICIDES

A. THE CONTRACTOR SHALL ENSURE THAT ALL FERTILIZERS, HERBICIDES, PESTICIDES AND SIMILAR PRODUCTS ARE PROPERLY STORED, OUT OF THE WEATHER, AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL ENSURE THAT THESE PRODUCTS ARE USED IN SUCH A MANNER THAT WILL NOT NEGATIVELY IMPACT STORMWATER, GROUNDWATER

B. NUTRIENTS SHALL BE APPLIED ONLY AT RATES NECESSARY TO ESTABLISH AND MAINTAIN VEGETATION.

A. THE CONTRACTOR SHALL INSPECT BMPS (I.E. DISCHARGE LOCATIONS, CONSTRUCTION EXIT, PERIMETER CONTROLS, INLET

- PROTECTION, STABILIZATION, EROSION CONTROL, DOCUMENTATION, WASTE DISPOSAL AREAS, MATERIAL STORAGE AREAS, ETC.) TO ENSURE THAT BMPS ARE NOT CAUSING OR CONTRIBUTION TO VIOLATIONS OF WATER QUALITY STANDARDS OR RESULTING IN OFESITE SEDIMENTATION: ENSURE THAT BMPS ARE INSTALLED. MAINTAINED AND OPERATING CORRECTLY AND EFFECTIVELY: ENSURE THAT BMPS ASSOCIATED WITH STORAGE AND WASTE DISPOSAL AREAS ARE BEING USED AND MAINTAINED PROPERLY: ENSURE THAT THE CONSTRUCTION EXIT IS FUNCTION PROPERLY TO PREVENT OFFSITE TRACKING OF SEDIMENT; ENSURE THAT EROSION PREVENTION MEASURES ARE MAINTAINED TO PREVENT VISIBLE EROSION OF DISTURBED AREAS AND SEDIMENTATION AT THE DISCHARGE POINTS; AND DETERMINE IF CONSTRUCTION ACTIVITIES HAVE ALTERED THE EFFECTIVENESS OF BMPS. INSPECTIONS MUST BE COMPLETED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS, AND WITHIN 24 HOURS AFTER A RAINSTORM OF 0.50 INCHES OR GREATER EVEN IF IT RAINS ON THE WEEKEND OR A HOLIDAY
- USING THE STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT FORM PROVIDED BY FDEP OR AN EQUIVALENT FORM. INSPECTION REPORTS SHALL BE SIGNED BY THE INSPECTOR AND A RESPONSIBLE ALITHORITY AS DEFINED BY THE PERMIT INSPECTION REPORTS SHALL BE MAINTAINED WITH THE SWPPP. THE INSPECTOR MUST BE A QUALIFIED EROSION AND SEDIMENT CONTROL INSPECTOR AS DEFINED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

B. THE CONTRACTOR SHALL REPORT ALL INSPECTION FINDINGS AND CORRECTIVE ACTIONS TAKEN AS A RESULT OF THE INSPECTION

C. ANY MAINTENANCE, REPAIR AND NECESSARY REVISIONS TO BMP ITEMS SHALL BE ADDRESSED IN A TIMELY MANNER, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING THE INSPECTION OR IDENTIFICATION OF THE ISSUE. UNLESS OTHERWISE SPECIFIED, ACCUMULATED SEDIMENTS SHOULD BE REMOVED BEFORE THEY REACH ONE-HALF OF THE CAPACITY OF THE CONTROL DEVICE.

THE GENERIC PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES PROHIBIT MOST

NON-STORMWATER DISCHARGES DURING THE CONSTRUCTION PHASE. CERTAIN DISCHARGES ARE ALLOWED BY THE PERMIT PROVIDED APPROPRIATE BMP'S ARE UTILIZED AND THE DISCHARGE DOES NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS. ALLOWABLE NON-STORMWATER DISCHARGES THAT OCCUR DURING CONSTRUCTION ON THIS PROJECT PER PART 3.2 OF THE GENERIC PERMIT ARE:

DISCHARGES FROM FIRE FIGHTING ACTIVITIES. FIRE HYDRANT FLUSHINGS.

WATERS WITHOUT DETERGENTS USED TO SPRAY OFF LOOSE SOLIDS FROM VEHICLES. WATERS USED TO CONTROL DUST

POTABLE WATER SOURCES SUCH AS WATERLINE FLUSHINGS.

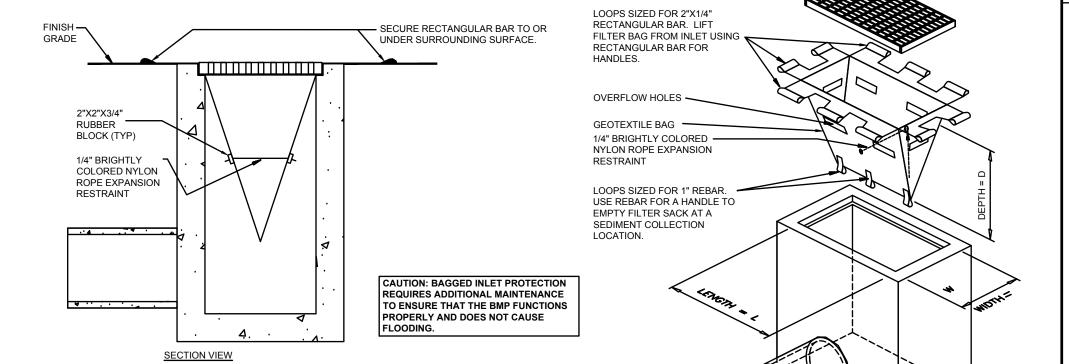
LANDSCAPE IRRIGATION AND DRAINAGE

ROUTINE EXTERNAL BUILDING WASHDOWN PROVIDED NO DETERGENTS ARE USED. PAVEMENT WASHWATERS THAT DO NOT CONTAIN DETERGENTS, LEAKS, SPILLS OF TOXIC OR HAZARDOUS MATERIALS.

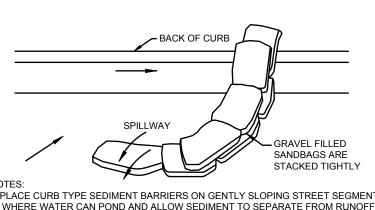
AIR CONDITIONING CONDENSATE

FOUNDATION OR FOOTING DRAIN FLOWS THAT ARE NOT CONTAMINATED WITH PROCESS MATERIAL SUCH AS SOLVENTS. NONCONTAMINATED GROUND WATER ASSOCIATED WITH DEWATERING ACTIVITIES AS DESCRIBED IN PART 3.4 OF THE GENERIC

AVOID USING IN TRAFFIC AREAS AS



THIS CAN CAUSE A HAZARD.



____2" X 4" BRACE @

CENTER

2" X 4" TAP CON. 16" O.

RUN FILTER FABRIC

SECTION A - A

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY

2. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE

BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON

FILTER FABRIC INLET PROTECTION DETAIL

GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM

3. FASTEN FRAMING TO STRUCTURE TO ALLOW GRATE REMOVAL.

4. LEAVE EXPOSED EDGE TO ALLOW FOR PAVING TO GRADE

EVEL DRAINAGE AREAS. (LESS THAN 5%)

THE DOWNSLOPE SIDE OF THE STRUCTURE.

GRAVEL FILLED SANDRAGS

CURB INLET

MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY

CURB INLET PROTECTION DETAIL

GRAVEL, LAYERED AND PACKED TIGHTLY.

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS

WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF

2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH

3. LEAVE ONE SANDBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY FOR OVERFLOW

4. INSPECT BARRIERS AND REMOVE SEDIMENT AS NECESSARY. SEDIMENT AND GRAVEL

ARE STACKED TIGHTLY

UNDER GRATE &

SIDES)

3/16" X 2-3/4" (TYPICAL AI

2"X4" PT BOX ALL

(RUN UNDER 2" X 4"

STAPLE IT TO SAME)

AVOID USING IN TRAFFIC AREAS AS

THIS CAN CAUSE A HAZARD.

AND INSIDE FRAME AND

~2" X 4" VERTICAL

SUPPORT FACH

ALLOW GRATE

REMOVAL)

CORNER (INSTALL TO

BACK OF CURI

-BACK OF CURB

1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF. 2. SANDBAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC, ARE FILLED WITH

3. TAPER TO ONE SANDBAG TO PROVIDE A SPILLWAY FOR OVERFLOW. 4 INSPECT BARRIERS AND REMOVE SEDIMENT AS NECESSARY SEDIMENT AND

GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

GRAVEL, LAYERED AND PACKED TIGHTLY.

CURB LINE PROTECTION DETAIL

CONTRACTOR / SUBCONTRACTOR CERTIFICATION TABLE

THIS SWPPP MUST CLEARLY IDENTIFY, FOR EACH MEASURE IDENTIFIED WITHIN THE SWPPP, THE CONTRACTOR(S) OR SUBCONTRACTOR(S) WHO WILL IMPLEMENT EACH MEASURE. ALL CONTRACTOR(S) AND SUBCONTRACTOR(S) IDENTIFIED IN THE SWPPP MUST SIGN THE FOLLOWING CERTIFICATION:

'I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND, AND SHALL COMPLY WITH. THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN.

Name / Signature	Title	Company Name, Address and Phone Number	Date

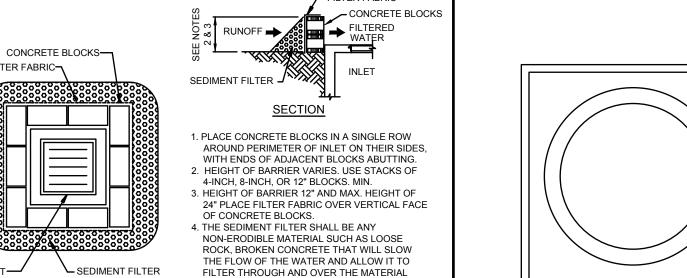
NOTE: CONTRACTOR TO ADD SHEETS TO CERTIFICATION TABLE AS NECESSARY.

SWPPP IMPLEMENTATION LOG

A RECORD OF DATES WHEN BMPs ARE INSTALLED OR REMOVED. STABILIZATION MEASURES ARE INITIATED. MAJOR GRADING ACTIVITIES OCCUR. AND CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON PORTIONS OF THE SITE. THIS FORM MUST BE UPDATED CONTINUOUSLY THROUGHOUT THE PROJECT UNTIL THE

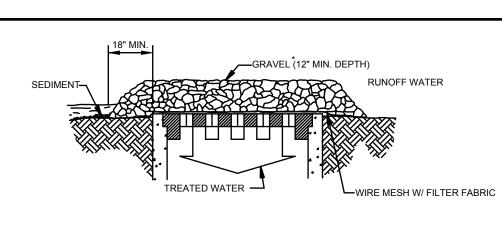
DESCRIPTION OF ACTIVITY	LOCATION	CONTRACTOR	BEGIN DATE	END DATE

NOTE: CONTRACTOR TO ADD SHEETS TO THE SWPPP IMPLEMENTATION LOG AS NECESSARY.



BLOCK AND AGGREGATE INLET SEDIMENT FILTER

BEFORE ENTERING THE INLET.



SPECIFIC APPLICATION

AVOID USING IN TRAFFIC AREAS AS

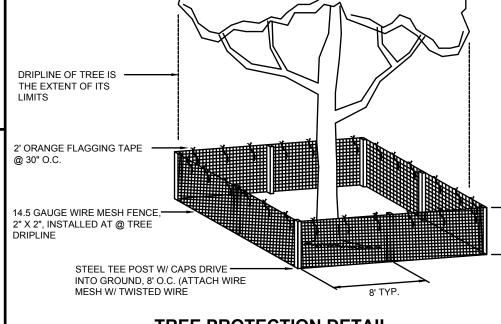
FILTER FABRIC-

RATED INLET —

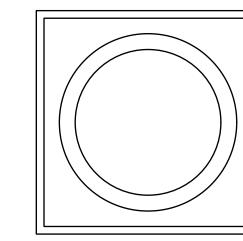
THIS CAN CAUSE A HAZARD.

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED ACRES. * GRAVEL SHALL BE 2"-3" CLEAN STONE

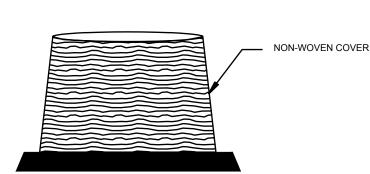
GRAVEL & WIRE MESH INLET SEDIMENT FILTER



TREE PROTECTION DETAIL



TOP VIEW



BASE OF FRAME SHAPED

SIDE VIEW

1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE

2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.

3. SLIDE THE COVER OVER THE FRAME.

4. FILL THE COVER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE COVER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE. 5. BACK FILL AROUND THE FRAME AND COVER ASSEMBLY IS NOT REQUIRED TO

COMPLETE INSTALLATION; HOWEVER, BACKFILLING MAY BE NECESSARY TO

COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.

DOMED INLET PROTECTION (PREFABRICATED)

													Stormwater Team		
													Description	Name	Company
													Contractor:		
													Contractor's Responsible		
CONSTRUCTION SEQUE	NCI	NG	TAE	BLE									Authority:		
ANTICIPATED CONSTRUCTION SEQUENCE*	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Qualified Inspector(s):		
CONSTRUCTION ENTRANCE															
TEMPORARY CONTROL MEASURES													Maintenance Personnel:		
STORM FACILITIES															
ROUGH GRADE / SEDIMENT CONTROL															
FOUNDATION / BUILDING CONSTRUCTION]		
SITE CONSTRUCTION													1		
FINISH GRADING													The contractor shall comp	olete this table identifying	the individua
PERMANENT CONTROL MEASURES													the stormwater team and	, , ,	and mannade
* THIS IS ONLY A GUIDE, CONTRACTOR IS TO	USE F	IIS JU	DGME	ENT T	ОМС	DIFY	AS N	EEDE	D.					Then responsibilities.	

A Full Service

A & E Firm 5200 Belfort Road, Suite 220 Jacksonville, FL 32256 Ph: 904.332.0999

Plans Prepared By CPH, Inc. State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143 Architect, No. AA26000926 Landscape No. LC000298

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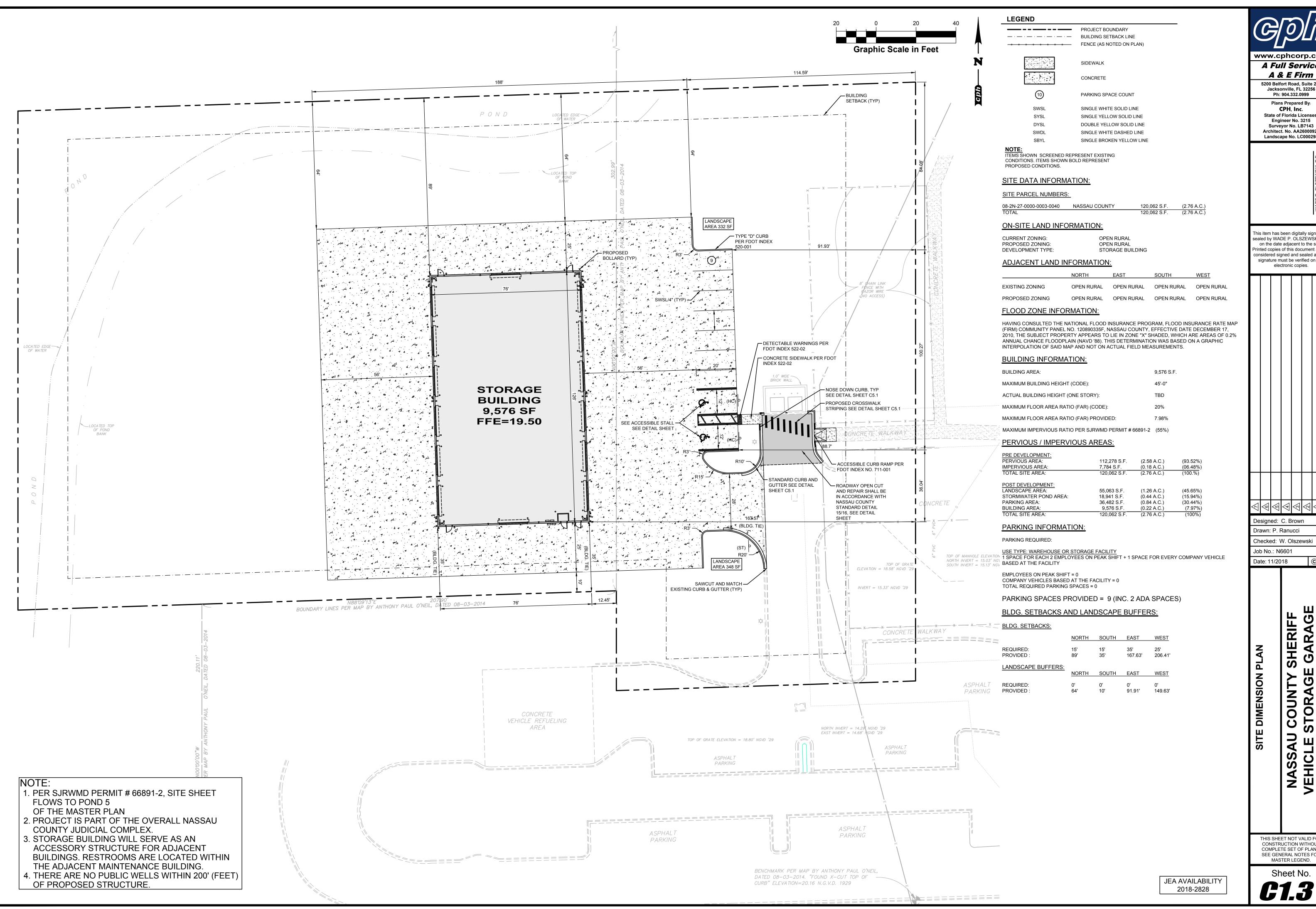
esigned: C. Brown

Drawn: P. Ranucci Checked: W. Olszewski Job No.: N6601

Date: 11/2018 © 2018

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CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.



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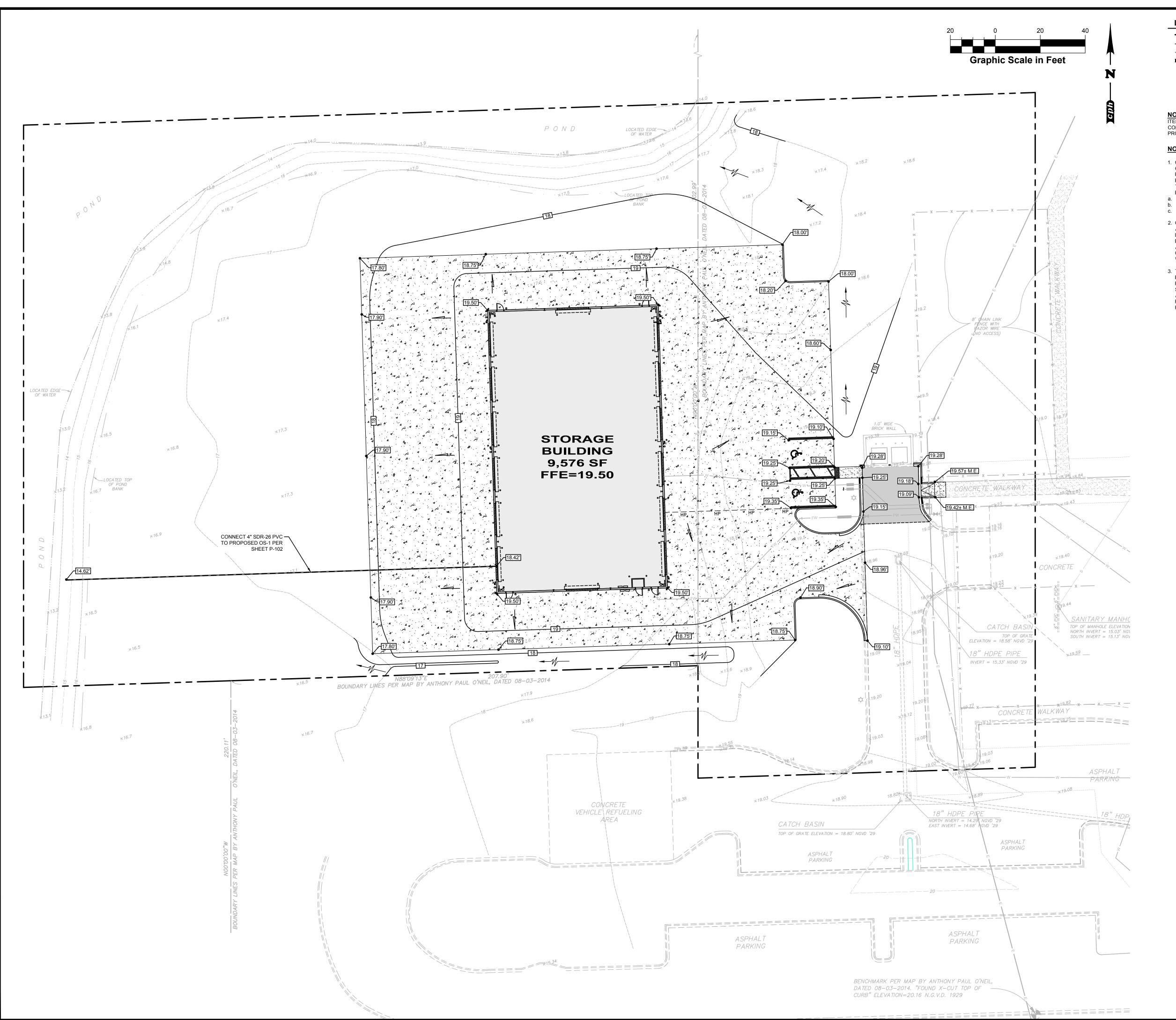
Architect. No. AA26000926

Landscape No. LC000298

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LEGEND

PROPERTY LINE STORM PIPE

> PAVEMENT ELEV. DIRECTION OF FLOW

SIDEWALK

ITEMS SHOWN SCREENED REPRESENT EXISTING CONDITIONS. ITEMS SHOWN BOLD REPRESENT PROPOSED CONDITIONS.

- 1. GRADING SHOWN ON THESE PLANS IS PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO ENSURE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. THE FOLLOWING MINIMUM SLOPES SHALL BE PROVIDED BY THE CONTRACTOR:
- a. ASPHALT PAVEMENT: MIN. 1% SLOPE b. CONCRETE PAVEMENT: MIN. 1% SLOPE
- c. GUTTERS: MIN 0.5%
- 2. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ADA AREAS ARE CONSTRUCTED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION. IF THE CONTRACTOR DETERMINES THAT ANY INFORMATION SHOWN ON THIS PLAN MAY NOT BE IN COMPLIANCE THEY SHALL NOTIFY THE ENGINEER PRIOR TO THE WORK BEING COMPLETED.
- 3. THE LOT GRADING PLAN DEMONSTRATE THAT THE FILL WILL NOT BLOCK NATURAL FLOW OF STORMWATER RUNOFF FROM ADJACENT PROPERTIES AND WILL NOT DIVERT OR DIRECT ADDITIONAL STORMWATER RUNOFF ONTO ADJACENT PROPERTIES. ANY ADDITIONAL STORMWATER RUNOFF SHALL BE DIRECTED TO THE ROADWAY DRAINAGE SYSTEM OR OTHER APPROVED DRAINAGE

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A & E Firm 5200 Belfort Road, Suite 220 Jacksonville, FL 32256 Ph: 904.332.0999

Plans Prepared By: CPH, Inc. State of Florida Licenses: Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926 Landscape No. LC000298

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							Date Revision		
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	esigned: C. Brown rawn: P. Ranucci								
	hacked: W. Olszewski								

Job No.: N6601 Date: 11/2018

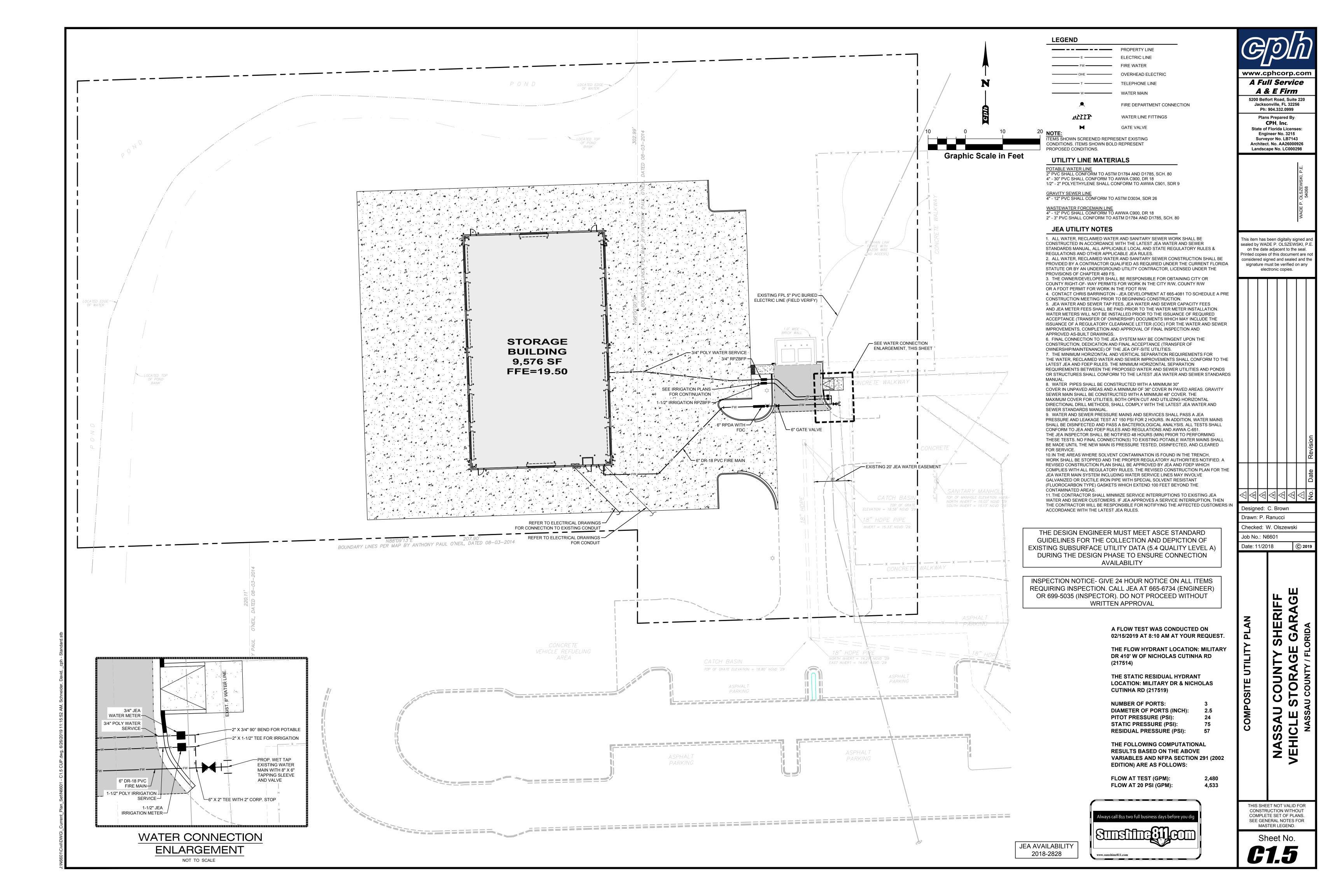
AND STORM DRAINAGE PL

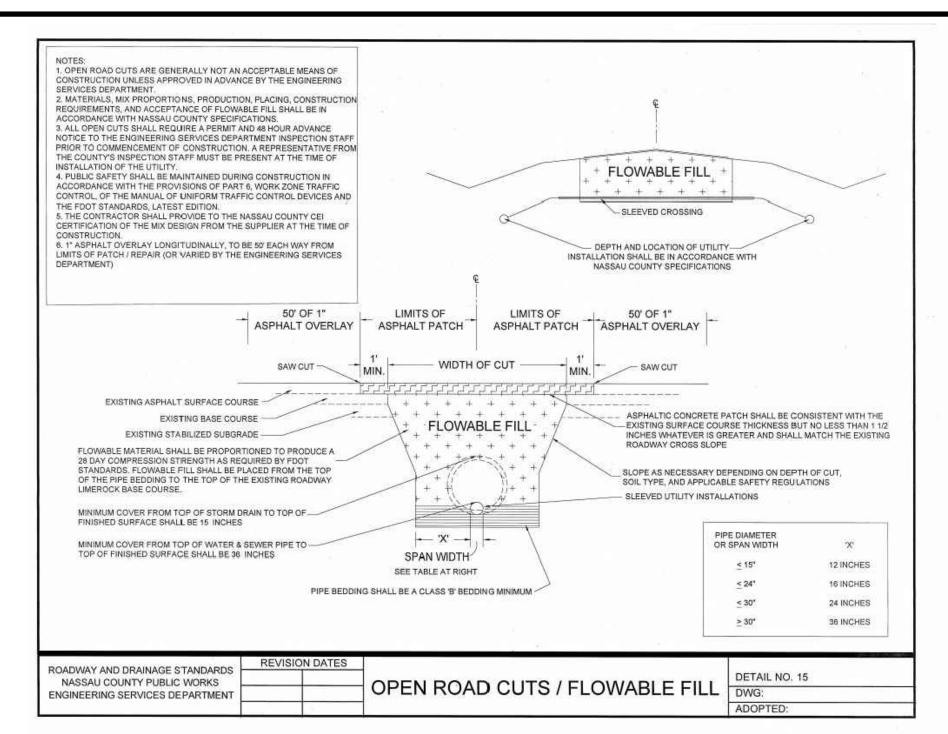
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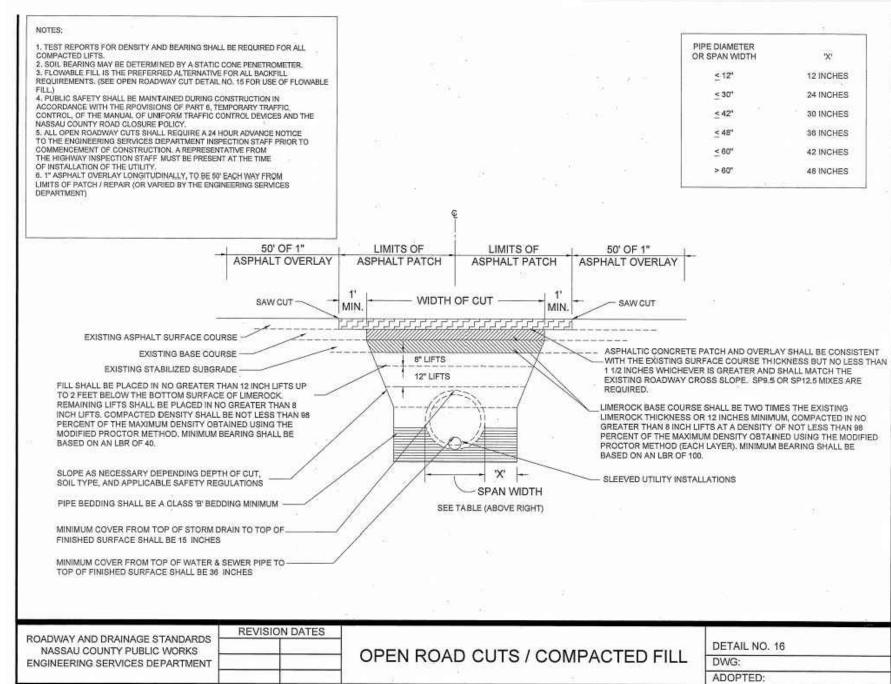
SITE GRADING

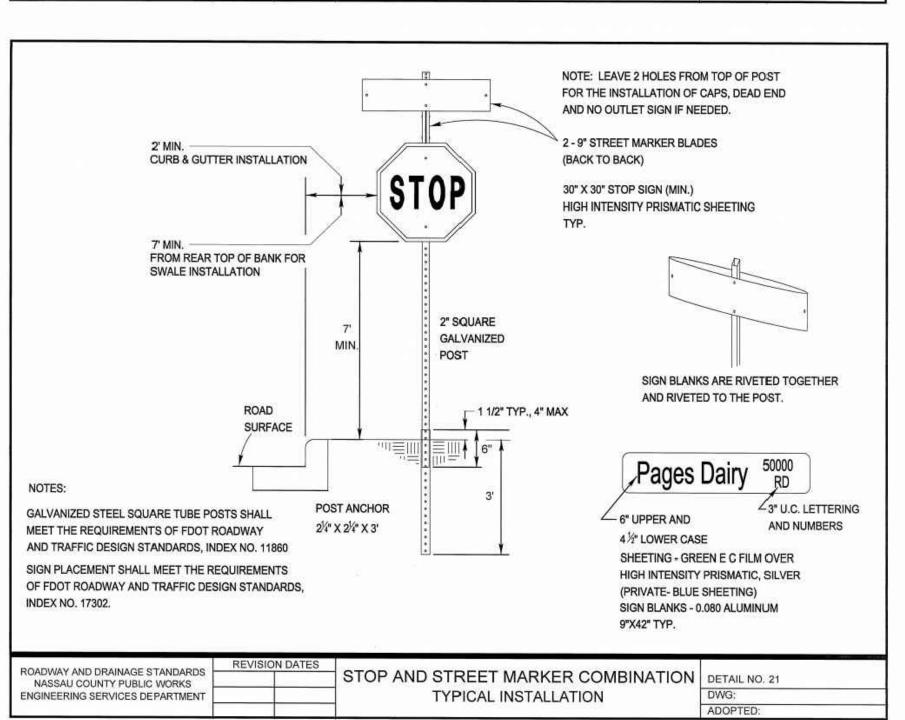
JEA AVAILABILITY

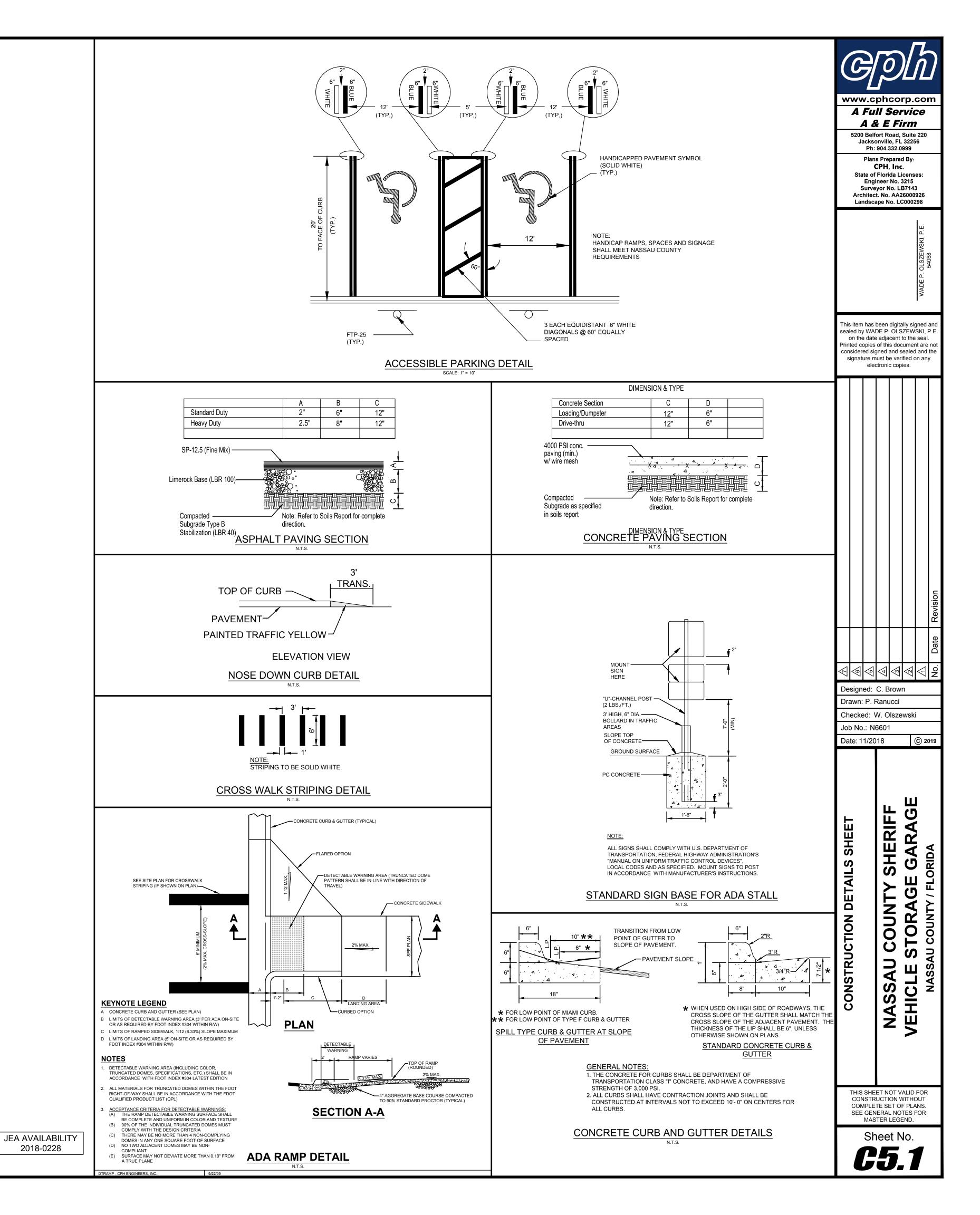
2018-2828











NOTES:

1. SEE PLATE W-1 FOR METER LOCATION REQUIREMENTS.

- 2. SINGLE BAND SADDLES SHALL BE UTILIZED ON NEW 1" WATER SERVICES WHICH ARE INSTALLED ON A DRY 10" SIZE OR SMALLER WATER MAIN (NEW WATER MAIN CONSTRUCTION). FOR WET TAPS OR WATER MAINS 12" SIZE AND LARGER, A DOUBLE BAND SADDLE IS REQUIRED. BRASS SADDLES MAY BE UTILIZED ON NEW 1 INCH AND SMALLER WATER SERVICES WHICH ARE INSTALLED ON A DRY 10 INCH OR SMALLER PVC WATER MAIN.
- 3. NO OPEN CUT UNDER ROADWAY PAVING ALLOWED UNLESS THE ROADWAY IS BEING RECONSTRUCTED OR IF DIRECTED OTHERWISE BY J.E.A. CONSTRUCT POLY LINE WITH 24" (MIN.) COVER UNDER ROADWAYS. THE POLY WATER SERVICE LINE SHALL BE SAME SIZE AS THE METER (1" MINIMUM) AND BE INSTALLED PERPENDICULAR TO THE MAIN AND NOT EXCEED 100LF UNLESS
- 4. INSTALL PVC PLUG IN ALL CURB STOPS IF WATER SERVICE IS "NOT IN USE" (I.E.: IF NO METER IS INSTALLED). WATER SERVICES SERVING VACANT LOTS (SERVICE NOT IN USE), SHALL INCLUDE A "W" CUT INTO THE CURB (CLOSEST TO THE METER BOX), AND PAINTED BLUE (PAINTED PURPLE FOR RECLAIMED WATER). IN ADDITION, FOR NEW DEVELOPMENT AREAS WHERE THE WATER SERVICE IS "NOT IN USE", A LANDSCAPE TIMBER OR 3x3 MIN. P.T. POST (TOP PAINTED BLUE OR PURPLE FOR RECLAIMED WATER). THE REMOVAL OR TRANSFER OF A WATER SERVICE SHALL INCLUDE BRASS METER COUPLINGS (HEX ON BARREL TYPE).
- 5. NO 2" AND SMALLER WATER SERVICE TAPS PERMITTED ON WATER MAINS WHICH ARE 20" AND LARGER SIZE.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE METER OR ELECTRONIC DEVICES IF DAMAGED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD.
- 7. METER BOX AND TOP SHALL BE CLEAR OF ALL DEBRIS TO ALLOW FULL ACCESS TO BOX (i.e. NO DIRT, TRASH OR OTHER DEBRIS
- 8. LOCATE WIRING REQUIRED ON ALL SERVICES 10' OR GREATER IN LENGTH. SEE PLATE W-44.

WATER SERVICE DETAIL- 2" AND SMALLER METER

JANUARY 2019

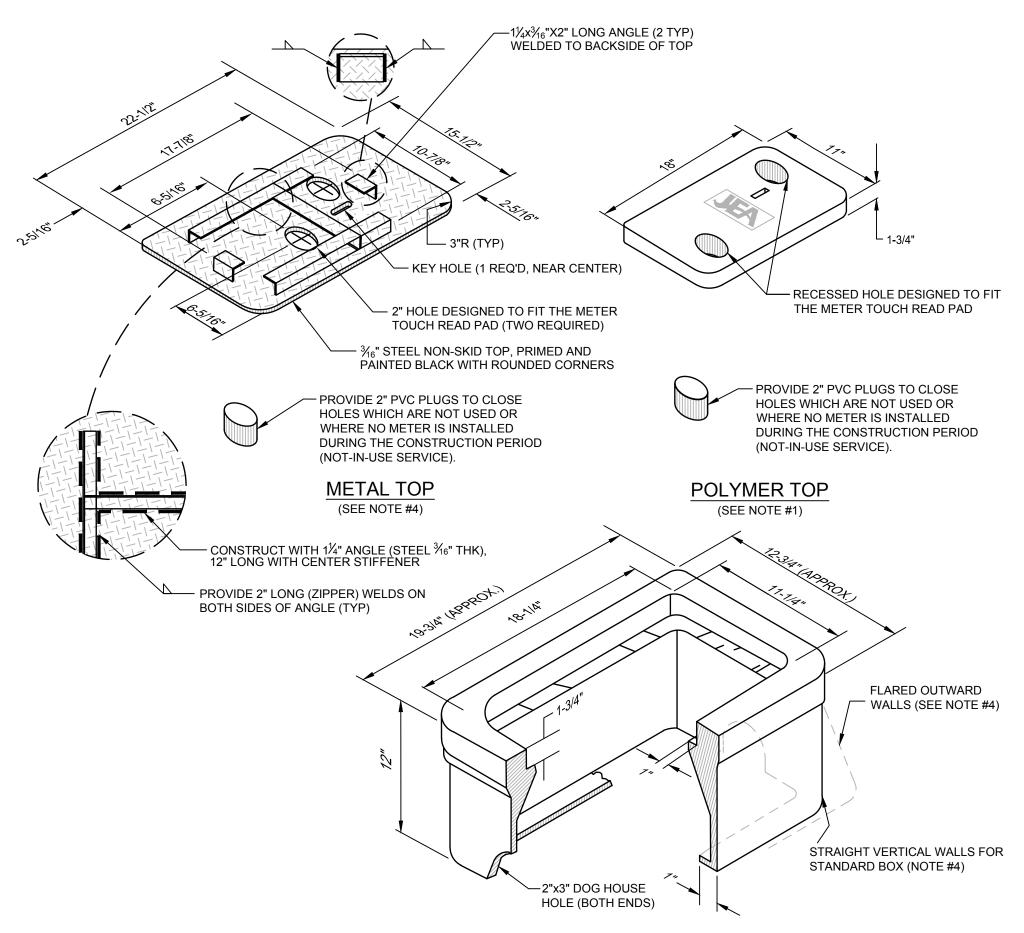
HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS

	PROPOSED UTILITY											
	PO ⁻	ΓABLE WA	TER		STEWATE Y AND FOR		RECL	AIMED WA	ATER	VACUUM SEWERS		
CONFLICTING UTILITY	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*	HORIZ.	VERT.	JOINT SPACING*
POTABLE WATER	3' NOTE 1	12"	3' NOTE 2	6' to 10'	12" NOTE 5	6' NOTE 2	3'	12"	6' NOTE 2	3' to 10'	12"	3' NOTE 2
RECLAIMED WATER	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3'	12"	6' NOTE 2	3' NOTE 1	12"	3' NOTE 2
WASTEWATER (GRAVITY AND FORCE MAIN)	6' to 10'	12"	6' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
VACUUM SEWERS	3' to 10'	12"	3' NOTE 2	3' NOTE 1	12"	6"	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
RIGHT OF WAYS	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A	3' NOTE 1	N/A	N/A
PERMANENT STRUCTURES (BUILDINGS, SIGNS, POLES, ETC.)	SEE NOTE 7	N/A	N/A	SEE NOTE 7	N/A	N/A	SEE NOTE 7	N/A	N/A	SEE NOTE 7	N/A	N/A
STORM SEWERS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
GAS	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2
TREES	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A	3'-6' NOTE 6	N/A	N/A
ALL OTHER UTILITIES	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2	3' NOTE 1	12"	3' NOTE 2

- 1. THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTH, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
- 2. THE MINIMUM JOINT SPACING REQUIRED FROM CROSSING FROM OTHER UTILITIES WHILE STILL MAINTAINING MINIMUM VERTICAL SEPARATION.
- 3. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- 4. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURES.
- 5. WATER MAIN SHOULD CROSS ABOVE OTHER PIPES WHENEVER POSSIBLE. WHEN WATER MAIN MUST BE BELOW OTHER UTILITY PIPING, THE MINIMUM SEPARATION SHALL BE 12 INCHES.
- 6. REFER TO POTABLE WATER PIPING- SECTION 350, III.4.11.
- 7. SEE SECTION 350, III.4.10 FOR MINIMUM SEPARATION REQUIREMENTS FROM PIPE TO STRUCTURES.

SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

JANUARY 2019



POLYMER BOX

- 1. THE STANDARD BOX (A-8 (ASTM C857) LOAD RATING WITH STRAIGHT VERTICAL WALLS) & TOP (A-8 (ASTM C857) RATING WITH 2 HOLES) SHALL BE MADE OF POLYMER CONCRETE. (SIMILAR TO OLD BROOKS SERIES 37 BOX). BOX WALLS SHALL BE FIBERGLASS. THE INSIDE LIP OF THE BOX SHALL BE RATED SAME AS THE BOX. THE ONE HOLE LIDS ARE FOR SPECIAL ORDERS ONLY AND REQUIRE JEA'S APPROVAL PRIOR TO USE.
- 2. ALL SIZES SHOWN ARE IN INCHES AND ARE APPROXIMATE SIZES.

1. IT IS REQUIRED THAT "WATER MAINS" BE INSTALLED, CLEANED, DISINFECTED AND HAVE A SATISFACTORY BACTERIOLOGICAL SURVEY PERFORMED IN ACCORDANCE WITH THE LATEST APPLICABLE AWWA STANDARDS, CHAPTER 62-555, F.A.C. AND LATEST

THE PHRASE "RECLAIMED WATER" REFERS TO THE WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

JEA WATER AND SEWER STANDARDS. FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS

FIRE HYDRANT LEADS; AND SERVICE LINES THAT HAVE AN INSIDE DIAMETER OF THREE (3) INCHES OR GREATER. IN ADDITION,

2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE (3) FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER,

3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX (6)

4. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES, AND PREFERABLE TWELVE (12) INCHES, ABOVE OR AT LEAST TWELVE (12) INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE.

5. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE

OUTSIDE OF THE WATER MAIN IS A LEAST TWELVE (12) INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE.

6. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 4 AND 5 ABOVE. ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED

7. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SO THAT THE HYDRANTS ARE AT LEAST THREE (3) FEET FROM ANY

I FAST SIX (6) FEET. AND PREFERABLY TEN (10) FEET. FROM ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE-TYPE

ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE

(3) FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER, AND AT LEAST SIX (6) FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE-TYPE SANITARY

EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER; AT LEAST

THREE (3) FEET. AND PREFERABLY TEN (10) FEET. FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER: AT

WHERE AN UNDERGROUND WATER MAIN IS BEING LAID LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM

MAIN ARE BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCE FROM JOINTS IN THE OTHER PIPELINE, THE

ANOTHER PIPELINE AND WHERE AN UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND JOINTS IN THE WATER

CONTRACTOR SHALL CONSULT THE DESIGN ENGINEER TO OBTAIN APPROVAL OF ANY ALTERNATIVE CONSTRUCTION METHODS

NOTES ON UTILITY SEPARATION REQUIREMENTS

ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE

FEET, AND PREFERABLY TEN (10) FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR

WATER. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS MAY BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX (6) INCHES ABOVE THE TOP

PROPOSED GRAVITY OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED

INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER;

WATER MAIN AND NON-WATER MAIN SEPARATION REQUIREMENTS - NOTES

STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER.

HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

HOWEVER. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

SEWERS, WASTEWATER FORCE MAINS, OR PIPELINE CONVEYING RECLAIMED WATER.

OF THE SEWER (SPECIAL CASE).

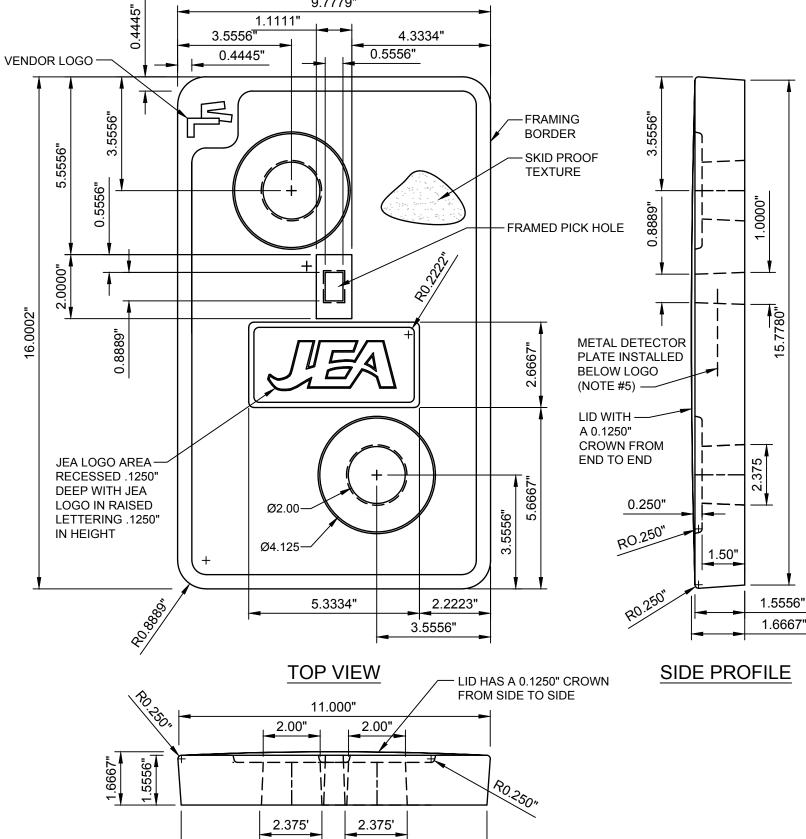
SANITARY SEWER OR WASTEWATER FORCE MAIN.

JANUARY 2019

- POLYMER BOX APPROXIMATE WEIGHT 25lbs. POLYMER TOP APPROXIMATE WEIGHT 20lbs. SEE CONSTRUCTION DETAILS W-3A (TWO HOLE) AND W-3B (ONE HOLE) FOR MANUFACTURING DETAILS FOR COVERS.
- 4. UNLESS APPROVED OTHERWISE IN WRITING BY JEA, ALL METER BOXES SHALL BE LOCATED IN NON-TRAFFIC AREAS (NOT IN THE ROADWAY, DRIVEWAYS OR SIDEWALKS). IF AN EXCEPTION TO THIS RULE IS APPROVED BY JEA, THEN THE FOLLOWING SHALL BE
- A) UNDER NO CIRCUMSTANCE SHALL A METER BOX BE LOCATED IN A COMMERCIAL TRAFFIC AREA. B) IF AN EXCEPTION IS APPROVED IN WRITING THE METER BOX LOCATED IN A SIDEWALK OR RESIDENTIAL DRIVEWAY SHALL
- INCLUDE A POLYMER BOX WITH FLARED OUTWARD WALLS (NOT STRAIGHT WALLS) AND A POLYMER TOP. BOX AND TOP SHALL COMPLY WITH A-8 (ASTM C857), LOAD RATING. C) METAL TOPS MAY BE UTILIZED IF SPECIFICALLY APPROVED BY JEA MANAGER OR JEA METER O&M STAFF.

WATER METER BOX & COVER FOR 1" AND SMALLER METERS

JANUARY 2019 PLATE W-3



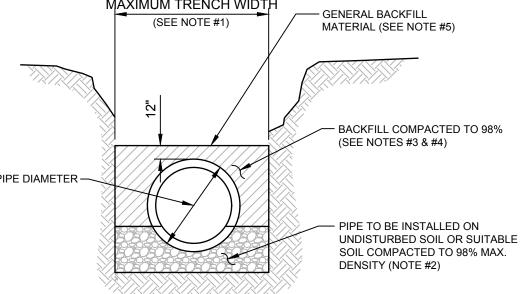
END PROFILE

- 1. ALL DIMENSIONS ARE IN INCHES.
- 2. COLOR SHALL BE OFF-WHITE, NON-POROUS, SAND TEXTURED SATIN FINISH.
- 3. ALL TOPS SHALL MEET A-8 (ASTM C857) LOAD RATING.
- 4. THE LID SHALL BE CERTIFIED BY CELLNET TECHNOLOGY INC AND SENSUS METERING
- SYSTEMS TO BE RF COMPATIBLE WITH THE SENSUS MTU. 5. METAL DETECTOR PLATE SHALL BE DETECTABLE BY JEA MAGNETIC LOCATE EQUIPMENT.

WATER METER BOX POLYMER COVER MODEL No. 37 - TWO HOLE

JANUARY 2019 PLATE W-3A

PIPE DIAMETER -



MAXIMUM TRENCH WIDTH

TYPICAL TRENCH

NOTES:

PLATE W-11

- 1. TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM
- 2. BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT
- 3. BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- 4. BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 98% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST. ASTM D1557
- 5. SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED SOILS.

OPEN CUT TRENCH FOR PRESSURE PIPE

JANUARY 2019 IN CITY RIGHT -OF-WAY

NOTES:

PLATE W-42

1. TRENCH SIDES SHALL BE APPROXIMATELY VERTICAL BETWEEN AN ELEVATION OF 1 FOOT ABOVE THE TOP OF THE PIPE AND THE CENTER LINE OF THE PIPE; OTHERWISE, TRENCH SIDES SHALL BE AS VERTICAL AS POSSIBLE OR AS REQUIRED BY OSHA STANDARDS. REFER TO THE MEASUREMENT AND PAYMENT SECTION (SECTION #801, PARAGRAPH #4)) TO DETERMINE MAXIMUM

TYPICAL TRENCH

2. BELL HOLE SHALL BE DUG TO PERMIT THE ENTIRE STRAIGHT BARREL OF THE PIPE TO REST ON THE UNDISTURBED TRENCH BOTTOM. BOULDERS OR LOOSE ROCKS LARGER THAN 3/4 INCH IN SIZE WILL NOT BE PERMITTED IN BACKFILL UP TO 1 FOOT

MAXIMUM TRENCH WIDTH

MATERIAL COMPACTED

NOTES #3 & #4)

TO 100% MAX.ASTM D698

- BACKFILL COMPACTED TO 98%

PIPE TO BE INSTALLED ON

UNDISTURBED SOIL OR SUITABLE

SOIL COMPACTED TO 100% MAX

DENSITY, ASTM D698 (NOTE #2)

MAX. DENSITY, ASTM D698 (SEE

- 3. BACK FILL MATERIAL UP TO A LEVEL OF 1 FOOT OVER THE PIPE SHALL CONSIST OF AASHTO CLASS A-3 SOIL (SUITABLE SOIL) AND SHALL EXCLUDE CLAY MATERIALS AND LOOSE ROCKS LARGER THAN 3/4 INCH SIZE.
- 4. BACKFILL MATERIAL UP TO A LEVEL 1 FOOT OVER THE TOP OF PIPE OR BOTTOM OF STRUCTURES SHALL BE PLACED IN 6 INCH COMPACTED THICKNESS LAYERS AND SHALL BE COMPACTED TO 100% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE LABORATORY MODIFIED PROCTOR TEST, ASTM D698
- 5. SEE " EXCAVATION AND EARTHWORK", SECTION 408 FOR ADDITIONAL REQUIREMENTS AND EXCEPTIONS INCLUDING REMOVAL AND REPLACEMENT OF UNSUITABLE SOILS, DEWATERING, COMPACTION REQUIREMENTS AND DENSITY TESTING OF COMPACTED

OPEN CUT TRENCH FOR PRESSURE PIPE JANUARY 2019 IN STATE ROAD RIGHT -OF-WAY PLATE W-42A **CONSTRUCTION WITHOUT** COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND. Sheet No.

sealed by WADE P. OLSZEWSKI, P. on the date adjacent to the seal. Printed copies of this document are r considered signed and sealed and the signature must be verified on any electronic copies. Designed: C. Brown Drawn: P. Ranucci Checked: W. Olszewski Date: 11/2018 © 2019

A Full Service A & E Firm

5200 Belfort Road, Suite 220 Jacksonville, FL 32256 Ph: 904.332.0999 Plans Prepared By

CPH, Inc.

State of Florida Licenses

Engineer No. 3215

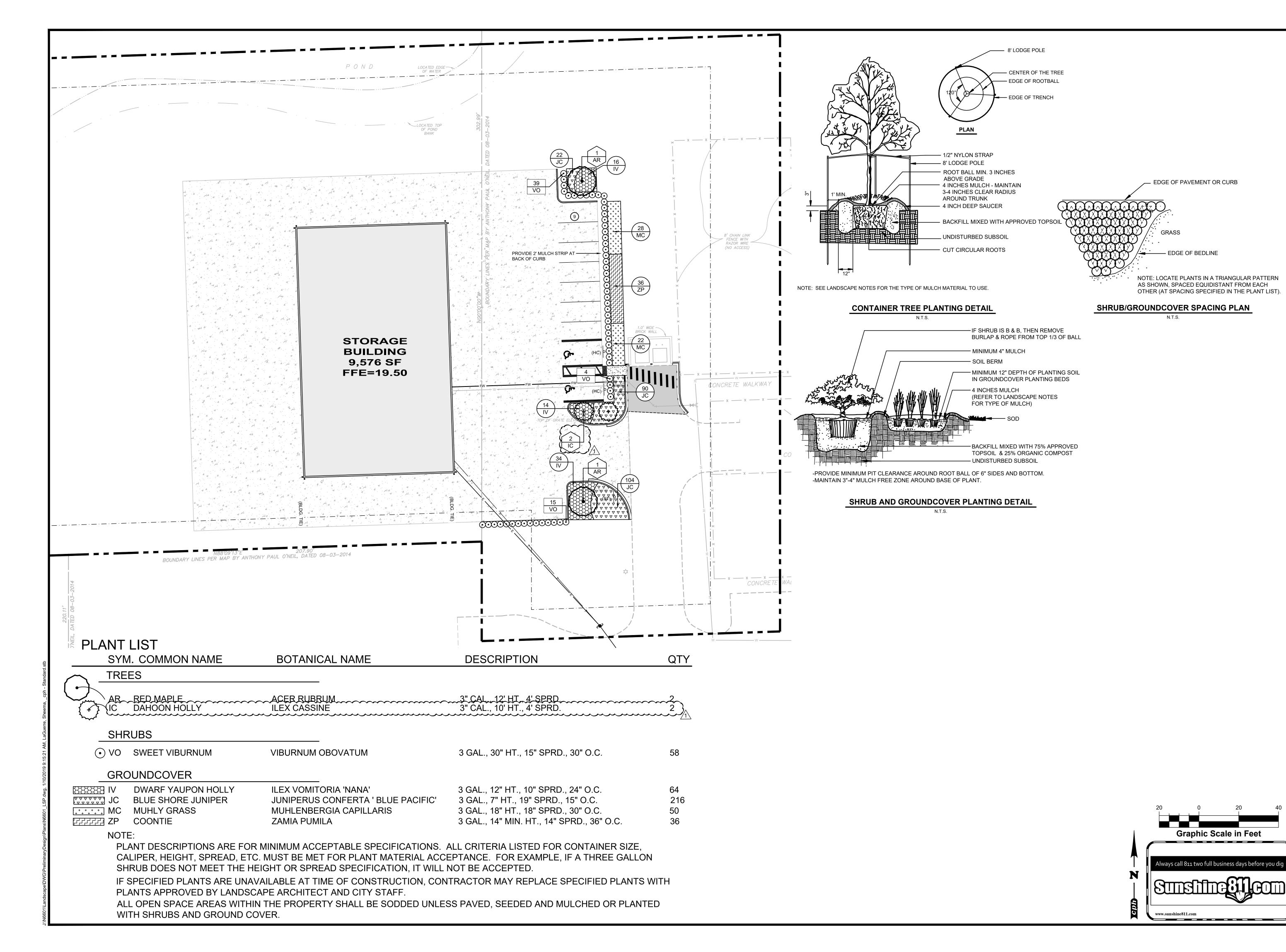
Surveyor No. LB7143

Architect, No. AA26000926

Landscape No. LC000298

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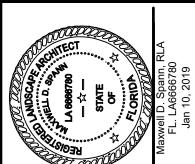
DETAIL AGENC



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A & E Firm5200 Belfort Road, Suite 220
Jacksonville, FL 32256
Ph: 904.332.0999

Plans Prepared By: CPH, Inc. State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA2600092 Landscape No. LC000298



| September | Sep

Date: 07/2018 © 2019

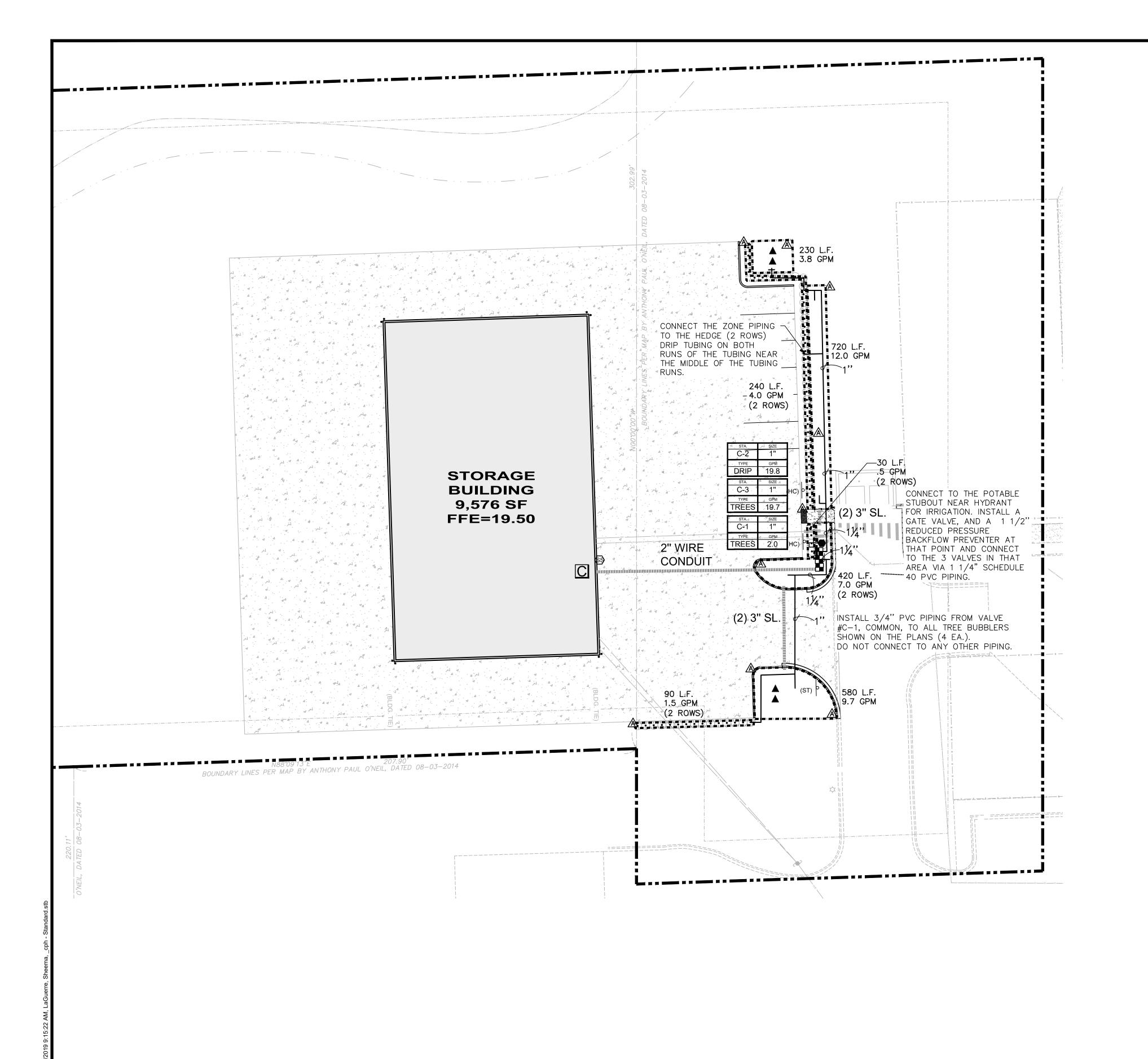
Drawn: A.S.L.

Checked: M.D.SD

Job No.: N6601

NASSAU COUNTY SHERIFF
VEHICLE STORAGE GARAGI

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LEGEND

POINT OF CONNECTION TO POTABLE SOURCE CAPABLE OF 20 GPM AT 50 PSI

1 1/2" REDUCED PRESSURE BACKFLOW PREVENTER INSTALLED TO CODE

HUNTER IC-600 PL CONTROLLER

HUNTER WSS-SEN WIRELESS SOLAR SYNC SENSOR

HUNTER ICV-100-G VALVE ASSEMBLY LOCATION

CL200 OR BETTER SOLVENT WELD PVC ZONE PIPE ROUTING

A RAIN BIRD 1402 BUBBLER (2 PER TREE)

TORO DL2000 1 GPH, 12" O.C. TUBING LIMITS

DRIP AIR RELIEF VALVE, LINE FLUSHING VALVE AND RAIN BIRD OPERIND LOCATION

SCHEDULE 40 PVC SLEEVE LOCATION

C-1 1"

TYPE GPM

TDEES 2.0

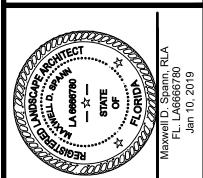
ALVE PROGRAMMING, SIZE APPLICATION AND GALLONAGE

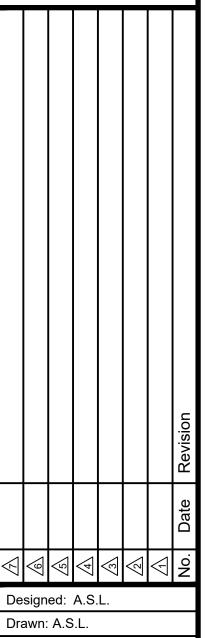


A Full Service

A & E Firm5200 Belfort Road, Suite 220
Jacksonville, FL 32256
Ph: 904.332.0999

Plans Prepared By: CPH, Inc. State of Florida Licenses: Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926 Landscape No. LC000298





Checked: M.D.SD

Job No.: N6601

Date: 07/2018 © 2019

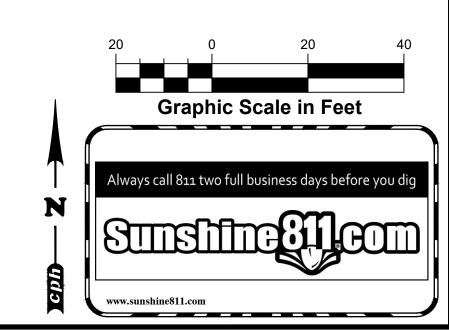
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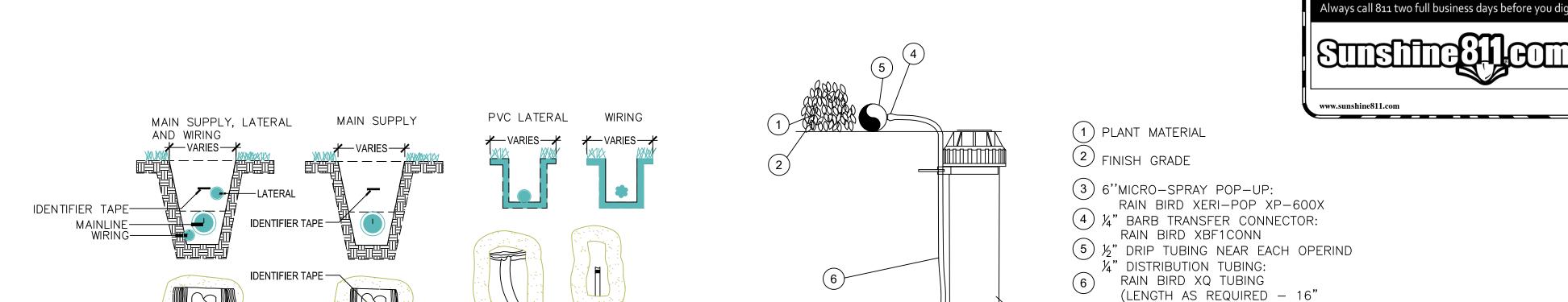
COUNTY SHERIFF

IRRIGATION PLAN

NASSAU COUN VEHICLE STORA

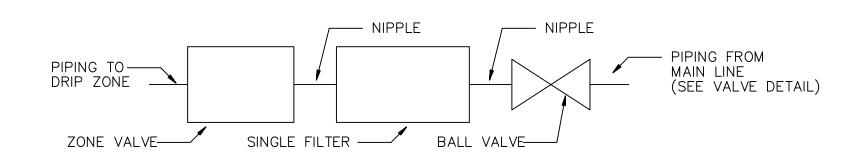
THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.





ALL PLASTIC PIPING -TO BE SNAKED IN

TRENCHES AS SHOWN



NOTES:

WIRE PER LOCAL CODE(S)

ELECTRICAL CONDUIT

120V. POWER WIRES

 $^\prime$ NOT TO SCALE

CONTROLLER MOUNTING

INSTALL A TORO ALFD15150-L FILTER UPSTREAM OF EACH DRIP VALVE.

INSTALL A SEPARATE VALVE BOX FOR EACH VALVE AND FILTER. (3 JUMBO VALVE BOXES)

INSTALL FILTER IN ORIENTATION THAT ALLOWS FOR FLUSHING.

VALVE W/ FILTER SCHEMATIC



TAPE & BUNDLE

WIRING AT 10' INTERVALS

SECTION

IR1.2 NOT TO SCALE

ALL MAIN SUPPLY LINES TO BE

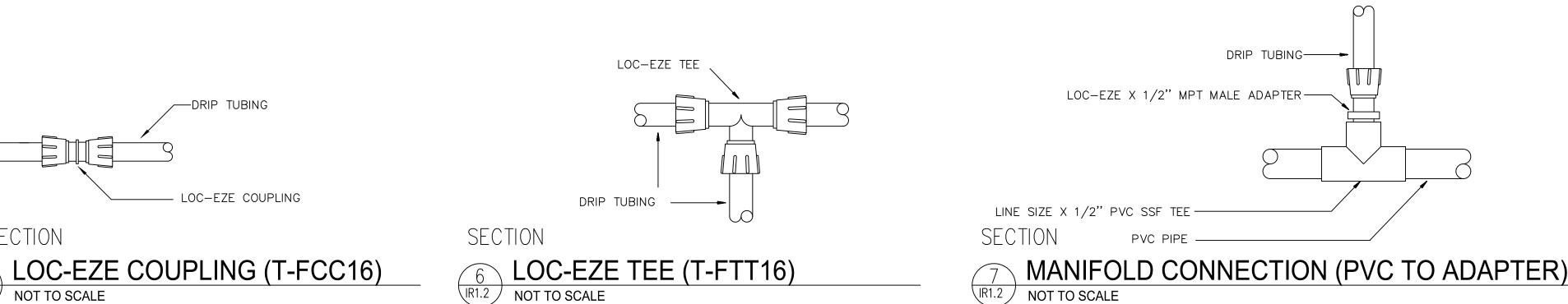
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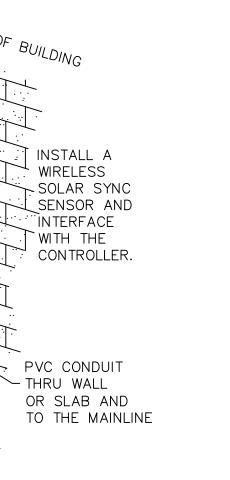


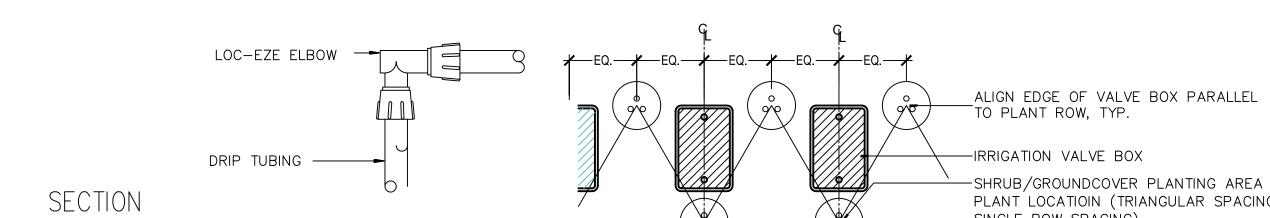
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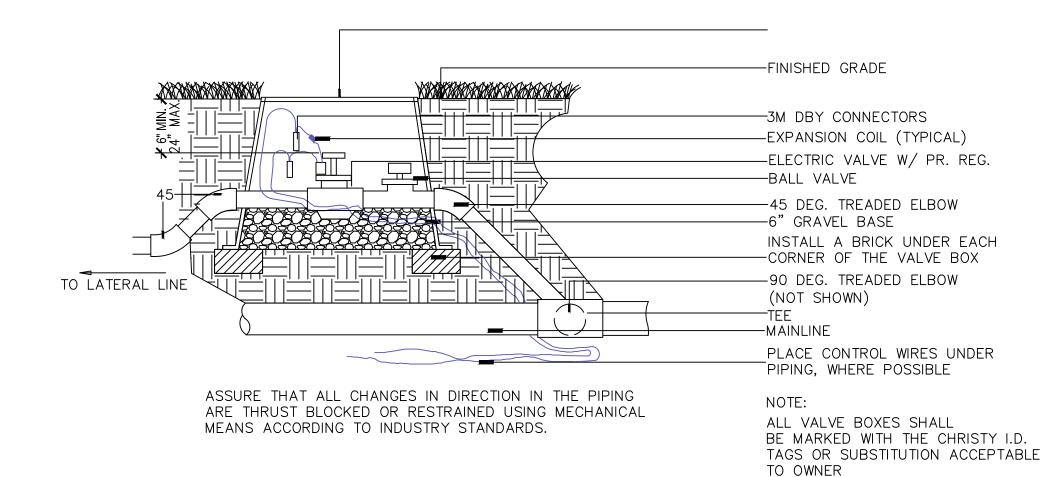
TO BE SET TO NO FLOW OUTPUT.



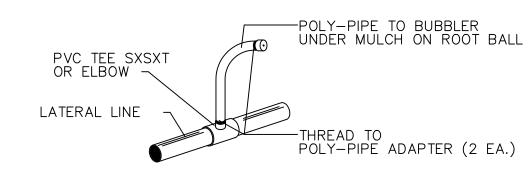




LOC-EZE ELBOW (T-FEEE16)



MIN. 30" ABOVE GRADE MIN. 24" BELOW GRADE



NOTE: INSTALL BUBBLERS ON TREE BALL.



SLEEVE DETAIL NOT TO SCALE

BUBBLER INSTALLATION (2 PER TREE) NOT TO SCALE

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Designed: A.S.L.

Checked: M.D.SD

© 2019

SHERIFF E GARAGE ORIDA

STORA AU COUNTY

NASSAU VEHICLE S

Drawn: A.S.L.

Job No.: N6601

Date: 07/2018

IRRIGATION NOTES AND DETAILS

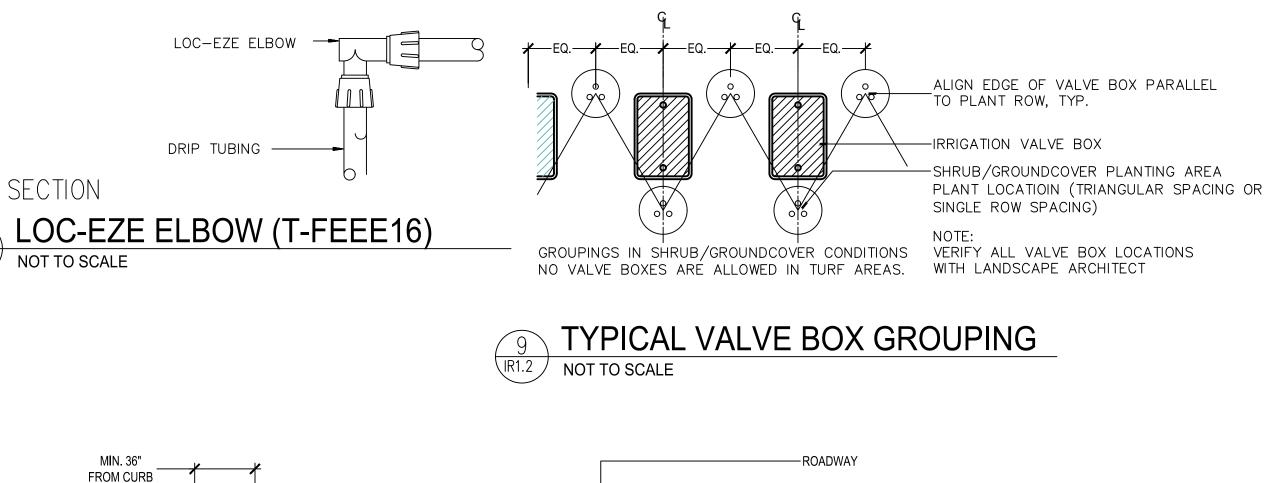
www.cphcorp.com A Full Service A & E Firm 5200 Belfort Road, Suite 220 Jacksonville, FL 32256 Ph: 904.332.0999

CPH, Inc.

State of Florida Licenses

Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926 Landscape No. LC000298

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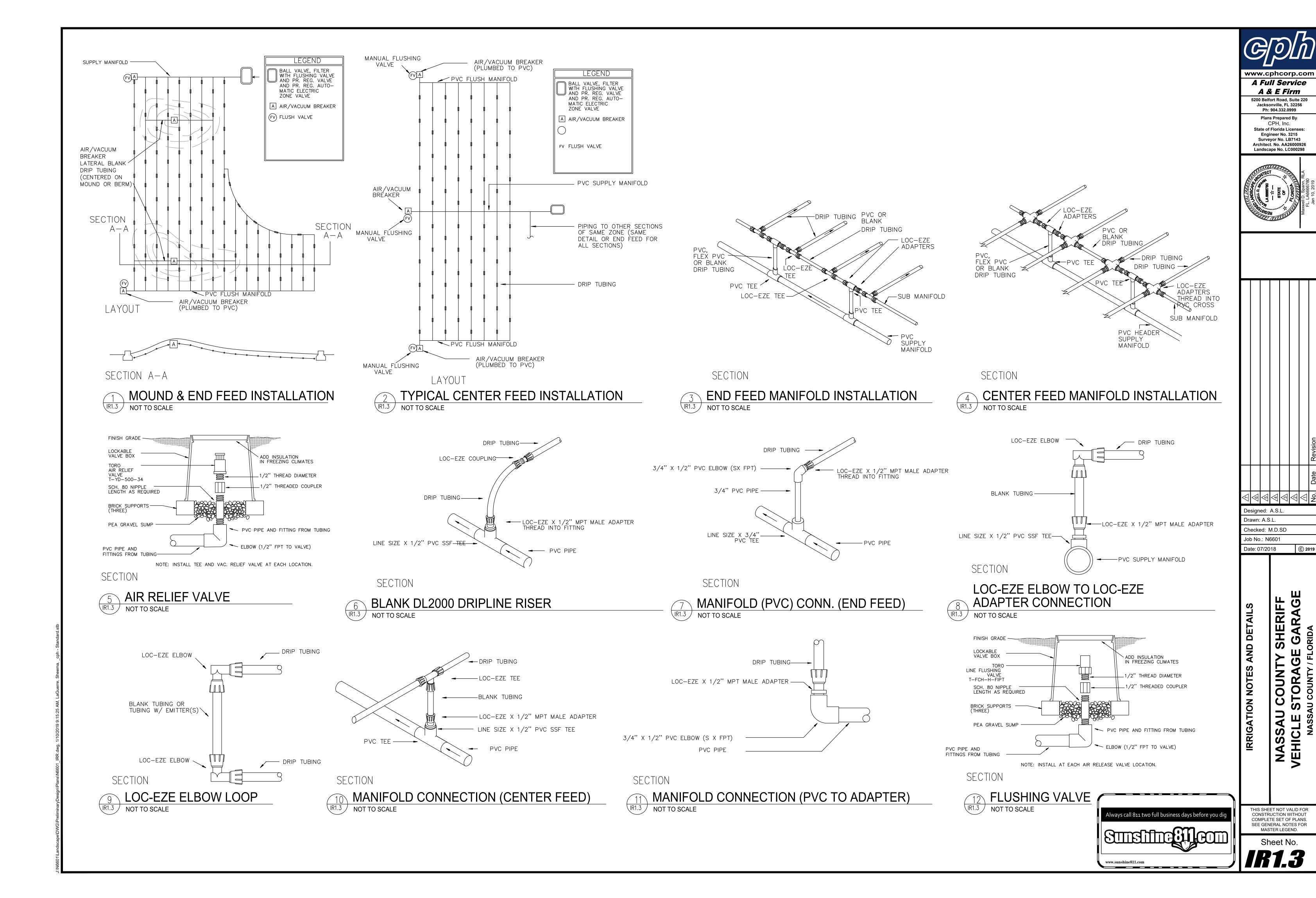


CAP (UNGLUED)

-PAINTED LAVENDER IF RECLAIMED

—ELBOW (UNGLUED)

SCH. 40 PVC SLEEVE PIPE



-POLY-PIPE TO BUBBLER UNDER MULCH ON ROOT BALL NOTE : NO FLEX PVC WILL BE ALLOWED.

THREAD TO POLY-PIPE ADAPTER (2 EA.)

OTE: INSTALL TWO BUBBLERS PER TREE ON OPPOSING SIDES OF TREE.

NOTE: INSTALL TWO BUBBLERS PER TREE ON OPPOSING SIDES OF TREE.

NOTE: INSTALL BUBBLERS ON TREE BALL.

TREE BUBBLER INSTALLATION

NOT TO SCALE

PVC TEE SXSXT OR ELBOW —

LATERAL LINE ---

INSTALL TORO DL2000 TUBING WITH ALL FITTINGS AS NECESSARY FOR ALL DRIP TUBING (GROUND COVER AND SHRUB) APPLICATIONS.

INSTALL A LINE OF TUBING 2" TO 4" FROM HARDSCAPE AND BEDLINES.

INSTALL A MINIMUM OF 2 ROWS OF TUBING IN ANY AREA.

INSTALL TUBING ROWS ON 12" SPACING MAXIMUM.

INSTALL TUBING AT FINISHED GRADE UNDER THE MULCH.

LOOP ALL RUNS OF TUBING WITH A MAXIMUM LOOP DISTANCE FROM THE SUPPLY MANIFOLD OF 300'.

INSTALL ONE TORO T-ALFD15150-L 1.5" FILTER WITH A STAINLESS STEEL 150 MESH (104 MICRONS) SCREEN FOR EACH VALVE.

INSTALL A TORO #T-FCH-H-FIPT FLUSHING VALVE AT EACH OF THE AIR/VACUUM RELIEF VALVE LOCATIONS WITH ALL FITTINGS AS NECESSARY TO FLUSH THE SYSTEM INTO THE LANDSCAPE, WHEN NECESSARY.

INSTALL A TORO #T-YD-500-34 VACUUM/AIR RELIEF VALVE AT THE ENDS OF THE LOOPED NETWORK AND AT THE TERMINATION OF THE SUPPLY MANIFOLD FROM THE AUTOMATIC VALVE. INSTALL A MANUAL LINE FLUSHING VALVE AT EACH LOCATION.

INSTALL A RAIN BIRD "OPERIND" AT EACH VACUUM/AIR RELIEF VALVE LOCATION.

DRIP TUBING QUANTITIES ON PLANS ARE APPROXIMATE. CONTRACTOR TO VERIFY EXACT QUANTITIES. CONTRACTOR TO BE PAID FOR ACTUAL QUANTITY OF DRIP TUBING AND BLANK TUBING INSTALLED UP TO A MAXIMUM AS SHOWN ON THE PLANS.

QUANTITIES ON PLANS DO NOT INCLUDE BLANK TUBING, LINE FLUSHING VALVES, AIR RELIEF VALVES OR PVC HEADERS. INCLUDE THESE ITEMS AND ANY OTHER ITEMS NECESSARY FOR A FULLY FUNCTIONING AUTOMATIC SYSTEM IN BID AND INSTALLATION.

INSTALL LANDSCAPE STAPLES 6' O.C. AND ANYWHERE ELSE NECESSARY TO SECURE TUBING TO THE GROUND.

FOLLOW THE MANUFACTURER'S INSTALLATION GUIDELINES INCLUDED WITH THE PRODUCTS.

DO NOT CURVE TUBING TO LOOP AT THE ENDS OF RUNS. INSTEAD USE (2) 90 DEG. FITTINGS AND A SHORT PIECE OF TUBING.

DRIP TUBING NOTES

NOTES

ANY IRRIGATION ITEMS NORMALLY INSTALLED IN LANDSCAPE AREAS THAT ARE SHOWN OUTSIDE OF LANDSCAPE AREAS OR OUTSIDE OF THE PROPERTY LINES ARE SHOWN AS SUCH FOR GRAPHIC CLARITY ONLY. INSTALL THESE ITEMS INSIDE OF PROPERTY LINES AND IN LANDSCAPE AREAS.

PROVIDE PROOF TO THE LANDSCAPE ARCHITECT THAT ALL AVAILABLE MAINTENANCE MANUALS FOR EACH OF THE PRODUCTS INCLUDED IN THIS INSTALLATION HAVE BEEN PROVIDED TO THE OWNER OR OWNER'S REPRESENTATIVE.

ANY EXISTING TREE ROOTS, WHEN ENCOUNTERED DURING INSTALLATION OF UTILITIES, SHALL BE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS AND COVERED WITH SOIL AS SOON AS POSSIBLE TO REDUCE DEHYDRATION. THE CONTRACTOR/DEVELOPER SHALL MINIMIZE THE DAMAGE TO EXISTING TREE ROOT SYSTEMS.

PROVIDE HAND WATERING FOR ESTABLISHMENT PERIOD FOR ALL TREES, GROUNDCOVER, SHRUBS, AND TURF NOT LOCATED IN IRRIGATED AREAS DURING THE ESTABLISHMENT PERIOD OF GROW—IN.

INSTALL THE SYSTEM IN ACCORDANCE WITH THE LOCAL CODES REGARDING IRRIGATION SYSTEMS.

INSTALL ALL PIPING SHOWN BETWEEN DIFFERENT PIPE SIZES AS THE LARGER SIZED PIPE.

INSTALL ALL PIPING TO INDIVIDUAL HEADS AS 3/4".

INSTALL PIPING BETWEEN THE LAST MARKED PIPE AND PIPING TO INDIVIDUAL HEADS (WHERE NO OTHER MARKINGS SHOW) AS 3/4".

THIS SYSTEM REQUIRES 50 GPM AT 45 PSI AT THE DISCHARGE INTO THE SYSTEM. VERIFY GALLONAGE AND PRESSURE AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT BEFORE COMMENCING WITH THE INSTALLATION.

DRILL A 5" DEEP WELL AND INSTALL A 7.5 HP SUBMERSIBLE PUMP AND HOOVER CONTROL PACKAGE PER THE LEGEND AS THE WATER SOURCE FOR THIS SYSTEM.

ADJUST THE IRRIGATION SYSTEM COMPONENTS TO PROVIDE UNIFORM COVERAGE. ASSURE THAT THE SYSTEM PROVIDES 100% COVERAGE OF ALL LANDSCAPE MATERIALS INCLUDING SHRUBS, GROUND COVER, TREES AND TURF.

ADJUST THE VERTICAL ORIENTATION OF SPRINKLERS ON SLOPES TO PROVIDE UNIFORM COVERAGE OF THE SLOPED AREA.

ANY EXISTING TREE ROOTS, WHEN ENCOUNTERED DURING INSTALLATION OF UTILITIES, SHALL BE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS AND COVERED WITH SOIL AS SOON AS POSSIBLE TO REDUCE DEHYDRATION. THE CONTRACTOR/DEVELOPER SHALL MINIMIZE THE DAMAGE TO EXISTING TREE ROOT SYSTEMS.

INSTALL THE SYSTEM IN ACCORDANCE WITH THE LOCAL IRRIGATION STANDARDS AND IRRIGATION REQUIREMENTS.

INSTALL MARLEX STREET ELLS FOR ALL SPRINKLER HEADS.

5 GENERAL IRRIGATION NOTES NOTES

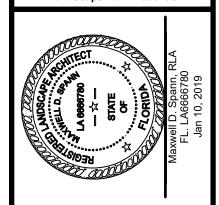


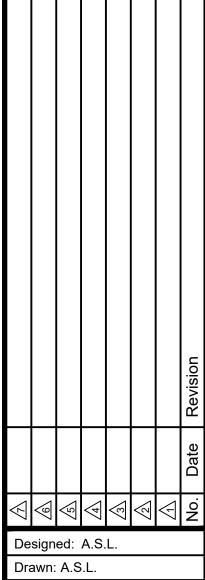


Ph: 904.332.0999

Plans Prepared By:
CPH, Inc.

State of Florida Licenses
Engineer No. 3215
Surveyor No. LB7143
Architect. No. AA2600092
Landscape No. LC000298





Checked: M.D.SD

Job No.: N6601

Date: 07/2018 © 2019

AND DETAILS

Y SHERIFF

SE GARAGE

NASSAU COUNTY SHER
VEHICLE STORAGE GARA

IRRIGATION NOTES

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS.
SEE GENERAL NOTES FOR MASTER LEGEND.

DESCRIPTION

FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND TRANSPORTATION, UNLESS OTHERWISE SPECIFIED, NECESSARY TO PROVIDE AN AUTOMATIC IRRIGATION SYSTEM FOR LANDSCAPE PLANT MATERIALS AND TURF AND MULCH AREAS.

APPLICABLE STANDARDS

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS S376.1, "DESIGN, INSTALLATION AND PERFORMANCE OF UNDERGROUND, THERMOPLASTIC IRRIGATION PIPELINES."

ASTM D2774, "UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING"

ASTM D1785, POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPE, SCHEDULES 40, 80, AND 120.

ASTM D2241 POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPE (SDR-PR).

SUBSTITUTIONS

WHEREVER BRAND NAMES ARE USED IN THESE SPECIFICATIONS, USE ONLY THE BRAND SPECIFIED. MAKE NO SUBSTITUTIONS AS A PART OF THIS BID PACKAGE

PART 2 - MATERIALS

PIF

FURNISH ALL UNDERGROUND PIPING AS PVC EXCEPT FOR THE FLEXIBLE POLYETHYLENE (POLY PIPE) PIPING THAT IS TO BE USED BETWEEN THE LATERALS AND SPRINKLER HEADS. ALL MAIN LINE PVC PIPE SHALL BE CL 200 PVC AND ALL ZONE PIPE SHALL BE CL 200 PVC OR BETTER.

SIZE EACH SLEEVE AT LEAST TWICE (2X) THE SIZE OF THE PIPE BEING ROUTED THROUGH IT. INSTALL EACH CONTROL WIRE SLEEVE OF SUFFICIENT SIZE FOR THE REQUIRED NUMBER OF WIRES BEING ROUTED THROUGH IT UNDER THE AREA SPECIFIED. CONSULT WITH THE OWNER OR OWNER'S REPRESENTATIVE FOR THE LOCATION, DEPTH, NUMBER AND SIZE OF ANY AVAILABLE EXISTING SLEEVES.

INSTALL ALL ABOVE GROUND PIPE AS D.I.P. OR GALVANIZED PIPE.

PIPE FITTINGS

FOR MAIN LINE PVC PIPE FITTINGS, USE PVC SCH. 40 FITTINGS AND USE THREADED FITTINGS FOR CONNECTION TO VALVES.

FOR PVC ZONE PIPE, USE SCHEDULE 40, SOLVENT WELD FITTINGS, MANUFACTURED FROM PVC 12454—B COMPOUND AND TESTED IN ACCORDANCE WITH ASTM D2466, EXCEPT FOR THREADED FITTINGS. FOR THREADED APPLICATIONS, USE SCHEDULE 80 FITTINGS MANUFACTURED FROM PVC 12454— B COMPOUND AND TESTED IN ACCORDANCE WITH ASTM D2467.

DO NOT USE MALE ADAPTERS FOR ANY APPLICATIONS. INSTEAD, USE A "TOE" NIPPLE GLUED INTO A SCHEDULE 40 COUPLER.

SEE DETAILS FOR BUBBLER TO PIPE CONNECTIONS. NO "FLEX PVC"

SOLVENT CEMENT AND PRIMER

USE A MEDIUM OR HEAVY BODY GRAY SOLVENT CEMENT MANUFACTURED IN ACCORDANCE WITH ASTM D2564 AND PRIMER MANUFACTURED IN ACCORDANCE WITH ASTM F656.

SPRINKLERS

INSTALL RAIN BIRD 1804—SAM SPRINKLERS WITH APPROPRIATE SCREENS AND NOZZLES FOR ALL TREE SPRAY APPLICATIONS.

INSTALL RAIN BIRD 1806—SAM SPRINKLERS WITH APPROPRIATE SCREENS AND NOZZLES FOR ALL TURF APPLICATIONS.

POINT OF CONNECTION

CONNECT TO THE POTABLE STUBOUT NEAR THE FIRE HYDRANT AS THE POINT OF CONNECTION. INSTALL A 1 1/2" REDUCED PRESSURE BACKFLOW PREVENTER TO CODE AT THAT POINT IF THERE IS NOT ONE EXISTING.

ASSURE THAT 20 GPM @ 40 PSI IS AVAILABLE AT THAT POINT.

NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES AS TO GALLONAGE AND PRESSURE BEFORE COMMENCING WITH THE INSTALLATION.

DRIP TUBING

INSTALL TORO DL2000 PRESSURE COMPENSATING TUBING FOR ALL DRIP LINE APPLICATIONS.

DRIP TUBING FITTINGS

INSTALL TORO TUBING FITTINGS FOR ALL DRIP LINE APPLICATIONS.

VALVE BOXES

USE 12 X 18 VALVE BOXES FOR ALL APPLICATIONS.

ELECTRIC VALVES

USE HUNTER ELECTRIC VALVES WITH PRESSURE REGULATORS FOR ALL APPLICATIONS.

CONTROLLER

USE A HUNTER CONTROLLER PER LEGEND AND NOTES. ASSURE THAT THE SYSTEM IS INTERFACED WITH A SOLAR SYNC SENSOR FOR THIS SYSTEM.

WIRE

USE U.F. WIRE APPROVED FOR DIRECT BURIAL UNDERGROUND FOR ALL 24 VAC APPLICATIONS.

USE RED #14 AWG WIRE FOR ALL VALVE POWER WIRES.

USE WHITE #14 AWG WIRE FOR ALL VALVE COMMON WIRES.

PART 3 - EXECUTION

A. GENERAL

INSTALL PVC PIPE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REVIEW CONSTRUCTION PLANS WITH THE OWNER OR OWNER'S REPRESENTATIVE BEFORE ANY WORK BEGINS. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT/OWNER PRIOR TO INSTALLATION IF THERE IS ANY DOUBT AS TO HEAD LINE OR ZONE PLACEMENT.

INSPECT THE CONSTRUCTION SITE BEFORE ANY WORK BEGINS AND FLAG LOCATIONS OF MAINLINE PIPE, SLEEVES, HEADS AND VALVES FOR REVIEW BY THE LANDSCAPE ARCHITECT/OWNER. FLAGS SHALL BE CLEARLY MARKED OR COLORED TO DESIGNATE THE TYPE OF EQUIPMENT TO BE INSTALLED AT THAT POINT. INSTALLATION SHALL NOT COMMENCE UNTIL THE STAKING/FLAGGING HAS BEEN APPROVED.

COORDINATE THE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR TO PROVIDE FOR CORRECT APPLICATION OF WATER TO THE PLANT MATERIAL.

PIPE TRENCH CONSTRUCTION

PROVIDE FOR A MINIMUM DEPTH OF COVER OF 18" FOR ALL MAIN LINE PIPE AND 12" OF COVER FOR ALL ZONE PIPE AS MEASURED FROM FINISHED GRADE.

PROVIDE THE MINIMUM DEPTH OF COVER, AS SPECIFIED ABOVE, OVER THE TOP OF THE PIPE BEFORE THE TRENCH IS WHEEL-LOADED.

BACK FILL

PROVIDE INITIAL BACK FILL MATERIAL THAT IS FINE—GRAINED MATERIAL FREE FROM COMPACTED EARTH GREATER THAN TWO INCHES IN DIAMETER, ROCKS, OR STONES.

TAMP THE BACK FILL IN LAYERS NOT TO EXCEED SIX INCHES. LIFT AND COMPACT FIRMLY AROUND THE PIPE AND UP TO AT LEAST SIX INCHES ABOVE THE TOP OF THE PIPE. SUFFICIENTLY MOISTEN THE BACK FILL TO PERMIT THOROUGH COMPACTION UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE FROM VOIDS. AVOID DEFORMING, DISPLACING, OR DAMAGING PIPE DURING THIS PHASE OF THE OPERATION. ASSURE THAT WHEN FINISHED, THE SOIL COMPACTION EQUALS THE ORIGINAL CONDITION.

FITTING AND PIPE CONNECTIONS

SQUARE CUT, CLEAN AND PRIME ALL JOINTS BEFORE CEMENTING.

FULLY ENGAGE ALL JOINTS WHILE CEMENTING.

PVC FITTINGS — MAKE ALL SOLVENT WELD JOINTS IN ACCORDANCE WITH ASTM D2855. PRIME ALL FITTINGS WITH PURPLE PRIMER BEFORE MAKING SOLVENT WELD CONNECTIONS. ALLOW SOLVENT WELDED JOINTS AT LEAST ONE (1) HOUR TO SET UP BEFORE MOVING OR HANDLING. DO NOT PERMIT WATER IN THE PIPE FOR AT LEAST TWENTY—FOUR HOURS AFTER MAKING A SOLVENT WELD ON THAT PIPE UNLESS RECOMMENDED OTHERWISE BY THE SOLVENT CEMENT MANUFACTURER. SEAL ALL THREADED PVC FITTINGS WITH LIQUID TEFLON EXCEPT SPRINKLER HEADS, ELECTRIC VALVE CONNECTIONS AND SWING JOINTS. INSTALL ALL OF THESE EXCEPTIONS USING ONE INCH TEFLON TAPE.

FLUSHING PIPELINES

FLUSH ALL PIPELINES BEFORE SPRINKLERS ARE INSTALLED. MAINTAIN A MINIMUM PIPE VELOCITY OF THREE FEET PER SECOND AND FLUSH FOR A MINIMUM TIME OF:

T = 2L/3 WHERE T = TIME IN SECONDS & L = PIPE LENGTH IN FEET FROM INLET POINT TO MOST DISTANT POINT IN PIPELINE.

INSTALLING ELECTRIC VALVE CONTROL WIRING

INSTALL WIRING IN THE SAME TRENCH AND ALONG THE SAME ROUTE AS, AND UNDERNEATH THE MAIN LINE EXCEPT IN LOCATIONS WHERE THE WIRE WILL PASS UNDER PAVING. AT THOSE LOCATIONS INSTALL THE WIRE INSIDE OF A PVC SLEEVE. INSTALL CONTROL WIRING THROUGH WALLS, FLOORS, AND SLABS IN PVC SLEEVES. INSTALL (2) EXTRA WIRES POWER FROM EACH CONTROLLER TO THE FARTHEST VALVE IN EACH DIRECTION OPERATED BY THAT CONTROLLER.

TAPE WIRING TOGETHER AT INTERVALS OF TEN FEET, USING 1/4 INCH FIBER REINFORCED TAPE.

USE A CONTINUOUS WIRE BETWEEN THE CONTROLLER AND VALVE. MAKE AN EXPANSION LOOP OF A MINIMUM 12 INCHES DIAMETER AT EACH WIRE CONNECTION. PROVIDE EXPANSION COILS OF WIRE AT NO MORE THAN 100 FOOT INTERVALS AND AT EACH DIRECTION CHANGE IN THE WIRE ROUTING.

ATTACH PERMANENT MARKINGS AT EACH END OF EACH WIRE TO IDENTIFY IT BY VALVE NUMBER.

PROVIDE A SEPARATE POWER WIRE FOR EACH CONTROL VALVE.

AUTOMATIC CONTROLLER INSTALLATION

LOCATION — VERIFY LOCATION WITH OWNER OR OWNER'S REPRESENTATIVE BEFORE INSTALLATION.

VERIFY THAT SUFFICIENT SLEEVING EXISTS TO ALLOW ROUTING OF THE VALVE WIRING FROM THE CONTROLLER TO EACH VALVE.

VALVE INSTALLATION

INSTALL ALL AUTOMATIC ZONE VALVES AND GATE VALVES IN VALVE BOXES. NUMBER EACH ZONE VALVE BOX ON THE UNDERSIDE AND TOPSIDE OF EACH VALVE BOX COVER WITH BLACK WATERPROOF MARKER FOR REFERENCE.

INSTALL ANY MAIN LINE ISOLATION VALVES AND QUICK COUPLING VALVES IN VALVE BOXES.

INSTALLATION OF SPRAY HEADS.

INSTALLATION SCHEDULE — INSTALL SPRAY HEADS AFTER THE SPRINKLER BODY ASSEMBLIES HAVE BEEN CLEANLY FLUSHED.

ORIENTATION — INSTALL POP-UP UNITS IN A PLUMB POSITION AND FIELD ADJUST SPRINKLER HEADS TO OBTAIN COMPLETE COVERAGE OF IRRIGATED AREA WITH MINIMUM OVER SPRAY ONTO PAVED SURFACES. HEADS ARE TO BE LOCATED ON A MAXIMUM SPACING OF 55% OF THE SPRINKLER COVERAGE DISTANCE AND CLOSER WHERE INDICATED. ADJUST NOZZLE DISTANCE AS NEEDED TO COVER PLANT MATERIALS AND MINIMIZE OVER SPRAY ON STRUCTURES AND PAVEMENT. ALIGN POP-UP SPRAY HEADS IN A VERTICAL ORIENTATION AS SHOWN IN THE DETAILS. ADJUST AS NECESSARY TO PROVIDE THE BEST COVERAGE IN SLOPED AREAS.

TESTING

PRESSURE TEST THE SYSTEM MAIN LINE BEFORE APPRECIABLY BACKFILLING.

PRESSURE TEST THE SYSTEM MAIN LINE, IN THE PRESENCE OF THE OWNER OR OWNER'S REPRESENTATIVE, FOR A PERIOD OF NO LESS THAN FOUR HOURS, CONTINUOUSLY, AT A PRESSURE OF NO LESS THAN 100 PSI WITH NO LEAKS AND ASSURE THAT ANY TESTS OF THE SYSTEM MAIN LINE MEET THE APPLICABLE COUNTY PLUMBING CODES. IF LEAKAGE OCCURS, REMEDY THE LEAKAGE PROBLEM AND RETEST. REPEAT THIS PROCESS AS MANY TIMES AS NECESSSARY UNTIL A SUCCESSFUL TEST IS PERFORMED.

INSPECTIONS

THE FOLLOWING INSPECTIONS ARE REQUIRED. NOTIFY OWNER OR OWNER'S REPRESENTATIVE IN ADVANCE THAT EACH ITEM IS READY FOR INSPECTION AS INDICATED BELOW:

INSPECTION OF FLAGGED UNDERGROUND MAINLINE PIPING, SLEEVES, SPRINKLER AND VALVE LOCATIONS PRIOR TO BEGINNING CONSTRUCTION — NOTIFY 48 HOURS IN ADVANCE.

SPRINKLER COVERAGE TEST - NOTIFY 48 HOURS IN ADVANCE.

FINAL INSPECTION - NOTIFY 48 HOURS IN ADVANCE.

TESTING

COVERAGE TESTS — CONDUCT SPRINKLER COVERAGE TESTS UNDER NORMAL OPERATING PRESSURE CONDITIONS BEFORE ANY GROUND COVER OR TURF IS PLANTED. CORRECT AND FIELD ADJUST SPRINKLER ORIENTATION TO PROVIDE UNIFORM PRECIPITATION OVER THE IRRIGATED AREA AND MINIMIZE OVER SPRAY ONTO PAVED SURFACES AND BUILDINGS.

WARRANTY

THE CONTRACTOR SHALL ISSUE TO THE OWNER OR OWNER'S REPRESENTATIVE A CERTIFICATE OF WARRANTY OF THE IRRIGATION SYSTEM FOR A PERIOD OF NOT LESS THAN ONE YEAR ON ALL SPRINKLERS, VALVES, THE CONTROLLER, AND HIS LABOR.

DRAWING OF RECORD

THE CONTRACTOR SHALL SUPPLY TO THE OWNER A DRAFTED, SCALED, REPRODUCIBLE PLAN SHOWING ALL CHANGES MADE TO THE EXISTING IRRIGATION SYSTEM AND ALL NEWLY INSTALLED COMPONENTS INCLUDING ALL SPRINKLERS, INCLUDING BODY TYPES AND NOZZLES, PIPE, INCLUDING SIZES AND THE ENDS OF SLEEVING LOCATIONS AS MEASURED FROM AT LEAST TWO FIXED OBJECTS, CONTROLLER, AND WIRE ROUTING. THIS PLAN MAY BE AN ADAPTATION OF THE IRRIGATION DESIGN WITH ANY CHANGES DRAFTED ON THIS PLAN. THE DRAWING SHALL ALSO PROVIDE A MINIMUM OF TWO (2) DIMENSIONS TAKEN FROM FIXED OBJECTS TO EACH AUTOMATIC VALVE AND MANUAL CONTROL VALVE.

ADDITIONAL SUBMITTALS

SUPPLY TO THE OWNER ALL INSTRUCTION SHEETS AND PARTS LISTS COVERING ALL OPERATING AND ELECTRICAL—RELATED EQUIPMENT, BOUND IN ONE FOLDER. FURNISH THE OWNER WITH ANY KEYS FOR LOCKABLE ITEMS ON THIS SYSTEM.

RAIN GAUGE

ASSURE THAT THE CONTROLLER IS INTERFACED WITH A RAIN SWITCH WHICH WILL TURN THE SYSTEM OFF IN CASE OF RAIN OR FREEZING WEATHER.

MISCELLANEOUS

ANY IRRIGATION ITEMS NORMALLY INSTALLED IN LANDSCAPE AREAS THAT ARE SHOWN OUTSIDE OF LANDSCAPE AREAS OR OUTSIDE OF THE PROPERTY LINES ARE SHOWN AS SUCH FOR GRAPHIC CLARITY ONLY. INSTALL THESE ITEMS INSIDE OF PROPERTY LINES AND IN LANDSCAPE AREAS. CONTACT THE OWNER OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF IN ANY DOUBT OF HEAD, LINE OR ZONE PLACEMENT.

ASSURE THAT THE SYSTEM PROVIDES 100% COVERAGE OF ALL LANDSCAPED AREAS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT BEFORE COMMENCING WITH THE INSTALLATION.

ALL APPLICABLE CODES SHALL TAKE PRECEDENCE OVER THESE PLANS. IT IS THE

CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE CODES.

THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR FIELD CHANGES.

FIELD ADJUST NOZZLE SELECTION LOCATIONS AND PLUMB OF SPRINKLERS TO PROVIDE

PRIORITIZATION OF SPECIFICATIONS

IRRIGATION REGULATIONS AND REQUIREMENTS.

PROPER COVERAGE.

GOVERNING REGULATIONS

IN ANY CONFLICTS BETWEEN THESE SPECIFICACTIONS AND THE CPH SPECIFICATIONS, THE CPH SPECIFICATIONS SHALL TAKE PRECEDENCE.

INSTALL THE IRRIGATION SYSTEM IN ACCORDANCE WITH THE NASSAU COUNTY CURRENT

Designed: A.S.L.

Drawn: A.S.L.

Checked: M.D.SD

DETAIL

AND

NOTES

IRRIGATION

Job No.: N6601 Date: 07/2018

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A Full Service
A & E Firm

5200 Belfort Road, Suite 220
Jacksonville, FL 32256
Ph: 904.332.0999

Plans Prepared By:
CPH, Inc.
State of Florida Licenses:
Engineer No. 3215
Surveyor No. LB7143
Architect. No. AA26000926

Landscape No. LC000298

/ SHERIFF E GARAGE

NASSAU COUNTY SHE
VEHICLE STORAGE GA
NASSAU COUNTY / FLORIDA

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Sheet No.

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THIS SHEET I CONSTRUCT COMPLETE SEE GENERAL MASTER

1 IRRIGATION SPECIFICATIONS
NOTES

SHERIFF VEHICLE STORAGE GARAGE

FOR:

NASSAU COUNTY

NASSAU COUNTY, FLORIDA

CONSTRUCTION DOCUMENTS

ISSUED FOR

PERMIT

APRIL 08, 2019

DESIGNER OF RECORD:

ARCHITECT: JEFF FOSTER, AIA CPH INC 407-322-6841 500 WEST FULTON ST. SANFORD, FL 32771 JFOSTER@CPHCORP.COM

STRUCTURAL FOUNDATION:

JOSE M. ORTIZ, MCE, P.E. CPH INC 407-322-6841 500 WEST FULTON ST. SANFORD, FL 32771 JORTIZ@CPHCORP.COM

MECHANICAL/PLUMBING:

DAVID MELFI P.E., LEED-AP CPH INC 407-322-6841 500 WEST FULTON ST SANFORD, FL 32771 DMELFI@CPHCORP.COM

ELECTRICAL:

GREGORY TAYLOR P.E., LEED-AP CPH INC 407-322-6841 500 WEST FULTON ST. SANFORD, FL 32771 GTAYLOR@CPHCORP.COM

PROJECT INFORMATION:

PRE-ENGINEERED METAL BUILDING (PEMB), VEHICULAR GARAGE. THIS VEHICULAR GARAGE WILL STORE VEHICLES BUT WILL NOT BE USED FOR ANY TYPE OF REPAIR OPERATIONS. THE WALLS ARE METAL PANELS AND THE ROOF WILL BE STANDING SEAM METAL ROOFING. ALL ASSOCIATED STRUCTURAL ENGINEERING (CONCRETE DESIGN BY CPH - BUILDING BY PEMB MANUFACTURER), MECHANICAL, PLUMBING AND ELECTRICAL IS INCLUDED. PLEASE SEE CIVIL PLANS FOR SITE WORK.

BUILDING STRUCTURE:

PRE-ENGINEERED METAL BUILDING (PEMB) (BY OTHERS)

BUILDING CODES:

GOVERNING JURISDICTION: NASSAU COUNTY

FLORIDA BUILDING CODE: FLORIDA ENERGY CONSERVATION CODE: FLORIDA MECHANICAL CODE: NATIONAL ELECTRICAL CODE, NFPA 70: FLORIDA PLUMBING CODE: FLORIDA FIRE PREVENTION CODE 6TH ADDITION: NFPA 101, LIFE SAFETY CODE NFPA 1, UNIFORM FIRE CODE: FLORIDA ACCESSIBILITY CODE

BUILDING DATA:

S2 (WAREHOUSE - NONCOMBUSTIBLE STORAGE - VEHICLE STORAGE -

(NO REPAIR WORK TO OCCUR ON SITE)

CONSTRUCTION TYPE: IIB, FULLY SPRINKLED

BUILDING HEIGHT: 35'-0" (TOP OF RIDGE)

OCCUPANCY SEPARATION NO

DESIGN LOADS:

LORIDA PRODUCT APPROVAL NOA'S

ROLL - UP DOORS

ULTIMATE DESIGN WIND SPEED:	126 MPH
NOMINAL DESIGN WIND SPEED:	98 MPH
EXPOSURE:	С
INTERNAL PRESSURE COEFFICIENT:	+/- 0.18
BUILDING RISK CATEGORY:	II

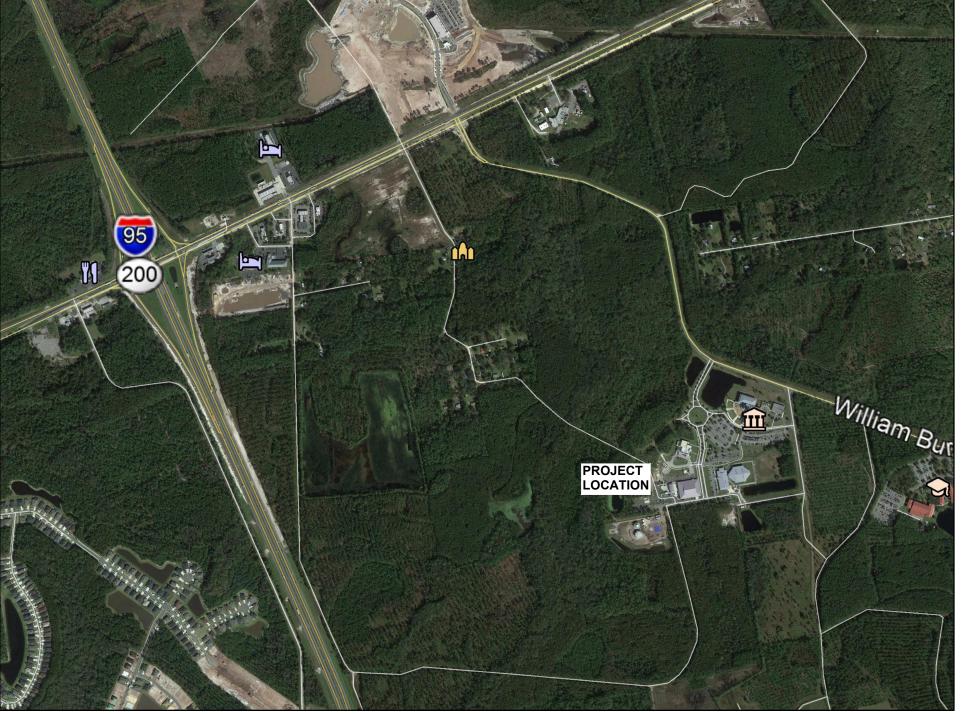
LIFE SAFETY SYSTEM:

EXIT SIGNS: FIRE ALARM & SMOKE DETECTION SYSTEM: FIRE SPRINKLER: NOT REQUIRED **FULLY FIRE SPRINKLERED**

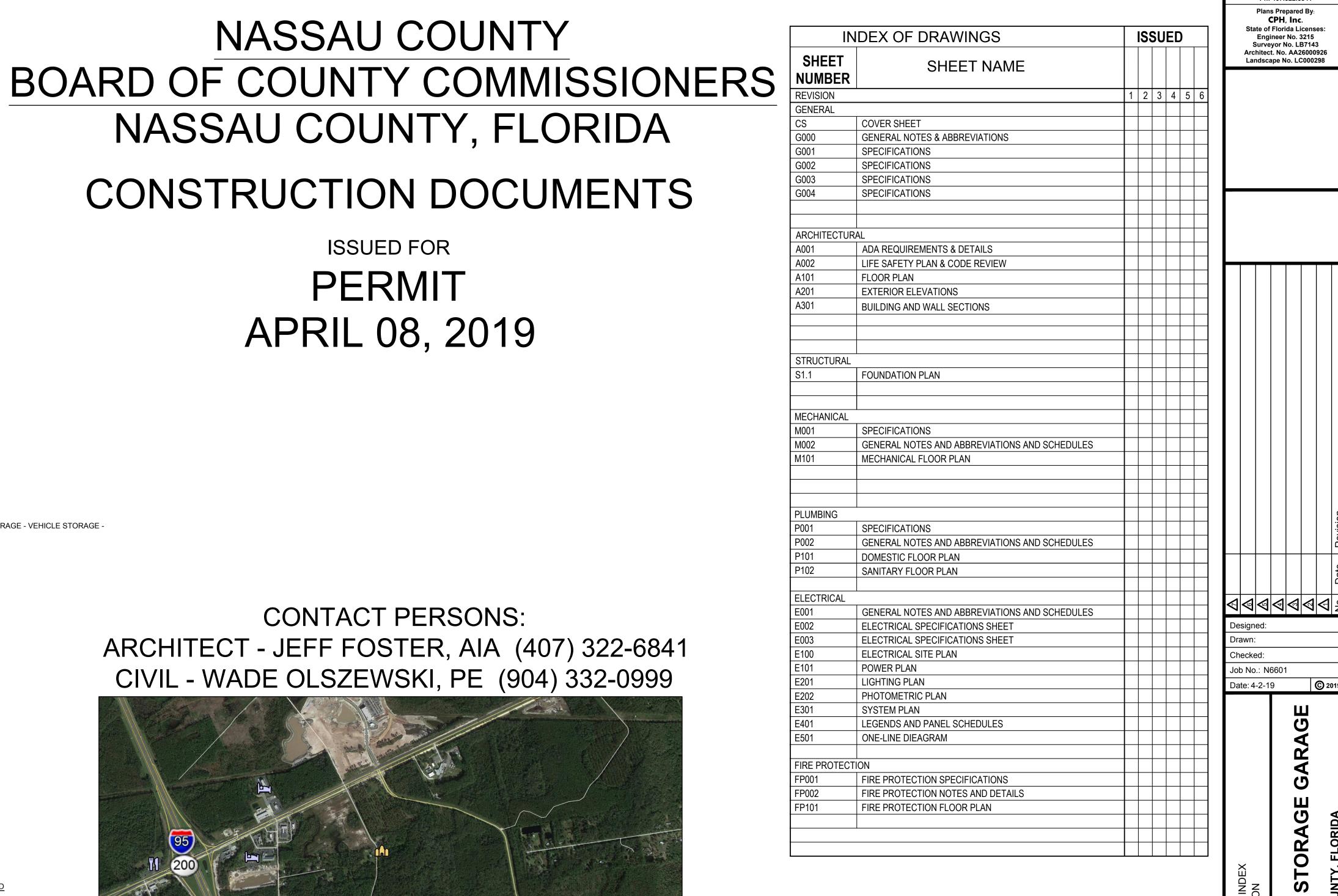
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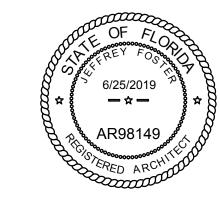
REVISION HISTORY REVISION DESCRIPTION

CONTACT PERSONS: ARCHITECT - JEFF FOSTER, AIA (407) 322-6841 CIVIL - WADE OLSZEWSKI, PE (904) 332-0999









CERTIFICATION

TO THE BEST OF THE ARCHITECT'S KNOWLEDGE INFORMATION, AND BELIEF, THIS DESIGN IS IN COMPLIANCE WITH APPLICABLE CODES AND LAWS.

> DATE JEFF FOSTER, AIA

COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Designed:

Job No.: N6601

Sheet No.

A Full Service

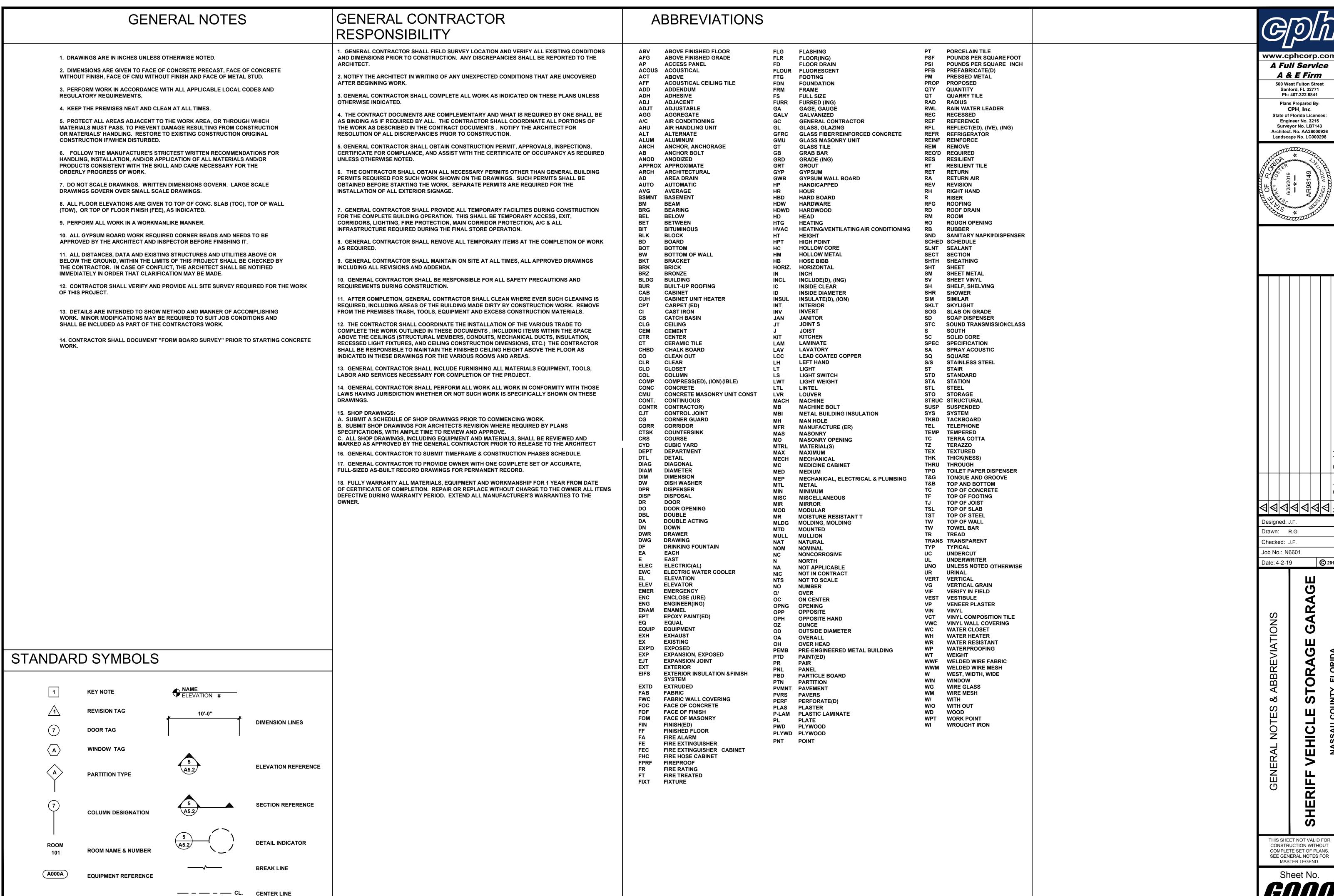
A & E Firm **500 West Fulton Street** Sanford, FL 32771 Ph: 407.322.6841

CPH, Inc.

State of Florida Licenses

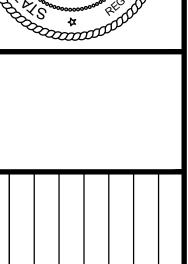
Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926

Landscape No. LC000298



A Full Service

Architect, No. AA26000926 Landscape No. LC000298



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THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR



SECTION 03 1000 CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES A. Formwork for cast—in place concrete, with shoring, bracing and anchorage.

B. Openings for other work. C. Form accessories.

D. Form stripping. 1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and

Divisions 1 Specification Sections, apply to this section. B. Section 04 2001 - Masonry Veneer: Spacing for veneer anchor reglets recessed in

C. Section 05 1200 — Structural Steel Framing: Placement of embedded steel anchors and plates in cast—in—place concrete.

1.03 REFERENCE STANDARDS A. ACI 117 — Standard Specifications for Tolerances for Concrete Construction and Materials: 2010.

B. ACI 301 - Specifications for Structural Concrete; 2010 (Errata 2012).

C. ACI 318 — Building Code Requirements for Structural Concrete and Commentary; 2011.

D. ACI 347R - Guide to Formwork for Concrete; 2014.

E. ASME A17.1 — Safety Code for Elevators and Escalators; 2013.

F. PS 1 - Structural Plywood; 2009.

1.04 SUBMITTALS

A. See Section 01 3000 – Administrative Requirements, for submittal procedures. B. Product Data: Provide data on void form materials and installation requirements.

C. Shop Drawings: Indicate pertinent dimensions, materials, bracing, and arrangement of joints and ties. D. Delegated Design Data: As required by authorities having jurisdiction.

1.05 QUALITY ASSURANCE PART 2 PRODUCTS

2.01FORMWORK - GENERAL

A. Provide concrete forms, accessories, shoring, and bracing as required to accomplish cast-in-place concrete work.

B. Design and construct to provide resultant concrete that conforms to design with respect to shape, lines, and dimensions.

C. Comply with applicable state and local codes with respect to design, fabrication, erection, and removal of formwork.

D. Comply with relevant portions of ACI 347R, ACI 301, and ACI 318.

2.02 WOOD FORM MATERIALS A. Softwood Plywood: PS 1, B—B High Density Concrete Form Overlay, Class I. 3/4 inch

Minimum thickness

2.03 REMOVABLE PREFABRICATED FORMS A. Preformed Steel Forms: Minimum 16 gage, 0.0598 inch thick, matched, tight fitting,

stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.

B. Tubular Column Type: Round, spirally wound laminated fiber material, surface treated with release agent, non-reusable, of sizes indicated.

C. Void Forms: Moisture resistant treated paper faces, biodegradable, structurally sufficient to support weight of wet concrete mix until initial set; 2 inches thick. 2.04FORMWORK ACCESSORIES

A. Form Ties: Snap-off type, galvanized metal, fixed length, cone type, with waterproofing washer, free of defects that could leave holes larger than 1 inch in

1. Provide stainless steel form ties for all exterior surfaces exposed to view.

2. Approved Manufacturers: a. Dayton: Sure-Grip"

b. Henchman: "Snapties"

c. Richmond: "Snop-Tys" B. Form Release Agent: Capable of releasing forms from hardened concrete without staining or discoloring concrete or forming bugholes and other surface defects, compatible with concrete and form materials, and not requiring removal for satisfactory

bonding of coatings to be applied. 1. Composition: Colorless reactive, mineral oil—based, soy—based, or vegetable—oil

based compound. 2. Do not use materials containing diesel oil or petroleum—based compounds.

3. VOC Content: In compliance with applicable local, State, and federal regulations. C. Filler Strips for Chamfered Corners: Wood strip type; 3/4 by 3/4 inch size;

D. Dovetail Anchor Slot: Galvanized steel, at least 22 gage, 0.0299 inch thick, foam filled, release tape sealed slots, anchors for securing to concrete formwork.

E. Dovetail Anchor Slot: Zinc coated (oriented vertically) shall be located at 3 feet - 0 inches on center horizontally wherever concrete surfaces adjoin masonry. WHere concrete masonry units (CMU) abut columns, provide dovetail slot at centerline of

adjoining CMU. Approved Manufacturers:

a. Henchman: Number 100 Standard, 24 gauge

b. Hohman & Barnard, Inc. Number 305

c. Wire Products Company, Number F-17 d. Gateway Building Products: DAS-STD

F. Flashing Reglets: Galvanized steel, at least 22 gage, 0.0299 inch thick, longest possible lengths, with alignment splines for joints, foam filled, release tape sealed slots, anchors for securing to concrete formwork

G. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

H. Embedded Anchor Shapes, Plates, Angles and Bars: As specified in Section 05 1200. PART 3 EXECUTION

3.01 EXAMINATION A. Verify lines, levels and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02ERECTION — FORMWORK

A. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301. B. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject

to overstressing by construction loads. C. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.

D. Align joints and make watertight. Keep form joints to a minimum. E. Obtain approval before framing openings in structural members that are not indicated

F. Install void forms in accordance with manufacturer's recommendations. Protect forms

from moisture or crushina G. Coordinate this section with other sections of work that require attachment of components to formwork.

3.03 APPLICATION - FORM RELEASE AGENT

A. Apply form release agent on formwork in accordance with manufacturer's

B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items. C. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated

forms with clean water. Keep surfaces coated prior to placement of concrete. 3.04INSERTS, EMBEDDED PARTS, AND OPENINGS A. Provide formed openings where required for items to be embedded in passing through

B. Locate and set in place items that will be cast directly into concrete.

C. Coordinate with work of other sections in forming and placing openings, slots, reglets,

recesses, sleeves, bolts, anchors, other inserts, and components of other work. D. Position recessed anchor slots for brick veneer masonry anchors to spacing and intervals specified in Section 04 2001.

E. Install accessories in accordance with manufacturer's instructions, so they are straight, level, and plumb. Ensure items are not disturbed during concrete placement.

F. Provide temporary ports or openings in formwork where required to facilitate cleaning

neatly fitted so joints will not be apparent in exposed concrete surfaces.

and inspection. Locate openings at bottom of forms to allow flushing water to drain. G. Close temporary openings with tight fitting panels, flush with inside face of forms, and 3.05 FORM CLEANING

A. Clean forms as erection proceeds, to remove foreign matter within forms. B. Clean formed cavities of debris prior to placing concrete.

1. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean—out ports.

A. Construct formwork to maintain tolerances required by ACI 117, unless otherwise

B. Construct permanent insulated foam panel formwork to maintain tolerances required by

C. Construct and align formwork for elevator hoistway in accordance with ASME A17.1.

A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.

B. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and to verify that supports, fastenings, wedges, ties, and items

C. Do not reuse wood formwork more than 3 times for concrete surfaces to be exposed to view. Do not patch formwork 3.08FORM REMOVAL

A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.

B. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view. C. Store removed forms to prevent damage to form materials or to fresh concrete.

END OF SECTION

SECTION 03 2000 CONCRETE REINFORCING

PART 1 GENERAL 1.01 SECTION INCLUDES

> B. Supports and accessories for steel reinforcement. 1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Divisions 1 Specification Sections, apply to this section. 1 03 REFERENCE STANDARDS

A. ACI 301 — Specifications for Structural Concrete; 2010 (Errata 2012). B. ACI SP-66 - ACI Detailing Manual; 2004.

C. ASTM A615/A615M — Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement; 2015.

D. ASTM A775/A775M — Standard Specification for Epoxy—Coated Steel Reinforcing Bars; 2007b (Reapproved 2014).

E. ASTM A884/A884M — Standard Specification for Epoxy—Coated Steel Wire and Welded Wire Reinforcement: 2014.

Epoxy-Coated Reinforcing Steel Bars; 2001 (Reapproved 2007). G. AWS D1.4/D1.4M — Structural Welding Code — Reinforcing Steel; 2011. H. CRSI (DA4) — Manual of Standard Practice; 2009.

1.04 SUBMITTALS A. See Section 01 3000 - Administrative Requirements, for submittal procedures. B. Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules,

C. Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.

D. Reports: Submit certified copies of mill test report of reinforcement materials analysis. 1.05 QUALITY ASSURANCE A. Perform work of this section in accordance with ACI 301.

B. Welders' Certificates: Submit certifications for welders employed on the project, verifying AWS qualification within the previous 12 months. PART 2 PRODUCTS

2.01 REINFORCEMENT

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) 1. Plain billet-steel bars, for bars numbers 3 to number 18

2. Epoxy coated in accordance with ASTM A775/A775M. B. Steel Welded Wire Reinforcement (WWR): Class A epoxy coated, deformed type; ASTM

A884/A884M. C. Reinforcement Accessories:

1. Tie Wire: Federal specifications QQ—W—461Annealed steel, minimum 16 gage, 0.0508 inch for use on epoxy coated steel reinforcement.

2. Bar Supports and Spacers: a. For unexposed concrete, bar supports and spacers shall be manufactured of standard brights basic wire upturned legs.

b. For concrete which will be exposed to view from the underside upon completion of the structures, use plastic capped bar supports and spacers. c. For slabs on grade, use bolsters with runners where base will not support chair

d. Do not use wood, brick or other non—specified material. 3. Welded electrodes: AWS A5.1, Low Hydrogen, E70 Series.

4. Welded Inserts: Provide wedge inserts for the support of brick ledger angles. Wedge inserts shall be placed at 4'-0" o.c. unless drawings indicate a more nut and washers as manufactured by Dayton Superior, 10101 C General Drive,

a. Wedge inserts and 3/4" diameter bolts to be deemed equal shall submit test information documenting an ultimate capacity of at least 8,500 pounds when the shelf angle is loaded 2-1/4" from the face of concrete, with the bottom of the insert 1-1/2" clear from the beam bottom, for concrete strength of

2.02RE-BAR SPLICING:

2.03FABRICATION

A. Fabricate concrete reinforcing in accordance with CRSI (DA4) — Manual of Standard

B. Welding of reinforcement is permitted only with the specific approval of Architect. Perform welding in accordance with AWS D1.4/D1.4M.

C. Fabricate and handle epoxy—coated reinforcing in accordance with ASTM D3963/D3963M.

PART 3 EXECUTION

3.01 GENERAL: A. Cleaning and storage reinforcement: Steel reinforcement at the time concrete is placed shall be free from heavy rust, scale or other coating that will destroy or

B. All reinforcing steel shall be stored in neat piles at the site clear of the ground in such a manner that all bars can be readily identified when required.

cleaning. Provide fire extinguisher at cleaning site. D. Supports for reinforcing steel: All reinforcing steel shall be rigidly supported, accurately located and held in position by the use of proper reinforcing steel supports

spacers and accessories before the concrete placement begins. E. The legs of all reinforcing supports shall be bent to form a foot so that the side and not the end of leg rods bears on the form.

F. Metal reinforcement shall be protected by the thickness of the concrete indicated on the drawings. Where not otherwise shown, the concrete cover shall be not less than the following:

against the ground. 2. 2 inches for bars larger than number 5, and 1-1/2 inches for number 5 bars and smaller where concrete will be exposed to the ground or weather after removal

3. 1-1/2 inches in all beams, girders and columns.

4. 3/4 inches for all slabs and walls not exposed to the ground or weather. 5. In any event, there shall be not less than 3/4" of concrete protection over all reinforcing bars.

G. Do not use bar supports or reinforcing as support for concrete runways or

H. Placing tolerances: Clear distance to formed surfaces: $\pm - 1/4$ inch. Minimum spacing between bars: -1/4 inch:

1. Top Bars in Slabs or Beams: a. Members 8" or less in depth: $\pm 1/4$ inch

b. Members 8" to 24" in depth: +/- 1/4 inch

c. Members 24" or greater in depth: $\pm -1/2$ inch

L. All bars shall be bent cold. Heating of bars will not be allowed

2. Crosswire of Slabs or Beams: Spaced evenly within 2 inches. 3. Lengthwise of Member: ± -2 inches Bending details: Typical bending and placing diagrams are shown on the drawings.

For parts not shown, bending details and lengths shall conform to the requirements of the ACI Building Code 318 and "Manual of Standard Practice for Detailing Reinforced Concrete Structures" ACL 315.

J. Bends for stirrups and ties shall be made around a pin having the diameter no less than 1-1/2 inches for number 3, and 2 inches for number 4. K. Bends for other bars shall be made around a pin having a diameter not less than six bar diameters for number 3 to number 6, 8 bar diameters for number 9, number 10 and number 11, 10 bar diameters for number 14 and number 18.

3.02 SPECIAL REINFORCING REQUIREMENTS: A. Where walls or other items are shown as built integrally with other section, but are placed as separate pours, key and dowels must be provided. Dowels shall be the

B. Main reinforcing bars shall not be spliced unless so noted on the drawings or approved by the Architect.

C. Provide 6 X 6 - W1.4 X W1.4 electrically welded wire fabric, ASTM A-185 reinforcing

E. Where openings occur in walls, or slabs, provide two number 5 bars at all sides and

in all concrete slabs on around unless shown otherwise. D. Provide corner bars of same size and spacing as main reinforcement at all

extending at least two feet beyond the corners and two number 5 bars at least three feet long diagonally across each re-entrant corner F. Unless permitted by an Inspector employed by the owner reinforcement shall not be bent after being embedded in hardened concrete.

A. Reinforcing placement must be checked by an Inspector employed by the owner before any concrete is placed. Any corrections shall be made before concrete is placed. B. Placement of reinforcing shall occur in such sequence that the Inspector has sufficient time to inspect the correctness of the reinforcing within the placement area and

placement for a particular portion of the building. D. Galvanized wire ties of double loop and tightly fastened to secure the proper spacing of rods and ties are required.

3.04LAP SPLICING: A. Welded wire fabric shall be overlapped wherever successive mats or rolls are continuous such that the overlap measured between outermost cross wires is not less

B. Longitudinal (continuous) footing reinforcing: Class B. C. Beam Reinforcing: Class B.

D. Column Reinforcing: Class B Offset lap splices. E. Column/footing dowels: Class B F. Masonry vertical reinforcing: Class B.

G. Splices not included above: Class B

SECTION 03 3000

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES A. Foundations and slabs on grade.

B. Joint devices associated with concrete work. C. Miscellaneous concrete elements, including equipment pads.

D. Concrete curing. 1.02 RELATED REQUIREMENTS

Divisions 1 Specification Sections, apply to this section. B. Section 03 1000 — Concrete Forming and Accessories: Forms and accessories for

C. Section 03 2000 - Concrete Reinforcing. D. Section 07 9200 — Joint Sealants: Products and installation for sealants for saw cut

joints and isolation joints in slabs. 1.03 REFERENCE STANDARDS A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and

B. ACL 301 - Specifications for Structural Concrete: 2010 (Errata 2012). C. ACI 302.1R - Guide for Concrete Floor and Slab Construction: 2004 (Errata 2007).

D. ACI 304R — Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000. E. ACI 305R - Hot Weather Concreting; 2010.

F. ACI 306R — Cold Weather Concreting; 2010. G. ACI 308R — Guide to Curing Concrete; 2001 (Reapproved 2008).

I. ASTM C33/C33M — Standard Specification for Concrete Aggregates; 2013. J. ASTM C39/C39M — Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2015a.

K. ASTM C94/C94M — Standard Specification for Ready—Mixed Concrete; 2015. L. ASTM C143/C143M — Standard Test Method for Slump of Hydraulic—Cement Concrete;

N. ASTM C173/C173M — Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2014. O. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete;

P. ASTM C494/C494M — Standard Specification for Chemical Admixtures for Concrete;

Q. ASTM C685/C685M — Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2014. R. ASTM C881/C881M — Standard Specification for Epoxy—Resin—Base Bonding Systems for Concrete: 2014.

Concrete; 2010. T. ASTM D1751 — Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types); 2004

(Reapproved 2013). U. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete

V. ASTM E1745 — Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2011. 1.04 SUBMITTALS

B. Product Data: Submit manufacturers' data on manufactured products showing

complies with the specified requirements.

Concrete Quality, Mixing and Placing.

Specifications.

compliance with specified requirements and installation instructions. 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives 2. Provide certificates signed by material manufacturer, certifying that each material

1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 -2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 -

1. Submit results of all compression, slump and air content tests performed during mix design and throughout the duration of the project as required by the

2. Submit sieve analysis of coarse and fine aggregate intended for use in the project. 3. Submit a copy of State Certification that the concrete batching and weighing equipment has been inspected and approved.

4. Submit letters from the cement and aggregate suppliers certifying that furnished materials meet appropriate ASTM Standards.

E. Samples: Submit samples of underslab vapor retarder to be used. F. Samples: Submit two, 12 inch long samples of waterstops and construction joint

G. Manufacturer's Installation Instructions: For concrete accessories, indicate installation procedures and interface required with adjacent construction. H. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.05 QUALITY ASSURANCE A. Do not commence placement of concrete until mix designs have been approved by the Architect. B. Any concrete work which does not conform to the specified requirements, including

strength, tolerance and finishes shall be corrected by the Contractor at his expense and as directed by the Architect 1. Tolerances listed in sub-paragraphs of 3.03 below. C. Perform work of this section in accordance with ACI 301 and ACI 318.

1. Maintain one copy of each document on site.

C. Required Sampling and Testing

E. Follow recommendations of ACI 306R when concreting during cold weather. 1.06 TESTING:

D. Follow recommendations of ACI 305R when concreting during hot weather.

A. Concrete shall be sampled and tested for Quality Control during placement of concrete. B. Failure to detect defective work or material shall not in any way prevent later rejection when such defect is discovered nor shall it obligate Architect for final acceptance.

1. Samples, for strength tests of each concrete mix shall be taken not less than once a day nor less than once for each 50 cu. yd. of concrete. D. If the total volume of concrete is such that the frequency of testing required above

would provide less than five strength tests for a given mix, tests shall be made from at least five randomly selected batches. 1. Secure composite samples in accordance with ASTM C172. 2. Mold and cure five specimens from each sample in accordance with ASTM C31.

a. Samples for test shall be taken at the 1/4 and 3/4 points of the load b. Cure specimens under laboratory conditions except as follows: 1) When in the opinion of the Architect there is a possibility of the

surrounding air temperature failing below 40 degrees F, he may require additional specimens to be cured under job conditions 2) In hot weather or periods of low humidity the Architect may require additional specimens to be cured under job conditions

(a) Test specimens in accordance with ASTM C39. (1) Test one specimen at 3 days.

ASTM C231, ASTM C173, or ASTM C138.

(2) Test one specimen at 7 days. (3) Test two specimens at 28 days for acceptance. This test of two specimens constitutes one strength test. The results of the strength test shall be the average of the strengths of the two specimens

(b) Hold one specimen for future use if test does not comply at 28 days. (c) Determine slump of the concrete sample for each strength test and whenever consistency appears to vary, using ASTM C143. (d) Determine air content for each strength test in accordance with either

(e) Determine temperature of concrete sample for each strength test.

E. Evaluation of Test Results 1. For evaluation each specified concrete mix shall be represented by at least five

F. The strength level of the concrete will be considered satisfactory if both of the following requirements are met. 1. The average of all sets of three consecutive strength tests (average of two

cylinders) exceeds specified strength. 2. No individual strength test (average of two cylinders) falls below the specified strength by 500 psi. G. If the strength level does not meet the above requirements, the Architect shall consider the concrete to be deficient and shall have the right to reject the work or

require load tests on the structure in the areas the tests represent at no cost to

H. Report tests results in writing to the Architect and the Contractor on the same day that tests are made. Reports of compressive strength tests shall contain:

2. Date of concrete placement 3. Name of Contractor 4. Name of Concrete Supplier and Truck Number

1. Project identification name and number

5. Name of Concrete Testing Service 6. Concrete type and class 7. Location of concrete batch in the structure

8. Design compressive strength at 28 days Slump 10. Air Content

11. Concrete temperature 12. Concrete mix identification number 13. Compressive breaking strength

compression tests as described above

14. Type of break for both 7—day tests and 28—day tests. 1. The Owner will employ an independent testing laboratory meeting the requirements of ASTM E329 and approved by the Architect to perform the following services:

a. Sample concrete at placement and make slump, air content, temperature and

b. Report tests results to the Architect. 2. Contractor Responsibilities a. Pay for additional testing and inspection of materials or concrete occasioned by their failure by test or inspection to meet specification requirements

b. Provide the necessary testing services for the qualification of proposed materials and the establishment of mix designs; and for any other testing services required by the Contractor.

c. Furnish any necessary labor to assist the designated testing agency in obtaining and handling samples. d. Advise the testing agency sufficiently in advance of operations to allow for completion of tests

e. Provide and maintain for the sole use of the testing agency adequate facilities for safe storage and proper curing of concrete test specimens as required by f. The use of Testing Services shall in no way relieve the Contractor of the responsibility to furnish materials and construction in full compliance with the

Contract Documents. PART 2 PRODUCTS

2.01 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I — Normal Portland type. 1. Acquire all cement for entire project from same source. B. Fine and Coarse Aggregates: ASTM C 33.

1. Acquire all aggregates for entire project from same source.

with sufficient capacity to place this size of aggregate.

2. Fine Aggregate: Clean, sharp sand, free from loam, clay, lumps or other deleterious substance. 3. Coarse Aggregate For Normal Weight Concrete: Comply with ASTM C33 size #57. Clean. uncoated, processed aggregate of crushed stone or washed gravel containing

permitted. Aggregate shall meet ASTM C33 Size No. 56 or 57.

no clay, mud, loam or foreign matter. Use of pit or bank run gravel is not

4. Where contractor elects to place concrete by pumping he shall provide a pump

5. ASTM C404 for masonry grout. Maximum aggregate size shall be 3/8". C. Water: Clean and not detrimental to concrete. 1. Water shall be fresh and potable. Water shall be obtained from city water system. The Contractor shall pay for the quantity of water used during construction and also furnish, install and maintain a water meter if required by the 2.02 ADMIXTURES

A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent

by weight of cement.

B. Air Entrainment Admixture: ASTM C260/C260M.

Manufacturers

a. "Darex" by W.R. Grace.

b. "SikaAer" by Sika Chemical Co.

c. "MBVR" by Master Builders d. "Air-Mix" by Euclid

e. "Sealtight" by W.R. Meadows C. High Range Water Reducing Admixture: ASTM C494/C494M Type F and shall contain

no chloride ions. Manufacturers: a. "Melmet" by American Admixtures.

manufacturers directions.

Manufacturers:

F. Calcium Chloride

a. Five Star

b. "WRDA 19" by W.R. Grace Co. c. "Sikament" by Sika Chemical Co. 2. Dosage and use of any mix containing this admixture shall be in strict accordance

3. A representative of the admixture manufacturer shall be present to observe the products use and to assure that it is being used in accordance with the

with the manufacturers direction and only with the written permission of the

D. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D. 1. Provide pigmented type, with ASTM C979/C979M inorganic pigments.

a. "Daratard 17" by W.R. Grace & Company. b. "Pozzolith 100XR" by Master Builders, Inc. c. "Lubricon R" by American Admixture

a. "Pozzolith 300 Series" by Master Builders.

d. "Plastocrete 161R" by Sika Chemical Co. E. Water Reducing Admixture: ASTM C494/C494M Type A. Manufacturers:

b. "WRDA/HYCOL" by Grace. c. "Plastocrete 161" by Sika

d. "Eucon-WR-75" by Euclid

1. Do not use calcium chloride in any concrete. 2.03 ACCESSORY MATERIALS A. Underslab Vapor Retarder: Multi-layer, fabric-, cord-, grid-, or aluminum-reinforced polyethylene or equivalent, complying with ASTM E1745, Class A; stated by manufacturer

as suitable for installation in contact with soil or granular fill under concrete slabs.

The use of single ply polyethylene is prohibited. 1. Installation: Comply with ASTM E1643. 2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations in vapor

Manufacturers: a. Fortifiber Building Systems Group; Moistop Ultra 10: www.fortifiber.com/sle. b. W.R. Meadows, Inc.; PERMINATOR Class A - 10 mils: www.wrmeadows.com. B. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents. 1. Products:

U.S. Grout

b. Euco NS Euclid Chemical c. Masterflow 713 Master Builders C. Water stop: 1. Provide rubber or PVC flat, center build type water stops

2.04BONDING AND JOINTING PRODUCTS A. Epoxy Bonding System: 1. Complying with ASTM C881/C881M and of Type required for specific application. 2. Manufacturers:

b. Thiopoxy W.R. Grace c. Epoxy #452 B. Slab Isolation Joint Filler: Thickness as indicated in drawings. If not indicated provide 1/2 inch thick, height equal to slab thickness, with removable top section that will

Sika Chemical

1. Material: ASTM D1751, non-staining, non-extruding and resilient bituminous type. 2.05 CURING MATERIALS A. Membrane curing compound:

form 1/2 inch deep sealant pocket after removal

1. Conform to ASTM C171, Class B, Clear 100% resin type.

2. Do not use on any surface which will later receive paint, sealer, hardener, carpeting, tile or other bonded covering. a. Acceptable Products: 3. Sealtight AR-30 W.R. Meadows

4. Kurez Euclid Chemical

a. Sikadur Hi-Mod

5. Horncure W.R. Grace 6. Hydrocide Resin Sonneborn B. Curing/sealing compound: 1. Sodium Silicate Sealer

a. Acceptable Products

b. Cure Hard Meadows

2.06 CONCRETE MIX DESIGN

G. Normal Weight Concrete:

3,000 pounds per square inch.

c. Eucosil Euclid Chemical d. WB-309 Grace e. Sonosil Sonneborn

f. Acurion Anti-Hydro Waterproofing 2. Verify compatibility of finish with curing/sealing compounds. C. Moisture-Retaining Sheet: ASTM C171. 1. Polyethylene film, clear, minimum nominal thickness of 0.0040 inch.

A. Contractor shall provide all testing services for approval of mixes.

B. The Contractor shall furnish the Architect for approval a mix design for each class of concrete at least 15 days prior to start of work. C. Do not begin production until mixes have been approved by Architect. D. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.

E. Concrete Strength: Establish required average strength for each type of concrete on

the basis of field experience or trial mixtures, as specified in ACI 301. 1. For trial mixtures method, employ independent testing agency acceptable to Architect for preparing and reporting proposed mix designs. F. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

2. Water-Cement Ratio: Maximum 40 percent by weight. 3. Total Air Content: 2-4 percent, determined in accordance with ASTM C173/C173M. 4. Maximum Slump: 4 inches. 5. Maximum Aggregate Size: 5/8 inch.

A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685. Mix each

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days:

B. Transit Mixers: Comply with ASTM C94/C94M. PART 3 EXECUTION

A. Verify lines, levels, and dimensions before proceeding with work of this section.

batch not less than 1-1/2 minutes and not more than 5 minutes.

A. Verify that forms are clean and free of rust before applying release agent. B. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.

manufacturer's instructions.

1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.

2. Use latex bonding agent only for non-load-bearing applications. D. Where new concrete with integral waterproofing is to be bonded to previously placed concrete, prepare surfaces to be treated in accordance with waterproofing manufacturer's instructions. Saturate cold joint surface with clean water, and remove excess water before application of coat of waterproofing admixture slurry. Apply slurry coat uniformly with semi-stiff bristle brush at rate recommended by waterproofing

E. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout. F. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Lap

joints minimum 6 inches. Seal joints, seams and penetrations watertight with

manufacturer's recommended products and follow manufacturer's written instructions.

Repair damaged vapor retarder before covering. 3.03 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

B. Place concrete for floor slabs in accordance with ACI 302.1R. C. Notify Architect not less than 24 hours prior to commencement of placement

D. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken

E. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement. F. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by

removing laitance and exposing the sand and sound surface mortar, by sandblasting or

(b) Maximum for the entire length (length greater than 40'-0")......1

high-pressure water jetting. G. Place concrete within the tolerances specified below:

1. Dimensional tolerances for formed surfaces:

a. Variation from plumb: 1) In the lines and surfaces of columns, piers, walls and in arises: (a) In any 10 ft. of length.....1/4 in.

2) Exposed corner columns, control—joint grooves, and other conspicuous lines: (a) In any 20 ft. of length......1/4 in.

b. Variation from the level or from the grades specified in the contract documents: 1) In slab soffits, ceilings, beam soffits and in arises, measured before removal of supporting shores (a) In any 10 ft. of length......1/4 in.

(c) Maximum for the entire length......3/4 in.

(b) Maximum for the entire length......1/2 in.

2) In exposed lintels, sills, parapets, horizontal grooves, and other conspicuous (a) In any bay or in 20 ft. length......1/4 in. (b) Maximum for the entire length......1/2 in.

related position of columns, walls, and partitions:

1) In any bay.....

(a) Minus.....

(b) Plus.....

2) In any 20 ft. of length..... 3) Maximum for the entire length......1 in. d. Variation in the sizes and location of sleeves, floor openings, and wall openings.....+1/4 in.

c. Variation of the linear building lines from established position in plan and

...1/2 in. Plus... f. Footings* 1) Variations in dimensions in plan:

(c) Misplacement or eccentricity: (1) 2 percent of the footing width in the direction of misplacement but not more than.....

vertical reinforcing steel, dowels, or embedded items. 3.04 SLAB JOINTING A. Locate joints as indicated on the drawings.

total height equal to thickness of slab, set flush with top of slab. A. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:

1. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing

burnish marks and other appearance defects. A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

C. Surfaces Not in Contact with Forms: 1. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding,

waterproof tape or adhesive; secure at edges. b. Curing Compound: Apply in two coats at right angles, using application rate recommended by manufacturer.

A. An independent testing agency will perform field quality control tests, as specified in

B. Provide free access to concrete operations at project site and cooperate with appointed firm.

E. Compressive Strength Tests: ASTM C39/C39M. For each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards or less of each class of concrete placed. F. Take one additional test cylinder during cold weather concreting, cured on job site

admixture (MVRA) to allow access for sampling and testing concrete for compliance with warranty requirements. 3.08 DEFECTIVE CONCRETE

A. Test Results: The testing agency shall report test results in writing to Architect and

B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements. C. Repair or replacement of defective concrete will be determined by the Architect. The

direction of Architect for each individual area.

A Full Service A & E Firm 500 West Fulton Street Sanford, FL 32771 Ph: 407.322.6841 Plans Prepared By

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State of Florida Licenses

www.cphcorp.com

Engineer No. 3215 Surveyor No. LB7143 Architect No AA26000926 Landscape No. LC000298

Drawn: R.G. Checked: J.F Job No.: N6601 Date: 4-2-19 C 2019

4|4|4|4|4|4|4|4|

Designed: J.F.

CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND. Sheet No.

THIS SHEET NOT VALID FOR

3.06FORMWORK TOLERANCES

D. Camber slabs and beams in accordance with ACI 301.

Discard damaged forms.

A. Reinforcing steel for cast—in—place concrete.

F. ASTM D3963/D3963M - Standard Specification for Fabrication and Jobsite Handling of

shapes of bent bars, spacing of bars, and location of splices.

restrictive spacing. Provide the F-7 wedge insert and 3/4" diameter askew bolt,

4.000 psi. A. Perform work of this section in accordance with ACI 318

C. Excessive form oil on the reinforcing shall be removed by washing the reinforcing with kerosene. Exercise due care that no smoking or welding is permitted in the area of

1. 3 inches for footings and other principal structural members poured directly

same size and at the same spacing as reinforcing.

3.03INSPECTION OF REINFORCEMENT:

retains the right to require necessary revisions be made before concrete is placed. C. The Contractor shall notify the Inspector at least 24 hours in advance of concrete

than one wire spacing plus 2 inches.

CAST-IN-PLACE CONCRETE

A. Drawings and general provisions of the Contract, including Contractual Conditions and

Mass Concrete; 1991 (Reapproved 2009).

H. ACI 318 — Building Code Requirements for Structural Concrete and Commentary; 2011.

M. ASTM C150/C150M — Standard Specification for Portland Cement; 2015.

S. ASTM C979/C979M — Standard Specification for Pigments for Integrally Colored

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

C. Mix Design: Submit proposed concrete mix design.

Water Department.

C. Where new concrete is to be bonded to previously placed concrete, prepare existing

surface by cleaning with steel brush and applying bonding agent in accordance with

(b) In any bay or in any 20 ft. of length.......3/8 in.

e. Variation in cross-sectional dimensions of columns and beams and in the thickness of slabs and walls:

(d) Thickness: (1) Decrease in specified thickness......5% (2) Increase in specified thickness......No limit

2) Footing Tolerances apply to concrete dimensions only, not to positioning of

.....1/4 in.

....1/2 in.

B. Anchor joint fillers and devices to prevent movement during concrete placement. C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete. 1. Normal concrete: Not less than 7 days.

a. Moisture—Retaining Sheet: Lap strips not less than 3 inches and seal with

water—saturated sand, water—fog spray, or saturated burlap.

2. Final Curing: Begin after initial curing but before surface is dry.

3.07 FIELD QUALITY CONTROL

Section 01 4000 - Quality Requirements.

conformance with specified requirements

Contractor within 24 hours of test.

under same conditions as concrete it represents.

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations. D. Tests of concrete and concrete materials may be performed at any time to ensure

G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M. H. Slab Testing: Cooperate with manufacturer of specified moisture vapor reduction

cost of additional testing shall be borne by Contractor when defective concrete is

D. Do not patch, fill, touch—up, repair, or replace exposed concrete except upon express

A. Do not permit traffic over unprotected concrete floor surface until fully cured.

m

F. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015 (Errata 2016). G. IAS AC172 — Accreditation Criteria for Fabricator Inspection Programs for Structural Steel: International Accreditation Service, Inc; 2011

H. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004). I. SSPC—Paint 20 — Zinc—Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).

J. SSPC-SP 2 - Hand Tool Cleaning; 1982 (Ed. 2004). 1.03 SUBMITTALS

A. See Section 01 3000 — Administrative Requirements, for submittal procedures. B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and

C. Welders' Certificates: Submit certification for welders employed on the project, verifying

1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net

AWS qualification within the previous 12 months. D. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is accredited under IAS AC172. 1.04 QUALITY ASSURANCE

A. Fabricator Qualifications: A qualified steel fabricator that is accredited by IAS AC172. PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing. C. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.

D. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded. E. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction

F. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction. A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured. C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed

joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius. D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise

2.03FABRICATED ITEMS A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish. B. Door Frames for Wall Openings and coiling doors: Channel sections; prime paint finish. 2.04FINISHES - STEEL

A. Prime paint steel items. 1. Exceptions: Galvanize items to be embedded in concrete.

2. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing. B. Prepare surfaces to be primed in accordance with SSPC-SP2.

C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing. D. Prime Painting: Two coats. E. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM

A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating. F. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M

2.05 FABRICATION TOLERANCES A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch. C. Maximum Misalignment of Adjacent Members: 1/16 inch. D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches. PART 3 EXECUTION 3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

A. Clean and strip primed steel items to bare metal where site welding is required. B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

A. Install items plumb and level, accurately fitted, free from distortion or defects. B. Provide for erection loads, and for sufficient temporary bracing to maintain true

alignment until completion of erection and installation of permanent attachments. C. Obtain approval prior to site cutting or making adjustments not scheduled. 3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative. B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch. END OF SECTION

SECTION 06 1000 ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES A. Preservative treated wood materials. B. Miscellaneous framing and sheathing.

C. Communications and electrical room mounting boards. D. Concealed wood blocking, nailers, and supports.

E. Miscellaneous wood nailers, furring, and grounds.

A. Drawings and general provisions of the Contract, including Contractual Conditions and Divisions 1 Specification Sections, apply to this section.

B. Section 07 6200 — Sheet Metal Flashing and Trim: Sill flashings. 1.03 REFERENCE STANDARDS

A. ASTM A153/A153M — Standard Specification for Zinc Coating (Hot—Dip) on Iron and Steel Hardware; 2009.

B. ASTM E84 — Standard Test Method for Surface Burning Characteristics of Building Materials; 2016. C. AWPA U1 — Use Category System: User Specification for Treated Wood; 2012.

D. PS 1 - Structural Plywood; 2009. E. PS 2 - Performance Standard for Wood-Based Structural-Use Panels; 2010. F. PS 20 - American Softwood Lumber Standard; 2010.

prevent deformation and to allow air circulation.

G. SPIB (GR) - Grading Rules; 2014. 1.04 DELIVERY, STORAGE, AND HANDLING A. General: Cover wood products to protect against moisture. Support stacked products to PART 2 PRODUCTS 2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies. 1. If no species is specified, provide any species graded by the agency specified; if

no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements. 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS A. Grading Agency: Southern Pine Inspection Bureau, Inc. (SPIB).

B. Lumber fabricated from old growth timber is not permitted.

B. Sizes: Nominal sizes as indicated on drawings, S4S. C. Moisture Content: S-dry or MC19. D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

2.03 CONSTRUCTION PANELS A. Subflooring: Plywood.

2. Boards: Standard or No. 3.

1. Bond Classification: Exposure 1 2. Thickness: as indicated on drawings 3. Span Rating: 48.

1. Lumber: S4S, No. 2 or Standard Grade.

4. Performance Category: 19/32 PERF CAT. 5. Edges: Tongue and groove. B. Communications and Electrical Room Mounting Boards: PS 1 A—D plywood, or medium

density fiberboard; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84. 2.04 ACCESSORIES

A. Fasteners and Anchors:

1. Metal and Finish: Hot-dipped galvanized steel per ASTM A 153/A 153M for high humidity and preservative—treated wood locations, unfinished steel elsewhere 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times

thickness of sheathing 3. Anchors: Toggle bolt type for anchorage to hollow masonry.

B. Sill Gasket on Top of Foundation Wall: 1/4 inch thick, plate width, closed cell plastic foam from continuous rolls.

C. Sill Flashing: As specified in Section 07 6200.

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 — Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

1. Preservative—Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards. B. Preservative Treatment:

1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative. a. Kiln dry lumber after treatment to maximum moisture content of 19 percent. b. Treat lumber in contact with masonry or concrete.

2. Preservative Pressure Treatment of Plywood Above Grade: AWPA U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative. a. Kiln dry plywood after treatment to maximum moisture content of 19 percent. b. Treat plywood in contact with masonry or concrete.

c. Treat plywood less than 18 inches above grade. d. Treat plywood in other locations as indicated.

PART 3 EXECUTION

3.01 PRFPARATION A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches and seal. B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture

gasket cleanly to fit tightly around protruding anchor bolts. C. Coordinate installation of rough carpentry members specified in other sections. 3.02INSTALLATION - GENERAL

accessory components, including: shims, bracing, and blocking.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as C. Where treated wood is used on interior, provide temporary ventilation during and

immediately after installation sufficient to remove indoor air contaminants. 3.03BLOCKING, NAILERS, AND SUPPORTS A. Provide framing and blocking members as indicated or as required to support finishes.

fixtures, specialty items, and trim. B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as

required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking. C. In metal stud walls, provide continuous blocking around door and window openings for

anchorage of frames, securely attached to stud framing. D. In walls, provide blocking attached to studs as backing and support for wall—mounted items, unless item can be securely fastened to two or more studs or other method of

E. Where ceiling—mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

F. Provide the following specific non-structural framing and blocking: 1. Cabinets and shelf supports. Wall brackets.

Handrails. Grab bars.

5. Wall-mounted door stops. 6. Wall paneling and trim.

7. Joints of rigid wall coverings that occur between studs. 8. Signage.

3.04INSTALLATION OF CONSTRUCTION PANELS A. Subflooring: Glue and nail to framing; staples are not permitted.

B. Communications and Electrical Room Mounting Boards: Secure with screws to stude with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board. 1. At fire—rated walls, install board over wall board indicated as part of the fire—rated

assembly. 2. Where boards are indicated as full floor—to—ceiling height, install with long edge of board parallel to studs.

3. Install adjacent boards without gaps.

4. Size and Location: As indicated on drawings.

3.05 SITE APPLIED WOOD TREATMENT A. Apply preservative treatment compatible with factory applied treatment at site—sawn cuts, complying with manufacturer's instructions.

B. Allow preservative to dry prior to erecting members. 3.06 TOLERANCES A. Framing Members: 1/4 inch from true position, maximum.

B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum. 3.07 CLEANING

A. Waste Disposal: Comply with the requirements of Section 01 7419 — Construction Waste Management and Disposal. 1. Comply with applicable regulations.

2. Do not burn scrap on project site. 3. Do not burn scraps that have been pressure treated.

4. Do not send materials treated with pentachlorophenol, CCA, or ACA to

co-generation facilities or "waste-to-energy" facilities. B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill. C. Prevent sawdust and wood shavings from entering the storm drainage system. END OF SECTION

SECTION 07 9200 JOINT SEALANTS

PART 1 GENERAL 1.01 SECTION INCLUDES

A. Nonsag gunnable joint sealants. B. Self-leveling pourable joint sealants.

C. Joint backings and accessories. 1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Divisions 1 Specification Sections, apply to this section. B. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Additional

requirements for sealants and primers C. Section 09 2116 — Gypsum Board Assemblies: Sealing acoustical and sound—rated walls and ceilings.

D. Section 09 3000 — Tiling: Sealant between tile and plumbing fixtures and at junctions

with other materials and changes in plane. 1.03 REFERENCE STANDARDS A. ASTM C661 — Standard Test Method for Indentation Hardness of Elastomeric—Type

Sealants by Means of a Durometer; 2006 (Reapproved 2011). B. ASTM C834 — Standard Specification for Latex Sealants; 2014. C. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications; 2012. D. ASTM C920 — Standard Specification for Elastomeric Joint Sealants; 2014a.

E. ASTM C1193 - Standard Guide for Use of Joint Sealants: 2013. F. ASTM C1248 — Standard Test Method for Staining of Porous Substrate by Joint Sealants; 2008 (Reapproved 2012).

G. ASTM C1311 — Standard Specification for Solvent Release Sealants; 2014.

H. ASTM C1330 — Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants; 2002 (Reapproved 2013). I. ASTM D2240 — Standard Test Method for Rubber Property——Durometer Hardness; 2005

(Reapproved 2010). J. SWRI (VAL) — SWR Institute Validated Products directory; Sealant, Waterproofing and Restoration Institute; online at http://www.swrionline.org/ValidatedSealants.

1.04 SUBMITTALS A. See Section 01 3000 - Administrative Requirements, for submittal procedures. B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.

1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability. 2. List of backing materials approved for use with the specific product.

3. Substrates that product is known to satisfactorily adhere to and with which it is 4. Substrates the product should not be used on.

5. Substrates for which use of primer is required. 6. Substrates for which laboratory adhesion and/or compatibility testing is required. 7. Installation instructions, including precautions, limitations, and recommended backing

8. Sample product warranty 9. Certification by manufacturer indicating that product complies with specification

10. SWRI Validation: Provide currently available sealant product validations as published by SWRI for specified sealants. C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and

D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection. 1.05 QUALITY ASSURANCE

A. Maintain one copy of each referenced document covering installation requirements on

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience. C. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience

D. Installation Plan: Include schedule of sealed joints, including the following. 1. Method to be used to protect adjacent surfaces from sealant droppings and condition and therefore prevention is imperative

A. See Section 01 7800 — Closeout Submittals, for additional warranty requirements. B. Correct defective work within a five year period after Date of Substantial Completion.

C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS A. Non—Sag Sealants: Permits application in joints on vertical surfaces without sagging

or slumping. 1. BASF Construction Chemicals—Building Systems: www.buildingsystems.basf.com.

2. Bostik Inc: www.bostik-us.com. 3. Dow Corning Corporation: www.dowcorning.com/construction/sle.

4. Hilti, Inc: www.us.hilti.com/#sle. 5. Pecora Corporation: www.pecora.com 6. The QUIKRETE Companies: www.quikrete.com. 7. Tremco Global Sealants: www.tremcosealants.com.

8. Sika Corporation: www.usa-sika.com. 9. W.R. Meadows, Inc: www.wrmeadows.com.

B. Self-Leveling Sealants: Pourable or self-leveling sealant that has sufficient flow to form a smooth, level surface when applied in a horizontal joint. 1. BASF Construction Chemicals—Building Systems: www.buildingsystems.basf.com. 2. Bostik Inc: www.bostik-us.com

3. Dow Corning Corporation: www.dowcorning.com/construction/sle. 4. Pecora Corporation: www.pecora.com.

5. The QUIKRETE Companies: www.quikrete.com. 6. Tremco Global Sealants: www.tremcosealants.com 7. Sika Corporation: www.usa-sika.com.

8. W.R. Meadows, Inc: www.wrmeadows.com. 9. Substitutions: See Section 01 6000 - Product Requirements.

2.02 JOINT SEALANT APPLICATIONS

1. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items. a. Joints between door, window, and other frames and adjacent construction.

b. In sound-rated wall and ceiling assemblies, gaps at electrical outlets, wiring devices, piping, and other openings; between wall/ceiling and other construction; and other flanking sound paths. 1) Exception: Such gaps and openings in gypsum board finished stud walls

and suspended ceilings. 2) Exception: Through—penetrations in sound—rated assemblies that are also fire-rated assemblies c. Other joints indicated below 2. Do not seal the following types of joints.

a. Intentional weepholes in masonry. b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.

d. Joints where installation of sealant is specified in another section. e. Joints between suspended panel ceilings/grid and walls. B. Exterior Joints: Use nonsag non-staining silicone sealant, unless otherwise indicated. 1. Lap Joints in Sheet Metal Fabrications: Butyl rubber, non-curing.

2. Lap Joints between Manufactured Metal Panels: Butyl rubber, non-curing. 3. Control and Expansion Joints in Concrete Paving: Self-leveling polyurethane "traffic-grade" sealant. 4. Wiring Slots in Concrete Paving: Self-leveling epoxy sealant.

C. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated. 1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.

2. Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous 3. Floor Joints in Wet Areas: Nonsag polyurethane "nontraffic—grade" sealant suitable

for continuous liquid immersion

4. Wall, Ceiling, and Floor Joints Where Tamper—Resistance is Required: Nonsag tamper-resistant silyl-terminated polyurethane sealant.

5. Joints between Fixtures in Wet Areas and Floors, Walls, and Ceilings: Mildew-resistant silicone sealant; clear. 6. In Sound-Rated Assemblies: Acrylic emulsion latex sealant.

7. Narrow Control Joints in Interior Concrete Slabs: Self-leveling epoxy sealant. 8. Other Floor Joints: Self—leveling polyurethane "traffic—grade" sealant. D. Interior Wet Areas: restrooms and break rooms; fixtures in wet areas include plumbing fixtures, food service equipment, countertops, cabinets, and other similar items.

E. Sound—Rated Assemblies: Walls and ceilings identified as "STC—rated", "sound—rated", or "acoustical". F. Areas Where Tamper—Resistance is Required: As indicated on the drawings.

2.03 JOINT SEALANTS - GENERAL A. Sealants and Primers: Provide products with levels of volatile organic compound (VOC)

content as indicated in Section 01 6116. B. Colors: As selected by the architect. 2.04NONSAG JOINT SEALANTS

A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic. 1. Movement Capability: Plus and minus 50 percent, minimum.

2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248. 3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.

continuous water immersion or traffic. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Hardness Range: 15 to 35, Shore A, when tested in accordance with ASTM C661. 3. Color: To be selected by Architect from manufacturer's standard range.

B. Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand

5. Service Temperature Range: Minus 65 to 180 degrees F. C. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or

4. Cure Type: Single-component, neutral moisture curing

 Color: White. D. Tamper-Resistant, Silyl-Terminated Polyurethane (STPU) Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion or traffic.

1. Movement Capability: Plus and minus 12-1/2 percent, minimum 2. Hardness Range: 50 to 60, Shore A, when tested in accordance with ASTM C661. 3. Color: To be selected by Architect from manufacturer's standard range. E. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent;

not expected to withstand continuous water immersion or traffic. 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661. 3. Color: To be selected by Architect from manufacturer's standard range.

4. Service Temperature Range: Minus 40 to 180 degrees F. F. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS. Uses M. and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface . 1. Movement Capability: Plus and minus 35 percent, minimum

2. Color: To be selected by Architect from manufacturer's standard range. 3. Service Temperature Range: Minus 40 to 180 degrees F. G. Tamper-Resistant Polyurethane Sealant: ASTM C920, Grade NS, Uses M, G, and A; single or multicomponent; not expected to withstand continuous water immersion or

1. Movement Capability: Plus and minus 12-1/2 percent, minimum. 2. Hardness Range: 50 to 60, Shore A, when tested in accordance with ASTM C661. 3. Color: To be selected by Architect from manufacturer's standard range. 4. Service Temperature Range: Minus 40 to 180 degrees F.

non—bleeding, non—sagging; not intended for exterior use. 1. Color: To be selected by Architect from manufacturer's standard range. 2. Grade: ASTM C834; Grade - Minus 18 Degrees C. I. Non-Curing Butyl Sealant: Solvent-based; ASTM C1311; single component, nonsag,

1. Acrylic Emulsion Latex: Water—based; ASIM C834, single component, non—staining,

non—skinning, non—hardening, non—bleeding; vapor—impermeable; intended for fully concealed applications. 2.05 SELF-LEVELING SEALANTS A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or

multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion 1. Movement Capability: Plus and minus 25 percent, minimum. 2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661. 3. Color: To be selected by Architect from manufacturer's standard range.

4. Service Temperature Range: Minus 40 to 180 degrees F B. Self-Leveling Polyurethane Sealant for Continuous Water Immersion: Polyurethane; ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure and continuous water immersion. 1. Movement Capability: Plus and minus 25 percent, minimum.

2. Hardness Range: 35 to 55, Shore A, when tested in accordance with ASTM C661. 3. Color: To be selected by Architect from manufacturer's standard range. C. Semi-Rigid Self-Leveling Epoxy Joint Filler: Epoxy or epoxy/polyurethane copolymer; intended for filling cracks and control joints not subject to significant movement; rigid enough to support concrete edges under traffic.

1. Composition: Multi-component, 100 percent solids by weight. 2. Hardness: Minimum of 85 (Shore A) or 35 (Shore D), when tested in accordance with ASTM D2240 after 7 days.

3. Color: To be selected by Architect from manufacturer's standard colors. 4. Joint Width, Minimum: 1/8 inch. 5. Joint Width, Maximum: 1/4 inch.

6. Joint Depth: Provide product suitable for joints from 1/8 inch to 2 inches in depth excluding space for backer rod.

compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application. 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type 0 — Open Cell Polyurethane.

2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B -

A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to,

Bi-Cellular Polyethylene. 3. Open Cell: 40 to 50 percent larger in diameter than joint width. 4. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width. B. Backing Tape: Self—adhesive polyethylene tape with surface that sealant will not

C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants. D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.

E. Primers: Type recommended by sealant manufacturer to suit application; non—staining.

adhere to and recommended by tape and sealant manufacturers for specific

PART 3 EXECUTION 3.01 FXAMINATION A. Verify that joints are ready to receive work.

application.

B. Verify that backing materials are compatible with sealants. C. Verify that backer rods are of the correct size. 3.02 PREPARATION A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions. C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in inconspicuous area to verify that it does not stain or discolor slab.

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions. B. Perform installation in accordance with ASTM C1193.

C. Perform acoustical sealant application work in accordance with ASTM C919. D. Measure joint dimensions and size joint backers to achieve width—to—depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where

specific dimensions are indicated. E. Install bond breaker backing tape where backer rod cannot be used. F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

G. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed. H. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

I. Concrete Floor Joint Filler: After full cure, shave joint filler flush with top of concrete 3.04 POST-OCCUPANCY

A. Post-Occupancy Inspection: Perform visual inspection of entire length of project

temperature in the thermal cycle. Report failures immediately and repair.

END OF SECTION

SECTION 08 33 00

sealant joints at a time that joints have opened to their greatest width; i.e. at the low

Insulated rolling service Door PART 1 GENERAL

1.1 SUMMARY

2. Painting, Field painting.

Section Includes: electric operated overhead insulated rolling doors A. Related Sections: 1. Rough Carpentry. Door opening jamb and head members.

3. Electrical wiring and conduit, fuses, disconnect switches, connection of operator to power supply, and installation of control station and wiring.

B. Products That May Be Supplied, But Are Not Installed Under This Section:

 Control Station 1.2 SYSTEM DESCRIPTION

A. Design Requirements:

 Wind Loading: a. Supply doors to withstand design wind load in the location where the project is located Cycle Life:

a. Design doors of standard construction for normal use of up to 20 cycles per day maximum, and an overall maximum of 50,000 operating cycles for the life of the door Seismic Performance: a. Provide manufacturer's seismic calculations confirming ASCE7—10

4. Insulated Door Slat Material Requirements: a. Flame Spread Index of 0 and a Smoke Developed Index of 10 as tested per ASTM E84 b. Sound Transmission Class (STC) rating up to 30 for the curtain and up to 22 for the entire assembly, as tested per ASTM E90 and based on testing a complete, operable

c. Minimum R—value of 8.0 (U—value of 0.125) as calculated using the ASHRAE Handbook

d. Insulation to be CFC Free with an Ozone Depletion Potential (ODP) rating of zero

of Fundamentals

1.3 SUBMITTALS A. Reference Section 01 33 00 Submittal Procedures; submit the following items:

 Product Data 2. Shop Drawings: Include special conditions not detailed in Product Data. Show interface with adjacent work. 3. Quality Assurance/Control Submittals:

b. Provide manufacturer and installer auglifications — see below c. Provide manufacturer's installation instructions 4. Closeout Submittals:

a. Operation and Maintenance Manual

2. Installer Qualifications: Manufacturer's approval

a. Provide manufacturer ISO 9001:2008 registration

b. Certificate stating that installed materials comply with this specification 1.4 QUALITY ASSURANCE

A. Qualifications: 1. Manufacturer Qualifications: ISO 9001:2008 registered and a minimum of five years experience in producing doors of the type specified

A. Reference Section 01 66 00 Product Storage and Handling Requirements B. Follow manufacturer's instructions

1.5 DELIVERY STORAGE AND HANDLING

A. Standard Warranty: Two years from date of shipment against defects in material and

B. Maintenance: Submit for owner's consideration and acceptance of a maintenance service agreement for installed products

PART 2 PRODUCTS

2.2 PRODUCT INFORMATION

A. Model: ESD20

2.1 MANUFACTURER A. Manufacturer: 1. Basis of Design — Cornell: 24 Elmwood Avenue, Mountain Top, PA 18707. Telephone: (800)

Cookson 3. Clopay Building Products Substitutions: Permitted with prior approval

2.3 MATERIALS A. Curtain:

steel zinc coating.

Interior Slat Finish:

 Fabrication: a. Slat Material: No. 6F, (Listed Exterior/Interior): 1) Galvanized Steel/Galvanized Steel: Manufacturer recommended gauge based on

performance requirements. Minimum 24/24 gauge, Grade 40, ASTM A 653 galvanized

a. Insulation: 7/8 inch (22 mm) foamed—in—place, closed cell urethane b. Total Slat Thickness: 15/16 inch (24 mm) c. Flame Spread Index of 0 and a Smoke Developed Index of 10 as tested per ASTM E84

per ASTM E90 and based on testing a complete, operable assembly 2. Exterior Slat Finish: a. SpectraShield® Coating System (Color Selected by Architect):

e. STC Rating: Up to 30 for the curtain and up to 22 for the entire assembly, as tested

1) Zirconium treatment followed by baked—on polyester powder coat, with color as

(0.065 mm) cured film thickness: ASTM D-3363 pencil hardness: H or better

selected by Architect from manufacturer's standard color range; minimum 2.5 mils

a. SpectraShield® Coating System (Color Selected by Architect): 1) Zirconium treatment followed by baked—on polyester powder coat, with color as selected by Architect from manufacturer's standard color range; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better

B. Endlocks: Fabricate interlocking sections with high strenath galvanized cast iron endlocks on alternate slats each secured with two $\frac{1}{4}$ " (6.35 mm) rivets. Provide windlocks as required to meet specified wind load.

1. Galvanized cast iron: Required if above 21'-5" width (DBG - Distance Between Guides)

C. Bottom Bar

 Configuration: a. Insulated Bottom Bar: Reinforced extruded aluminum interior face with full depth insulation and exterior skin slat to match curtain material and gauge. Minimum 4" tall x

Finish: a. Exterior: Match slats

1-1/16" thickness.

D. Guides:

 Fabrication: a. Minimum 3/16 inch (4.76 mm) structural steel angles. Provide windlock bars of same material when windlocks are required to meet specified wind load. Top of inner and outer guide angles to be flared outwards to form bellmouth for smooth entry of curtain into guides. Provide removable guide stoppers to prevent over travel of curtain and

1. Top 16 1/2" (419.10 mm) of coil side guide angles to be removable for ease of curtain installation and as needed for future curtain service.

Finish: a. SpectraShield® Coating System (Color Selected by Architect): Zirconium treatment followed by baked—on polyester powder coat, color as selected by Architect from manufacturer's standard color range; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better

E. Counterbalance Shaft Assembly: 1. Barrel: Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width

2. Spring Balance: Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque. Fabricate from minimum 3/16 inch (5 mm) steel plate with permanently lubricated ball or roller

bearings at rotating support points to support counterbalance shaft assembly and form end a. SpectraShield® Coating System (Color Selected by Architect): Zirconium treatment followed by baked—on polyester powder coat, color as selected by Architect from manufacturer's standard color range; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363

pencil hardness: H or better Minimum 24 gauge galvanized steel with reinforced top and bottom edges. Provide minimum

1/4 inch (6.35 mm) steel intermediate support brackets as required to prevent excessive sag. a. SpectraShield® Coating System (Color Selected by Architect): 1) Zirconium treatment followed by baked—on polyester powder coat, with color as

(0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better H. Weatherstripping: Bottom Bar: a. Bottom Bar, Motor Operated Doors: Sensing/weather edge with neoprene astragal

extending full width of door bottom bar

3. Hood: Neoprene/rayon baffle to impede air flow above coil

4. Lintel Seal: Nylon brush seal fitted at door header to impede air flow

A. Manual Chain Hoist: Provide chain hoist operator with endless steel chain, chain pocket wheel

2. Guides: Replaceable vinyl strip on guides sealing against fascia side of curtain

selected by Architect from manufacturer's standard color range; minimum 2.5 mils

and guard, geared reduction unit, and chain keeper secured to guide. Fabricate gear box to completely enclose operating mechanism and be oil-tight. B. Motor — Continuous Use — Cornell Model SG (Super Duty Gear Head) Operator: The operator must not extend above or below the door coil when mounted front-of-coil. cULus listed (to comply with UL requirements in The United States and Canada). Totally Enclosed Fan Cooled gear head operator(s) rated (1/2) to (7 1/2) hp as recommended by door manufacture for size and type of door, 208 Volts, 3 Phase. Provide complete with electric motor and factory pre-wired motor control terminals, maintenance free solenoid actuated brake, emergency manual chain hoist provided up to 2 hp and control station(s). Motor shall be high starting torque, industrial type, with overload protection. Primary speed reduction shall be heavy-duty gears running in grease or oil bath with mechanical braking to hold the door in any position. When equipped, the emergency manual chain hoist assembly is automatically disengaged when motor is energized. A disconnect chain shall not be required to engage or release the manual chain hoist. Operator drive and door driven sprockets shall be provided with minimum #50 roller chain. Operator shall be capable of driving the door at a speed of 8 to 9 inches per second (20 to 23 cm/sec). Fully adjustable, driven linear screw type cam limit switch mechanism shall synchronize the operator with the door. The motor shall be removable without affecting the limit switch settings. The electrical contractor shall mount the control station(s) and supply the appropriate disconnect switch, all conduit and wiring per the overhead door wiring instructions.

C. Control Station: 1. Surface mounted: "Open/Close/Stop," push buttons with keyed lock—out, not masterkeyable;

Fail-safe, UL325-2010 Compliant Entrapment Protection for Motor Operation a. 2-wire, E.L.R. electric sensing/weather edge seal extending full width of door bottom bar. Provide a self—coiling cable connection to control circuit. b. NEMA 4X photo eye sensors consisting of a transmitter and receiver that are to be mounted within 6" (152.4 mm) of the floor, projecting an IR beam across the entire

width of the door. Electrical contractor to provide low voltage wiring from the transmitter and receiver to the door operator c. NEMA 1 photo eye sensors consisting of a transmitter and receiver that are to be mounted within 6" (152.4 mm) of the floor, projecting an IR beam across the entire width of the door. Electrical contractor to provide low voltage wiring from the

transmitter and receiver to the door operator.

D. Control Operation:

Momentary Contact to Close:

2.5 ACCESSORIES A. Locking:

1. Padlockable slide bolt on coil side of bottom bar at each jamb extending into slots in

B. Vision Panels: $10 \times 1 - 1/2 \times 3/4$ inch thick (254 x 38 x 19 mm) oval acrylic panes set with

cover to enclose exposed moving operating components at coil area of unit. Finish to match

double-sided foam glazing tape and fully contained within slat assembly. Refer to drawings for number and placement. Smaller vision panels are not acceptable. C. Interior Aesthetic Covers: 1. Operator [and Bracket Mechanism] Cover: Minimum 24 gauge galvanized steel sheet metal

guides. Provide interlock switches on Motor operated units

2. Trim Package: Minimum 16 gauge powder coated steel to match guides.

PART 3 EXECUTION 3.1 EXAMINATION

3.2 INSTALLATION

3.3 ADJUSTING

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates C. Commencement of work by installer is acceptance of substrate

A. General: Install door and operating equipment with necessary hardware, anchors, inserts, hangers

B. Follow manufacturer's installation instructions

and supports

A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion 3.4 CLEANING

A. Clean surfaces soiled by work as recommended by manufacturer

3.5 DEMONSTRATION A. Demonstrate proper operation to Owner's Representative

B. Instruct Owner's Representative in maintenance procedures

B. Remove surplus materials and debris from the site

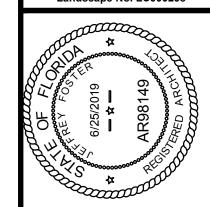
END OF SECTION



A Full Service A & E Firm 500 West Fulton Street

Ph: 407.322.6841 Plans Prepared By CPH, Inc. State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143 Architect, No. AA26000926 Landscape No. LC000298

Sanford, FL 32771



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Designed: J.F.

Drawn: R.G.

Job No.: N6601

Checked: J.F

Date: 4-2-19 © 2019

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THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

SECTION 08 7100 DOOR HARDWARE

PART 1 – GENERAL

1.1 SUMMARY:

- A. Section Includes: Finish Hardware for door openings, except as otherwise specified
- 1. Door hardware for steel (hollow metal) doors.
- 3. Door hardware for wood doors.

2. Door hardware for aluminum doors.

- 4. Door hardware for other doors indicated.
- Keved cylinders as indicated.
- B. Related Sections:
- Division 6: Rough Carpentry.
- 2. Division 8: Hollow Metal Doors and Frames.
- C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
- 1. Builders Hardware Manufacturing Association (BHMA)
- 2. NFPA 101 Life Safety Code
- 3. NFPA 80 -Fire Doors and Windows
- 4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
- 5. UL10C Positive Pressure Fire Test of Door Assemblies
- 6. ANSI-A117.1 Accessible and Usable Buildings and Facilities 2009
- 7. DHI /ANSI A115.IG Installation Guide for Doors and Hardware
- 8. Florida Building Codes for Hurricane (NOA) for exterior openings.
- D. Intent of Hardware Groups
- 1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
- 2. Where items of hardware aren't definitely or correctly specified, are required for completion of the Work, a written statement of such omission, error, or other discrepancy to be submitted to Architect, prior to date specified for receipt of bids for clarification by addendum; or, furnish such items in the type and quality established by this specification, and appropriate to the service intended.
- E. Allowances
- 1. Refer to Division 1 for allowance amount and procedures.
- F. Alternates
- 1. Refer to Division 1 for Alternates and procedures.
- 1.2 SUBSTITUTIONS: A. Comply with Division 1
- 1.3 SUBMITTALS:
- A. Comply with Division 1
- B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be
- C. Product Data: Manufacturer's specifications and technical data including the following:
- 1. Detailed specification of construction and fabrication. 2. Manufacturer's installation instructions.
- 3. Wiring diagrams for each electric product specified. Coordinate voltage with
- electrical before submitting.
- 4. Submit 6 copies of catalog cuts with hardware schedule.
- 5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2
- D. Shop Drawings Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.
- List groups and suffixes in proper sequence.
- 2. Completely describe door and list architectural door number.
- 3. Manufacturer, product name, and catalog number
- 4. Function, type, and style. Size and finish of each item.
- 6. Mounting heights.
- 7. Explanation of abbreviations and symbols used within schedule.
- 8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.
- E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of
- 1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.
- F. Samples: (If requested by the Architect)
- 1. 1 sample of Lever and Rose/Escutcheon design, (pair).
- 2. 3 samples of metal finishes
- G. Contract Closeout Submittals: Comply with Division 1 including specific requirements
- 1. Operating and maintenance manuals: Submit 3 sets containing the following.
- a. Complete information in care, maintenance, and adjustment, and data on
- repair and replacement parts, and information on preservation of finishes. b. Catalog pages for each product.
- c. Name, address, and phone number of local representative for each manufacturer.
- d. Parts list for each product.

low voltage and 110 volts.

- 2. Copy of final hardware schedule, edited to reflect, "As installed".
- 3. Copy of final keying schedule
- 4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both
- 5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
- 1.4 QUALITY ASSURANCE
- A. Comply with Division 1.
- 1. Exterior Openings Severe Windstorm Components testing: Listed and labeled by a testing and inspecting agency acceptable to authority having jurisdiction, based on testing according to ANSI A250.13. Further compliance with Florida Building Codes for Hurricane (NOA) for Exterior Openings.
- 2. Statement of qualification for distributor and installers.
- 3. Statement of compliance with regulatory requirements and single source responsibility
- 4. Distributor's Qualifications: Firm with 3 years experience in the distribution of commercial hardware.
- a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying
- b. Hardware Schedule shall be prepared and signed by an AHC.
- 5. Installer's Qualifications: Firm with 3 years experienced in installation of similar

- hardware to that required for this Project, including specific requirements indicated. 6. Regulatory Label Requirements: Provide testing agency label or stamp on hardware
- a. Provide UL listed hardware for labeled and 20 minute openings in conformance with requirements for class of opening scheduled.
- b. Underwriters Laboratories requirements have precedence over this specification
- 7. Single Source Responsibility: Except where specified in hardware schedule, furnish

Architect in writing and furnish hardware in compliance with the Specification unless

- products of only one manufacturer for each type of hardware. B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the
- 1.5 DELIVERY, STORAGE, AND HANDLING

for labeled openings.

A. Packing and Shipping: Comply with Division 1.

otherwise directed in writing by the Architect.

- 1. Deliver products in original unopened packaging with legible manufacturer's identification.
- 2. Package hardware to prevent damage during transit and storage.
- 3. Mark hardware to correspond with "reviewed hardware schedule"

4. Deliver hardware to door and frame manufacturer upon request.

- B. Storage and Protection: Comply with manufacturer's recommendations.
- 1.6 PROJECT CONDITIONS:
- A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
- B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.
- 1.7 WARRANTY: A. Refer to Conditions of the Contract
- B. Manufacturer's Warranty:
- 1. Closers: Limited Lifetime Warranty
- 2. Exit Devices: Limited Lifetime Warranty 3. Locksets & Cylinders: Limited Lifetime Warranty
- 4. All other Hardware: One year.
- 1.8 OWNER'S INSTRUCTION:
- A. Instruct Owner's personnel in operation and maintenance of hardware units.
- 1.9 MAINTENANCE:
- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals Section.
- 1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.
- 2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer
- 1. Weatherstrip shall be resilient seal of (Neoprene, Polyurethane, Vinyl, Pile, Nylon 3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra service materials.
- B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.
- PART 2 PRODUCTS 2.1 MANUFACTURERS:

Rain Drip

2.2 MATERIALS:

A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 1

Item:	Manufacturer:	Approved:
Hinges	Stanley	Bommer, McKinney
Locksets	Stanley	No Substitutions
Cylinders	Stanley	No Substitutions
Exit Devices	Stanley	Yale, DormaKaba, Sargent
Closers	Stanley	Norton, LCN, Yale
Protection Plates	Trimco	Burns, Rockwood
Door Stops	Trimco	Burns, Rockwood

4. Minimum of 2 permanently lubricated non—detachable bearings on standard weight

13. Furnish 3 hinges per leaf to 7 foot 6 inch height. Add one for each additional 30

14. Tested and approved by BHMA for all applicable ANSI Standards for type, size,

3. UL listed (3 hour) for "A" label single door applications (4' by 8') UL10C/UBC

5. California State Reference Code (formerly Title 19 - Fire Marshal) Hurricane

8. Backset: 2 3/4" (70mm) square standard; 2 3/8" (60mm) and 5" (127mm)

9. Latch bolt: keyed/exterior 1/2" (12.7mm) steel throw; interior 1/2" (12.7mm)

available Strike: ANSI strike 1 1/4" (32mm) x 4 7/8" (124mm) standard; other

spring latch; 3/4" throw option for hurricane compliance or fire—rated double door

6. Exposed trim: pressure cast zinc, plated to match finish designation

options available Door prep: 2 1/8" (54mm) diameter cross bore

10. Latch faceplate: 1 1/8" (29mm) x 2 1/4" (57mm) standard

1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1

3. ANSI A117.1 Section 404.2.6 Accessibility Code (ADA compliant)

4. UL/cUL listed (3 hour) for "A" label door applications (8' by 8')

7. Standard door thickness: 1 3/8" (35mm) — 2" (51mm)

hinge and 4 permanently lubricated bearing on heavy weight hinges.

6. Non Removable Pin screws shall be slotted stainless steel screws.

Threshold & Gasketing National Guard Reese, K.N. Crowder

A. Hinges: Shall be Five Knuckle Ball bearing hinges

5. Equip with easily seated, non-rising pins.

3. Bearing shell is to be consistent shape with barrel.

7. Hinges shall be full polished, front, back and barrel.

9. Bearing assembly is to be installed after plating.

10. Sufficient size to allow 180-degree swing of door

B. Heavy Duty Cylindrical Type Locks & Latchsets: (K2 QCL100)

2. ANSI A117.1 Accessibility Code (ADA compliant)

11. Furnish five knuckles with flush ball bearings

12. Provide hinge type as listed in schedule.

inches in height or fraction thereof.

15. UL10C listed for Fire rated doors.

1. ANSI/BHMA A156.2 Series--Grade 1

7-2 (1997) positive pressure rated

Compliant — Miami DADA N.O.A.

2. ANSI/BHMA A156.3 Series--Grade 1

function and finish

4. UL10B pressure rated

applications

C. Exit Devices:

Template screw hole locations

2. Bearings are to be fully hardened.

8. Hinge pin is to be fully plated.

- National Guard Substitutions permitted with prior approval
 - B. Powder coat door closers to match other hardware, unless otherwise noted. C. Aluminum items shall be finished to match predominant adjacent material. Seals to
 - coordinate with frame color.

2.3 FINISH:

A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.

5. California Administrative Code Title 24 compliant for Sierra and Summit lever trims

7. SVR and CVR latch bolt: stainless steel 1/2" (12.7mm) throw Fasteners: wood

11. Standard door thickness: 1 3/4" (44.5mm) Standard backset: 2 7/8" (62mm) to

12. SVR and CVR stile width: 3 1/2" (89mm) minimum SVR and CVR door height: 7'

2. ANSI A117.1 Accessibility Code (ADA Compliant) UL/cUL listed (3 hour) for

7. Arms & brackets: Tri-pack standard: additional heavy-duty arms optional Arms

11. Fasteners: Wood and machine screws standard; sex nuts and self—reaming,

E. Door Stops: Provide a dome floor or wall stop for every opening as listed in

F. Kickplates: Provide with four beveled edges ANSI J102, 10 inches high by width less 2

G. Seals: All seals shall be finished to match adjacent frame color. Seals shall be

H. Weather-Stripping: Provide at head and jambs only those units where resilient or

I. Door Bottoms/Sweeps: Surface mounted or concealed door bottom where listed in the

1. Door seal shall be resilient seal of (Neoprene, Polyurethane, Nylon Brush, Silicone)

J. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½" for

K. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit

A. Designations used in Schedule of Finish Hardware — 3.05, and elsewhere to indicate

traditional U.S. finishes shown by certain manufacturers for their products

hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with

conformance with ADA requirements. Furnish as specified and per details. Provide

flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel

furnished as listed in schedule. Material shall be UL listed for labeled openings.

inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk

1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.

3. Coordinate reinforcement of walls where wall stop is specified.

face of doorstop Rim stile width: 4 ¼" (108mm) minimum

screws, machine screws, and sex bolts standard Head cap and end cap: zinc

Hurricane Compliant - Miami-DADA N.O.A. for Rim and SVR options

6. Rim latch bolt: stainless steel 3/4" (19mm) standard

8. Dogging: hex key and cylinder dogging available

9. 36" field sizeable to 32" door

10. 48" field sizeable to 36" door

1. ANSI/BHMA A156.4 Series--Grade 1

3. UL10c positive pressure rated

6. Covers: Metal and plastic available

Heat-treated carbon steel

self—tapping screws standard

8. Springs: High-impact hand-drawn steel wire

9. Pinions: Heat-treated chrome molybdenum steel

10. Cylinders: Heat—treated free—cutting carbon steel

2. Provide fastener suitable for wall construction.

arm mounted closers install weatherstrip first.

2. UL10C Positive Pressure rated seal set when required.

2. UL10C Positive Pressure rated seal set when required.

fasteners and screws suitable for floor conditions.

where any type of seals occur.

4. UL10b pressure rated

and 8' options

self-closing

5. Body: Cast iron

the hardware sets.

screws to match finish.

Brush, Silicone)

D. Door Closers shall:

- B. Cylinders, removable and interchangeable core system: Best CORMAX™ Patented 7—pin.
- C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."
- D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested
- E. Furnish keys in the following quantities:
 - 1. 1 each Grand Masterkeys 2. 4 each Masterkevs
 - 3. 2 each Change keys each keyed core
 - 4. 15 each Construction masterkeys
- 5. 1 each Control keys
- F. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.
- G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.
- PART 3 EXECUTION
- 3.1 EXAMINATION
- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
- 1. Do not proceed until unsatisfactory conditions have been corrected.
- 3.2 HARDWARE LOCATIONS:
- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.

1. Recommended Locations for Builder's Hardware for Standard Steel Doors and

- Frames, by the Door and Hardware Institute (DHI). 2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
- 3. WDMA Industry Standard I.S.—1A—04, Industry Standard for Architectural wood flush 3.3 INSTALLATION:
- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- B. Conform to local governing agency security ordinance.
- C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.

- 1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.
- 3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT
- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
- 1. Check and adjust closers to ensure proper operation.
- 2. Check latchset, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
- a. Verify levers are free from binding.
- b. Ensure latchbolts and dead bolts are engaged into strike and hardware is 3. Report findings, in writing, to architect indicating that all hardware is installed and
- functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.
- 3.5 SCHEDULE OF FINISH HARDWARE: A. Schedule is indicated on the Drawings
- Schedule

ΕI	1:		
	3 - FBB191 x 4.5" x 4.5" x NRP x US32D	Hinges	Stanley
	1 - HC8804 x ET TRIM x mortise cylinder (LA Keywo	y)Exit Device	Sargent
	1 – 281 x AL	Door Closer	Sargent
	1 - 896 x 3'0" x AL	Threshold	National Guard
	1 - 5050B x 17'	Gasket	National Guard
	1 - 16 x 40" x AL	Rain Drip	National Guard

END OF SECTION

SECTION 09 9113 EXTERIOR PAINTING

- PART 1 GENERAL 1.01 SECTION INCLUDES
- A. Surface preparation.
- B. Field application of paints, stains, and varnishes. C. Scope: Finish exterior surfaces exposed to view, unless fully factory—finished and
- unless otherwise indicated, including the following: 1. Exposed surfaces of steel lintels and ledge angles.
- 2. Mechanical and Electrical:
- view, including factory—finished materials. D. Do Not Paint or Finish the Following Items:
- 1. Items factory—finished unless otherwise indicated; materials and products having factory—applied primers are not considered factory finished.
- 2. Items indicated to receive other finishes. 3. Items indicated to remain unfinished.

a. On the roof and outdoors, paint equipment that is exposed to weather or to

- 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
- 5. Non-metallic roofing and flashing. 6. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, zinc, and
- 7. Floors, unless specifically indicated.
- 8. Glass.
- 9. Concealed pipes, ducts, and conduits. 1.02 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this section.

- 1.03 REFERENCE STANDARDS A. 40 CFR 59, Subpart D — National Volatile Organic Compound Emission Standards for
- Architectural Coatings; U.S. Environmental Protection Agency; current edition. B. ASTM D16 — Standard Terminology for Paint, Related Coatings, Materials, and
- Applications; 2014. C. MPI (APSM) — Master Painters Institute Architectural Painting Specification Manual;
- Current Edition, www.paintinfo.com. D. SSPC-SP 1 - Solvent Cleaning; 2015.

2. MPI product number (e.g. MPI #47).

- E. SSPC-SP 2 Hand Tool Cleaning; 1982 (Ed. 2004).
- F. SSPC—SP 6 Commercial Blast Cleaning; 2007. 1.04 SUBMITTALS
- A. See Section 01 3000 Administrative Requirements, for submittal procedures.

B. Contractor to provide Architect with an interior paint systems schedule.

- C. Product Data: Provide complete list of products to be used, with the following information for each:
- 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
- 3. Cross—reference to specified paint system(s) product is to be used in; include description of each system.
- 4. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed. D. Samples: Submit three paper "draw down" samples, 8—1/2 by 11 inches in size,
- illustrating range of colors available for each finishing product specified.
- 1. Where sheen is specified, submit samples in only that sheen. 2. Where sheen is not specified, submit each color in each sheen available.
- samples, to eliminate sheens definitely not required. 4. Allow 30 days for approval process, after receipt of complete samples by

sheets (MSDS), care and cleaning instructions, touch—up procedures, repair of painted

3. Where sheen is not specified, discuss sheen options with Architect before preparing

- 5. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data
- and finished surfaces, and color samples of each color and finish used. F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 01 6000 - Product Requirements, for additional provisions.

2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed. 3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products

- specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 3 years experience and approved by manufacturer.
- 1.06 DELIVERY, STORAGE, AND HANDLING A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code. coverage surface preparation, drying time, cleanup requirements, color
- designation, and instructions for mixing and reducing. C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's
- instructions. 1.07 FIELD CONDITIONS
- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 50 degrees F for exterior; unless required otherwise by manufacturer's instructions. E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.
- 2.01 MANUFACTURERS A. Provide paints and finishes from the same manufacturer to the greatest extent
- possible. 1. In the event that a single manufacturer cannot provide specified products, minor
- specified procedures for substitutions 2. Substitution of MPI—approved products by a different manufacturer is preferred
- over substitution of unapproved products by the same manufacturer. 3. Substitution of a different paint system using MPI—approved products by the same manufacturer will be considered.

exceptions will be permitted provided approval by Architect is obtained using the

- 1. Benjamin Moore & Co: www.benjaminmoore.com.
- 2. Glidden Professional, a product of PPG Architectural Coatings: www.gliddenprofessional.com.
- 4. Pratt & Lambert Paints: www.prattandlambert.com.

C. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

3. PPG Paints: www.ppgpaints.com.

PART 2 PRODUCTS

B. Paints:

6. Valspar Corporation: www.valsparpaint.com

5. Sherwin-Williams Company: www.sherwin-williams.com.

- D. Substitutions: See Section 01 6000 Product Requirements.
- 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing

properties, and capable of drying or curing free of streaks or sags.

A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.

2. Supply each paint material in quantity required to complete entire project's work from a single production run.

3. Do not reduce, thin, or dilute paint or finishes or add materials unless such

B. Volatile Organic Compound (VOC) Content: 1. Provide paints and finishes that comply with the most stringent requirements

procedure is specifically described in manufacturer's product instructions.

specified in the following: a. 40 CFR 59, Subpart D——National Volatile Organic Compound Emission Standards for Architectural Coatings.

b. Architectural coatings VOC limits of the State in which the Project is located.

2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR

- 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having
- C. Flammability: Comply with applicable code for surface burning characteristics. D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.
- 1. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner. 2. Extend colors to surface edges; colors may change at any edge as directed by
- 2.03 PAINT SYSTEMS EXTERIOR A. Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including primed metal.
- 1. Two top coats and one coat primer. 2. Top Coat(s): Exterior Light Industrial Coating, Water Based; MPI #161, 163, or
- B. Transparent Finish on Concrete Floors: 1 coat stain. Sealer: Water Based for Concrete Floors; MPI #99.
- 1) Substitutions: Section 01 6000 Product Requirements. Sealer Sheen:
- a. Eggshell: MPI gloss level 3; use this sheen at all locations. C. Masonry, Opaque, Latex, 2 Coat

2.05 ACCESSORY MATERIALS

PART 3 EXECUTION

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

a. Products:

 One coat of block filler. 2. Semi-gloss: One coat of latex enamel.

E. Colors: As indicated in Color Schedule.

- D. Masonry/Concrete, Tranparent, Sealer 2 Coat: 1. Semi-gloss: One coat of latex enamel.
- 2.04 PRIMERS A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
- 2. Interior/Exterior Quick Dry Alkyd Primer for Metal; MPI #76. 3. Water Based Primer for Galvanized Metal; MPI #134.

Interior/Exterior Latex Block Filler; MPI #4.

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- 3.01 EXAMINATION A. Verify that surfaces are ready to receive work as instructed by the product

- B. Examine surfaces scheduled to be finished prior to commencement of work. Report
- C. If substrate preparation is the responsibility of another installer, notify Architect of
- unsatisfactory preparation before proceeding.

D. Test shop-applied primer for compatibility with subsequent cover materials.

1. Masonry, Concrete, and Concrete Masonry Units: 12 percent.

- E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
- 2. Concrete Floors and Traffic Surfaces: 8 percent.
- 3.02 PREPARATION
- A. Clean surfaces thoroughly and correct defects prior to application. B. Prepare surfaces using the methods recommended by the manufacturer for achieving
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat. E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium

the best result for the substrate under the project conditions

- phosphate and bleach. Rinse with clean water and allow surface to dry.
- 1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
- 2. Prepare surface as recommended by top coat manufacturer. 3. Clean surfaces with pressurized water. Use pressure range of 600 to 1500 psi at 6 to 12 inches. Allow to dry.
- G. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid—alkali balance is achieved. Allow to dry.
- H. Galvanized Surfaces: 1. Remove surface contamination and oils and wash with solvent according to
- SSPC-SP 1. 2. Prepare surface according to SSPC-SP 2.
- I. Ferrous Metal:

3.03 APPLICATION

3.04 CLEANING

- 1. Solvent clean according to SSPC-SP1. 2. Shop—Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch—up patches inconspicuous. Clean surfaces with
- solvent. Prime bare steel surfaces. Re-prime entire shop-primed item. 3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC—SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and

C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is

- electrical components and paint separately. B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before
- E. Apply each coat to uniform appearance. F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.

G. Sand metal surfaces lightly between coats to achieve required finish.

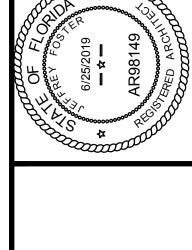
- H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat. I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings
- containers, and remove daily from site. 3.05 PROTECTION

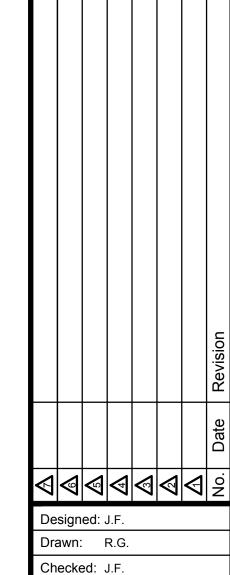
A. Protect finishes until completion of project.

B. Touch—up damaged finishes after Substantial Completion. END OF SECTION

A. Collect waste material that could constitute a fire hazard, place in closed metal

Engineer No. 3215 Surveyor No. LB7143 Architect, No. AA26000926 Landscape No. LC000298





Job No.: N6601

© 2019

Date: 4-2-19

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THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Sheet No.

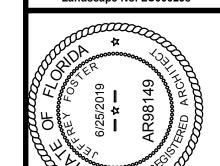
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any condition that may potentially effect proper application.

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SECTION 10 2800 3.04 PROTECTION TOILET, BATH, AND LAUNDRY ACCESSORIES A. Protect installed accessories from damage due to subsequent construction operations. RART 1 GENERAL END OF SECTION 1.01 SECTION INCLUDES SECTION 10 4400 A. Accessories for toilet rooms. FIRE PROTECTION SPECIALTIES PART 1 GENERAL ∖B. Grab bars. 1.02 RELATED REQUIREMENTS 1.01 SECTION INCLUDES 1.03 REFERENCE STANDARDS A. Fire extinguishers. A.\ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic B. Accessories. \Stainless Steel Tubing for General Service; 2015. 1.02 RELATED REQUIREMENTS B. ASTM A653/A653M — Standard Specification for Steel Sheet, Zinc—Coated (Galvanized) A. Drawings and general provisions of the Contract, including Contractual Conditions and ok Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015. Divisions 1 Specification Sections, apply to this section. C. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless 1.03 REFERENCE STANDARDS Stelel Sheet, Strip, Plate, and Flat Bar; 2015. A. NFPA 10 — Standard for Portable Fire Extinguishers; 2013. D. ASTM C1036 - Standard Specification for Flat Glass; 2011. B. UL (DIR) — Online Certifications Directory; current listings at database.ul.com. E. ASTM C1048 — Standard Specification for Heat—Strengthened and Fully Tempered/Flat 1.04 SUBMITTALS A. See Section 01 3000 - Administrative Requirements, for submittal procedures. F. ASTM \$1503 - Standard Specification for Silvered Flat Glass Mirror; 2008 (Reapproved B. Shop Drawings: Indicate cabinet physical dimensions, rough—in measurements for 2013). recessed cabinets, wall bracket mounted measurements, and location. 1.04 ADMINISTRATIVE REQUIREMENTS C. Product Data: Provide extinguisher operational features, color and finish, and A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling anchorage details. supports, and reinforcement of toilet partitions to receive anchor attachments. D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening 1.05 SUBMITTALS coordination requirements A. See Section 01 3000 - Administrative Requirements, for submittal procedures E. Maintenance Data: Include test, refill or recharge schedules and re-certification B. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods. PART 2 PRODUCTS C. Samples: Submit two samples of each accessory, illustrating color and finish. 2.01 MANUFACTURERS D. Manufacturer's Installation Instructions: Indicate special procedures and conditions A. Fire Extinguishers: requiring special\ attention. 1. Ansul, a Tyco Business: www.ansul.com. PART 2 PRODUCTS 2. Nystrom, Inc: www.nystrom.com. 2.01 MANUFACTURERS 3. Pyro-Chem, a Tyco Business: www.pyrochem.com. A. Toilet Accessories 4. Strike First Corporation of America: www.strikefirstusa.com. 1. AJW Architectural Products: www.ajw.com. 5. Substitutions: See Section 01 6000 - Product Requirements. 2. ASI - American Specialties, Inc; ____: www.americanspecialties.com. B. Fire Extinguisher Cabinets and Accessories: 3. Bradley Corporation: www.bradleycorp.com. 1. Ansul, a Tyco Business: www.ansul.com. 4. Bobrick, Inc; www.bobrick.com. 2. JL Industries, Inc: www.jlindustries.com. 5. Substitutions: Section 01 6000 - Product Requirements. Larsen's Manufacturing Co: www.larsensmfg.com. B. All items of each type to be made by the same manufacturer 4. Potter-Roemer: www.potterroemer.com. 2.02 MATERIALS 5. Pyro-Chem, a Tyco Business: www.pyrochem.com. A. Accessories — General: Shop assembled, free of dents and scratches and packaged 6. Strike First Corporation of America; EL-Elite Architectural Series Fire Extinguisher complete with anchors and fittings, steel anchor plates, adapters, and anchor Cabinet, Non-Fire Rated: www.strikefirstusa.com. components for installation. 7. Substitutions: See Section 01 6000 - Product Requirements. 2.02 FIRE EXTINGUISHERS 2. Fabricate units made of metal sheet of seamless sheets, with flat surfaces. A. Fire Extinguishers — General: Comply with product requirements of NFPA 10 and B. Keys: Provide 10 keys for each accessory to Owner; master key lockable accessories. applicable codes, whichever is more stringent. C. Stainless Steel Sheet: ASTM A666, Type 304. 1. Provide extinguishers labeled by UL (DIR) for the purpose specified and indicated. D. Stainless Steel Tubing: ASTM A\(\frac{1}{2}\)69/A269M, Type 304/or 316. B. Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gage. E. Galvanized Sheet Steel: Hot-dipped galvanized steel/sheet, ASTM A653/A653M, with 1. Class: A:B:C. G90/Z275 coating. 2. Size: 20 pound. F. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with 3. Finish: Baked polyester powder coat, color as selected by architect. silvering, protective and physical characteristics complying with ASTM C1503. 4. Temperature range: Minus 40 degrees F to 120 degrees F. G. Mirror Glass: Tempered safety glass, ASTM C104\$; and ASTM C1036 Type I, Class 1, Quality Q2, with silvering as required.\ A. Extinguisher Brackets: Formed steel, galvanized and enamel finished. H. Adhesive: Two component epoxy type√ waterpropf. B. Extinguisher Theft Alarm: Battery operated alarm, 10 second delay for disarming, I. Fasteners, Screws, and Bolts: Hot dip/galvanized; tamper-proof; security type. activated by opening cabinet door. J. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer PART 3 EXECUTION for component and substrate. 3.01 EXAMINATION 2.03FINISHES A. Verify existing conditions before starting work. A. Stainless Steel: No. 4 Brushed finish, unless otherwise noted. B. Verify rough openings for cabinet are correctly sized and located. B. Back paint components where contact is Made with building finishes to prevent 2.04 TOILET ROOM ACCESSORIES A. Install in accordance with manufacturer's instructions. Toilet Paper Dispenser: Double roll, surface mounted bracket type, stainless ste B. Secure rigidly in place. spindleless type for tension spring delivery designed to prevent theft of tissue roll. C. Place extinguishers in cabinets and on wall brackets. 1. Attached Purse Shelf: 0.03 inch satin finished stainless steel, with rolled or END OF SECTION formed edge at front. B. Paper Towel Dispenser: Electric, roll/paper type. 1. Cover: Stainless steel. 2. Paper Discharge: Touchless automatic. SECTION 13 3419 3. Capacity: 6 inch diameter rol/ METAL BUILDING SYSTEMS 4. Mounting: Semi recessed. PART 1 GENERAL 5. Power: Battery operated. 1.01 SECTION INCLUDES 6. Refill Indicator: Illuminated /refill indicator. A. Manufacturer—engineered, shop—fabricated structural steel building frame. Manufacturers: a. American Specialties, Inc: www.americanspecialties.com. C. Exterior doors, windows, and louvers. b. Georgia-Pacific: www.gppro.com. 1.02 RELATED REQUIREMENTS c. Global Plastics: www.globalplastics.com. A. Section 07 9200 — Joint Sealants: Sealing joints between accessory components and d. Substitutions: Section 01 6000 - Product Requirements. wall system. C. Soap Dispenser: Soap lather dispenser, wall—mounted, surface, with stainless steel B. Section 08 1113 — Hollow Metal Doors and Frames. cover and horizontal stain/less steel tank and working parts; \push type soap valve, C. Section 08 35 23 - Overhead Coiling Doors check valve, and window/gage refill indicator, tumbler lock. 1.03 REFERENCE STANDARDS 1. Minimum Capacity: /48 ounces. A. AISC 360 - Specification for Structural Steel Buildings; 2010. D. Mirrors: Stainless steel framed, 1/4 inch thick annealed float\glass; ASTM C1036.

B. Insulated Metal wall and roof panels including soffits and gutters and downspouts.

B. ASTM A36/A36M — Standard Specification for Carbon Structural Steel; 2014. 1. Annealed Float Glass: Silvering, protective and physical characteristics in

> Steel Hardware; 2009. D. ASTM A307 — Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014.

E. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2014.

C. ASTM A153/A153M — Standard Specification for Zinc Coating (Hot—Dip) on Iron and

F. ASTM A325M - Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength (Metric); 2014.

G. ASTM A500/A500M — Standard Specification for Cold—Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013. H. ASTM A501/A501M — Standard Specification for Hot-Formed Welded and Seamless

Carbon Steel Structural Tubing: 2014. I. ASTM A529/A529M — Standard Specification for High—Strength Carbon—Manganese Steel of Structural Quality; 2014.

J. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy—Coated by the Hot—Dip Process; 2010 (Reapproved 2015). K. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2014a.

L. ASTM C1107/C1107M — Standard Specification for Packaged Dry, Hydraulic—Cement

Grout (Nonshrink); 2014a. M. AWS A2.4 — Standard Symbols for Welding, Brazing, and Nondestructive Examination;

N. AWS D1.1/D1.1M — Structural Welding Code — Steel; 2015 (Errata 2016). O. IAS AC472 — Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2012.

P. MBMA (MBSM) — Metal Building Systems Manual; Metal Building Manufacturers Association; 2012. Q. SSPC—Paint 20 — Zinc—Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002

(Ed. 2004). R. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition,

Including All Revisions. 1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene one week before starting work of this section. 1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures. B. Product Data: Provide data on profiles, component dimensions, fasteners. C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections; wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage, installation; framing anchor bolt settings, sizes, and locations from datum, foundation loads; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and

D. Samples: Submit two samples of precoated metal panels for each color selected, 12 by 12 inch in size illustrating color and texture of finish.

E. Manufacturer's Instructions: Indicate preparation requirements, anchor bolt placement. F. Erection Drawings: Indicate members by label, assembly sequence, and temporary erection bracina. G. Manufacturer Qualification Statement: Provide documentation showing metal building

manufacturer is accredited under IAS AC472. 1. Include statement that manufacturer designs and fabricates metal building system as integrated components and assemblies, including but not limited to primary structural members, secondary members, joints, roof, and wall cladding components specifically designed to support and transfer loads and properly assembled components form a complete or partial building shell.

H. Project Record Documents: Record actual locations of concealed components and utilities. 1.06 QUALITY ASSURANCE

A. Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of

1. Design Engineer Qualifications: Licensed in the State in which the Project is 2. Conform to applicable code for submission of design calculations as required for acquiring permits.

3. Cooperate with regulatory agency or authority and provide data as requested.

B. Perform work in accordance with AISC 360 and MBMA (MBSM). C. Perform welding in accordance with AWS D1.1/D1.1M. D. Manufacturer Qualifications: Company specializing in the manufacture of products

similar to those required for this project.

1. Not less than 3 years of documented experience 2. Accredited by IAS in accordance with IAS AC472.

E. Erector Qualifications: Company specializing in performing the work of this section with minimum 5 years experience.

A. See Section 01 7800 — Closeout Submittals, for additional warranty requirements. B. Metal building system manufacturer shall provide a written weathertightness warranty for a maximum of 20 years against leaks in standing roof panels, arising out of or caused by ordinary wear and tear under normal weather and atmospheric conditions.

1. Warranty shall be signed by both the metal roof system manufacturer and the metal roof system installer. C. Metal building system manufacturer shall provide a written warranty for 25 years against perforation of metal roof panels due to corrosion under normal weather and

atmospheric conditions D. Metal building system manufacturer shall provide a paint film written warranty for 25 years against cracking, peeling, chalking, and fading of exterior coating on painted roof and wall panels.

1. Warranty shall be signed by metal building system or roof system manufacturer and state that the coating contains 70 percent "Kynar 500" or "Hylar 5000" resin. 2. Metal building system manufacturer shall warrant that the coating shall not peel,

3. For a period of 25 years, chalking shall not exceed ASTM D 4214, #8 rating and shall not fade more than 5 color difference units in accordance with ASTM D 2244 E. Metal Building System Manufacturer's Certification: Metal building system manufacturer shall submit a signed written Certification 1 week before bid date, stating that the metal roof system manufacturer or approved representative will provide warranties and Inspection and Report Service specified in this specification section.

1. Warranty terms shall be submitted with bid PART 2 PRODUCTS 2.01 MANUFACTURERS

> A. Metal Buildings: 1. Rhino Steel Building Systems: www.rhinobldg.com. Contact Mr Gary Spray Jr. at 888-320-7466 or 940-484-6746 for quote on metal building. Do not quote other metal building suppliers without first contacting Mr Gary Spray Jr.

2. Substitutions: See Section 01 6000 - Product Requirements. 2.02 METAL BUILDING A. Primary Framina: Rigid frame of rafter beams and columns, canopy beams,

intermediate columns, and braced end frames, and wind bracing. B. Secondary Framing: Purlins, and other items detailed.

C. Wall System: Preformed metal panels of vertical profile, with sub-girt framing/anchorage assembly and liner panels, and accessory components.

D. Roof System: Preformed metal panels oriented parallel to slope, with sub-girt framing/anchorage assembly, insulation, and liner panels, and accessory components. 2.03MATERIALS - FRAMING

A. Structural Steel Members: ASTM A36/A36M. B. Structural Tubing: ASTM A500/A500M, Grade B cold—formed. C. Plate or Bar Stock: ASTM A529/A529M, Grade 50.

D. Anchor Bolts: ASTM A307, galvanized to ASTM A153/A153M.

E. Bolts, Nuts, and Washers: ASTM A325 or ASTM A325M, Type 1, galvanized to ASTM A153/A153M, Class C. F. Welding Materials: Type required for materials being welded.

G. Primer: SSPC—Paint 20, zinc rich. H. Grout: ASTM C1107/C1107M, Non-shrink type, premixed compound consisting of

non-metallic aggregate, cement, water reducing and plasticizing agents, capable of developing minimum compressive strength of 2400 psi in two days and 7000 psi in 28

2.04MATERIALS - WALLS AND ROOF A. Steel Sheet: ASTM A792/A792M aluminum—zinc alloy coated to AZ50/AZM150. B. Insulation:

1. Faced Blanket Insulation in indicated U—value on drawings: Use with option of using thermal blocks to eliminate "thermal short circuits".

C. Joint Seal Gaskets: Manufacturer's standard type. D. Fasteners: Manufacturer's standard type, galvanized to comply with requirements of ASTM A153/A153M, finish to match adjacent surfaces when exterior exposed.

E. Sealant: ASTM C920, elastomeric sealant with movement capability of at least plus/minus 50 percent; 100 percent silicone; for exposed applications, match adjacent colors as closely as possible.

F. Trim, Closure Pieces, Caps, Flashings, Gutters, Downspouts, Rain Water Diverter, Fascias, and Infills: Same material, thickness and finish as exterior sheets; brake formed to required profiles.

2.05 ACCESSORY COMPONENTS

A. Doors and Frames: Specified in Section 08 1113. B. Overhead Coiling Doors: Specified in Section 08 35 23. C. Windows: Specified in Section 08 5113.

D. Wall Louvers: where indicated type Y blade design, same finish as adjacent material, with steel mesh bird screen and frame, blank sheet metal at unused portions.

2.06 DESIGN CRITERIA A. Installed Thermal Resistance of Wall System: U-value as indicated on drawings per Florida Building COde (2014) 5th Edition Energy Conservation Code requirments.

B. Installed Thermal Resistance of Roof System: U-value as indicated on drawings per Florida Building COde (2014) 5th Edition Energy Conservation Code requirments. C. Design members to withstand dead load, and design loads due to pressure and suction of wind calculated in accordance with applicable code.

D. Design members to withstand UL 580 Uplift Class 90. E. Exterior wall and roof system shall withstand imposed loads with maximum allowable deflection of 1/90 of span.

F. Provide drainage to exterior for water entering or condensation occurring within wall or roof system.

G. Permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of 100

H. Size and fabricate wall and roof systems free of distortion or defects detrimental to appearance or performance. 2.07 FABRICATION - FRAMING

A. Fabricate members in accordance with AISC 360 for plate, bar, tube, or rolled structural shapes.

B. Anchor Bolts: Formed with bent shank, assembled with template for casting into concrete.

C. Provide wall opening framing for doors, windows, and other accessory components. 2.08FABRICATION - WALL AND ROOF PANELS

A. Siding and roofing: Minimum 24 gage metal, of profile indicated, lapped edges fitted

with continuous gaskets

B. Liner: Minimum24 gage metal thickness, flat profile indicated, lapped V edges fitted with continuous aaskets

C. Flashings, Closure Pieces, Fascia: Same material and finish as adjacent material, profile to suit system.

D. Fasteners: To maintain load requirements and weather tight installation, same finish as cladding, non-corrosive type. 2.09FABRICATION - GUTTERS AND DOWNSPOUTS

A. Fabricate of same material and finish as roofing metal. B. Form gutters and downspouts and scuppers of indicated profile and size indicated to collect and remove water. Fabricate with connection pieces.

D. Fabricate support straps of same material and finish as roofing metal, color as selected.

C. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion

2.10FINISHES A. Framing Members: Clean, prepare, and galvanize to ASTM A123. Do not prime

B. Exterior Surfaces of Wall Components and Accessories: Precoated enamel on steel of modified silicone finish. Color as selected from manufacturer's standard range. C. Interior Surfaces of Wall Components and Accessories: Precoated enamel on steel of modified silicone finish. Color as selected from manufacturer's standard range.

PART 3 EXECUTION 3.01 FXAMINATION A. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors

are in correct position 3.02 ERECTION - FRAMING A. Erect framing in accordance with AISC 360.

B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent

bracing. Locate braced bays as indicated. C. Set column base plates with non—shrink grout to achieve full plate bearing.

D. Do not field cut or alter structural members without approval. E. After erection, prime welds, abrasions, and surfaces not shop primed.

3.03ERECTION - WALL AND ROOF PANELS

A. Install in accordance with manufacturer's instructions. B. Exercise care when cutting prefinished material to ensure cuttings do not remain on

finish surface. C. Fasten cladding system to structural supports, aligned level and plumb. D. Locate end laps over supports. End laps minimum 2 inches. Place side laps over

E. Provide expansion joints where indicated.

F. Use concealed fasteners

G. Install insulation and vapor retarder. Place wire mesh under vapor retarder for support between framing member H. Install sealant and gaskets, providing weather tight installation.

3.04ERECTION — GUTTERS AND DOWNSPOUTS A. Rigidly support and secure components. Join lengths with formed seams sealed

watertight. Flash and seal gutters to downspouts. B. Apply bituminous paint on surfaces in contact with cementitious materials.

C. Slope gutters minimum 1/16 inch/ft. D. Connect downspouts to storm sewer system.

E. Install splash pans under each downspout. 3.05INSTALLATION - ACCESSORY COMPONENTS IN WALL SYSTEM

A. Install door frames, doors, overhead doors, and windows and glass in accordance with manufacturer's instructions. 3.06 TOLERANCES

A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.

B. Siding and Roofing: 1/8 inch from true position. END OF SECTION

> SECTION 31 3116 TERMITE CONTROL

PART 1 GENERAL 1.01 SECTION INCLUDES

A. Chemical soil treatment. 1.02 RELATED REQUIREMENTS 1.03 REFERENCE STANDARDS

A. Title 7, United States Code, 136 through 136y — Federal Insecticide, Fungicide and Rodenticide Act; 1947 (Revised 2001).

A. See Section 01 3000 — Administrative Requirements, for submittal procedures.

B. Product Data: Indicate toxicants to be used, composition by percentage, dilution schedule, intended application rate. C. Test Reports: Indicate regulatory agency approval reports when required.

D. Manufacturer's Application Instructions: Indicate caution requirements . E. Manufacturer's Certificate: Certify that toxicants meet or exceed specified

requirements. F. Certificate of compliance from authority having jurisdiction indicating approval of

G. Record moisture content of soil before application. H. Warranty: Submit warranty and ensure that forms have been completed in Owner's

1.05 QUALITY ASSURANCE A. Installer Qualifications: Company specializing in performing this type of work.

1. Having minimum of 5 documented experience. 2. Approved by manufacturer of treatment materials. 3. Licensed in the State in which the Project is located.

1.06 WARRANTY A. See Section 01 7800 — Closeout Submittals, for additional warranty requirements. B. Provide five year installer's warranty against damage to building caused by termites. 1. Include coverage for repairs to building and to contents damaged due to building

damage. Repair damage and, if required, re—treat. PART 2 PRODUCTS

2.01 MATERIALS A. Manufacturers

1. Bayer Environmental Science Corp: www.backedbybayer.com/pest-management.

2. FMC Professional Solutions: www.fmcprosolutions.com. 3. Syngenta Professional Products: www.syngentaprofessionalproducts.com. 4. Substitutions: See Section 01 6000 - Product Requirements.

B. Toxicant Chemical: EPA approved; synthetically color dyed to permit visual identification

C. Diluent: Recommended by toxicant manufacturer. 2.02 MIXES

A. Mix toxicant to manufacturer's instructions. PART 3 EXECUTION

3.01 EXAMINATION A. Verify that soil surfaces are unfrozen, sufficiently dry to absorb toxicant, and ready to

B. Verify final grading is complete. 3.02 APPLICATION

A. Comply with requirements of U.S. EPA and applicable state and local codes.

B. Spray apply toxicant in accordance with manufacturer's instructions. C. Apply toxicant at following locations:

3.03 PROTECTION

 Under Slabs-on-Grade. D. Under slabs, apply toxicant immediately prior to installation of vapor barrier.

E. Apply extra treatment to structure penetration surfaces such as pipe or ducts, and soil penetrations such as grounding rods or posts.

F. Re—treat disturbed treated soil with same toxicant as original treatment. G. If inspection or testing identifies the presence of termites, re—treat soil and re—test.

A. Do not permit soil grading over treated work. FND OF SECTION

Engineer No. 3215 Surveyor No. LB7143 Architect, No. AA26000926 Landscape No. LC000298

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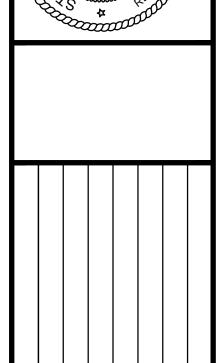
Sanford, FL 32771

Ph: 407.322.6841

Plans Prepared By:

CPH, Inc.

State of Florida Licenses



Designed: J.F.

Drawn: R.G.

Job No.: N6601

Checked: J.F

Date: 4-2-19 C 2019 3

TION CIFIC

THIS SHEET NOT VALID FOR **CONSTRUCTION WITHOUT** COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR

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MASTER LEGEND.

compliance with ASTM C1503.

tamperproof hanging system; No.4 finish.

backp/ate for concealed attachment, satin finish.

A. Verlify existing conditions before starting work.

B. Verify exact location of accessories for installation.

C. Verify that field measurements are as indicated on drawings.

A. Deliver inserts and rough—in frames to site for timely installation.

B. Install plumb and level, securely and rigidly anchored to substrate.

₿. Provide templates and rough—in measurements as required.

E. Grab Bars: Stainless steel, nonslip grasping surface finish.

3. Frame: 0.05 in/ch angle shapes, with mitered and welded and ground corners, and

1. Heavy Duty/Grab Bars: Floor supports are acceptable if necessary to achieve load

b. Dimensions: 1-1/2 inch outside diameter, minimum 0.125 inch wall thickness,

exposed flange mounting, 1-1/2 inch clearance between wall and\inside of

4. Backing: Full∮mirror sized, minimum 0.03 inch galvanized stee√ sheet and

a. Push/₱ull Point Load: Minimum 1000 pound—force, minimum.

F. Sanitary Mapkin Disposal Unit: Stainless steel, surface-mounted, self-closing door,

locking bottom panel with full—length stainless steel piano—type hinge, removable

A. Robe ⊭ook: Heavy—duty stainless steel, double—prong, rectangular—shaped bra¢ket and

D. Confirm installation of blocking, reinforcing plates, and concealed anchors in walls and

A. Install accessories in accordance with manufacturers' instructions in locations indicated

C. Mounting Heights: As required by accessibility regulations and as indicated on the

c. Length and Configuration: As indicated on drawings.

2. Size: As indicated on drawings.

nonabsorptive/filler material.

2.05 OTHER ACCESSORIES

PART 3 EX≢CUTION

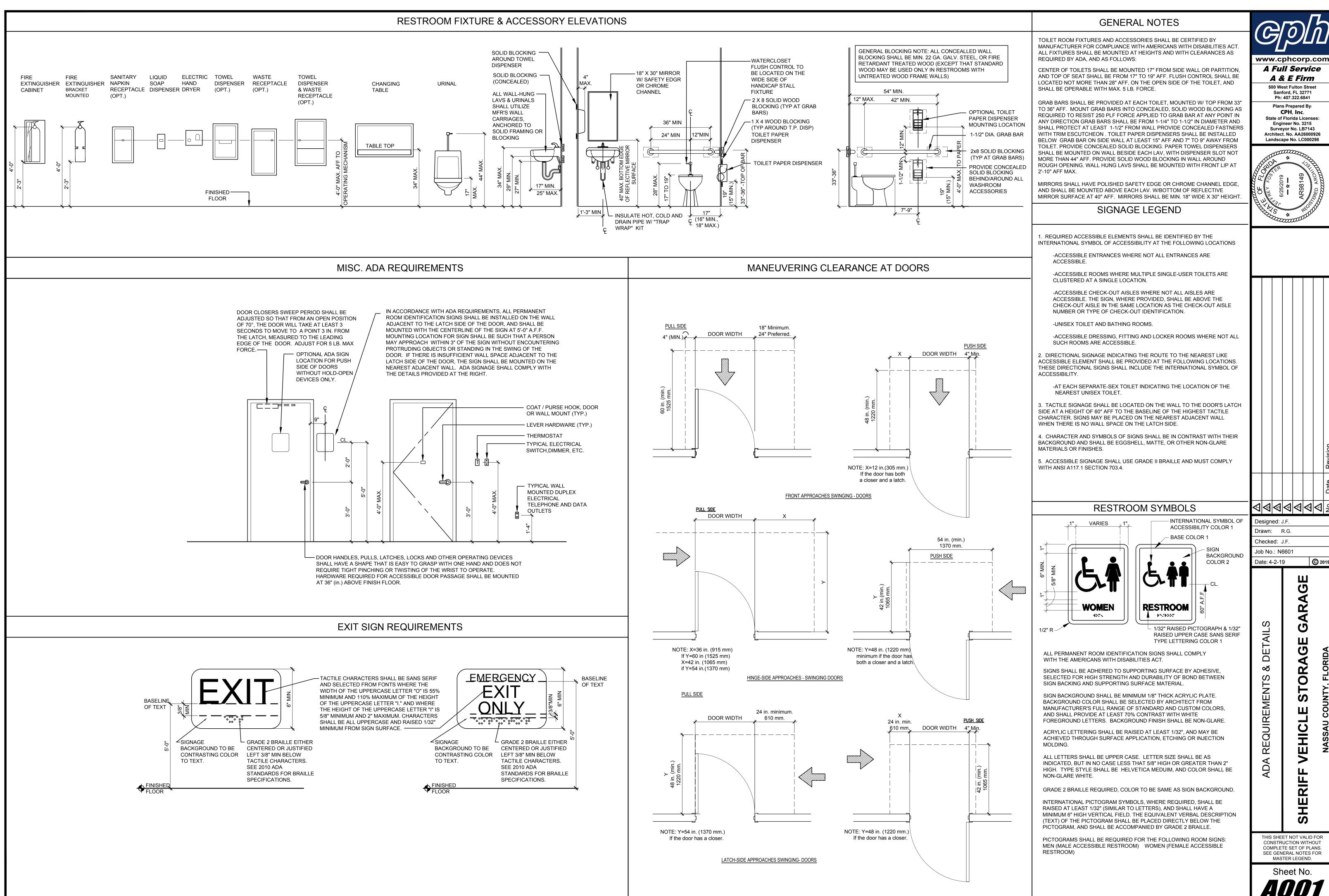
3.01 EXAMINATION

3.02 PREPARATION

3.0 INSTALLATION

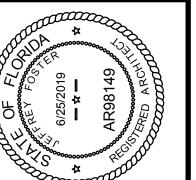
on the drawings.

drawings, unless otherwise indicated.



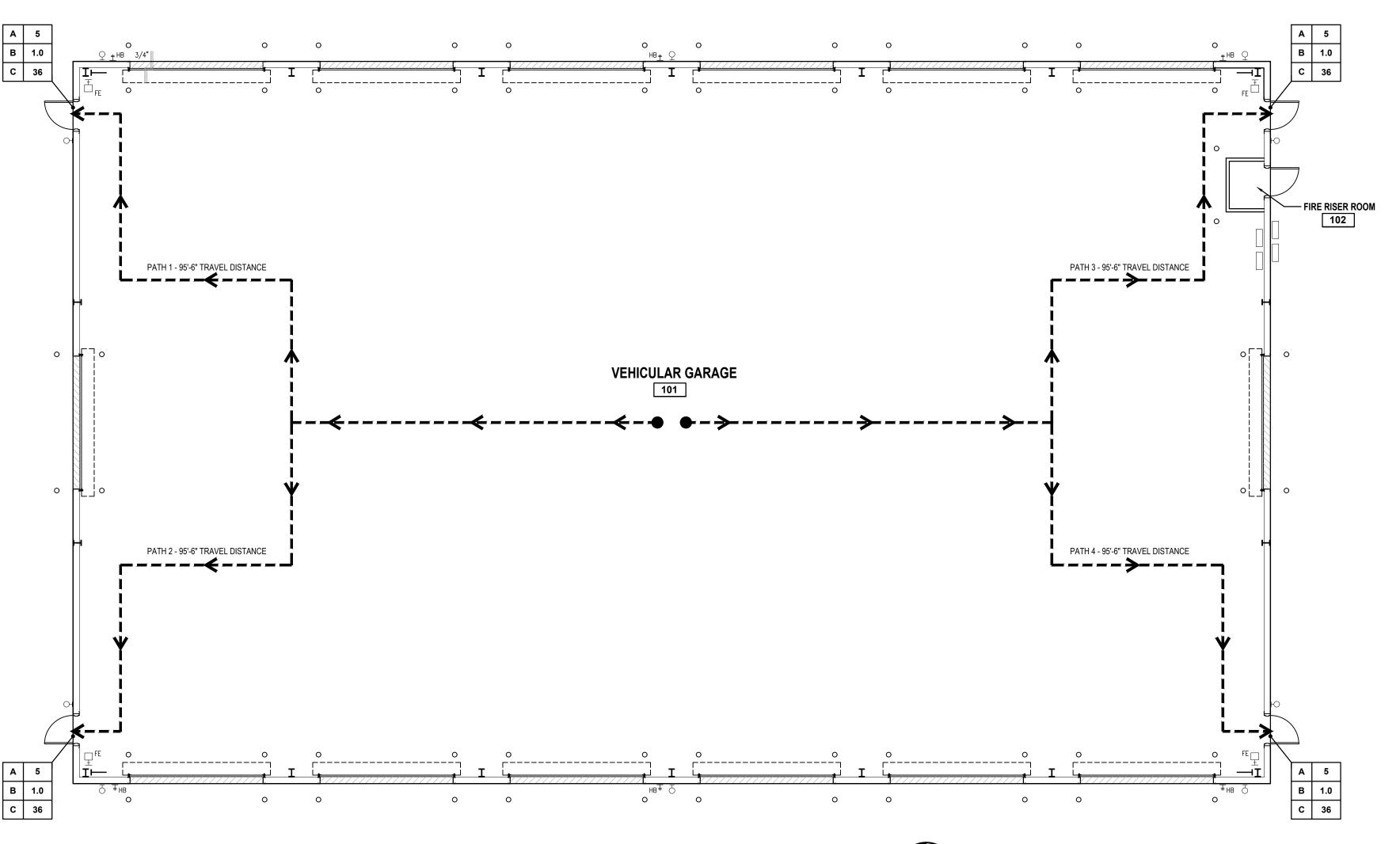
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A Full Service



THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR







SYMBOL LEGEND

A OCCUPANT LOAD AT THIS EXIT

ON HOOK

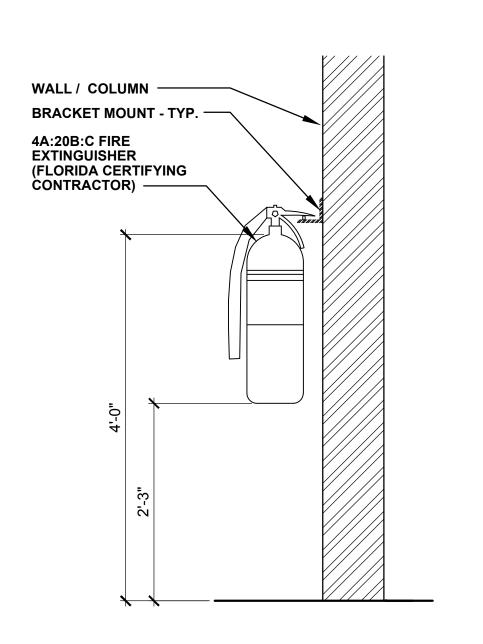
START OF TRAVEL

B REQUIRED EXIT WIDTH

C PROVIDED EXIT WIDTH

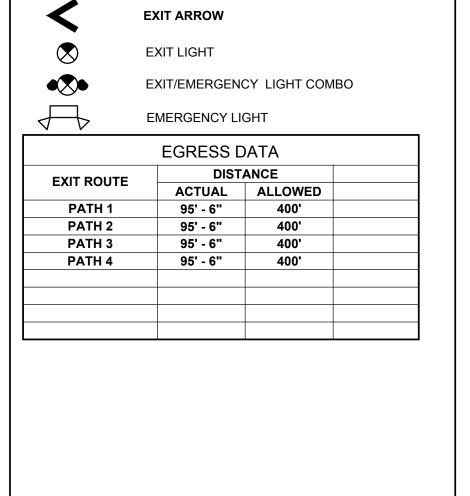
TRAVEL PATH

EGRESS LEGEND



BRACKET MOUNTED FIRE EXTINGUISHER

SCALE: NOT TO SCALE



FIRE EXTINGUISHER / 20LB TYPE ABC

LI	FE SAFETY NOTES
1.	EXIT LIGHTS SHALL BE PROVIDED AT ALL DOORS ALONG THE EGRESS PATH. REFER TO ELECTRICAL DRAWINGS

- 2. EMERGENCY LIGHTING SHALL BE PROVIDED AS REQUIRED BY CODE. REFER TO ELECTRICAL DRAWINGS 3. EACH SINGLE SWINGING DOOR SHALL PROVIDE 33" MIN. CLEAR
- WHEN THE DOOR OR GATE IS FULLY OPEN. 4. ALL DOOR HARDWARE SHALL MEET ALL APPLICABLE CODE REQUIREMENTS FOR EGRESS, HANDICAP ACCESSIBILITY AND
- FIRE RATED ASSEMBLY. REFER TO DOOR AND HARDWARE
- 5. REFER TO DIMENSION FLOOR PLAN FOR EXACT DIMENSIONS.
- 6. ALL SIDEWALKS SHALL HAVE A 5% MAX. SLOPE IN THE DIRECTION OF TRAVEL AND A 2% MAX. CROSS SLOPE. CONTRACTOR SHALL CONFIRM THAT ALL SIDEWALKS MEET THESE REQUIREMENTS.

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LIFE SAFETY INFORMATION:	De	sign	ed: 、	J.F.				
BUILDING CODES:	Dra	awn:	F	R.G.				
SEE COVER SHEET FOR CODE EDITIONS USED FOR THIS PROJECT	Ch	ecke	ed: .	J.F.				

BUILDING DATA: OCCUPANCY CLASSIFICATION: GROUP S2 (NEW NON-COMBUSTIBLE WAREHOUSE ADDITION) - 9,576 SQ.FT.

CONSTRUCTION TYPE: IIB, FULLY FIRE SPRINKLED **NUMBER OF STORIES: BUILDING HEIGHT:** 26'-9" OVERALL BUILDING AREA: 9,576 GROSS S.F. NON-SEPARATED OCCUPANCY: S-2 OCCUPANCY REQUIRED SEPARATIONS: NONE REQUIRED

MEANS OF EGRESS (FBC 6th Ed. 2017) 500 SF PER OCCUPANT (GROSS) STORAGE (WAREHOUSE) AREAS

MAXIMUM EXIT ACCESS TRAVEL DISTANCE DISTANCE COMMON PATH S2-OCCUPANCY (SPRINKLED) 400 FEET 100 FEET

OCCUPANCY CALCULATIONS OCCUPANT OCCUPANT OCCUPANCY AREA SPACE / USE PER S.F. LOAD S2 9,576 **VEHICLE STORAGE** 20 PEOPLE 9,576 ALLOWABLE BUILDING AREAS & HEIGHTS FOR A TYPE IIB CONSTRUCTION TYPE / SPRINKLED

PRIMARY USE ACTUAL AREA ALLOWED AREA STATUS ALLOWED HEIGHT S2 OCCUPANCY 9,576 S.F. < 78,000 S.F. OK 4 STORIES, 75FT.

TOTAL EXIT WIDTH REQUIRED: TOTAL OCCUPANT LOAD x 0.2 INCHES PER PERSON = INCHES REQUIRED ACTUAL

20 PEOPLE x 0.2 INCHES PER PERSON = 4.0 INCHES REQUIRED EXIT WIDTH PROVIDED

4 EGRESS DOORS: TOTAL PROVIDED 36 INCHES CLEAR WIDTH @ EACH DOOR 144 INCHES CLEAR WIDTH PROVIDED

PANIC HARDWARE NOT REQUIRED PER 1008.1.10 DOORS DO NOT NEED TO SWING IN THE DIRECTION OF EGRESS AS EACH DOOR SERVES LESS THAN 50 OCCUPANTS PER 1008.1.2

MINIMUM CORRIDOR WIDTH REQUIRED = 44" PER TABLE 1018.2 5'-0" WIDE CORRIDORS PROVIDED.

CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. COMMON PATH OF EGRESS: 100 FT FOR S2 SEE GENERAL NOTES FOR MASTER LEGEND.

Sheet No.

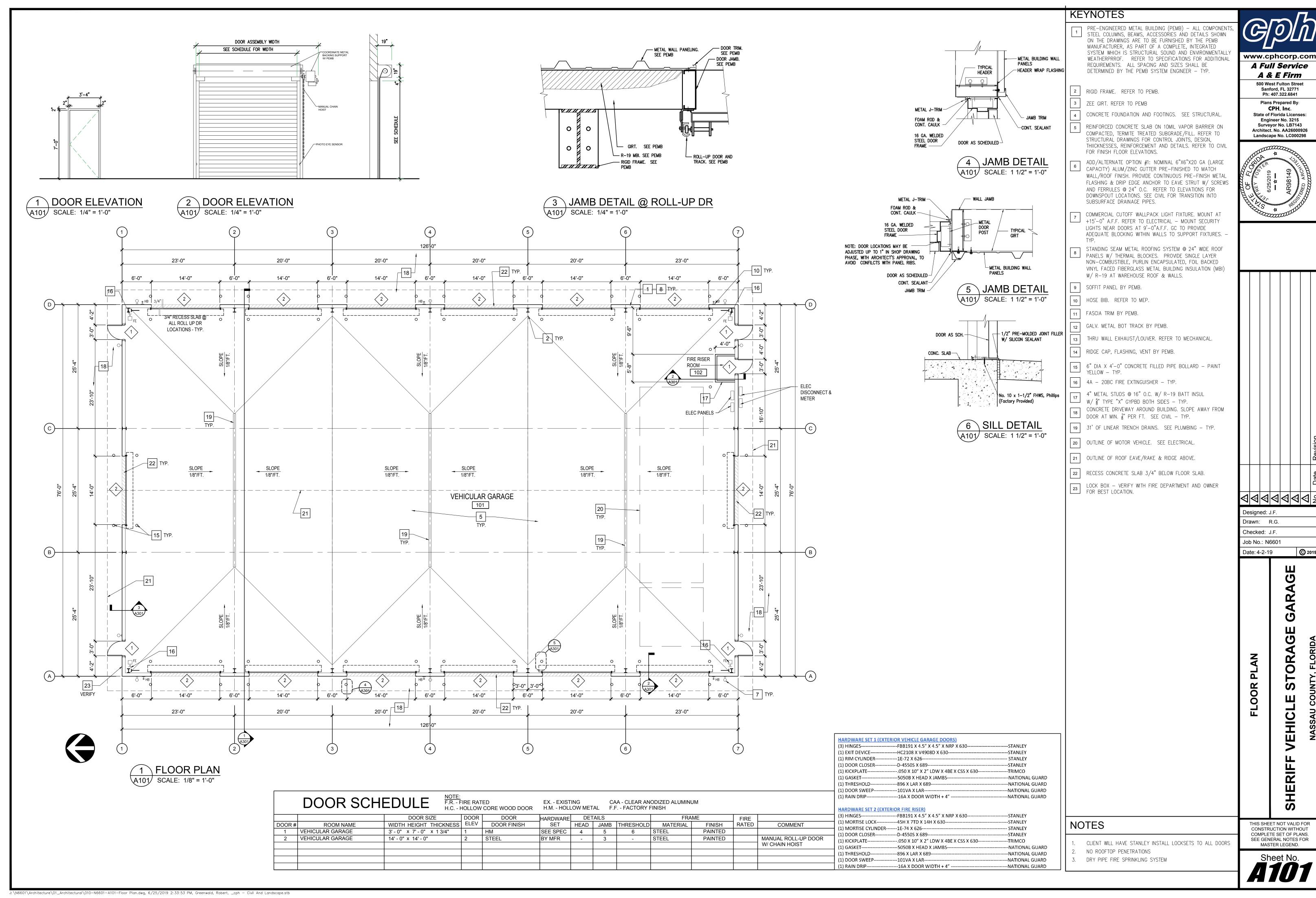
Job No.: N6601

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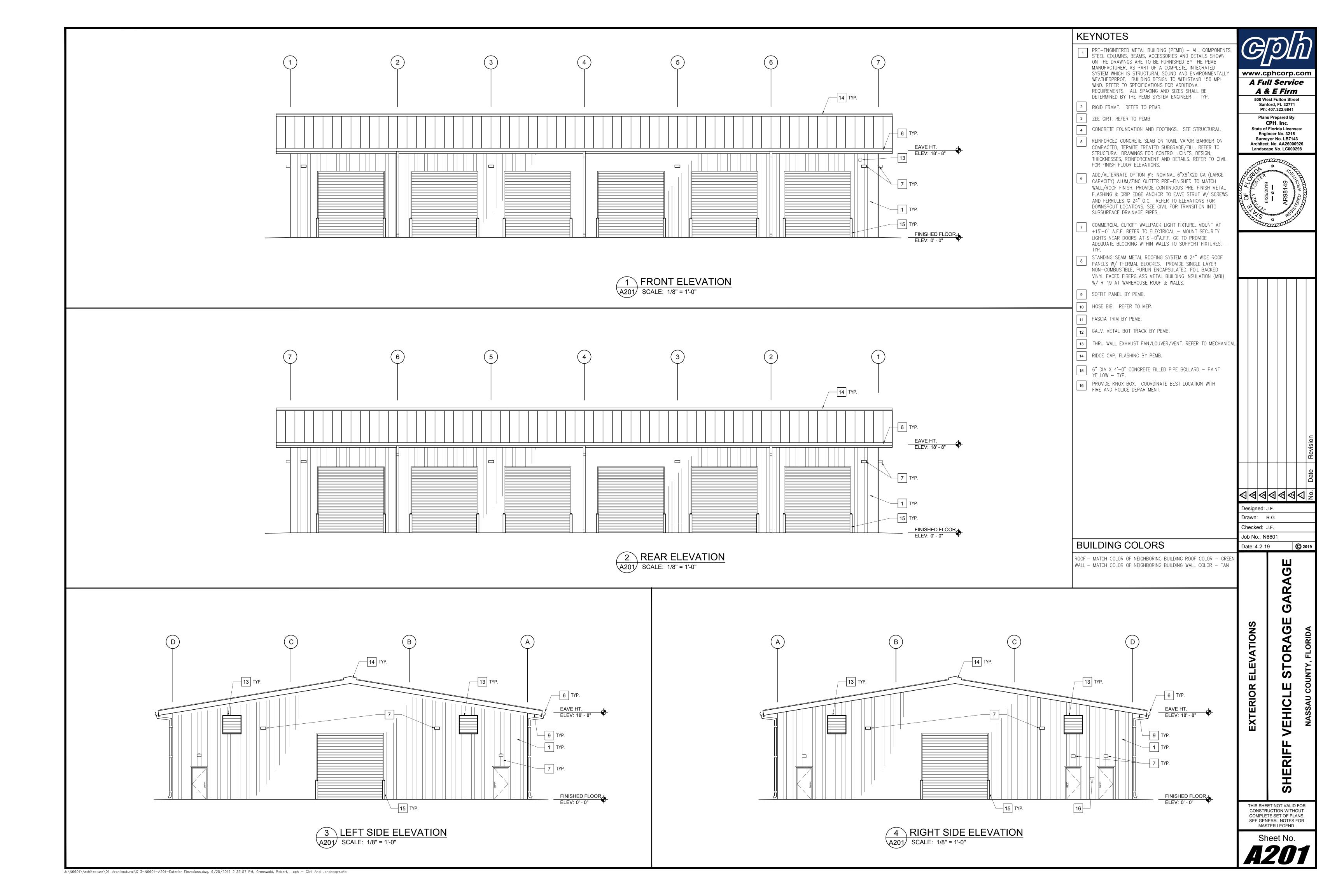
Date: 4-2-19

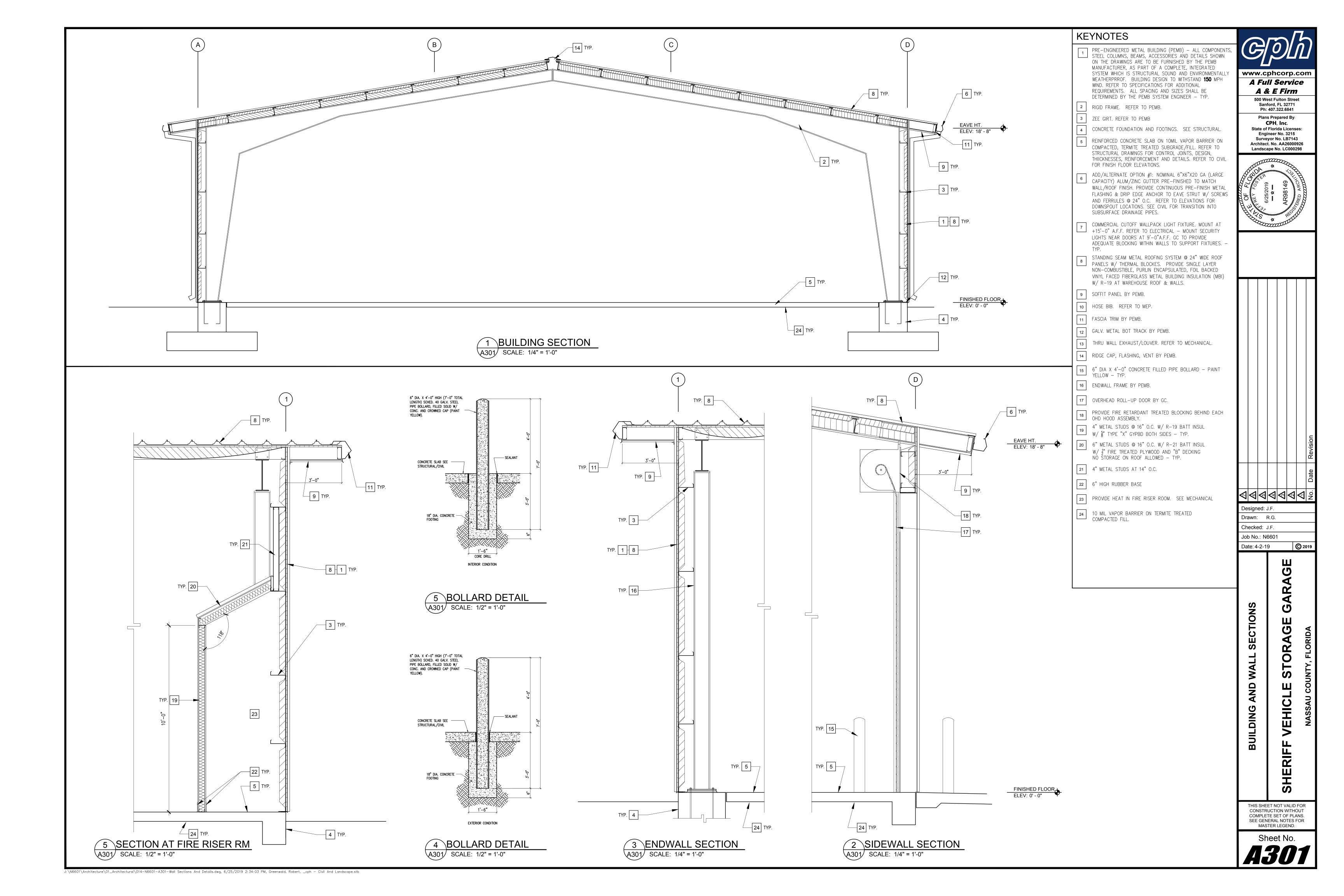
A Full Service A & E Firm 500 West Fulton Street Sanford, FL 32771 Ph: 407.322.6841

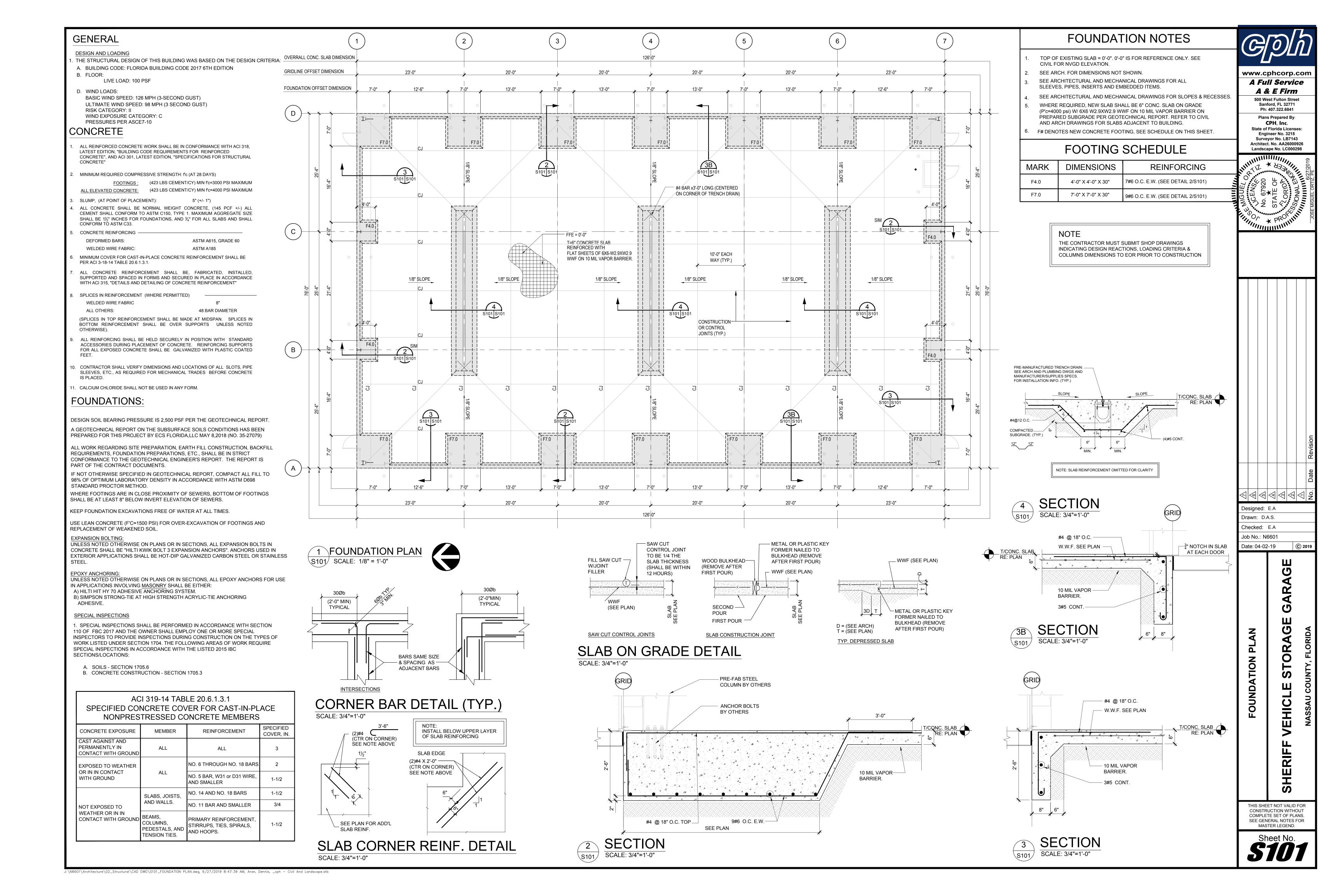
Plans Prepared By: CPH, Inc. State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926 Landscape No. LC000298



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GENERAL MECHANICAL REQUIREMENTS

DEEINITIONS

(FURNISH): SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS.

(INSTALL): OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS.

(PROVIDE): FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED

(UNO)OR (U.N.O.): UNLESS NOTED OTHERWISE.

SAFETY:

THE CONTRACTOR SHALL MAINTAIN A SAFE WORK ENVIRONMENT AT ALL TIMES. COMPLY WITH ALL OSHA, NIOSH, DOT, STATE, AND LOCAL REQUIREMENTS REGARDING SAFE HANDLING, STORING, TRANSPORTING, AND DISPENSING OF CHEMICALS. MAINTAIN AND DISPLAY MSDS INFORMATION FOR ALL CHEMICAL PRODUCTS. PROVIDE ALL NECESSARY MEANS TO MAINTAIN SAFE WORKING CONDITIONS, INCLUDING VENTILATION FANS, FIRE EXTINGUISHERS, EYE PROTECTION, RESPIRATORS, PROTECTIVE CLOTHING, VENTILATION, ETC. ALL EQUIPMENT AND MATERIALS USED TO IMPLEMENT THE WORK SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING ALL RECOMMENDED SAFETY PRECAUTIONS. MAINTAIN A PROPER FIRE WATCH FOR ALL OPERATIONS WHERE SPARKS, FLAMES, OR OTHER SOURCES OF FIRE ARE PRODUCED. FOR ALL MATERIALS CONTAINING SOLVENTS, MAINTAIN THE RECOMMENDED VENTILATION OF THE AREA TO PREVENT THE ACCUMULATION OF VAPORS WHICH POSE A HEALTH OR FIRE HAZARD.

COMPLETE SYSTEMS:

THE DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF EACH UTILITY, WHETHER OR NOT ALL SUCH MATERIALS AND APPURTENANCES ARE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS. THE INSTALLED SYSTEM SHALL BE COMPLETE IN EVERY WAY AND FUNCTIONING ACCORDING TO THE DESIGN INTENT.

THE CONTRACTOR SHALL VERIFY PROJECT CONDITIONS TO INSURE THAT THE WORK WILL FIT INTO THE STRUCTURE IN THE MANNER INTENDED ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO FABRICATION OR PERFORMING ANY WORK IN THE AREA INVOLVING THE DIFFERENCES.

NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS OR NOTES RELATING TO THE AREA. PROVIDE ALL SAW CUTTING, EXCAVATION, TRENCHING, SHORING, COMPACTING, DE-WATERING, ETC. REQUIRED FOR THE PROJECT, WHETHER OR NOT SHOWN ON THE DRAWINGS. ALL LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC., INDICATED ON THE AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE TO THE PLANS SUBJECT TO BUILDING CONSTRUCTION AND INTERFERENCES WITH OTHER TRADES.

PERFORM ALL WORK NECESSARY TO PREPARE THE STRUCTURE FOR THE INSTALLATION OF THE WORK. ALL HOLES, OPENINGS AND DAMAGED MATERIALS CREATED DURING CONSTRUCTION SHALL BE REPAIRED AND FINISHED BY EXPERIENCED WORKMEN.

PROVIDE ALL WALL AND FLOOR PENETRATIONS REQUIRED TO COMPLETE INSTALLATION. ALL PENETRATIONS SHALL BE PATCHED AND FINISHED TO MATCH SURROUNDING SURFACES AND FINISHES. ALL EQUIPMENT OR PIPE PENETRATIONS THROUGH WALL AND FLOORS SHALL BE SLEEVED AND SEALED SO AS TO BE WATER AND AIR TIGHT.

COORDINATION AND WORKMANSHIP:

ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. VERIFY VOLTAGE AND ALL ELECTRICAL REQUIREMENTS OF MECHANICAL EQUIPMENT AND SYSTEMS WITH DIV. 26 CONTRACTOR PRIOR TO ORDERING. ALL MATERIALS SHALL BE FABRICATED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER. THE OWNER AND ENGINEER SHALL DETERMINE WHETHER WORKMANSHIP IS ACCEPTABLE. NO ALLOWANCES WILL BE MADE FOR REWORK OR DELAY DUE TO POOR WORKMANSHIP, COORDINATION DIFFICULTIES, OR INTERFERENCES BETWEEN INVOLVED TRADES.

RELATED WORK SPECIFIED ELSEWHERE

ALL DIVISION 1 REQUIREMENT, AND ALL TERMS AND CONDITIONS OF CONTRACT

REFER TO ELECTRICAL SPECIFICATION FOR ELECTRICAL WORK TO BE DONE IN CONJUNCTION WITH THE MECHANICAL WORK. THIS CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT, WIRING, JUNCTION BOXES, ETC., REQUIRED FOR HVAC CONTROLS, UNLESS SPECIFICALLY NOTED OTHERWISE.

SUBSTITUTIONS:

EQUIPMENT AND DESIGN OF SYSTEMS INDICATED ON THE DESIGN DRAWINGS AND WITHIN THESE SPECIFICATIONS SHALL BE CONSIDERED AS SPECIFIED STANDARD OF QUALITY. NO SUBSTITUTIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. ALL COSTS ARISING FROM A SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR MAKING THE SUBSTITUTION, INCLUDING VERIFICATION OF FIT AND ACCESS, FIELD-INSTALLED ACCESSORIES, SUPPORTS, ELECTRICAL REQUIREMENTS, AND REVISIONS TO DOCUMENTS (DESIGN COSTS).

CODES AND STANDARDS:

THE ENTIRE SYSTEM AND ALL COMPONENTS LISTED HEREIN SHALL MEET ALL STATE, COUNTY, AND LOCAL CODES AND ORDINANCES IN EVERY RESPECT. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND PAY ALL FEES.

PRODUCTS:

ALL EQUIPMENT, ETC., SHALL BE NEW UNLESS OTHERWISE NOTED, AND AS SPECIFIED FREE OF DEFECTS. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. OR E.T.L. LISTED.

SHOP DRAWINGS AND SUBMITTALS:

SUBMIT FOR ENGINEER'S APPROVAL, SHOP DRAWINGS, COORDINATION DRAWINGS, AND MANUFACTURER'S DATA FOR ALL NEW EQUIPMENT AND FIXTURES PRIOR TO PURCHASE AND/OR FABRICATION. WHERE QUALIFICATIONS AND/OR QUALITY ASSURANCE REQUIREMENTS ARE SPECIFIED, THE SUBMITTAL SHALL INCLUDE EVIDENCE THAT THE STATED REQUIREMENTS HAVE BEEN MET. INCLUDE QUALIFICATIONS AND CERTIFICATIONS OF PROPOSED TEST AND BALANCE SUBCONTRACTOR.

EQUIPMENT PERFORMANCE SHALL BE VERIFIED BY THE EQUIPMENT MANUFACTURER AS PART OF THE SUBMITTAL, PRIOR TO ORDERING. VERIFY EQUIPMENT VOLTAGE AND ELECTRICAL REQUIREMENTS OF THE EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT. SHOP DRAWINGS FOR EQUIPMENT REQUIRING ELECTRIC POWER OR CONTROL WIRING CONNECTIONS SHALL INCLUDE COMPLETE WIRING DIAGRAMS.

SUBMITTALS SHALL BE SUBMITTED IN PDF FORMAT AND TRANSMITTED ELECTRONICALLY. INCOMPLETE SUBMITTALS WILL BE RETURNED, UNCHECKED.

DO NOT ORDER EQUIPMENT OR PROCEED WITH THE WORK WITHOUT PRIOR APPROVED SUBMITTALS. EQUIPMENT OR WORK WHICH IS ORDERED OR INSTALLED WITHOUT PRIOR APPROVED SUBMITTALS SHALL, AT THE ENGINEER'S DISCRETION, BE REMOVED AT NO COST TO THE OWNER. NO ALLOWANCES WILL BE MADE FOR REWORK OR DELAY DUE TO NEGLECT OF REQUIRED APPROVAL PROCESS.

COORDINATION DRAWINGS:

SUBMIT 1/4 IN. SCALED DIMENSIONED LAYOUTS SHOWING THE ACCURATELY SCALED DUCTWORK AND PIPING AND THEIR RELATIONSHIP TO SPACE ENCLOSURE.

SHOW ALL OFFSETS AND FITTINGS NECESSARY TO COMPLETE THE DUCTWORK AND PIPING SYSTEMS, INCLUDING INSTALLATION BETWEEN AND THROUGH JOIST, ETC. SHOP DRAWINGS SHALL BE MACHINE DRAFTED BY PERSONS REGULARLY ENGAGED IN SUCH WORK.

DUCT DRAWINGS:

SHOW DUCT GAUGE, SIZES, HANGER METHODS, AND DUCT JOINT CONNECTION DETAILS. SHOW DUCT ELEVATIONS IN RELATION TO FLOOR, CEILING AND STRUCTURAL ELEMENTS. INDICATE ALL FIRE DAMPERS, ACCESS PANELS, VOLUME AND CONTROL DAMPERS, SMOKE DETECTORS, MECHANICAL EQUIPMENT, HOUSEKEEPING PADS, SPRINKLER HEADS, LIGHT FIXTURES, GRILLES AND DIFFUSERS, ETC. ON SHOP DRAWINGS. LOCATE ALL POWER VENTILATORS, AIR HANDLING EQUIPMENT, SMOKE DETECTORS, ETC., IN FULLY ACCESSIBLE LOCATIONS AS THEY RELATE TO LIGHTS, JOISTS, BEAMS, SPRINKLER MAINS, ETC. TO ENSURE SAFE UNRESTRICTED ACCESS FOR SERVICE AND MAINTENANCE.

RECORD DRAWINGS AND OPERATION / MAINTENANCE MANUALS:

PROVIDE THE OWNER A COMPLETE SET OF RECORD DRAWINGS AND OWNER OPERATION/ MAINTENANCE (O/M) MANUALS AT THE END OF THE PROJECT. PROJECT WILL NOT BE COMPLETE UNTIL ACCURATE RECORD DRAWINGS AND O/M MANUALS ARE DELIVERED.

THE RECORD DRAWINGS SHALL BE MACHINE DRAFTED, AND SHALL BE PROVIDED BOTH ON REPRODUCIBLE VELLUMS AND MAGNETIC MEDIA CAD FILES.

DRAWING FORMAT FOR THIS PROJECT SHALL BE AUTOCAD VERSION 2013.

O/M MANUALS SHALL INCLUDE CATALOG TECHNICAL DATA, RECOMMENDED SERVICE PROCEDURES, RECOMMENDED SERVICE INTERVALS, CALIBRATION INFORMATION, FACTORY TRAINING MANUALS, MAGNETIC MEDIA FOR SOFTWARE PROVIDED, AND RECOMMENDED SPARE PARTS. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL, HEAVY-DUTY, 2-INCH, 3-RING VINYL-COVERED BINDERS WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER AND PROVIDE WITH MAGNETIC MEDIA FILES OF MANUALS ON THE INSIDE COVER OF EACH. INCLUDE THE FOLLOWING TYPES OF INFORMATION:

OPERATING AND MAINTENANCE INSTRUCTIONS SPARE PARTS LIST

COPIES OF WARRANTIES

WIRING DIAGRAMS
INSPECTION REPORTS & APPROVALS

SHOP DRAWINGS AND PRODUCT DATA

TRAINING SERVICES:

THOROUGHLY INSTRUCT THE OWNER'S REPRESENTATIVE IN THE OPERATION OF ALL EQUIPMENT FURNISHED AND LOCATION OF ALL VALVES AND CONTROL DEVICES.

TRAIN BUILDING OWNER'S PERSONNEL DURING NORMAL WORKING HOURS ON START-UP AND SHUT-DOWN PROCEDURES, TROUBLESHOOTING PROCEDURES, SERVICING AND PREVENTATIVE MAINTENANCE SCHEDULE AND PROCEDURES. REVIEW WITH THE OWNER'S PERSONNEL, THE DATA CONTAINED IN THE OPERATING AND MAINTENANCE MANUALS. SCHEDULE TRAINING WITH OWNER, PROVIDE AT LEAST 7-DAYS PRIOR NOTICE TO ARCHITECT/ENGINEER.

SUPERVISION:

ALL WORK SHALL BE PERFORMED UNDER THE PERSONAL SUPERVISION OF A PROJECT SUPERINTENDENT ON-SITE. MAINTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES DURING THE PROJECT.

DISPOSAL

FOR ALL MATERIALS AND DEVICES REMOVED, THE CONTRACTOR SHALL DISPOSE OFF SITE IN AN APPROVED MANNER. PROVIDE WRITTEN DOCUMENTATION FOR DISPOSAL OF ALL ITEMS.

ACCESS AND CLEARANCES:

ARRANGE EQUIPMENT, CONNECTING PIPING, CONNECTING DUCTWORK, ETC.

TO PERMIT FREE ACCESS FOR MAINTENANCE AND REPAIR. COORDINATE WITH OWNER'S REPRESENTATIVE TO BE CERTAIN THAT PROPER ACCESS IS PROVIDED. MAINTAIN REQUIRED CLEARANCES IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT.

CLEANING, TESTING AND ADJUSTING:

THE MECHANICAL CONTRACTOR, AT HIS EXPENSE, SHALL CLEAN, REPAIR, ADJUST, CHECK, BALANCE, AND PLACE IN SERVICE THE VARIOUS SYSTEMS HEREIN SPECIFIED WITH THEIR RESPECTIVE EQUIPMENT, ACCESSORIES AND PIPING. HE SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND TOOLS REQUIRED TO PERFORM TESTS REQUIRED BY THESE SPECIFICATIONS AND BY THE GOVERNING AUTHORITIES.

NO WORK SHALL BE COVERED OR CONCEALED UNTIL PROPERLY INSPECTED AND TESTED.

SYSTEM IDENTIFICATION:

PROVIDE IDENTIFICATION LABELS ON OR NEAR EACH PIECE OF EQUIPMENT AND EACH OPERATIONAL DEVICE AND DISCONNECT. THE LABELS SHALL BE CONSTRUCTED OF ENGRAVED PLASTIC LAMINATE SIGN OR PLASTIC EQUIPMENT MARKER PERMANENTLY SECURED TO EQUIPMENT. THE LETTERING SHALL BE A MINIMUM OF 1/2 INCH HIGH FOR EQUIPMENT NAME AND 3/8 INCH FOR EQUIPMENT INFORMATION.

ALL VALVES SHALL BE TAGGED, USING ROUND BRASS TAGS AND CHAINS.
LETTERING SHALL BE STAMPED. COORDINATE WITH OWNER FOR REQUIRED TEXT FOR VALVE TAGS.

MOTORS:

THE DRAWINGS INDICATE MINIMUM MOTOR HORSEPOWER RATINGS.
BRAKE HORSEPOWER SHALL NOT EXCEED MOTOR HORSEPOWER, I.E.
MOTORS SHALL NOT OPERATE IN THEIR SERVICE FACTORS.

MINIMUM MOTOR EFFICIENCIES SHALL NOT BE LESS THAN THAT SET FORTH IN THE FLORIDA ENERGY CODE.

UNLESS OTHERWISE SPECIFIED, MOTORS SHALL BE OPEN DRIP PROOF TYPE FOR INDOOR USE, TEFC TYPE FOR OUTDOOR USE, TEFC FOR ALL CHILLER PLANT PUMP MOTORS, TEAO FOR ALL COOLING TOWER FANS. ALL MOTORS SHALL UTILIZE COPPER WINDINGS.

MOTOR CHARACTERISTICS, SUCH AS INSULATION CLASS, SPEED/TORQUE CURVE, BEARING DESIGN LIFE, SHAFT MATERIAL, BODY MATERIAL, ETC. SHALL BE SELECTED BY THE EQUIPMENT MANUFACTURER BASED UPON THE INTENDED SERVICE OF THE EQUIPMENT. MOTORS SHALL BE SELECTED BY THE EQUIPMENT MANUFACTURER SUCH THAT THE MOTOR SURFACE TEMPERATURE IS NOT EXCESSIVE. SURFACE TEMPERATURES OVER 150 DEG F, WITH SURROUNDING AIR OF 100 DEG F SHALL BE CONSIDERED EXCESSIVE AND UNACCEPTABLE. MOTORS FOUND TO OPERATE AT EXCESSIVE TEMPERATURES SHALL BE REPLACED WITH COOLER-RUNNING MOTORS. AT NO ADDITIONAL COST TO THE OWNER.

PROVIDE INHERENT THERMAL PROTECTION FOR ALL FRACTIONAL HORSEPOWER MOTORS.

HANGERS AND SUPPORTS

PROVIDE ALL NECESSARY DUCTWORK, PIPE SUPPORTS, HANGER, RODS, CLAMPS AND ATTACHMENTS TO PROPERLY INSTALL AND SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM THE BUILDING STRUCTURE.

PROVIDE ALL ANGLE IRON OR UNISTRUT AND SUSPENSION RODS REQUIRED TO INSTALL EQUIPMENT, PIPING AND DUCTWORK.

ALL SUPPORTS EXPOSED TO OUTDOORS SHALL BE CLEANED, PRIMED AND PAINTED TO PREVENT RUSTING. FINISH COLOR AS SELECTED BY OWNER.

THE USE OF BALING WIRE, CLOTH WEBBING, OR PERFORATED METAL STRAPPING IS NOT ACCEPTABLE FOR SUPPORTS.

PIPE SUPPORT SPACING:

SERVICE	PIPE SIZE	SPACING
CONDENSATE DRAIN (COPPER)	UP TO 3/4 IN. 1 IN. THRU 1-1/2 IN. 2 IN.	5 FEET 6 FEET 8 FEET
REFRIGERANT (COPPER)	UP TO 3/4 IN. 1 IN. THRU 1-1/2 IN. 2 IN. THRU 4 IN.	4 FEET 6 FEET 8 FEET
PVC PIPING SYSTEMS	ALL SIZES	4 FEET

PIPE SUPPORTS OVERHEAD SHALL BE CLEVIS TYPE, EQUIVALENT TO GRINNELL FIG. 260. FOR COPPER TUBING SUPPORT, PROVIDE ELASTOMERIC PAD TO PREVENT METAL-TO-METAL CONTACT. FOR INSULATED PIPING, USE MSS TYPE 40 METAL SHIELDS, OF THICKNESS AND LENGTH AS PRESCRIBED IN MSS-SP58.

PIPE SUPPORT HARDWARE, THREADED RODS, ETC. SHALL BE GALVANIZED FINISH UNLESS NOTED OTHERWISE.

WARRANTY/GUARANTEE

(ALL SYSTEMS)

THE CONTRACTOR SHALL WARRANTY/GUARANTEE AND MAINTAIN THE STABILITY OF WORK AND MATERIALS AND KEEP SAME IN PERFECT REPAIR AND CONDITION OF THE PERIOD OF ONE (1) YEAR.

DEFECTS OF ANY KIND DUE TO FAULTY WORK OR MATERIALS APPEARING DURING THE ABOVE MENTIONED PERIOD MUST BE IMMEDIATELY MADE GOOD BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE ENTIRE SATISFACTION OF THE OWNER AND ARCHITECT AND ENGINEER. SUCH RECONSTRUCTION AND REPAIRS SHALL INCLUDE ALL DAMAGE TO THE FINISH OR FURNISHING OF THE BUILDING RESULTING FROM THE ORIGINAL DEFECT OR REPAIRS THERETO.

FOR ALL COMPRESSOR-BEARING EQUIPMENT, PROVIDE 4 YEAR EXTENDED REPLACEMENT WARRANTY ON THE COMPRESSOR, WHICH INCLUDES ALL REFRIGERANT, PARTS AND LABOR

FURNISH ALL LABOR AND MATERIALS TO REPLACE REFRIGERANT LOST DURING THE ONE-YEAR WARRANTY PERIOD.

TEST AND BALANCE:

ADJUST THE AIR CONDITIONING SYSTEMS, VENTILATING SYSTEMS, FANS, PUMPS, ETC., TO DELIVER NOT LESS THAN THE REQUIRED QUANTITY WITH QUANTITIES IN EXCESS TO BE SUBJECT TO THE APPROVAL OF THE ENGINEER. NOTIFY THE ENGINEER IF SYSTEMS ARE FOUND TO HAVE OBJECTIONABLE EFFECTS SUCH AS NOISE, DRAFTS, OR MOTOR OVERLOAD.

PRIOR APPROVAL BY THE ENGINEER OF TESTING AND BALANCING CONTRACTOR IS REQUIRED. TEST AND BALANCE REPORTS BY NON-APPROVED CONTRACTORS WILL BE REJECTED.

PERFORM TESTING AND BALANCING WORK USING PUBLISHED PROCEDURES AS OUTLINED IN AABC TEST AND BALANCE PROCEDURES, LATEST EDITION.

PROVIDE THREE (3) COPIES OF THE TEST AND BALANCE REPORT TO THE ENGINEER AT TIME OF SUBSTANTIAL COMPLETION INSPECTION. THE TEST AND BALANCE REPORT SHALL BE PREPARED BY A CONTRACTOR CERTIFIED BY ASSOCIATED AIR BALANCE COUNCIL OR NATIONAL ENVIRONMENTAL BALANCING BUREAU

THE TEST AND BALANCE REPORT SHALL BE TYPEWRITTEN AND CONTAIN THE FOLLOWING MINIMUM DATA:

GENERAL:

PERSONS CONDUCTING AND SUPERVISING THE TEST.

DATE, TIME, AND WEATHER WHEN TEST TAKEN.

EQUIPMENT IDENTIFICATION.

DESIGN VS. MEASURED QUANTITIES.

MOTORS AND DRIVES:

MOTOR OPERATING VOLTAGE AND AMPERAGE (EACH LEG FOR 3-PHASE MOTORS). DRIVE TYPES, SIZES AND SPEED RANGE. MOTOR AND DRIVE RPM. PROVIDE TACHOMETER MEASUREMENT OF SPEED FOR ALL BELT DRIVEN EQUIPMENT.

HEAT EXCHANGERS, COOLING:

HEAT TRANSFER CAPACITY, INCLUDING SENSIBLE (MBH), LATENT (MBH), AND TOTAL (MBH) FOR EACH HEAT EXCHANGER. INCLUDES AIR COILS, PASSIVE HEAT EXCHANGERS, RUNAROUND COILS, HEAT PIPES, ETC. INDICATE ACTUAL FACE AREA, FIN SPACING, AND ROWS FOR EACH AIR COIL.

AIR SYSTEMS:

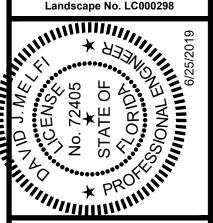
AIRFLOW RATES FOR EACH FAN AND ALL TERMINAL UNITS. AIRFLOW RATES FOR EACH DIFFUSER AND GRILLE. OUTSIDE AIR, EXHAUST AIR, RETURN AIR, AND SUPPLY AIR FOR ALL FAN COILS, UNIT VENTILATORS, AIR HANDLERS, ALL HVAC EQUIPMENT, AND WHERE SCHEDULED. INTERNAL AND EXTERNAL STATIC PRESSURE THROUGH UNITS AND ALL UNIT COMPONENTS. PRESSURE DROP THROUGH FILTER SECTION (CLEAN FILTERS). BRANCH DUCT SECTIONS WHERE CFM IS INDICATED ON THE DRAWINGS. FAN CURVES FOR EACH FAN AND AIR HANDLER WITH CURVE PLOTTED FOR ACTUAL RPM, OPERATING POINT, AND SYSTEM CURVE. FOR MULTIPLE FAN UNITS, SHOW SINGLE FAN CURVE, COMBINED FAN CURVE; ALSO SYSTEM CURVE FOR SINGLE AND MULTIPLE FAN OPERATION.

www.cphcorp.com

A Full Service

A & E Firm500 West Fulton Street
Sanford, FL 32771
Ph: 407.322.6841

Plans Prepared By: CPH, Inc. State of Florida Licenses: Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926



Designed: J.A.D.

Date: 4-2-19 © 2019

Drawn: J.A.D.

Checked: D.J.M.

Job No.: N6601

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THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS.

Sheet No.

SEE GENERAL NOTES FOR

MASTER LEGEND.

HVAC GENERAL NOTES

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2014 FLORIDA BUILDING CODE WITH REVISIONS, THE 2014 FLORIDA MECHANICAL CODE WITH REVISIONS, THE 2014 FLORIDA ENERGY EFFICIENCY CODE WITH REVISIONS AND THE SEMINOLE COUNTY BUILDING DEPARTMENT REQUIREMENTS NFPA, NEC, CCAS STANDARD AND ALL OTHER APPLICABLE CODES AND STANDARDS.
- 2. PRIOR TO FABRICATION, VERIFY AND COORDINATE ALL DIMENSIONS IN FIELD. CONTRACTOR SHALL SUBMIT 1/4" SCALE COORDINATED DRAWINGS OF ALL DUCTWORK, PIPING, EQUIPMENT, STRUCTURAL SYSTEM AND LIGHT FIXTURES. NO DUCTWORK, PIPING OR EQUIPMENT SHALL BE INSTALLED OR FABRICATED UNTIL THE DRAWINGS ARE SUBMITTED AND APPROVED BY THE ENGINEER.
- 3. PRIOR TO ORDERING HVAC EQUIPMENT CONTRACTOR SHALL PREPARE AND SUBMIT A 1/4" SCALE COORDINATED SHOP DRAWING OF EACH MECHANICAL ROOM. THESE DRAWINGS SHALL INCLUDE THE DIMENSIONS AND REQUIRED CLEARANCES OF THE ACTUAL EQUIPMENT PROPOSED FOR THE PROJECT. THESE DRAWINGS SHALL ALSO INCLUDE ALL DUCTWORK, EQUIPMENT, HEATERS, DISCONNECTS, PIPING, AND THEIR REQUIRED ACCESS CLEARANCES. FAILURE TO SUBMIT THESE DRAWINGS RELIEVES THE ENGINEER OF ALL RESPONSIBILITY FOR THE MECHANICAL ROOM LAYOUT.
- 4. REFER TO ARCHITECTURAL DRAWINGS FOR CLEARANCES WITHIN THE CEILING SPACE AND MECHANICAL ROOMS, LOCATIONS AND SIZES OF BEAMS AND CEILING AND SOFFIT HEIGHTS.
- 5. DUCTWORK AND EQUIPMENT LOCATIONS AND CLEARANCES SHALL BE COORDINATED WITH GENERAL, PLUMBING AND ELECTRICAL CONTRACTORS. REFER TO ARCHITECTURAL PLANS FOR BUILDING SECTIONS AND DETAILS.
- 6. CONNECTION TO ALL EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURERS CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR ALL EQUIPMENT FURNISHED.
- 7. ALL HVAC SYSTEMS SHALL BE BALANCED FOR AIR QUANTITIES SHOWN AGAINST THE ACTUAL INSTALLED STATIC PRESSURE OF THE SYSTEM. CONTRACTOR SHALL PROVIDE POSITIVE MEANS FOR BALANCING EACH INDIVIDUAL AIR OUTLET AND INLET.
- 8. ALL EQUIPMENT SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION. ALL AIR HANDLING EQUIPMENT SHALL BE SUPPORTED OR SUSPENDED WITH SPRING VIBRATION ISOLATORS PADS. ALL CONNECTIONS BETWEEN AIR HANDLING EQUIPMENT AND DUCTWORK SHALL BE CANVAS FLEXIBLE CONNECTORS.
- 9. EVERY APPLIANCE AND ALL MECHANICAL EQUIPMENT SHALL BE LOCATED WITH RESPECT TO BUILDING CONSTRUCTION AND OTHER EQUIPMENT SO AS TO PERMIT ACCESS TO THE MECHANICAL EQUIPMENT IN CONFORMITY WITH ANY CLEARANCE WHICH MAY BE RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT. SUFFICIENT CLEARANCE SHALL BE MAINTAINED FOR CLEANING COILS, MOTORS, AS WELL AS CHANGING FILTERS. ALL EQUIPMENT SHALL BE LOCATED WITHIN THE MECHANICAL ROOM AND CEILING SPACES WITH ADEQUATE CLEARANCES FOR REPAIR AND MAINTENANCE. ALL PIPING AND DUCTWORK SHALL BE INSTALLED TO PROVIDE ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT. INSTALLATION OF ALL MECHANICAL EQUIPMENT SHALL COMPLY WITH THE MANUFACTURERS SPECIFICATION AND CLEARANCE REQUIREMENT.
- 10. EXHAUST DUCTWORK SHALL BE GALVANIZED STEEL SHEETS IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS FOR A 2 INCH PRESSURE CLASSIFICATION. CONTRACTOR SHALL SEAL ALL EXHAUST DUCTWORK WITH GLASS
- 11. ALL DUCT JOINTS SHALL BE SEALED WITH APPROVED MASTIC.
- 12. PROVIDE HANGER STRAPS FOR ALL DUCTS MADE OF 2" WIDE, 22 GAGE GALVANIZED STEEL- SPACED ACCORDING TO SMACNA STANDARDS AND ALL OTHER APPLICABLE GOVERNING CODES AND STANDARDS.
- 13. EXHAUST FAN OUTLETS SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM FRESH AIR INTAKES OF MECHANICAL EQUIPMENT AS WELL AS ALL OPERABLE WINDOWS AND

- 14. ALL FANS AND AIR HANDLING UNITS SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION. ALL AIR HANDLING EQUIPMENT SHALL BE SUPPORTED OR SUSPENDED WITH SPRING ISOLATORS. ALL CONNECTIONS BETWEEN FANS OR AIR HANDLING UNITS AND DUCTWORK SHALL BE
- CANVAS FLEXIBLE CONNECTORS. 15. ALL EQUIPMENT LOCATED WITHIN THE CEILING SPACES SHALL HAVE ADEQUATE CLEARANCES FOR REPAIR AND MAINTENANCE. ALL PIPING AND DUCTWORK SHALL

BE INSTALLED TO PROVIDE ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT.

- 16. COORDINATE ALL CONTROL DEVICES WITH ELECTRICAL CONTRACTOR.
- 17. ALL CONTROL WIRING, CONDUIT AND HARDWARE TO COMPLETE THE HVAC CONTROL SYSTEM SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 23 - MECHANICAL.
- 18. ALL EXHAUST FANS SHALL BE PROVIDED WITH BACK DRAFT DAMPERS.
- 19. OUTSIDE AIR INTAKE LOUVERS SHALL HAVE 1/2" x 1/2" MINIMUM MESH SCREEN, AND SHALL BE LOCATED AS HIGH ABOVE FINISH GRADE AS POSSIBLE.
- 20. THE CONTRACTOR SHALL HIRE AN INDEPENDENT TEST AND BALANCE FIRM TO TEST AND BALANCE ALL AIR CONDITIONING SYSTEMS-SEE SPECIFICATIONS.
- 21. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE TEST AND BALANCE FIRM. PRIOR TO TEST AND BALANCE. THE CONTRACTOR SHALL START-UP, PRE-BALANCE THE SYSTEM, AND REPLACE ALL AIR FILTERS FOR EVERY AHU BEING TESTED. ALL DISCREPANCIES, DRIVE CHANGES, ETC. REPORTED BY ENGINEER OR THE TEST AND BALANCE FIRM SHALL BE CORRECTED BY THE CONTRACTOR WITHIN FIVE CALENDAR DAYS AT NO ADDITIONAL COST.
- 22. OPERATION AND MAINTENANCE MANUALS SHALL INCLUDE AS A SEPARATE SUBMITTAL ITEM, PREVENTATIVE MAINTENANCE REQUIREMENTS ALONG WITH TIME SCHEDULE(S) FOR EACH ITEM. THE SEQUENCE OF OPERATION SHALL ALSO INCLUDE A DEFINITIVE SEQUENCE OF OPERATION OF THE MECHANICAL SYSTEM AND COMPONENTS AS THEY FUNCTION INTEGRALLY AND INDEPENDENTLY WITH THE
- 23. THE CM OR GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT COMMISSIONING CONTRACTOR TO COMMISSION THE MECHANICAL AND CONTROL SYSTEMS. A COMPLETE COMMISSIONING REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE CM OR GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF AN INDEPENDENT TEST AND BALANCE
- 24. VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING NEW WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 25. PROVIDE LABOR AND MATERIALS TO PROVIDE A COMPLETE AND OPERATIONAL HVAC SYSTEM AS SHOWN ON DRAWINGS AND SPECIFICATIONS. COORDINATE WORK WITH ALL OTHER TRADES. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE UL LISTED WHERE APPLICABLE.
- 26. PLANS AND DIAGRAMS ARE SCHEMATIC OVERVIEW DESCRIPTIONS OF THE SYSTEM AND SHOULD NOT BE SCALED. CONTRACTOR SHALL COORDINATE ALL PLUMBING, INTERIORS, ARCHITECTURAL, AND ELECTRICAL WORK AT SITE SO AS NOT TO CONFLICT WITH OTHER WORK UNDER THE CONTRACT.
- 27. DIVISION 23 CONTRACTOR TO FURNISH ALL STARTERS/DISCONNECTS (UNO) FOR HVAC EQUIPMENT, TO BE INSTALLED BY DIVISION 26 CONTRACTOR. THE DIVISION 23 CONTRACTOR IS DIRECTED TO COMPLY WITH DIVISION 26 OF THE CONTRACT SPECIFICATIONS REFERRING TO MOTORS, STARTERS, ETC.
- 28. MOUNT THERMOSTATS AND HUMIDISTATS 48" AFF (TYPICAL FOR ALL STANDARD SENSORS). COORDINATE LOCATION WITH CASEWORK SHOP DRAWINGS.

OUTDOOR AIR & COOLING REQUIREMENT

REQUIRED EXHAUST: (0.75 CFM/SF)(9576 SF) = 7182 CFM

COOLING LOAD: 90500 BTU/HR

EXHAUST REQUIRED FOR COOLING: 90500 (BTU/HR)/(1.08)(5°F) = 16760 CFM

LOUVER SCHEDULE									
TAG	CFM	SIZE W"XH"	MAX. FPM	FREE AREA	BASIS OF DESIGN	NOTES			
L-1	8400	48x48	893	9.4 SF	GREENHECK ESD-635X	1			
L-2	8400	48x48	893	9.4 SF	GREENHECK ESD-635X	1			
				_					

PROVIDE INSECT SCREEN.

EXHAUST FAN SCHEDULE

	MOTOR WEIGHT												
				SP	SONES			МОТО	OR		WEIGHT	MANUFACTURER	
UNIT	FAN TYPE	DRIVE TYPE	CFM	(IN WG)	MAX	RPM	HP	BHP	VOLTS	PH	LBS	MODEL	NOTES
EF-1	SIDEWALL	BELT	8400	0.25	26	964	1.5	3500	480	3	299	COOK 30EW624B	1,2,3,4,5
EF-2	SIDEWALL	BELT	8400	0.25	26	964	1.5	3500	480	3	299	COOK 30EW624B	1,2,3,4,5

- PROVIDE BACKDRAFT DAMPER
- PROVIDE BIRD SCREEN

COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Designed: J.A.D. Drawn: J.A.D. Checked: D.J.M.

Date: 4-2-19

NOTES

ABBREVIATIONS,

SCHEDULES,

www.cphcorp.com

A Full Service

A & E Firm

500 West Fulton Street Sanford, FL 32771

Ph: 407.322.6841

Plans Prepared By:

CPH, Inc.

State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143

Architect, No. AA26000926

Landscape No. LC000298

RUN CONTINUOUSLY- SEE SEQUENCE OF OPERATIONS

PROVIDE MOTOR SIDE GUARD PROVIDE WEATHERHOOD

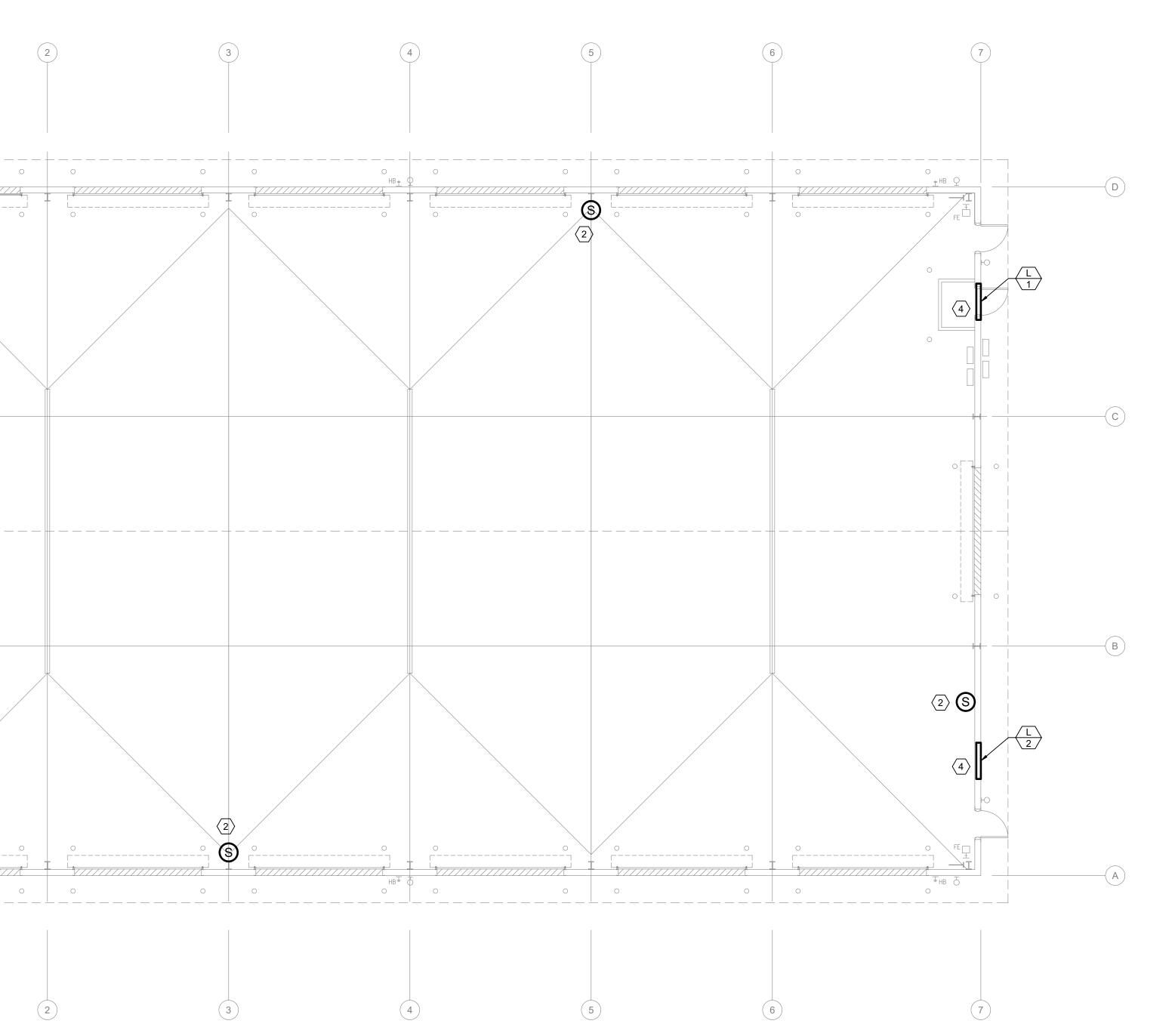
J: \N6601\Architecture\03_MEP\021-N6601-M002-MECHANICAL SCHEDULES, NOTES, LEGENDS, AND ABBREVIATIONS.dwg, 6/25/2019 4:10:15 PM, Deal, Jeffrey P.E., _cph - Civil And Landscape.stb

FAN SEQUENCE OF OPERATIONS

- FAN TO OPERATE CONTINUOUSLY.
- 1.1. WHEN THERMOSTAT IS SATISFIED THE FAN WILL OPERATE AT MINIMUM OF 3600 CFM.
- 1.2. WHEN THE THERMOSTAT CALLS FOR COOLING THE FAN WILL OPERATE AT 8400 CFM UNTIL THE THERMOSTAT IS SATISFIED.
- 1.3. WHEN THE CARBON MONOXIDE SENSOR IS IN ALARM THE FAN WILL OPERATE AT 8400 CFM UNTIL 15 MINUTES AFTER ALARM IS SATISFIED.

MECHANICAL PLAN NOTES

- 1. INSTALL CARBON MONOXIDE MONITORING SYSTEM ON WALL PER MANUFACTURER'S RECOMMENDED HEIGHT. BASIS OF DESIGN: ARMSTRONG AMC-1ACO. INTERLOCK EXHAUST FAN EF-1 AND EF-2. WHEN SYSTEM GOES INTO ALARM CONTROLLER SHALL ENERGIZE EXHAUST FANS. FANS SHALL OPERATE CONTINUOUSLY FOR 15-MINUTES (ADJUSTABLE) AFTER SYSTEMS LOW LEVEL THRESHOLD IS REACHED.
- 2. INSTALL CARBON MONOXIDE SENSOR ON WALL PER MANUFACTURER'S RECOMMENDED HEIGHT AND
- 3. INSTALL EF-1 AND EF-2 CENTERED BETWEEN COLUMNS. BOTTOM OF FAN TO BE 14' AFF.
- 4. INSTALL L-1 CENTERED FIRE RISER DOOR. SEE ARCHITECTURAL ELEVATIONS. BOTTOM OF LOUVER TO BE 14' AFF.
- 5. INSTALL L-2 CENTERED BETWEEN COLUMN LINES A AND B. SEE ARCHITECTURAL ELEVATIONS. BOTTOM OF LOUVER TO BE 14' AFF.





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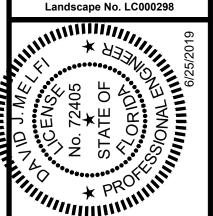


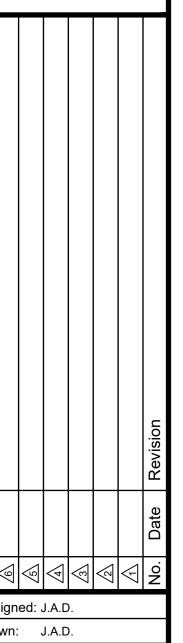


A Full Service

A & E Firm 500 West Fulton Street Sanford, FL 32771 Ph: 407.322.6841

Plans Prepared By: CPH, Inc. State of Florida Licenses: Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926





Checked: D.J.M.

Job No.: N6601 © 2019 Date: 4-2-19

B B FLOOR PLAN

VEHICLE

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.



GENERAL PLUMBING REQUIREMENTS

(FURNISH): SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS.

(INSTALL): OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS.

(PROVIDE): FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

(UNO) OR (U.N.O.): UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL MAINTAIN A SAFE WORK ENVIRONMENT AT ALL TIMES. COMPLY WITH ALL OSHA, NIOSH, DOT, STATE, AND LOCAL REQUIREMENTS REGARDING SAFE HANDLING, STORING, TRANSPORTING, AND DISPENSING OF CHEMICALS. MAINTAIN AND DISPLAY MSDS INFORMATION FOR ALL CHEMICAL PRODUCTS.

PROVIDE ALL NECESSARY MEANS TO MAINTAIN SAFE WORKING CONDITIONS, INCLUDING VENTILATION FANS, FIRE EXTINGUISHERS, EYE PROTECTION, RESPIRATORS, PROTECTIVE CLOTHING, VENTILATION, ETC.

ALL EQUIPMENT AND MATERIALS USED TO IMPLEMENT THE WORK SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING ALL RECOMMENDED SAFETY PRECAUTIONS.

MAINTAIN A PROPER FIRE WATCH FOR ALL OPERATIONS WHERE SPARKS, FLAMES, OR OTHER SOURCES OF FIRE ARE PRODUCED.

FOR ALL MATERIALS CONTAINING SOLVENTS, MAINTAIN THE RECOMMENDED VENTILATION OF THE AREA TO PREVENT THE ACCUMULATION OF VAPORS WHICH POSE A HEALTH OR FIRE HAZARD.

COMPLETE SYSTEMS:

THE DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF EACH UTILITY, WHETHER OR NOT ALL SUCH MATERIALS AND APPURTENANCES ARE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.

THE INSTALLED SYSTEM SHALL BE COMPLETE IN EVERY WAY AND FUNCTIONING ACCORDING TO THE DESIGN INTENT.

THE CONTRACTOR SHALL VERIFY PROJECT CONDITIONS TO INSURE THAT THE WORK WILL FIT INTO THE STRUCTURE IN THE MANNER INTENDED ON THE DRAWINGS.

SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO FABRICATION OR PERFORMING ANY WORK IN THE AREA INVOLVING THE DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS OR NOTES RELATING TO THE AREA.

PROVIDE ALL SAW CUTTING, EXCAVATION, TRENCHING, SHORING, COMPACTING, DE-WATERING, ETC. REQUIRED FOR THE PROJECT, WHETHER OR NOT SHOWN ON THE DRAWINGS.

ALL LOCATIONS OF EQUIPMENT, PIPING, ETC., INDICATED ON THE AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE TO THE PLANS

SUBJECT TO BUILDING CONSTRUCTION AND INTERFERENCES WITH OTHER TRADES. PERFORM ALL WORK NECESSARY TO PREPARE THE STRUCTURE FOR THE INSTALLATION OF THE WORK. ALL HOLES, OPENINGS AND

DAMAGED MATERIALS CREATED DURING CONSTRUCTION SHALL BE REPAIRED AND FINISHED BY EXPERIENCED WORKMEN.

PROVIDE ALL WALL AND FLOOR PENETRATIONS REQUIRED TO COMPLETE INSTALLATION. ALL PENETRATIONS SHALL BE PATCHED AND FINISHED TO MATCH SURROUNDING SURFACES AND FINISHES.

ALL EQUIPMENT OR PIPE PENETRATIONS THROUGH WALL AND FLOORS SHALL BE SLEEVED AND SEALED SO AS TO BE WATER AND AIR TIGHT.

COORDINATION AND WORKMANSHIP:

ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED.

VERIFY VOLTAGE AND ALL ELECTRICAL REQUIREMENTS OF MECHANICAL EQUIPMENT AND SYSTEMS WITH DIV. 26 CONTRACTOR PRIOR TO ORDERING.

ALL MATERIALS SHALL BE FABRICATED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER. THE OWNER AND ENGINEER SHALL DETERMINE WHETHER WORKMANSHIP IS ACCEPTABLE.

NO ALLOWANCES WILL BE MADE FOR REWORK OR DELAY DUE TO POOR WORKMANSHIP, COORDINATION DIFFICULTIES OR INTERFERENCES BETWEEN INVOLVED TRADES.

RELATED WORK SPECIFIED ELSEWHERE

ALL DIVISION 1 REQUIREMENT, AND ALL TERMS AND CONDITIONS OF CONTRACT.

REFER TO ELECTRICAL SPECIFICATION FOR ELECTRICAL WORK TO BE DONE IN CONJUNCTION WITH THE MECHANICAL WORK.

THIS CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT, WIRING, JUNCTION BOXES, ETC., REQUIRED FOR HVAC CONTROLS, UNLESS SPECIFICALLY NOTED OTHERWISE.

SUBSTITUTIONS:

EQUIPMENT AND DESIGN OF SYSTEMS INDICATED ON THE DESIGN DRAWINGS AND WITHIN THESE SPECIFICATIONS SHALL BE CONSIDERED AS SPECIFIED STANDARD OF QUALITY.

NO SUBSTITUTIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.

ALL COSTS ARISING FROM A SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR MAKING THE SUBSTITUTION. INCLUDING VERIFICATION OF FIT AND ACCESS, FIELD-INSTALLED ACCESSORIES, SUPPORTS, ELECTRICAL REQUIREMENTS, AND REVISIONS TO DOCUMENTS (DESIGN COSTS).

CODES AND STANDARDS:

THE ENTIRE SYSTEM AND ALL COMPONENTS LISTED HEREIN SHALL MEET ALL STATE, COUNTY, AND LOCAL CODES AND ORDINANCES IN EVERY RESPECT. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND PAY ALL FEES.

ALL EQUIPMENT, ETC., SHALL BE NEW UNLESS OTHERWISE NOTED, AND AS SPECIFIED FREE OF DEFECTS. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. OR E.T.L. LISTED.

SHOP DRAWINGS AND SUBMITTALS:

SUBMIT FOR ENGINEER'S APPROVAL, SHOP DRAWINGS, COORDINATION DRAWINGS, AND MANUFACTURER'S DATA FOR ALL NEW EQUIPMENT AND FIXTURES PRIOR TO PURCHASE AND/OR FABRICATION. WHERE QUALIFICATIONS AND/OR QUALITY ASSURANCE REQUIREMENTS ARE SPECIFIED, THE SUBMITTAL SHALL INCLUDE EVIDENCE THAT THE STATED REQUIREMENTS HAVE BEEN MET. INCLUDE QUALIFICATIONS AND CERTIFICATIONS OF PROPOSED TEST AND BALANCE SUBCONTRACTOR.

EQUIPMENT PERFORMANCE SHALL BE VERIFIED BY THE EQUIPMENT MANUFACTURER AS PART OF THE SUBMITTAL, PRIOR TO ORDERING. VERIFY EQUIPMENT VOLTAGE AND ELECTRICAL REQUIREMENTS OF THE EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT. SHOP DRAWINGS FOR EQUIPMENT REQUIRING ELECTRIC POWER OR CONTROL WIRING CONNECTIONS SHALL INCLUDE COMPLETE WIRING DIAGRAMS.

SUBMITTALS SHALL BE SUBMITTED IN PDF FORMAT AND TRANSMITTED ELECTRONICALLY. INCOMPLETE SUBMITTALS WILL BE RETURNED, UNCHECKED.

DO NOT ORDER EQUIPMENT OR PROCEED WITH THE WORK WITHOUT PRIOR APPROVED SUBMITTALS. EQUIPMENT OR WORK WHICH IS ORDERED OR INSTALLED WITHOUT PRIOR APPROVED SUBMITTALS SHALL, AT THE ENGINEER'S DISCRETION, BE REMOVED AT NO COST TO THE OWNER. NO ALLOWANCES WILL BE MADE FOR REWORK OR DELAY DUE TO NEGLECT OF REQUIRED APPROVAL PROCESS.

COORDINATION DRAWINGS:

SUBMIT 1/4 IN. SCALED DIMENSIONED LAYOUTS SHOWING THE ACCURATELY SCALED PIPING AND THEIR RELATIONSHIP TO SPACE ENCLOSURE. SHOW ALL OFFSETS AND FITTINGS NECESSARY TO COMPLETE THE PIPING SYSTEMS, INCLUDING INSTALLATION BETWEEN AND THROUGH JOIST, ETC. SHOP DRAWINGS SHALL BE MACHINE DRAFTED BY PERSONS REGULARLY ENGAGED IN SUCH

PIPING DRAWINGS

SHOW UNDERGROUND PIPING INVERTS, RATE OF SLOPE, JOINT LOCATIONS, THRUST BLOCKS, ETC. SHOW PIPE SIZES, HANGER METHODS AND JOINT CONNECTION DETAILS. SHOW PIPE ELEVATIONS IN RELATIONSHIP TO THE EXISTING FLOOR, CEILING AND STRUCTURAL ELEMENTS. INDICATE SLOPES. INDICATE ALL VALVES, FITTINGS, ANCHORS, DRAINS, SUPPORTS, ANCHORS, ETC. LOCATE ALL VALVES, PUMPS, CLEANOUTS, ETC. SO AS TO ENSURE SAFE UNRESTRICTED ACCESS FOR SERVICE AND MAINTENANCE.

RECORD DRAWINGS AND OPERATION / MAINTENANCE MANUALS:

PROVIDE THE OWNER A COMPLETE SET OF RECORD DRAWINGS AND OWNER OPERATION/ MAINTENANCE (O/M) MANUALS AT THE END OF THE PROJECT. PROJECT WILL NOT BE COMPLETE UNTIL ACCURATE RECORD DRAWINGS AND O/M MANUALS ARE DELIVERED.

THE RECORD DRAWINGS SHALL BE MACHINE DRAFTED, AND SHALL BE PROVIDED BOTH ON REPRODUCIBLE VELLUMS AND MAGNETIC MEDIA CAD FILES.

DRAWING FORMAT FOR THIS PROJECT SHALL BE AUTOCAD VERSION 2013.

O/M MANUALS SHALL INCLUDE CATALOG TECHNICAL DATA, RECOMMENDED SERVICE PROCEDURES, RECOMMENDED SERVICE INTERVALS, CALIBRATION INFORMATION, FACTORY TRAINING MANUALS, MAGNETIC MEDIA FOR SOFTWARE PROVIDED, AND RECOMMENDED SPARE PARTS. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL, HEAVY-DUTY, 2-INCH, 3-RING VINYL-COVERED BINDERS WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER AND PROVIDE WITH MAGNETIC MEDIA FILES OF MANUALS ON THE INSIDE COVER OF EACH. INCLUDE THE FOLLOWING TYPES OF INFORMATION:

OPERATING AND MAINTENANCE INSTRUCTIONS

SPARE PARTS LIST

COPIES OF WARRANTIES

WIRING DIAGRAMS

INSPECTION REPORTS & APPROVALS SHOP DRAWINGS AND PRODUCT DATA

TRAINING SERVICES:

THOROUGHLY INSTRUCT THE OWNER'S REPRESENTATIVE IN THE OPERATION OF ALL EQUIPMENT FURNISHED AND LOCATION OF ALL VALVES AND CONTROL DEVICES.

TRAIN BUILDING OWNER'S PERSONNEL DURING NORMAL WORKING HOURS ON START-UP AND SHUT-DOWN PROCEDURES, TROUBLESHOOTING PROCEDURES, SERVICING AND PREVENTATIVE MAINTENANCE SCHEDULE AND PROCEDURES. REVIEW WITH THE OWNER'S PERSONNEL. THE DATA CONTAINED IN THE OPERATING AND MAINTENANCE MANUALS. SCHEDULE TRAINING WITH OWNER. PROVIDE AT LEAST 7-DAYS PRIOR NOTICE TO ARCHITECT/ENGINEER.

ALL WORK SHALL BE PERFORMED UNDER THE PERSONAL SUPERVISION OF A PROJECT SUPERINTENDENT ON-SITE. MAINTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES DURING THE PROJECT.

FOR ALL MATERIALS AND DEVICES REMOVED, THE CONTRACTOR SHALL DISPOSE OFF SITE IN AN APPROVED MANNER. PROVIDE WRITTEN DOCUMENTATION FOR DISPOSAL OF ALL ITEMS.

ACCESS AND CLEARANCES:

ARRANGE EQUIPMENT, CONNECTING PIPING, ETC. TO PERMIT FREE ACCESS FOR MAINTENANCE AND REPAIR. COORDINATE WITH OWNER'S REPRESENTATIVE TO BE CERTAIN THAT PROPER ACCESS IS PROVIDED. MAINTAIN REQUIRED CLEARANCES IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT.

EXCAVATION, BEDDING, AND BACKFILL:

PROVIDE ALL EXCAVATION AND TRENCHING TO THE CORRECT ELEVATIONS, FOR THE INSTALLATION OF ALL PIPING, MANHOLES, CATCH BASINS AND FOUNDATIONS INCLUDED UNDER THIS DIVISION OF THE WORK.

PROVIDE ALL BACKFILL IN STRICT ACCORDANCE WITH THE EXCAVATION AND BACKFILL SECTION OF DIVISION 1 SPECIFICATIONS. EXCAVATION: EXCAVATE PIPE TRENCH. HAND DIG IN ALL AREAS WHERE EXISTING UTILITIES EXIST. HAND TRIM EXCAVATION FOR ACCURATE PLACEMENT OF PIPE TO ELEVATIONS INDICATED. PROVIDE NECESSARY SHEETING AND SHORING TO COMPLY WITH OSHA REGULATIONS FOR SAFETY IN THE TRENCH.

BEDDING: PLACE BEDDING MATERIAL AT TRENCH BOTTOM, LEVEL MATERIALS IN CONTINUOUS LAYER NOT EXCEEDING 6 INCHES COMPACTED DEPTH, COMPACT TO 95 PERCENT. MAINTAIN OPTIMUM MOISTURE CONTENT OF BEDDING MATERIAL TO ATTAIN REQUIRED COMPACTION DENSITY

BACKFILL: BACKFILL MATERIAL SHALL BE CLEAN EARTH FILL COMPOSED OF SAND, SLIGHTLY SILTY SAND, SAND AND ROCK, CRUSHED ROCK, OR AN APPROVED COMBINATION THEREOF. THE BACKFILL MATERIAL SHALL HAVE NO MORE THAN 12 PERCENT PASSING THE NUMBER 200 SIEVE UNLESS APPROVED BY THE OWNER AND AHJ. ALL OTHER LOCATIONS SHALL BE 95 PERCENT. DENSITY TESTS FOR CONFORMANCE TO THE COMPACTION REQUIREMENTS SHALL BE MADE BY TESTING LABORATORY SELECTED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR. TESTS SHALL BE MADE EVERY 100 FEET OR LESS, MINIMUM TWO TESTS PER SITE. IF ANY TEST RESULTS ARE UNSATISFACTORY, THE CONTRACTOR SHALL RE-EXCAVATE AND RE-COMPACT THE BACKFILL AT HIS EXPENSE UNTIL THE DESIRED COMPACTION IS OBTAINED.

CLEANING, TESTING AND ADJUSTING:

THE MECHANICAL CONTRACTOR, AT HIS EXPENSE, SHALL CLEAN, REPAIR, ADJUST, CHECK, BALANCE, AND PLACE IN SERVICE THE VARIOUS SYSTEMS HEREIN SPECIFIED WITH THEIR RESPECTIVE EQUIPMENT, ACCESSORIES AND PIPING. HE SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND TOOLS REQUIRED TO PERFORM TESTS REQUIRED BY THESE SPECIFICATIONS AND BY THE GOVERNING AUTHORITIES.

NO WORK SHALL BE COVERED OR CONCEALED UNTIL PROPERLY INSPECTED AND TESTED.

TESTING:

SOIL PIPE AND CONDENSATE DRAIN TEST:

TEMPORARILY PLUG ALL OUTLETS AND FILL THE SYSTEM WITH WATER TO THE LEVEL OF THE HIGHEST VENT STACK. THE SYSTEM SHALL BE INSPECTED AND ALL LEAKS REPAIRED AND THE TEST REPEATED UNTIL THE WATER LEVEL DOES NOT DECREASE FOR A PERIOD OF 24 HOURS.

SYSTEM IDENTIFICATION:

PROVIDE IDENTIFICATION LABELS ON OR NEAR EACH PIECE OF MAJOR EQUIPMENT AND EACH OPERATIONAL DEVICE AND DISCONNECT. THE LABELS SHALL BE CONSTRUCTED OF ENGRAVED PLASTIC LAMINATE SIGN OR PLASTIC EQUIPMENT MARKER PERMANENTLY SECURED TO EQUIPMENT. THE LETTERING SHALL BE A MINIMUM OF 1/2 INCH HIGH FOR EQUIPMENT NAME AND 3/8 INCH FOR EQUIPMENT INFORMATION.

ALL VALVES SHALL BE TAGGED, USING ROUND BRASS TAGS AND CHAINS. LETTERING SHALL BE STAMPED. COORDINATE WITH OWNER FOR REQUIRED TEXT FOR VALVE TAGS.

HANGERS AND SUPPORTS:

PROVIDE ALL NECESSARY PIPE SUPPORTS, HANGER, RODS, CLAMPS AND ATTACHMENTS TO PROPERLY INSTALL AND SUPPORT PIPING AND EQUIPMENT FROM THE BUILDING STRUCTURE.

PROVIDE ALL ANGLE IRON OR UNISTRUT AND SUSPENSION RODS REQUIRED TO INSTALL EQUIPMENT, PIPING AND DUCTWORK. ALL SUPPORTS EXPOSED TO OUTDOORS SHALL BE CLEANED, PRIMED AND PAINTED TO PREVENT RUSTING. FINISH COLOR AS SELECTED BY OWNER.

THE USE OF BALING WIRE OR PERFORATED METAL STRAPPING IS NOT ACCEPTABLE FOR SUPPORTS.

PIPE SUPPORT SPACING:

SERVICE	PIPE SIZE	SPACING
CONDENSATE DRAIN	UP TO 3/4 IN.	5 FEET
(COPPER)	1 IN. THRU 1-1/2 IN.	6 FEET
	2 IN.	8 FEET
PVC PIPING SYSTEMS	ALL SIZES	4 FEET

PIPE SUPPORT HARDWARE, THREADED RODS, ETC. SHALL BE GALVANIZED FINISH UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL WARRANTY/GUARANTEE AND MAINTAIN THE STABILITY OF WORK AND MATERIALS AND KEEP SAME IN PERFECT REPAIR AND CONDITION OF THE PERIOD OF ONE (1) YEAR.

DEFECTS OF ANY KIND DUE TO FAULTY WORK OR MATERIALS APPEARING DURING THE ABOVE MENTIONED PERIOD MUST BE IMMEDIATELY MADE GOOD BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE ENTIRE SATISFACTION OF THE OWNER AND ARCHITECT AND ENGINEER. SUCH RECONSTRUCTION AND REPAIRS SHALL INCLUDE ALL DAMAGE TO THE FINISH OR FURNISHING OF THE BUILDING RESULTING FROM THE ORIGINAL DEFECT OR REPAIRS THERETO.

PLUMBING

THE GENERAL SPECIFICATIONS APPLY TO THE WORK SPECIFIED IN THIS SECTION

FURNISH AND INSTALL COMPLETE PLUMBING SYSTEM AS INDICATED ON THE DESIGN DRAWINGS AND AS OUTLINED WITHIN THESE SPECIFICATIONS. WORK SHALL INCLUDE BUT NOT BE LIMITED TO SELECTIVE DEMOLITION, THE FABRICATION AND/OR INSTALLATION OF THE SCHEDULED PLUMBING FIXTURES AND RELATED PIPING. THE COMPLETED PLUMBING SYSTEM SHALL MEET ALL APPLICABLE CODES AND STANDARDS.

ALL SOLDER OR BRAZE CONNECTIONS TO THE POTABLE WATER SYSTEM SHALL BE MADE WITH LEAD-FREE SOLDER.

PLUMBING DRAWINGS INDICATE FIXTURE TYPES, BUT NOT QUANTITIES. REFER TO PLUMBING PLANS AND ARCHITECTURAL PLANS TO DETERMINE REQUIRED NUMBER OF FIXTURES.

REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE LOCATION AND FIXTURE HEIGHTS.

PIPE AND FITTINGS - POTABLE WATER.

ABOVE GROUND - ASTM B88 SEAMLESS TYPE L HARD COPPER TUBING AND WROUGHT COPPER FITTINGS, WITH SOLDERED JOINTS.

BELOW GROUND - SIZES THROUGH 2-1/2 INCH. ASTM B88 SEAMLESS TYPE K HARD COPPER TUBING AND WROUGHT COPPER FITTINGS, WITH SOLDERED JOINTS. PROVIDE CONTINUOUS POLYBUTYLENE SLEEVES, COLOR CODED FOR TEMPERATURE.

VALVES (2-1/2 INCH AND SMALLER) TWO PIECE 400 PSI WOG FULL PORT BRONZE BODY BALL VALVE WITH THREADED ENDS. LOCKABLE LEVER HANDLE AND REPLACEABLE TEFLON OR PTFE SEATS.

INDOORS: INSULATE WITH FR/ARMAFLEX. INSULATION OUTDOORS SHALL BE PROVIDED WITH TWO COATS OF ARMAFLEX INSULATION PAINT, WHITE COLOR.

INSULATION THICKNESS:

ALL PIPE SIZES 3 /4 INCH

OUTDOORS: INSULATION NOT REQUIRED

VALVE BOX:

PROVIDE VALVE BOX FOR ALL WATER SHUTOFF VALVES OUTDOORS BELOW GRADE.

WHERE VALVES ARE INDICATED TO BE INSTALLED IN RECESSED VALVE BOX, PROVIDE STAINLESS STEEL ACCESS FRAME WITH SECURED COVER, EQUIVALENT TO JOSAM 58650.

VACUUM BREAKERS:

PROVIDE VACUUM BREAKERS WHERE SHOWN AND WHERE REQUIRED.

FOR HOT WATER, PROVIDE BACKFLOW PREVENTER IN LIEU OF VACUUM BREAKER. PROVIDE VACUUM BREAKER FOR ALL FIXTURES WITH THREADED ENDS, INCLUDING BUT NOT LIMITED TO:

- HOSE BIBBS.
- HYDRANTS.

SUPPLIES AND STOPS

PROVIDE POLISHED CHROME PLATED BRASS SUPPLIES AND ANGLE STOPS FOR ALL FIXTURES. PLASTIC SUPPLIES AND STOPS ARE NOT ACCEPTABLE. PROVIDE SHUT OFF VALVES FOR WATER SERVICE TO ALL EQUIPMENT, UPSTREAM OF FIXTURE STOPS.

PROVIDE WATER HAMMER ARRESTORS WHERE SHOWN, AT EACH GROUP OF FIXTURES, AT ENDS OF PRINCIPAL PIPING RUNS, AND AS REQUIRED. AIR CHAMBERS ARE NOT ACCEPTABLE SIZE WATER HAMMER ARRESTORS BASED ON FIXTURE UNITS OR TWO FIXTURE UNITS PER GPM, WHICHEVER IS GREATER. WATER HAMMER ARRESTORS SHALL COMPLY WITH PDI WH-201; GAS CHARGED PISTON TYPE, AS MANUFACTURED BY SIOUX CHIEF, ZURN, JOSAM, OR WADE.

FOR FIXTURE UNITS 100 OR MORE: STAINLESS STEEL CHAMBER WITH STAINLESS STEEL OR BRASS BELLOWS, ARGON CHARGED, ZURN Z-1700 OR EQUIVALENT.

FOR FIXTURE UNITS LESS THAN 100: SPUN COPPER CHAMBER WITH TRIPLE PISTON AND O-RING SEAL, AIR CHARGED, ZURN Z-1705

CHLORINATION:

BEFORE BEING PLACED IN SERVICE, ALL WATER DISTRIBUTION SYSTEMS SHALL BE FLUSHED CLEAN AND DISINFECTED. THE METHOD TO BE FOLLOWED SHALL BE THAT PRESCRIBED BY THE HEALTH AUTHORITY OR WATER PURVEYOR HAVING JURISDICTION OR, IN THE ABSENCE OF A PRESCRIBED METHOD, USE THE FOLLOWING PROCEDURE:

THE PIPE SYSTEM SHALL BE FLUSHED WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT THE OUTLETS. THE SYSTEM SHALL BE FILLED WITH A WATER / CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE. VALVED OFF, AND ALLOWED TO STAND FOR (24) HOURS. ALTERNATELY, A SOLUTION OF 200 PARTS PER MILLION AND A STANDING TIME OF (3) HOURS MAY BE USED. FLUSH THE SYSTEM WITH CLEAN POTABLE WATER UNTIL THE CHLORINE IS PURGED FROM THE SYSTEM. REPEAT THE PROCEDURE WHERE BACTERIAL CONTAMINATION REMAINS PRESENT IN THE SYSTEM.

CONNECTIONS TO MISCELLANEOUS EQUIPMENT:

ROUGH-IN AND CONNECT WATER, WASTE, AND VENT TO COMPLETE THE INSTALLATION OF EQUIPMENT LISTED ON THE DRAWINGS.

PLUMBING FIXTURES SHALL BE PROVIDED COMPLETE AS SHOWN ON THE DRAWINGS WITH ALL REQUIRED SUPPLY, WASTE, SOIL. AND VENT CONNECTIONS, TOGETHER WITH ALL FITTINGS, SUPPORTS, FASTENING DEVICES, COCKS, VALVES, AND TRAPS. ALL FIXTURES SHALL HAVE STOP VALVES ON ALL WATER CONNECTIONS. ALL EXPOSED METAL TRIM ON ALL FIXTURES SHALL BE POLISHED CHROMIUM PLATED. ALL EXPOSED PIPES EXTENDING FROM WALL SHALL HAVE CHROMIUM PLATED BRASS ESCUTCHEON MOUNTED AGAINST WALL. EXPOSED PVC PIPING AND P-TRAPS ARE UNACCEPTABLE.

THE PLUMBING FIXTURES SHALL BE ROUGHED-IN ACCORDANCE WITH MANUFACTURER'S ROUGH-IN INFORMATION. PROVISIONS FOR MOUNTING WALL FIXTURES SHALL BE MADE WHILE THE WALL IS BEING BUILT.

DRAINAGE SYSTEM

<u>GENERAL</u>

TRAP AND VENT ALL FIXTURES UNLESS NOTED OTHERWISE.

EXTEND VENTS TO BUILDING EXTERIOR.

AIR ADMITTANCE VALVES ARE NOT ACCEPTABLE.

PROVIDE POLISHED CHROME PLATED CAST BRASS GROUND JOINT SWIVEL (ADJUSTABLE TYPE) P-TRAP WITH CLEAN OUT PLUG FOR ALL FIXTURES TRAPPED ABOVE GRADE. TRAP SHALL HAVE PROVISION FOR DISASSEMBLY TO ALLOW STRAIGHT-THROUGH CLEAN-OUT OPERATIONS.

WHERE INDIRECT CONNECTIONS ARE SHOWN OR REQUIRED, PROVIDE MANUFACTURER'S STANDARD AIR GAP FITTING OR OTHER PROVISION TO MAINTAIN AIR GAP EQUAL TO MINIMUM TWICE THE DIAMETER OF THE DRAINING PIPE, BUT NOT LESS THAN 2 INCHES.

PIPE AND FITTINGS

SANITARY WASTE AND VENT - SIZES THROUGH 6 INCH:

INSIDE BUILDING: ASTM D1785 SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS, DWV PATTERN.

DRAIN, WASTE AND VENT PIPING LOCATED IN FIRE RATED WALL ASSEMBLIES AND RETURN AIR PLENUMS SHALL BE SERVICE-WEIGHT CAST IRON WITH SPIGOT FITTINGS.

UNDERGROUND: ASTM D1785 SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS, DWV PATTERN.

PROVIDE REQUIRED CLEANOUTS IN ALL DRAINAGE PIPING, WHETHER OR NOT SHOWN ON THE DRAWINGS. INCLUDE CLEAN-OUTS FOR THE FOLLOWING SYSTEMS:

SANITARY WASTE.

CONDENSATE DRAIN (A/C CLEAR WATER WASTE).

OTHER GRAVITY DRAINAGE SYSTEMS

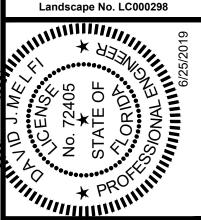


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A Full Service A & E Firm 500 West Fulton Street Sanford, FL 32771

Ph: 407.322.6841

Plans Prepared By: CPH, Inc. State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143 Architect, No. AA26000926



Designed: J.A.D.

Drawn: J.A.D. Checked: D.J.M. Job No.: N6601 Date: 4-2-19 © 2019

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THIS SHEET NOT VALID FOR **CONSTRUCTION WITHOUT** COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR

MASTER LEGEND.

PLUMBING LEGEND						
DESCRIPTION						
COLD WATER PIPING						
140° HOT WATER PIPING						
110° HOT WATER PIPING						
HOT WATER RETURN PIPING						
SANITARY DRAINAGE PIPING (BELOW SLAB)						
SANITARY DRAINAGE PIPING (ABOVE SLAB)						
VENT PIPING (V)						
VALVE (SEE SPECS FOR TYPES)						
WALL CLEANOUT						
FLOOR/EXTERIOR CLEANOUT						
GAS COCK						
PIPING TURNING DOWN						
PIPING TURNING UP						
PIPING TEE PIPING						
ROLL DOWN						
P-TRAP						
VALVE IN VERTICAL						
FIXTURE CALLOUT						
FLOOR DRAIN						
FLOOR SINK						
DEMOLITION PIPING						

NOT ALL SYMBOLS USED

	PLUMBING A	- IL	VIATIONO
AS	ABOVE SLAB	MAX	MAXIMUM
ADA	AMERICANS WITH DISABILITIES ACT	MEZZ	MEZZANINE
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AFG	ABOVE FINISHED GRADE	MNTG	MOUNTING
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MS	MOP SINK
AP	ACCESS PANEL		NOT ADDITIONAL F
ASTM	AMERICAN STANDARDS TESTING MATERIALS	NA	NOT APPLICABLE
AWWA	AMERICAN WATER WORKS ASSOCIATION	NC	NORMALLY CLOSED
		NIC	NOT IN CONTRACT
BFP	BACKFLOW PREVENTER	NO	NORMALLY OPEN
BS	BELOW SLAB	NSF	NATIONAL SANITATION FOUNDATION
ВЗ	DELOW SLAD		
0.0	COMPENSATE	NTS	NOT TO SCALE
CD	CONDENSATE		OLITOIDE DIAMETED
CIRC	CIRCULATING	OD	OUTSIDE DIAMETER
CLG	CEILING	ORD	OVERFLOW ROOF DRAIN
CO	CLEANOUT	lorw	OVERFLOW RAIN WATER
CP	CIRCULATING PUMP	ORWL	OVERFLOW RAIN WATER LEADER
-		1 -	
CONN	CONNECTION	PDI	PLUMBING DRAINAGE INSTITUTE
CONT	CONTINUOUS	PH	PHASE
CW	COLD WATER	PPP	PRECISION PLUMBING PRODUCTS
		PSI	POUNDS PER SQUARE INCH
DIA	DIAMETER	1	
DN	DOWN	RD	ROOF DRAIN
DFU	DRAINAGE FIXTURE UNITS	REF	REFERENCE
-			
DWG	DRAWING		EVOLUTIONS PER MINUTE
		RR	RESTROOM
ECO	EXTERIOR CLEANOUT	RW	RECLAIMED WATER
ELEV	ELEVATION	RWL	RAIN WATER LEADER
EQUIP	EQUIPMENT		
		SAN	CANITADV
EWC	ELECTRIC WATER COOLER		SANITARY
EWH	ELECTRIC WATER HEATER	SH	SHOWER
EXIST	EXISTING	SK	SINK
		SPEC	SPECIFICATIONS
°F	DEGREES FAHRENHEIT	sQ	SQUARE
FCO	FLOOR CLEANOUT	SS	SANITARY SEWER, STAINLESS STEEL
			•
FD	FLOOR DRAIN	ST	STORM
FIN	FINISH	STD	STANDARD
FLR	FLOOR		
FPS	FEET PER SECOND	T&P	TEMPERATURE AND PRESSURE
FT	FEET	TDH	TOTAL DYNAMIC HEAD
-	 -	TEMP	TEMPERATURE
GAL	CALLON(S)	TET	THERMAL EXPANSION TANK
-	GALLON(S)	1	
GFP	GALLONS PER FLUSH	TMV	THERMOSTATIC MIXING VALVE
GPM	GALLONS PER MINUTE	TP	TRAP PRIMER
GW	GREASE WASTE	TYP	TYPICAL
		1	
HB	HOSE BIBB	UL	UNDERWRITER'S LABORATORY
HD	HUB DRAIN	UNO	UNLESS NOTED OTHERWISE
HP	HORSEPOWER	UR	URINAL
		UR	UNINAL
HR	HOUR	1	
HW	HOT WATER	V	VOLTS
HWR	HOT WATER RETURN	VTR	VENT THROUGH ROOF
HZ	HERTZ	VIV	VALVE IN VERTICAL
		VLV	VALVE
IE	INVERT ELEVATION	VOL	VOLUME
		VOL	V OLUIVIL
ID	INTERNAL DIAMETER	1,,,	1444 TTO
IN	INCHES	W	WATTS
IPS	INTERNATIONAL PIPE STANDARD	W/	WITH
		WB	WALL BOX
KW	KILOWATT	l wc	WATER CLOSET
1 / 4 4	MEOWATI	WCO	
	LAV4T0DV	1	WALL CLEANOUT
	LAVATORY	WHA	WATER HAMMER ARRESTOR
	LINEAD FEET	WHY	WALL HYDRANT
	LINEAR FEET	I AALI	WALLITIDIVANI
L LF LP	LIQUID PROPANE GAS	WSFU	WATER SUPPLY FIXTURE UNITS

NOT ALL SYMBOLS USED

PLUMBING GENERAL NOTES

- ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH 2014 FLORIDA BUILDING CODE PLUMBING.
- LOCATE ALL VALVES IN ACCESSIBLE AREAS AS DEFINED BY THE 2014 FPC. CONTRACTOR SHALL PROVIDE ACCESS DOORS WHERE NECESSARY.
- 3. PROVIDE THERMOSTATIC MIXING VALVES AT WATER HEATERS AS STATED IN SCHEDULES.
- VENT PIPING SHOWN IS ONLY FOR DIAGRAMMATIC PURPOSES. COORDINATE FINAL CONNECTION TO EXISTING VTR AT EXISTING RESTROOM GROUP,
- 5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS TO ENSURE PROPER BID NO EXCEPTIONS WILL BE MADE.
- 6. ROUTE T&P VALVE PIPING TO EXISTING ADJACENT FLOOR DRAIN ONLY.
- PROPERLY SLEEVE ALL PIPING ROUTED THROUGH WALLS AND FLOOR SLABS, AND PROTECT TO PREVENT CORROSION. SLEEVES SHALL BE RATED ASSEMBLIES WHERE THE WALL IS A RATED WALL. DIELECTRIC UNIONS SHALL BE USED TO CONNECT COPPER TO STEEL PIPE AND SHALL HAVE METAL CONNECTIONS ON EACH END THREADED TO MATCH THE ADJACENT PIPING. SEPARATE METAL COMPONENTS WITH A NYLON INSULATOR TO PREVENT CURRENT FLOW BETWEEN DISSIMILAR METALS.
- PROVIDE PIPE MARKERS FOR ALL PIPING ABOVE THE CEILING SPACES IN ACCORDANCE WITH SPECIFICATION SECTION 220553, "IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT".
- LABEL ALL VALVES ABOVE CEILINGS AND IN CONCEALED SPACES. LABEL AT CEILING TILE WITH VALVE # AND TYPE OF WATER. (i.e.; BLUE= COLD WATER, LETTERING CW VLV1-001). SEE SPECIFICATIONS FOR TAGGING.
- 10. PROVIDE WATER HAMMER ARRESTORS IN ALL CW AND HW SUPPLY PIPING AS REQUIRED AND/OR AS SHOWN ON WATER RISERS. INSTALL IN ACCORDANCE WITH PDI-WH201 STANDARDS. SEE SCHEDULE ON THIS SHEET FOR SIZES. AIR CHAMBERS ARE NOT ACCEPTABLE SUBSTITUTIONS.
- 11. PROVIDE THERMAL INSULATION FOR HOT WATER PIPING IN ACCORDANCE WITH THE ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION AND PER SPECIFICATIONS.
- 12. PROVIDE ALL LAVATORIES WITH HW FROM THE WATER HEATER THERMOSTATIC MIXING VALVE SET TO 105°F.
- 13. PROVIDE CLEANOUTS AT THE BASE OF EACH SANITARY STACK IN ACCORDANCE WITH 2014 FLORIDA PLUMBING CODE. CLEANOUTS SHALL BE SIZED TO MATCH THE PIPING BEING SERVED. CLEANOUTS SHALL BE SPACED AT 75'-0" MAX. ALSO PROVIDE CLEANOUTS IN HORIZONTAL CHANGE OF
- 14. THE MANUFACTURERS OF ALL EQUIPMENT SHOWN ARE THE BASIS OF DESIGN. SEE SPECIFICATIONS FOR OTHER ACCEPTABLE MANUFACTURERS.
- 15. FIRE CAULK AND SLEEVE ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. REFER TO LIFE SAFETY PLANS FOR RATED ASSEMBLY LOCATIONS. REFER TO ARCHITECTURAL SHEET FOR DETAILS AND UL ASSEMBLY NUMBERS
- 16. REFER TO ARCHITECTURAL SHEETS FOR ALL FIXTURE MOUNTING HEIGHTS.
- COORDINATE UNDERGROUND PIPING INVERT ELEVATIONS WITH STRUCTURAL FOOTING ELEVATIONS AND CIVIL INVERT CONNECTIONS PRIOR TO ANY UNDERGROUND PIPING INSTALLATIONS. IF FOOTINGS ARE IN CONFLICT AND WHERE A PIPING ROLL DOWN IS NOT POSSIBLE, COORDINATE WITH STRUCTURAL ENGINEER FOR DROPS IN FOOTINGS IN SPECIFIC LOCATIONS.
- 18. COORDINATE ALL CEILING PIPING AND ELEVATIONS IN SHOP DRAWINGS WITH HVAC, FIRE PROTECTION AND ELECTRICAL TRADES TO ENSURE CLEARANCES AND PENETRATIONS, PRIOR TO INSTALLATION.
- 19. SLOPE ALL SANITARY PIPING 2 1/2"Ø OR LESS AT 1/4" PER FOOT. SLOPE ALL SANITARY PIPING 3"Ø TO 6"Ø AT 1/8" PER FOOT.
- 20. SIZE VALVES AND FITTINGS THE SAME SIZE AS THE PIPING WHERE THEY ARE LOCATED UNLESS NOTED OTHERWISE.
- 21. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL FIXTURES INCLUDED IN THIS CONTRACT OR SPECIFIED HEREIN.
- 22. PROVIDE TRAP PRIMER CONNECTIONS ON ALL FLOOR DRAINS.
- 23. CONTRACTOR SHALL ROUGH-IN ALL WASTES AND WATER SUPPLIES FOR FIXTURES AND PERFORM FINAL CONNECTIONS AS NEEDED.
- 24. INSTALL PRESSURE REDUCING VALVES ON ANY PORTION OF BUILDING PIPING THAT EXCEEDS 80 PSI.
- 25. THE CONTRACTOR SHALL BASE HIS PROPOSAL UPON THE EQUIPMENT AS SCHEDULED OR SPECIFIED, USING THE MANUFACTURERS AND MODEL NUMBERS AS CALLED FOR IN THE SPECIFICATIONS AND SCHEDULED ON THE DRAWINGS. IF MORE THAN ONE MANUFACTURER OF EQUIPMENT IS SPECIFIED, ANY ONE OF THE MANUFACTURERS OF EQUIPMENT MAY BE USED IN THIS CONTRACTOR'S PROPOSAL. IF THIS CONTRACTOR WISHES TO USE EQUIPMENT NOT SPECIFIED, HE MUST, AT THE TIME OF BIDDING, SUBMIT SEPARATELY ON LETTERHEAD STATIONARY OF THE BIDDER, THE EQUIPMENT HE WOULD SUBSTITUTE AND THE COST TO BE ADDED OR TO BE DEDUCTED FROM HIS PROPOSAL.
- 26. ROUGH IN ALL FLUSH VALVE WATER CLOSETS SO THAT THE FLUSH VALVE HANDLE IS TO THE WIDE SIDE OF THE ROOM, AS PER FLORIDA PLUMBING
- 27. THIS FACILITY SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.
- 28. DISINFECT DOMESTIC WATER PIPING BY EITHER OF TWO WAYS: FILL SYSTEM WITH 50ppm CHLORINE SOLUTION AND STAND FOR 24 HOURS OR 200ppm CHLORINE SOLUTION AND STAND FOR 3 HOURS.

	DRAI	N SCHEDULE			
TAG	TYPE	MANUFACTURER	MODEL NO.	OUTLET	NOTES
TD-1	TRENCH DRAIN	ZURN	Z884-E1-U3-FS	SIZE PER PLAN	1, 2
FCO	FLOOR CLEANOUT	ZURN	ZB1400	SIZE PER PLAN	3

- 1. PROVIDE PPP INC, PR-500, 1/2" UNDER LAV TRAP PRIMER OR AS NOTED ON PLAN.
- 2. PROVIDE 1/2" TRAP PRIMER OR AS NOTED ON PLAN.

3. COORDINATE FINISH CAP WITH FINISH FLOOR MATERIAL.

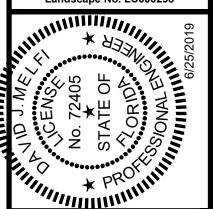
	PLUMBING FIXTURE SCHEDULE									
MARK	MARK DESCRIPTION WASTE VENT CW HW REMARKS									
HB-1	WALL HYDRANT EXTERIOR OF BLDG.			3/4"		WALL MOUNTED @ 18" AFF MODEL: ZURN #Z1305 LOOSE KEY OPERATION, ANTI-SIPHON,ENCASED, NONFREEZE, 3/4" INLET, CHROME FINISH.				
OS-1	OIL AND SAND SEPARATOR	4	3			MODEL: STRIEM OS-75 PROVIDE HIGHWAY RATED COVER 16,000 LB CAPACITY.				



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A & E Firm 500 West Fulton Street Sanford, FL 32771 Ph: 407.322.6841

Plans Prepared By: CPH, Inc. State of Florida Licenses: Engineer No. 3215 Surveyor No. LB7143 Architect. No. AA26000926 Landscape No. LC000298



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Designed: J.A.D.

Drawn: J.A.D. Checked: D.J.M. Job No.: N6601 Date: 4-2-19

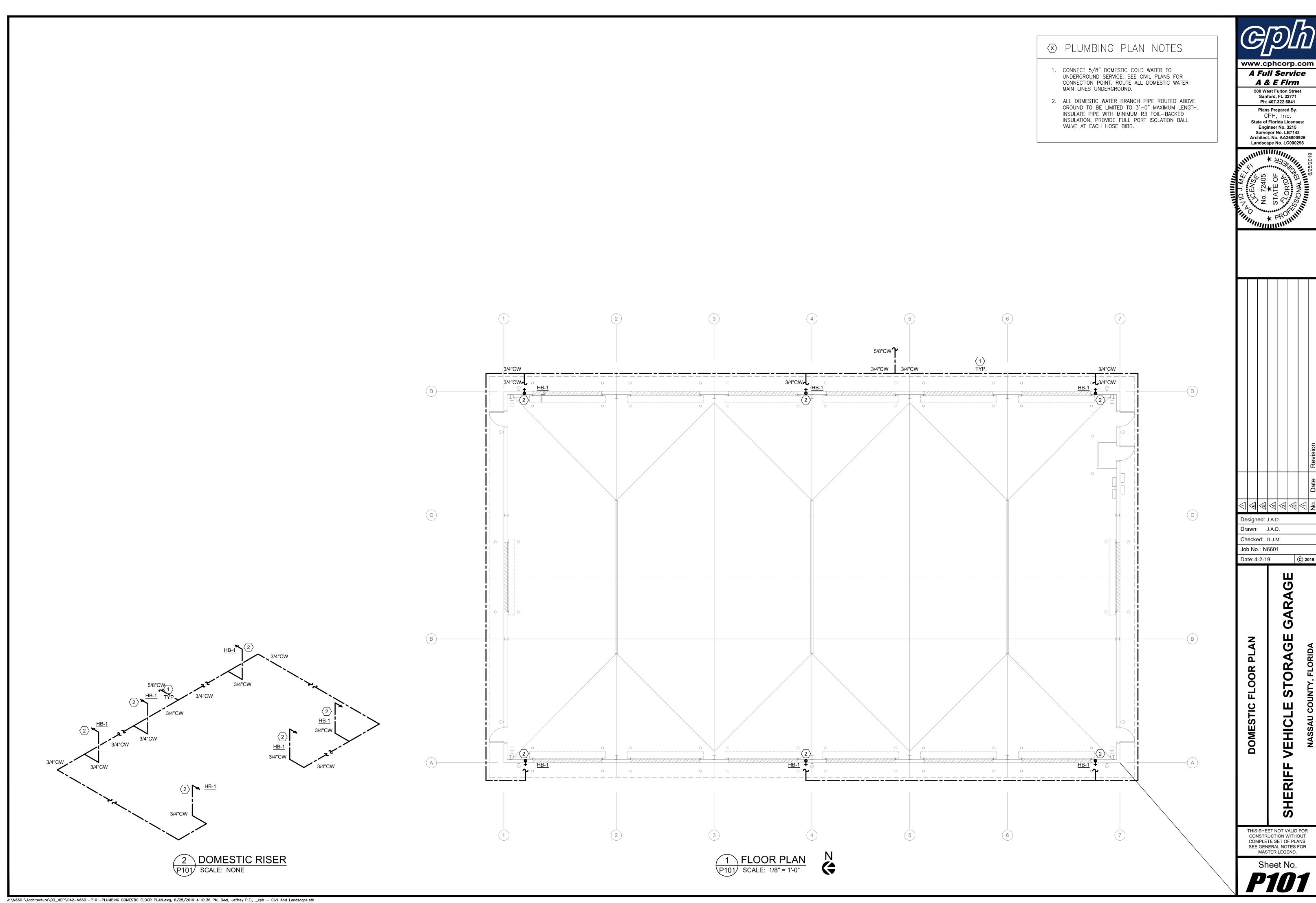
NOTES

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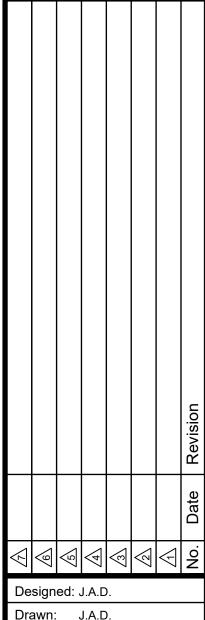
CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.





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GENERAL FIRE PROTECTION REQUIREMENTS

DEFINITIONS:

(FURNISH): SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS.

(INSTALL): OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS.

(PROVIDE): FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE.

(UNO) OR (U.N.O.): UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL MAINTAIN A SAFE WORK ENVIRONMENT AT ALL TIMES. COMPLY WITH ALL OSHA, NIOSH, DOT, STATE, AND LOCAL REQUIREMENTS REGARDING SAFE HANDLING, STORING, TRANSPORTING, AND DISPENSING OF CHEMICALS. MAINTAIN AND DISPLAY MSDS INFORMATION FOR ALL CHEMICAL PRODUCTS. PROVIDE ALL NECESSARY MEANS TO MAINTAIN SAFE WORKING CONDITIONS. INCLUDING VENTILATION FANS. FIRE EXTINGUISHERS, EYE PROTECTION, RESPIRATORS, PROTECTIVE CLOTHING, VENTILATION, ETC. ALL EQUIPMENT AND MATERIALS USED TO IMPLEMENT THE WORK SHALL BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING ALL RECOMMENDED SAFETY PRECAUTIONS. MAINTAIN A PROPER FIRE WATCH FOR ALL OPERATIONS WHERE SPARKS, FLAMES, OR OTHER SOURCES OF FIRE ARE PRODUCED. FOR ALL MATERIALS CONTAINING SOLVENTS, MAINTAIN THE RECOMMENDED VENTILATION OF THE AREA TO PREVENT THE ACCUMULATION OF VAPORS WHICH POSE A HEALTH OR FIRE HAZARD.

COMPLETE SYSTEMS:

THE DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR THE COMPLETE INSTALLATION OF EACH UTILITY, WHETHER OR NOT ALL SUCH MATERIALS AND APPURTENANCES ARE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS. THE INSTALLED SYSTEM SHALL BE COMPLETE IN EVERY WAY AND FUNCTIONING ACCORDING TO THE DESIGN INTENT. THE CONTRACTOR SHALL VERIFY PROJECT CONDITIONS TO INSURE THAT THE WORK WILL FIT INTO THE STRUCTURE IN THE MANNER INTENDED ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO FABRICATION OR PERFORMING ANY WORK IN THE AREA INVOLVING THE DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS OR NOTES RELATING TO THE AREA. PROVIDE ALL SAW CUTTING, EXCAVATION, TRENCHING, SHORING, COMPACTING, DE-WATERING, ETC. REQUIRED FOR THE PROJECT, WHETHER OR NOT SHOWN ON THE DRAWINGS. ALL LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC., INDICATED ON THE AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE TO THE PLANS SUBJECT TO BUILDING CONSTRUCTION AND INTERFERENCES WITH OTHER TRADES.

PERFORM ALL WORK NECESSARY TO PREPARE THE STRUCTURE FOR THE INSTALLATION OF THE WORK. ALL HOLES, OPENINGS AND DAMAGED MATERIALS CREATED DURING CONSTRUCTION SHALL BE REPAIRED AND FINISHED BY EXPERIENCED WORKMEN.

PROVIDE ALL WALL AND FLOOR PENETRATIONS REQUIRED TO COMPLETE INSTALLATION. ALL PENETRATIONS SHALL BE PATCHED AND FINISHED TO MATCH SURROUNDING SURFACES AND FINISHES. ALL EQUIPMENT OR PIPE PENETRATIONS THROUGH WALL AND FLOORS SHALL BE SLEEVED AND SEALED SO AS TO BE WATER AND AIR TIGHT.

COORDINATION AND WORKMANSHIP:

ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. VERIFY VOLTAGE AND ALL ELECTRICAL REQUIREMENTS OF EQUIPMENT AND SYSTEMS WITH DIV. 26 CONTRACTOR PRIOR TO ORDERING. ALL MATERIALS SHALL BE FABRICATED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER. THE OWNER AND ENGINEER SHALL DETERMINE WHETHER WORKMANSHIP IS ACCEPTABLE. NO ALLOWANCES WILL BE MADE FOR REWORK OR DELAY DUE TO POOR WORKMANSHIP, COORDINATION DIFFICULTIES, OR INTERFERENCES BETWEEN INVOLVED TRADES.

RELATED WORK SPECIFIED ELSEWHERE:

ALL DIVISION 1 REQUIREMENT, AND ALL TERMS AND CONDITIONS OF CONTRACT.

REFER TO ELECTRICAL SPECIFICATION FOR ELECTRICAL WORK TO BE DONE IN CONJUNCTION WITH THE MECHANICAL WORK. THIS CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT, WIRING, JUNCTION BOXES, ETC., REQUIRED FOR HVAC CONTROLS, UNLESS SPECIFICALLY NOTED OTHERWISE.

SUBSTITUTIONS:

EQUIPMENT AND DESIGN OF SYSTEMS INDICATED ON THE DESIGN DRAWINGS AND WITHIN THESE SPECIFICATIONS SHALL BE CONSIDERED AS SPECIFIED STANDARD OF QUALITY. NO SUBSTITUTIONS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. ALL COSTS ARISING FROM A SUBSTITUTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR MAKING THE SUBSTITUTION, INCLUDING VERIFICATION OF FIT AND ACCESS, FIELD-INSTALLED ACCESSORIES, SUPPORTS, ELECTRICAL REQUIREMENTS, AND REVISIONS TO DOCUMENTS (DESIGN COSTS).

CODES AND STANDARDS

THE ENTIRE SYSTEM AND ALL COMPONENTS LISTED HEREIN SHALL MEET ALL STATE, COUNTY, AND LOCAL CODES AND ORDINANCES IN EVERY RESPECT. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND PAY ALL FEES.

ALL EQUIPMENT, ETC., SHALL BE NEW UNLESS OTHERWISE NOTED, AND AS SPECIFIED FREE OF DEFECTS. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. OR E.T.L. LISTED.

SHOP DRAWINGS AND SUBMITTALS:

SUBMIT FOR ENGINEER'S APPROVAL, SHOP DRAWINGS, COORDINATION DRAWINGS, AND MANUFACTURER'S DATA FOR ALL NEW EQUIPMENT AND FIXTURES PRIOR TO PURCHASE AND/OR FABRICATION. WHERE QUALIFICATIONS AND/OR QUALITY ASSURANCE REQUIREMENTS ARE SPECIFIED, THE SUBMITTAL SHALL INCLUDE EVIDENCE THAT THE STATED REQUIREMENTS HAVE BEEN MET. INCLUDE QUALIFICATIONS AND CERTIFICATIONS OF PROPOSED TEST AND BALANCE SUBCONTRACTOR.

EQUIPMENT PERFORMANCE SHALL BE VERIFIED BY THE EQUIPMENT MANUFACTURER AS PART OF THE SUBMITTAL, PRIOR TO ORDERING. VERIFY EQUIPMENT VOLTAGE AND ELECTRICAL REQUIREMENTS OF THE EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT, SHOP DRAWINGS FOR EQUIPMENT REQUIRING ELECTRIC POWER OR CONTROL WIRING CONNECTIONS SHALL INCLUDE COMPLETE WIRING DIAGRAMS.

SUBMITTALS SHALL BE PLACED IN THREE RING BINDERS, INDEXED AND TABBED. INCOMPLETE SUBMITTALS WILL BE RETURNED, UNCHECKED.

DO NOT ORDER EQUIPMENT OR PROCEED WITH THE WORK WITHOUT PRIOR APPROVED SUBMITTALS. EQUIPMENT OR WORK WHICH IS ORDERED OR INSTALLED WITHOUT PRIOR APPROVED SUBMITTALS SHALL, AT THE ENGINEER'S DISCRETION, BE REMOVED AT NO COST TO THE OWNER. NO ALLOWANCES WILL BE MADE FOR REWORK OR DELAY DUE TO NEGLECT OF REQUIRED APPROVAL PROCESS.

COORDINATION DRAWINGS:

SUBMIT 1/4 IN. SCALED DIMENSIONED LAYOUTS SHOWING THE ACCURATELY SCALED PIPING AND THEIR RELATIONSHIP TO SPACE ENCLOSURE. SHOW ALL OFFSETS AND FITTINGS NECESSARY TO COMPLETE THE PIPING SYSTEMS, INCLUDING INSTALLATION BETWEEN AND THROUGH JOIST, ETC. SHOP DRAWINGS SHALL BE MACHINE DRAFTED BY PERSONS REGULARLY ENGAGED IN SUCH WORK.

PIPING DRAWINGS:

SHOW UNDERGROUND PIPING INVERTS, RATE OF SLOPE, JOINT LOCATIONS, THRUST BLOCKS, ETC. SHOW PIPE SIZES, HANGER METHODS AND JOINT CONNECTION DETAILS. SHOW PIPE ELEVATIONS IN RELATIONSHIP TO FLOOR, CEILING AND STRUCTURAL ELEMENTS. INDICATE SLOPES. INDICATE ALL VALVES, FITTINGS, ANCHORS, DRAINS, SUPPORTS, ANCHORS, ETC. LOCATE ALL VALVES, CLEANOUTS, ETC. SO AS TO ENSURE SAFE UNRESTRICTED ACCESS FOR SERVICE AND MAINTENANCE.

RECORD DRAWINGS AND OPERATION / MAINTENANCE MANUALS:

PROVIDE THE OWNER A COMPLETE SET OF RECORD DRAWINGS AND OWNER OPERATION/ MAINTENANCE (O/M) MANUALS AT THE END OF THE PROJECT. PROJECT WILL NOT BE COMPLETE UNTIL ACCURATE RECORD DRAWINGS AND O/M MANUALS ARE DELIVERED.

THE RECORD DRAWINGS SHALL BE MACHINE DRAFTED, AND SHALL BE PROVIDED BOTH ON REPRODUCIBLE VELLUMS AND MAGNETIC MEDIA CAD FILES

DRAWING FORMAT FOR THIS PROJECT SHALL BE AUTOCAD VERSION 2013.

O/M MANUALS SHALL INCLUDE CATALOG TECHNICAL DATA, RECOMMENDED SERVICE PROCEDURES, RECOMMENDED SERVICE INTERVALS, CALIBRATION INFORMATION, FACTORY TRAINING MANUALS, MAGNETIC MEDIA FOR SOFTWARE PROVIDED, AND RECOMMENDED SPARE PARTS. ORGANIZE OPERATING AND MAINTENANCE DATA INTO SUITABLE SETS OF MANAGEABLE SIZE. BIND PROPERLY INDEXED DATA IN INDIVIDUAL, HEAVY-DUTY, 2-INCH, 3-RING VINYL-COVERED BINDERS WITH POCKET FOLDERS FOR FOLDED SHEET INFORMATION. MARK APPROPRIATE IDENTIFICATION ON FRONT AND SPINE OF EACH BINDER. INCLUDE THE FOLLOWING TYPES OF INFORMATION:

OPERATING AND MAINTENANCE INSTRUCTIONS

SPARE PARTS LIST COPIES OF WARRANTIES WIRING DIAGRAMS INSPECTION REPORTS & APPROVALS SHOP DRAWINGS AND PRODUCT DATA

TRAINING SERVICES:

THOROUGHLY INSTRUCT THE OWNER'S REPRESENTATIVE IN THE OPERATION OF ALL EQUIPMENT FURNISHED AND LOCATION OF ALL VALVES AND CONTROL DEVICES.

ALL WORK SHALL BE PERFORMED UNDER THE PERSONAL SUPERVISION OF A PROJECT SUPERINTENDENT ON-SITE. MAINTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES DURING THE PROJECT.

DISPOSAL:

FOR ALL MATERIALS AND DEVICES REMOVED, THE CONTRACTOR SHALL DISPOSE OFF SITE IN AN APPROVED MANNER. PROVIDE WRITTEN DOCUMENTATION FOR DISPOSAL OF ALL

ACCESS AND CLEARANCES:

ARRANGE EQUIPMENT, CONNECTING PIPING, CONNECTING DUCTWORK, ETC. TO PERMIT FREE ACCESS FOR MAINTENANCE AND REPAIR. COORDINATE WITH OWNER'S REPRESENTATIVE TO BE CERTAIN THAT PROPER ACCESS IS PROVIDED. MAINTAIN REQUIRED CLEARANCES IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT.

EXCAVATION, BEDDING, BACKFILL, AND PAVING:

PROVIDE ALL EXCAVATION AND TRENCHING TO THE CORRECT ELEVATIONS, FOR THE INSTALLATION OF ALL PIPING, MANHOLES, CATCH BASINS AND FOUNDATIONS INCLUDED UNDER THIS DIVISION OF THE WORK.

PROVIDE ALL BACKFILL IN STRICT ACCORDANCE WITH THE EXCAVATION AND BACKFILL SECTION OF DIVISION 1 SPECIFICATIONS.

EXCAVATION: EXCAVATE PIPE TRENCH. HAND DIG IN ALL AREAS WHERE EXISTING UTILITIES EXIST. HAND TRIM EXCAVATION FOR ACCURATE PLACEMENT OF PIPE TO ELEVATIONS INDICATED. PROVIDE NECESSARY SHEETING AND SHORING TO COMPLY WITH OSHA REGULATIONS FOR SAFETY IN THE TRENCH.

BEDDING: PLACE BEDDING MATERIAL AT TRENCH BOTTOM, LEVEL MATERIALS IN CONTINUOUS LAYER NOT EXCEEDING 6 INCHES COMPACTED DEPTH, COMPACT TO 95 PERCENT. MAINTAIN OPTIMUM MOISTURE CONTENT OF BEDDING MATERIAL TO ATTAIN REQUIRED COMPACTION DENSITY.

BACKFILL: BACKFILL MATERIAL SHALL BE CLEAN EARTH FILL COMPOSED OF SAND, SLIGHTLY SILTY SAND, SAND AND ROCK, CRUSHED ROCK, OR AN APPROVED COMBINATION THEREOF. THE BACKFILL MATERIAL SHALL HAVE NO MORE THAN 12 PERCENT PASSING THE NUMBER 200 SIEVE UNLESS APPROVED BY THE OWNER AND AHJ. WHEN TRENCHES ARE CUT IN PAVEMENTS OR AREAS TO BE PAVED, COMPACTION AS DETERMINED BY ASSHTO SPECIFICATION T-180 (MODIFIED), SHALL BE NOT LESS THAN 98 PERCENT OF MAXIMUM DENSITY. ALL OTHER LOCATIONS SHALL BE 95 PERCENT. DENSITY TESTS FOR CONFORMANCE TO THE COMPACTION REQUIREMENTS SHALL BE MADE BY TESTING LABORATORY SELECTED BY THE OWNER AT THE EXPENSE OF THE CONTRACTOR. TESTS SHALL BE MADE EVERY 100 FEET OR LESS, MINIMUM TWO TESTS PER SITE. IF ANY TEST RESULTS ARE UNSATISFACTORY, THE CONTRACTOR SHALL RE-EXCAVATE AND RE-COMPACT THE BACKFILL AT HIS EXPENSE UNTIL THE DESIRED COMPACTION IS

DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTAL CONDITIONS AND DIVISION I SPECIFICATIONS, APPLY TO WORK SPECIFIED IN THIS SECTION.

PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, FEES AND SERVICES FOR, AND REASONABLY INCIDENTAL TO, PROPER COMPLETION OF ALL FIRE PROTECTION WORK HEREIN SPECIFIED.

CONTRACTOR SHALL REVISE EXISTING SPRINKLER HEAD LOCATION TO INCORPORATE NEW PIPING AND HEADS AS REQUIRED FOR NEW LAYOUT.

ALL WORK SHALL COMPLY WITH NFPA REQUIREMENTS, FLORIDA BUILDING CODE AND LOCAL FIRE DEPARTMENT

ALL WORK SHALL BE PERFORMED BY COMPETENT WORKMEN SKILLED AND LICENSED IN THIS PARTICULAR TRADE.

RESPONSIBILITY FOR LAYOUT OF PIPING:

MAKE A CAREFUL LAYOUT OF THE PROPOSED NEW SERVICES BEFORE STARTING WITH THE WORK, MAKING EVERY ATTEMPT TO AVOID INTERFERENCES.

ATTENTION IS CALLED TO DUCTWORK, HEATING AND COOLING PIPING, WATER AND DRAIN PIPING, AND TO THE ELECTRICAL INSTALLATION, WHICH WILL BE INSTALLED BY OTHERS.

ANY DISCREPANCIES OR CONFLICTS DISCOVERED SHOULD BE REPORTED TO THE ARCHITECT/ENGINEER, AND WORK SHALL NOT PROCEED UNTIL A SATISFACTORY RESOLUTION IS FOUND. NO ADDITIONAL COMPENSATION WILL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY THE OWNER TO COVER THE COST OF ANY SUCH INTERFERENCES, WHETHER DUE TO NEGLIGENCE, ERROR, OVERSIGHT OR OTHER CAUSE IN NOT HAVING PROPERLY ESTABLISHED THE ELEVATIONS OF ALL NEW OR EXISTING PIPING, ETC.

PIPING SHALL BE CONCEALED IN AREAS WITH CEILINGS AND EXPOSED IN AREAS WITHOUT CEILINGS.

WHERE LAY-IN CEILINGS ARE USED, CENTER HEADS IN THE TILES USING A STANDARD ARM-OVER METHOD

PIPING SHALL BE INSTALLED AND SUPPORTED PER NFPA 13.

SLOPE PIPING IN ACCORDANCE WITH NFPA REQUIREMENTS.

PROVIDE DRAINS AT RISERS, ON VALVED SECTIONS, AT SIAMESE CONNECTIONS AND AT OTHER LOCATIONS REQUIRING SAME FOR COMPLETE DRAINAGE OF SYSTEMS. PIPE DRAINS TO OUTSIDE OF BUILDING OR AS APPROVED.

WALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED WITH PRO-SET FIRESTOP COUPLING SYSTEM OR WITH GEDNEY TYPE CFS1 FIRE SEAL OR EQUAL. SPACE BETWEEN SLEEVE AND WALL TO BE COMPLETELY SEALED WITH CAULKING. VOID BETWEEN SLEEVE PLUGS TO BE FILLED WITH INSULATION.

DRAWINGS FOR APPROVALS

BEFORE PROCEEDING WITH WORK, SUBMIT SHOP DRAWINGS FIRST TO THE AUTHORITY HAVING JURISDICTION, AND THEN TO THE ARCHITECT/ENGINEER FOR REVIEW. SUBMITTALS SHALL SHOW LOCATIONS OF PIPING, SPRINKLER HEADS, UNDERGROUND PIPING, ETC., AND SHALL INCLUDE INFORMATION ON VALVES, SPRINKLER HEADS, ALARM VALVES, HYDRANTS, ETC. AT LEAST TWO (2) SETS OF THE SHOP DRAWINGS SHALL BEAR THE APPROVAL STAMP OF THE LOCAL FIRE MARSHALL.

EQUIPMENT AND MATERIALS

ALL DEVICES, EQUIPMENT AND MATERIALS SHALL BE NEW, SHALL BE IN ACCORDANCE WITH NFPA REQUIREMENTS AND SHALL BEAR FACTORY MUTUAL AND THE UNDERWRITER'S LABEL OF APPROVAL.

ABOVE GROUND PIPE AND FITTINGS: PIPE ABOVE GROUND AND WITHIN THE BUILDING SHALL BE STANDARD WEIGHT, SCHEDULE 40 BLACK STEEL PIPE FITTINGS SHALL BE OF A TYPE APPROVED FOR SPRINKLER SYSTEMS AND DESIGNED FOR 175 PSI WORKING PRESSURE. MALLEABLE IRON STANDARD WEIGHT FITTINGS WILL BE ACCEPTABLE IN SIZES UP TO 6 IN..

INTERIOR VALVES: 2-1/2 IN. AND LARGER SHALL BE OS AND Y, FLANGED, IBBM GATE VALVES. 2 IN. AND SMALLER SHALL BE THREADED, BRONZE GATE VALVES. ALL VALVES DESIGNED FOR 175 PSI WP. LISTED GROOVED OR BUTTERFLY VALVES ARE ACCEPTABLE.

SPRINKLER HEADS: FOR ALL EXPOSED UNFINISHED AREAS AND MECHANICAL ROOMS UPRIGHT TYPE 1/2 IN. ORIFICE, BRASS FINISH. FOR FINISHED AREAS, RECESSED PENDENT TYPE, CHROME FINISH, 1/2 IN. ORIFICE. ALL HEAD SHALL BE A CENTRAL MODEL GB-QR (QUICK RESPONSE). VIKING AND RELIABLE ACCEPTABLE

MANUFACTURERS.

POST INDICATOR VALVE(S): EQUAL TO TRAVERSE CITY IRON WORKS NO. A-261-MJ GATE VALVE WITH NON-RISING STEM AND MECHANICAL JOINT ENDS. PROVIDE COMPLETE WITH POST INDICATOR ASSEMBLY EQUAL TO T.C.I.W. NO. A-240. SEAL OPEN WITH APPROVED SEALS. PROVIDE WRENCH FOR EACH POST.

CHECK VALVE(S): SWING TYPE, FLANGED CONNECTIONS, 175 PSI WWP, BRASS SEAT, ELASTOMER O-RING SEAT. EQUAL TO VIKING MODEL C-2. WHERE ALLOWED BY THE UNDERWRITER AND PERMITTED BY LOCAL AUTHORITIES, WAFER CHECK VALVE(S) EQUAL TO VIKING MODEL A-1 MAY BE USED IN LIEU OF SWING CHECK VALVES.

ALARM BELL: WATER MOTOR GONG 8 IN. DIAMETER, 120V-1 PHASE, BACKBOX KIT, GUARD, EQUAL TO VIKING MODEL BH-1003-8. WIRING BY ELECTRICAL CONTRACTOR.

FLOW SWITCH(ES): PADDLE TYPE, 120V-1 PHASE, TWO (2) SPDT SWITCHES, EQUAL TO VIKING MODEL C-1. FURNISHED AND INSTALLED BY THIS CONTRACTOR, WIRING AND CONNECTION TO ALARM BELL (AND BUILDING ALARM SYSTEM) BY ELECTRICAL CONTRACTOR.

VALVE SUPERVISORY SWITCHES: FURNISHED AND INSTALLED BY THIS CONTRACTOR FOR ALL CONTROL VALVES. ALL WIRING AND CONNECTION TO BUILDING FIRE ALARM PANEL BY ELECTRICAL CONTRACTOR.

VALVE SUPERVISORY SWITCHES: FURNISHED AND INSTALLED BY THIS CONTRACTOR FOR ALL CONTROL VALVES. ALL WIRING AND CONNECTION TO BUILDING FIRE ALARM PANEL BY

SIAMESE CONNECTION(S): CONCEALED, FLUSH, POLISHED BRASS FACE, CAPS, CHAINS EQUAL TO SECO NO. L-111, 4 IN. X 2-1/2 IN. X 2-1/2 IN. BRANDED AUTO SPKR. THREADS TO MATCH THOSE PRESENTLY IN USE BY THE LOCAL FIRE DEPARTMENT. INSTALL AUTOMATIC BALL DRIP.

SPRINKLER CABINET: PROVIDE A WALL-MOUNTED SPRINKLER CABINET WITH A TOTAL OF TWELVE (12) SPARE SPRINKLER HEADS, INCLUDING ALL TYPES AND TEMPERATURES INSTALLED ON PROJECT. PROVIDE SPRINKLER WRENCH.

PAINTING AND STENCILING

PROVIDE PAINTING AND STENCILING OF ALL EXPOSED PIPING, EQUIPMENT, ETC. INSTALLED

ABOVE GROUND PIPING: PERFORM A HYDROSTATIC TEST OF THE PIPING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13.

NOTIFY THE ARCHITECT/ENGINEER/OWNER/ UNDERWRITER PRIOR TO PERFORMING THE TEST WHO, AT THEIR OPTION, MAY DESIRE TO WITNESS THE TEST. TEST SHALL BE SATISFACTORY TO THE ARCHITECT/ENGINEER/OWNER/UNDERWRITER OR AUTHORITIES

IF TEST PROVES UNSATISFACTORY, LEAKS SHALL BE REPAIRED AND A NEW TEST SHALL BE PERFORMED.

AFTER TESTING HAS BEEN COMPLETED, ALL VALVES SHALL BE LEFT IN THEIR RESPECTIVE NORMAL POSITIONS, AND THE OWNER AND HIS DULY APPOINTED REPRESENTATIVE SHALL BE INSTRUCTED IN THE CARE, OPERATION AND MAINTENANCE OF THE ENTIRE SYSTEM.

MATERIAL AND TEST CERTIFICATE SHALL BE COMPLETED AND TURNED OVER TO THE OWNER'S REPRESENTATIVE UPON COMPLETING THE TEST.

ELECTRICAL CONTRACTOR.

AS PART OF THIS CONTRACT

TEST OF COMPLETED SYSTEM

PROJECT INFORMATION

PROJECT LOCATION: NASSAU COUNTY YULEE, FLORIDA

PROJECT NAME: SHERIFFS VEHICLE STORAGE GARAGE

61G15-32 COMPLIANCE NOTES

61G15-32.003

- SPRINKLER SYSTEM LAYOUT SHALL BE SUBMITTED BY A STATE OF FLORIDA LICENSED FIRE PROTECTION CONTRACTOR. THIS BUILDING SHALL BE FULLY SPRINKLED BY A WET PIPE SPRINKLER SYSTEM. CONTRACTOR SHALL LAYOUT AND PROVIDE AUTOMATIC WET PIPE FIRE SPRINKLER SYSTEM ALL APPLICABLE CODES SET FORTH BY THE AUTHORITY HAVING JURISDICTION. DISCHARGE FROM INDIVIDUAL HEADS IN THE HYDRAULICALLY MOST REMOTE/DEMANDING AREA SHALL BE HYDRAULICALLY CALCULATED TO AN ACCEPTABLE MARGIN OF SAFETY NOT LESS THAN 10 PSI FOR GROWTH AND FLUCTUATION IN AVAILABLE SUPPLY OF AREA. FIRE SPRINKLER SYSTEM SHALL INCLUDE MATERIALS, ACCESSORIES, AND EQUIPMENT INSIDE AND OUTSIDE THE BUILDING TO PROVIDE A COMPLETE AND READY FOR USE SPRINKLER SYSTEM. LAYOUT AND PROVIDE THE SPRINKLER SYSTEM TO GIVE FULL CONSIDERATION TO BLIND SPACES, PIPING, ELECTRICAL EQUIPMENT, DUCTS, HVAC EQUIPMENT, ACCESS SPACE NEEDED FOR MAINTENANCE OF EQUIPMENT AND OTHER CONSTRUCTION AND EQUIPMENT IN ACCORDANCE WITH DETAILED WORKING DRAWINGS TO BE SUBMITTED FOR APPROVAL. LOCATE SPRINKLER HEADS IN A CONSISTENT PATTERN WITH CEILING GRID, LIGHTS, DIFFUSER, REGISTERS, GRILLES AND ARCHITECTURAL FEATURES. DEVICES AND EQUIPMENT FOR FIRE PROTECTION SERVICES SHALL BE U.L. LISTED AND F.M. APPROVED FOR USE IN WET PIPE SYSTEM.
- THE AUTOMATIC FIRE SUPPRESSION SYSTEM SHALL BE TESTED IN ACCORDANCE WITH NFPA 13, CHAPTER 16 AND NFPA 25.
- REFER HYDRAULIC DESIGN DATA LEGEND FOR HAZARD CLASSIFICATIONS AND REQUIRED DENSITIES.
- 1) FLORIDA FIRE PREVENTION CODE, 2017
- 2) NFPA 13, 2013
- 3) NFPA 24, 2010 4) NFPA 25, 2014
- 5) FLORIDA BUILDING CODE, 2017
- 6) FLORIDA ADMINISTRATIVE CODE 61G15-32.003 AND 61G15-32.004
- 7) LOCAL AND COUNTY CODES SET FORTH BY AUTHORITY HAVING JURISDICTION

61G15-32.004

2A THIS WORK SHALL COVER A NEW DRY SYSTEM WITH A NEW POINT OF SERVICE. REFER TO CIVIL PLAN FOR NEW POINT OF SERVICE.

INSTALLATION SHALL BE IN ACCORDANCE WITH N.F.P.A. 13, 2013 ED. FIRE PREVENTION CODE 2017, STATE AND LOCAL AUTHORITIES.

NO ADDITIONAL STRUCTURAL SUPPORT SHOULD BE REQUIRED, BEYOND NORMAL PIPING SUPPORT REQUIREMENTS

- REFER TO HYDRAULIC DESIGN DATA LEGEND ON FLOOR PLANS.
- REFER TO 61G15-32.003 COMPLIANCE NOTE #1 AND HYDRAULIC DESIGN DATA LEGEND ON FLOOR PLANS.

NEW UNDERGROUND BUILDING FIRE SUPPLY MAIN TAPS INTO AN EXISTING WATER MAIN.

CONTRACTOR SHALL PERFORM OR OBTAIN A CURRENT FLOW TEST FROM THE LOCAL UTILITIES PRIOR TO THE LAYOUT OF SHOP DRAWINGS. DATE OF FLOW TEST SHALL NOT EXCEED 6 MONTHS TO THE SUBMISSION OF SHOP DRAWINGS. FLOW TEST SHALL INCLUDE ALL INFORMATION AS INDICATED BELOW

HYDRANT ID

- FLOW TEST DATE/TIME HYDRANT LOCATION STATIC GAUGE PRESSURE
- RESIDUAL GAUGE PRESSURE FLOW RATE: SOURCE OF INFORMATION:
- 2G ALL VALVES CONTROLLING WATER SUPPLY SHALL HAVE A RED TAMPER PROOF COVER WHICH WILL ACTIVATE AN ALARM OF TROUBLE SIGNAL WHEN ADJUSTED.
- VERIFY THAT UTILITY PURVEYOR CONTINUOUSLY MONITORS THE WATER SUPPLY FOR MICRO BIOLOGICAL CONTAMINANTS WITH MAY CAUSE MICROBIAL CORROSION.
- EXISTING BUILDING SPRINKLER SYSTEM BACKFLOW HAS NOT CHANGED. NEW BUILDING SPRINKLER SYSTEM IS PROVIDED WITH A NEW BACKFLOW. REFER TO CIVIL DRAWINGS.
- 2J ALL YARD AND INTERIOR FIRE PROTECTION COMPONENTS SHALL BE NEW U.L. LISTED AND FM APPROVED.

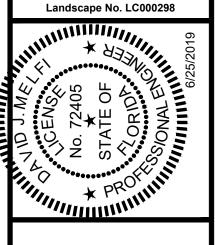


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500 West Fulton Street

Sanford, FL 32771 Ph: 407.322.6841 Plans Prepared By: CPH. Inc. State of Florida Licenses Engineer No. 3215 Surveyor No. LB7143

Architect, No. AA26000926



Designed: J.A.D. Drawn: J.A.D. Checked: D.J.M.

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Job No.: N6601

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Date: 4-2-19

THIS SHEET NOT VALID FOF **CONSTRUCTION WITHOUT** COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

FIRE PROTECTION GENERAL NOTES

1. FIRE PROTECTION SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF NFPA # 13, 15, 25, 70, 72, & 101, LOCAL FIRE MARSHALS OFFICE, OWNERS INSURANCE CARRIER, ALL APPLICABLE STATE, LOCAL AND FEDERAL CODES AND REGULATIONS AND ANY OTHER AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT. THIS SYSTEM SHALL BE INSTALLED BY A STATE OF FLORIDA CERTIFIED FIRE PROTECTION CONTRACTOR SKILLED AND LICENSED IN THIS PARTICULAR TRADE.

2. CONTRACTOR SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND HYDRAULIC CALCULATIONS FOR APPROVAL BY THE AUTHORITIES HAVING JURISDICTION AND ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK. THE DOCUMENTS SHALL BE PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED IN THESE DRAWINGS AND SPECIFICATIONS AND ALL APPLICABLE CODES ADOPTED BY THE STATE OF FLORIDA.

3. THE CONTRACTOR SHALL CONDUCT A HYDRANT FLOW TEST, WHICH SHALL BE THE BASIS FOR THE HYDRAULIC CALCULATIONS. CONTRACTOR SHALL EVALUATE THE WATER SUPPLY FOR EVIDENCE OF MICROBIAL INDUCED CORROSION (MIC) AND INCORPORATE ANY PREVENTIVE MEASURES AS REQUIRED.

4. THE CONTRACTOR SHALL PROVIDE ALL PERMITS, MATERIAL, LABOR, TRUCKING, HOISTING, ENGINEERING, SCAFFOLDING, POWER HOOK UPS, PROTECTION, SHOP DRAWINGS, TAXES, LAYOUT, EQUIPMENT, SUPERVISION, INSURANCE, ETC. NECESSARY FOR THE FURNISHING AND INSTALLATION OF ALL SPECIFIED AND RELATED WORK IN ACCORDANCE WITH THE CONTACT DRAWINGS AND SPECIFICATIONS.

5. THIS CONTRACTOR SHALL OBTAIN FINAL INSPECTION AND APPROVAL BY LOCAL FIRE DEPARTMENT, BLDG. DEPT., OWNERS INSURANCE CARRIER AND ARCHITECT/ENGINEER.

6. PROVIDE DETAIL AND INDICATE TYPE OF HANGERS TO BE INSTALLED FOR SPRINKLER PIPING. METHODS OF HANGING PIPES, HEADERS AND BRANCHES SHALL BE IN ACCORDANCE WITH N.F.P.A. 13. ALL HANGERS ON 4" PIPE AND LARGER SHALL BE CLEVIS-TYPE HANGERS. HANGERS SHALL NOT INTERFERE WITH ANY OTHER TRADE. POWDER DRIVEN STUDS SHALL NOT BE USED. ALL PIPING SUPPORTS AND HANGERS SHALL BE CORROSION RESISTANT, SIZED AND SPACED IN ACCORDANCE WITH NFPA #13.

7. BEFORE SUBMITTING PROPOSAL OR BID, EXAMINE ALL DRAWINGS AND SPECIFICATIONS RELATING TO THIS PROJECT, THE AMOUNT OF SPACE AVAILABLE FOR PIPING, EQUIPMENT AND CONNECTING SERVICES, THE SCOPE OF SITE OF THE WORK, THE REQUIREMENTS TO CORRELATE THE FIRE PROTECTION WORK WITH THAT OF OTHER TRADES AND THE TIME SCHEDULE NECESSARY TO PERFORM THAT WORK. CONTRACTOR SHALL VISIT THE SITE TO CHECK AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO ENSURE THE COORDINATION OF THE FIRE SERVICES WITH EXISTING CONDITIONS. IN CASE OF DISPUTE OR DOUBT AS TO INTENT OF DRAWINGS OR SPECIFICATIONS, OBTAIN ARCHITECT/ENGINEER'S WRITTEN DECISION BEFORE PROCEEDING WITH BID OR WORK INVOLVED.

8. IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THESE PLANS, OTHER ENGINEERING PLANS, THE ARCHITECTURAL PLANS AND/OR FIELD CONDITIONS PRIOR TO FINAL BID PRICE OR FINAL PERMITTING.

9. INDICATE CENTER TO CENTER DIMENSIONS AND/OR PIPE CUT LENGTHS AND NOMINAL PIPE DIAMETERS ON ALL PIPING. INDICATE PIPE TYPE, SCHEDULE OF WALL THICKNESS AND METHOD OF JOINING ON SHOP DRAWING.

10. CUTTING OF STRUCTURAL AND/OR ARCHITECTURAL MEMBERS SHALL BE DONE ONLY WITH THE WRITTEN APPROVAL OF THE ARCHITECT AND STRUCTURAL ENGINEER.

11. VERIFY STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS AND AVOID AN/ALL OBSTRUCTIONS OR INTERFERENCES WITH FIRE PROTECTION PIPE ROUTING.

12. ALL MATERIALS, WHERE APPLICABLE, SHALL BE U.L. LISTED AND FACTORY MUTUAL APPROVED FOR USE IN AUTOMATIC SPRINKLER SYSTEMS. ALL NEW PIPING SHALL BE HYDROSTATICALLY TESTED FOR TWO HOURS IN ACCORDANCE WITH NFPA #13. HYDROSTATIC TEST PRESSURE SHALL

13. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, FLOORS, ROOFS, ETC., FLASH AND COUNTERFLASH ROOF PENETRATIONS. (SEE FIRE RATED PIPE PENETRATION DETAILS ON ARCHITECTURAL SHEETS).

14. COORDINATE ALL PIPE ROUTING WITH ALL OTHER TRADES TO AVOID DUCTWORK, LIGHTING, PIPING AND ANY BUILDING STRUCTURE, ROUTE ALL PIPING CONCEALED ABOVE CEILING, WITHIN CHASES OR CONCEALED WITHIN WALLS

15. WELD-O-LETS SHALL BE TWO SIZES SMALLER THAN CROSSMAIN, NO LENGTH OF CROSSMAIN SHALL BE GREATER THAN 10'-0". ALL SPRINKLER PIPING & FITTINGS SHALL BE INSTALLED ABSOLUTELY RUST-FREE.

16. ALL SPRINKLER DROPS SHALL BE 1" SCHEDULE 40 BLACK STEEL PIPE WITH 1" X 1/2" THREADED

17. PIPE SHALL BE REAMED AND CLEANED BEFORE ASSEMBLY, AND AFTER ASSEMBLY THE ENTIRE PIPING SYSTEM SHALL BE FLUSHED CLEAN.

18. PROVIDE ACCESS PANELS TO ALL VALVES ABOVE NON-ACCESSIBLE CEILINGS AND CHASES.

19. PROVIDE SYSTEM(S) WITH FLUSHING CONNECTION(S).

20. INSPECTOR'S TEST VALVE SHALL NOT EXCEED 7 FEET ABOVE THE FINISHED FLOOR. PROVIDE SMOOTH BORE CORROSION RESISTANT OUTLET FOR INSPECTOR'S TEST GIVING FLOW EQUIVALENT

21. THIS CONTRACTOR SHALL ASSIST IN PREPARATION OF COORDINATION DRAWINGS FOR ALL LEVELS WHICH INDICATE ALL THE ENGINEERING DISCIPLINES & FIRE PROTECTION PIPING.

22. FIRE SPRINKLER PIPING SHALL NOT TRAVEL OVER THE TOPS OF ELECTRICAL PANEL BOARDS.

23. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS IN EACH AREA.

24. WET SYSTEM PIPING SHALL BE INSTALLED LEVEL TO DRAIN BACK TO THE SYSTEM RISER, IN ACCORDANCE WITH NFPA #13, 4-14.3.2. TRAPPED SECTIONS OF PIPING SHALL HAVE AUXILIARY DRAIN CONNECTIONS IN ACCORDANCE WITH 4-14.3.5

25. AUTOMATIC SPRINKLER TEMPERATURE RATINGS OF FUSIBLE ELEMENTS SHALL BE IN ACCORDANCE WITH N.F.P.A. 13. ALL SPRINKLERS SHALL HAVE CORROSIVE RESISTANT COATING WHERE EXPOSED TO ELEMENTS.

26. SPRINKLERS SHALL COVER THE ENTIRE AREA OF ALL STRUCTURAL MEMBERS. THE SPRAY PATTERN ON ANY SPRINKLER SHALL NOT BE BLOCKED BY WALL, PARTITIONS OR STRUCTURAL COMPONENTS.

27. ALL PENDENT SPRINKLERS SHALL BE CENTER OF TILE, UNLESS MAXIMUM DISTANCES FROM WALLS OR BETWEEN HEADS IS EXCEEDED. IF NOT POSSIBLE ALL SPRINKLER HEADS MOUNTED IN CEILING SHALL BE LOCATED A MINIMUM OF 4" AWAY FROM ANY WALLS, CEILING GRID MEMBERS, CEILING HEIGHT CHANGES OR ANY OTHER VERTICAL INTERSECTING STRUCTURAL SURFACE.

28. PROVIDE STOCK OF EXTRA SPRINKLERS IN ACCORDANCE WITH N.F.P.A. # 13.

29. PROVIDE SPRINKLERS ABOVE AND BELOW EXPOSED DUCTWORK 4 FEET OR WIDER.

30. PROVIDE HAZARD COVERAGE FOR THE FUNCTIONS FOR EACH AREA AS INDICATED ON PLANS OR REQUIRED BY NFPA.

31. INDICATE THE LOCATION AND SIZE OF BLIND SPACES AND CLOSETS.

32. PROVIDE HEAD GUARDS ON SPRINKLER HEADS IN ELECTRIC, TELEPHONE, AND MECHANICAL

33. SPRINKLER HEADS SHALL BE INSTALLED IN FULL ACCORDANCE WITH THE MANUFACTURES

34. CONTRACTOR SHALL PERFORM A HYDROSTATIC TEST OF THE SPRINKLER SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13. NOTIFY THE ARCHITECT, ENGINEER, OWNER AND UNDERWRITER PRIOR TO PERFORMING THE TEST WHO, AT THEIR OPTION, MAY DESIRE TO WITNESS THE TEST. TEST SHALL BE SATISFACTORY TO THE ARCHITECT, ENGINEER, OWNER, UNDERWRITER OR AUTHORITIES HAVING JURISDICTION. AFTER TESTING HAS BEEN COMPLETED. ALL VALVES SHALL BE LEFT IN THEIR RESPECTIVE NORMAL POSITIONS, AND THE OWNER AND HIS DULY APPOINTED REPRESENTATIVE SHALL BE INSTRUCTED IN THE CARE, OPERATION AND MAINTENANCE OF THE ENTIRE SYSTEM. ALL MATERIAL AND TEST CERTIFICATE SHALL BE COMPLETED AND TURN OVER TO THE OWNER'S REPRESENTATIVE AT THAT TIME.

35. FLUSHING CONNECTIONS TO BE PROVIDED AT REMOTE ENDS OF ALL CROSS MAINS.

36. PROJECT SPECIFICATIONS TAKE PRECEDENT OVER PLANS.

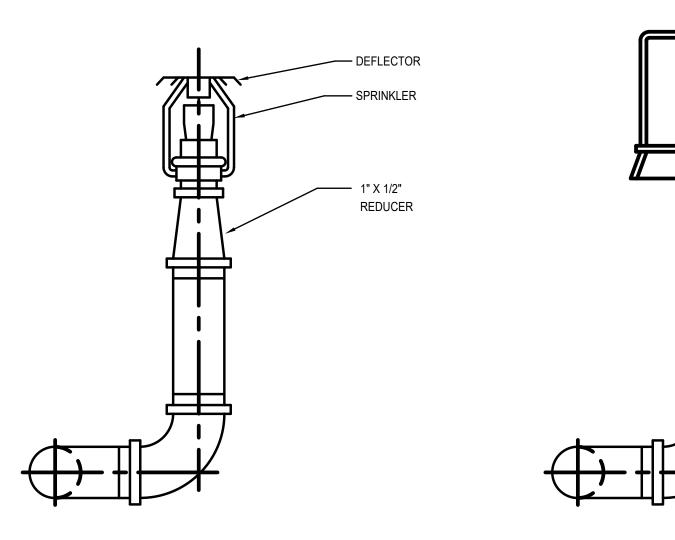
37. VERIFY UNDERGROUND FIRE MAIN LOCATIONS AND SIZE OF FIRE MAIN REQUIRED WITH

38. UNFORESEEN CONDITIONS MAY EXIST. COOPERATION WITH OTHER TRADES IN ROUTING AND/OR BURIAL DEPTHS AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT MAY BE NECESSARY. IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED AS PART OF THIS CONTRACT. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.

39. THE CONTRACTOR WILL INSTALL A FIRE SAFETY PROGRAM TO ADDRESS ALL THE REQUIREMENTS SPECIFIED IN THE FLORIDA FIRE PREVENTION CODE, INCLUDING NFPA 241. THIS PROGRAM SHALL BE EFFECTIVE FOR THE DURATION OF ALL DEMOLITION, ALTERATION AND CONSTRUCTION OPERATIONS.

40. WORK SHALL BE PERFORMED, IN STRICT COMPLIANCE WITH THE ESTABLISHED WORK SCHEDULE BEING SET FORTH BY OWNER. COORDINATE ALL WORK WITH GENERAL CONTRACTOR. THIS CONTRACTOR SHALL FURNISH ADEQUATE FORCES, CONSTRUCTION PLANT AND EQUIPMENT. AND SHALL WORK SUCH HOURS, INCLUDING NIGHT SHIFTS, OVERTIME OPERATIONS, SUNDAYS AND HOLIDAYS IN ACCORDANCE WITH THE OWNER'S OPERATIONAL SCHEDULE AS LISTED IN DIVISION 1 OF THE SPECIFICATIONS. IF THE CONTRACTOR DOES NOT MAINTAIN THE CONSTRUCTION SCHEDULE BECAUSE OF INADEQUATE FORCES, SUPERVISION OR ANY OTHER REASON UNDER THE CONTRACTOR'S CONTROL, THE OWNER MAY REQUIRE THE CONTRACTOR TO INCREASE THE

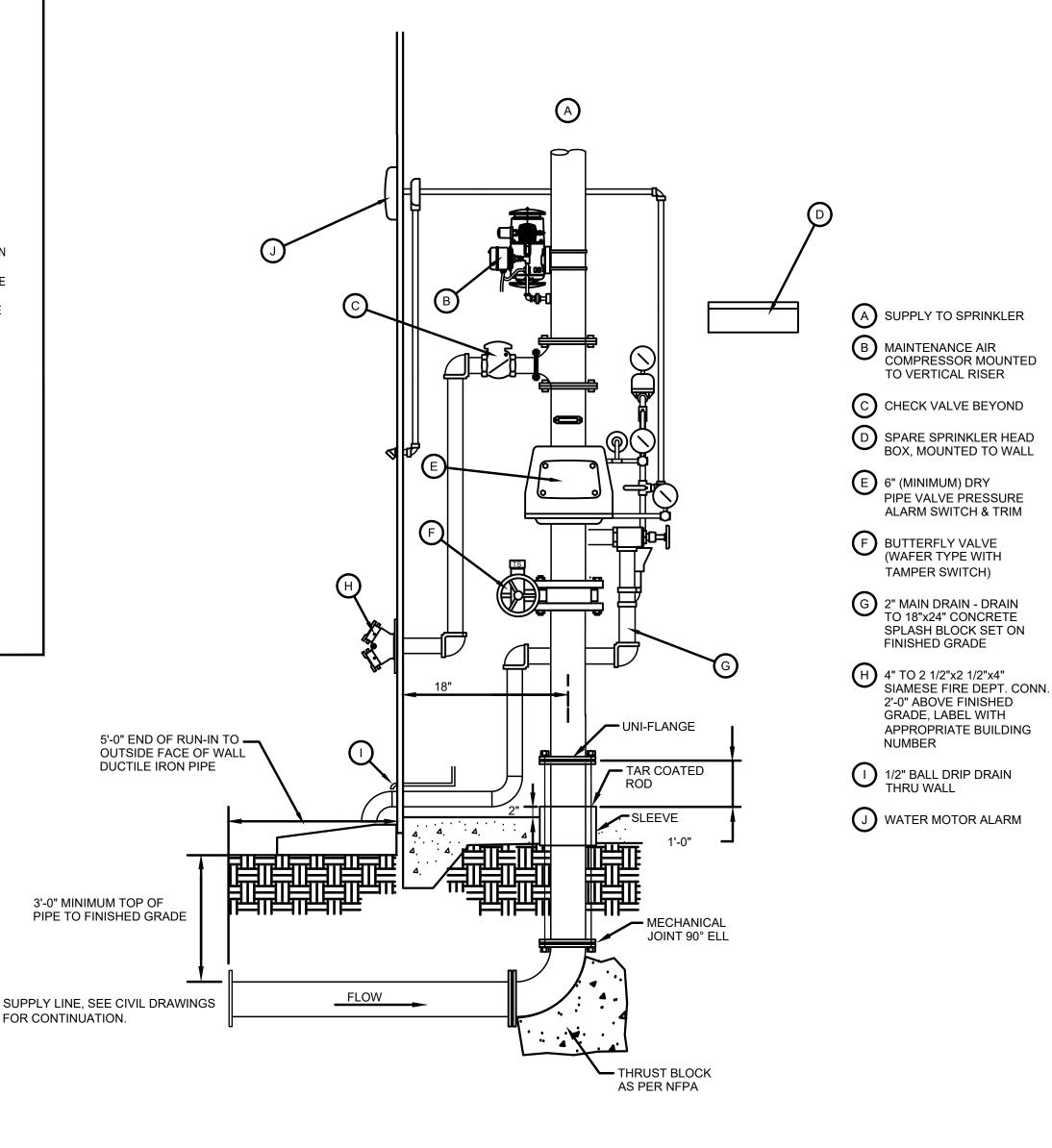
NUMBER OF SHIFTS AND/OR OVERTIME OPERATIONS, DAY OF WORK AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AT NO ADDITIONAL COST TO THE OWNER UNDER THIS CONTRACT. FAILURE TO MAINTAIN THE CONSTRUCTION SCHEDULE DUE TO OWNER'S OPERATIONAL INTERFERENCE'S, WHICH WERE NOT IDENTIFIED IN OR PRIOR TO THE PRE-BID CONFERENCE, SHALL NOT BE THE CONTRACTOR'S LIABILITY.



UPRIGHT SPRINKLER HEAD DETAIL

UPRIGHT SPRINKLER HEAD W/ GUARD DETAIL

REDUCER



DRY PIPE FIRE RISER DETAIL

HYDRAULIC DESIGN DATA

OCCUPANCY CLASSIFICATION DESIGN AREAS MAXIMUM COVERAGE

DENSITY GPM/SQ. FT.

HOSE STREAM

TEMPERATURE RATING

A) AUTOMOBILE PARKING. 130 SQ. FT. PER SPRINKLER ORDINARY 155°, QUICK RESPONSE 0.15 GPM OVER 1500 SQ. FT.

250 GPM / DURATION 60-90 MINUTES

ORDINARY HAZARD GROUP 1

Sanford, FL 32771 Ph: 407.322.6841 Plans Prepared By: CPH, Inc. State of Florida Licenses

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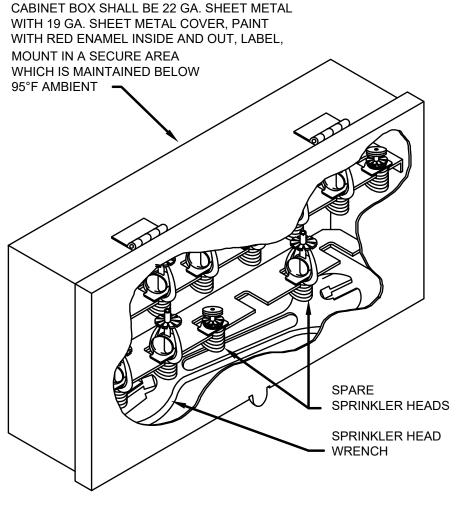
Engineer No. 3215

Surveyor No. LB7143

Architect, No. AA26000926

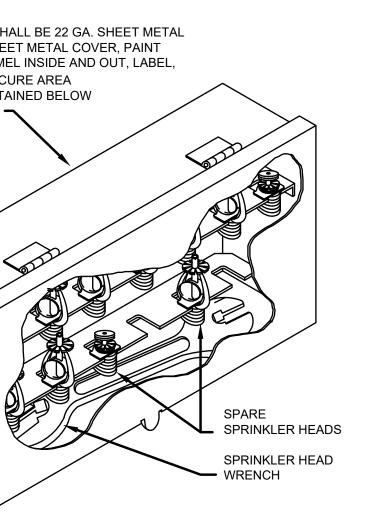
	FIRE SPRINKLER LEGEND									
?? FIRE SPRINKLER HAZARD CLASSIFICATION OF ROOM										
F1 KEY NOTE										
— FM—	FIRE MAIN (BELOW GRADE)									
— FL — SPRINKLER PIPING (ABOVE GRADE)										
COMBINATION SPRINKLER RISER										

MAXIMUM DISTANCE BETWEEN HANGERS											
NOMINAL PIPE SIZE (STEEL	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"			
PIPE)	12'-0"	12'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"			



SPARE SPRINKLER HEAD QUANTITY SHALL BE IN ACCORDANCE WITH NFPA 13.3-11.

SPARE SPRINKLER HEAD BOX DETAIL



THIS SHEET NOT VALID FOR **CONSTRUCTION WITHOUT** COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Designed: J.A.D.

Drawn: J.A.D.

Checked: D.J.M.

Job No.: N6601

© 2019

Date: 4-2-19

IRE PROTECTION NOTES, DETAI LEGENDS, AND ABBREVIATION



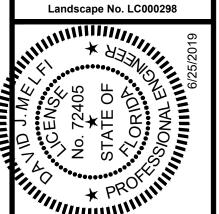
- 1. PROVIDE DRY SPRINKLER SYSTEM FOR PROTECTION OF UNCONDITIONED AUTOMOBILE PARKING.
- TRANSITION TO DRY SPRINKLER SYSTEM TO OCCUR IN SPRINKLER RISER CLOSET.
- 3. PROVIDE HEAT TRACE SYSTEM FOR WET PORTION OF RISER. CONTROLLER TO BE LOCATED IN FIRE RISER CLOSET. PROVIDE HEAT TRACE TAPE AND PIPE INSULATION AS REQUIRED. BASIS OF DESIGN: NELSON CM2201.

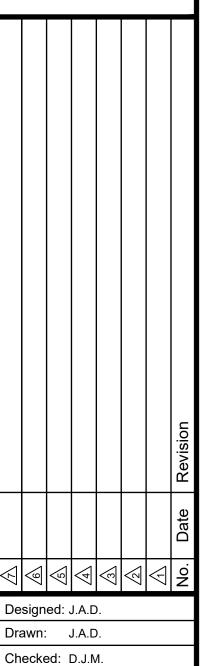


A Full Service

A & E Firm 500 West Fulton Street Sanford, FL 32771 Ph: 407.322.6841

Plans Prepared By: CPH, Inc.
State of Florida Licenses:
Engineer No. 3215
Surveyor No. LB7143
Architect. No. AA26000926





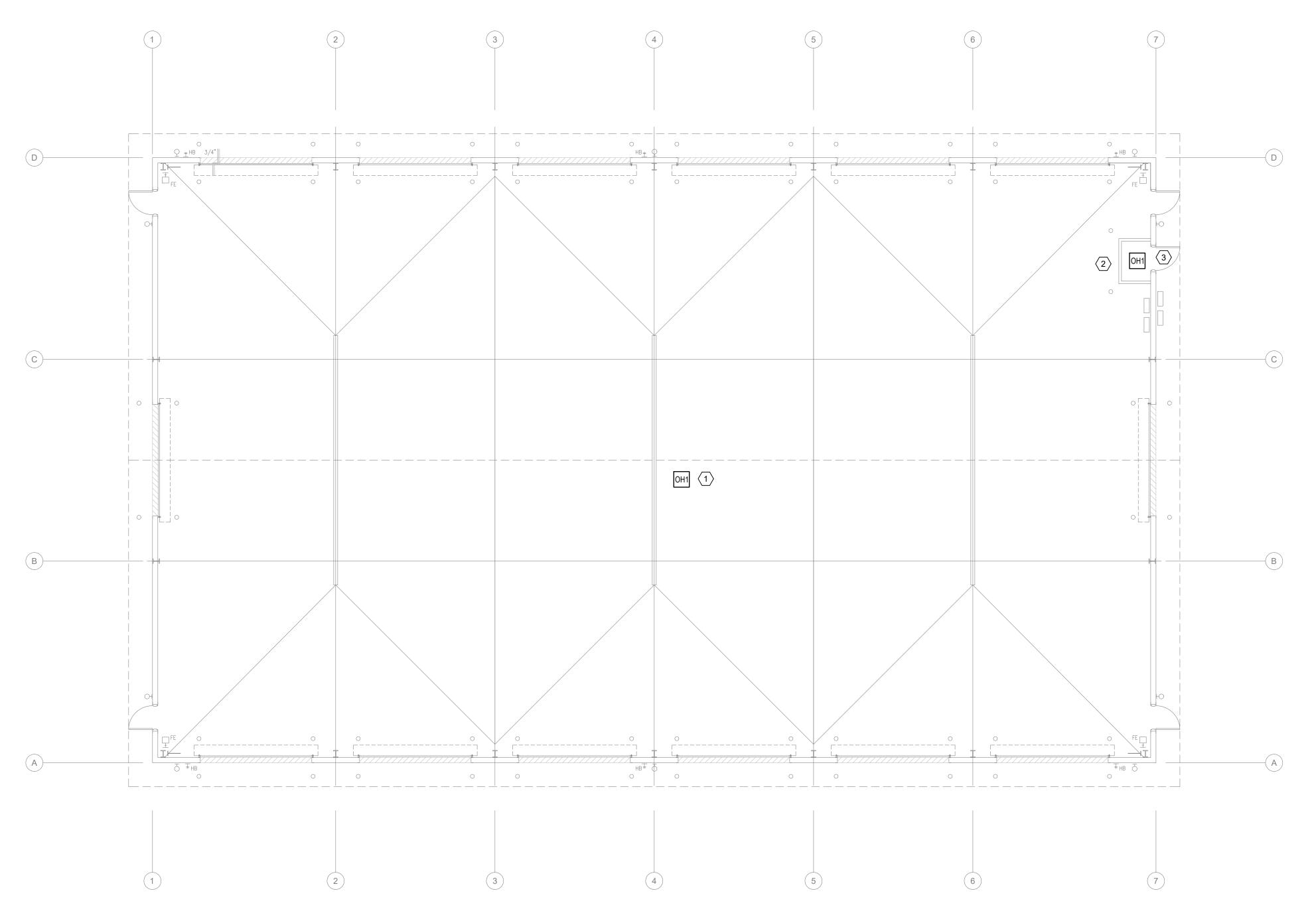
Checked: D.J.M. Job No.: N6601

© 2019 Date: 4-2-19

FIRE PROTECTION FLOOR

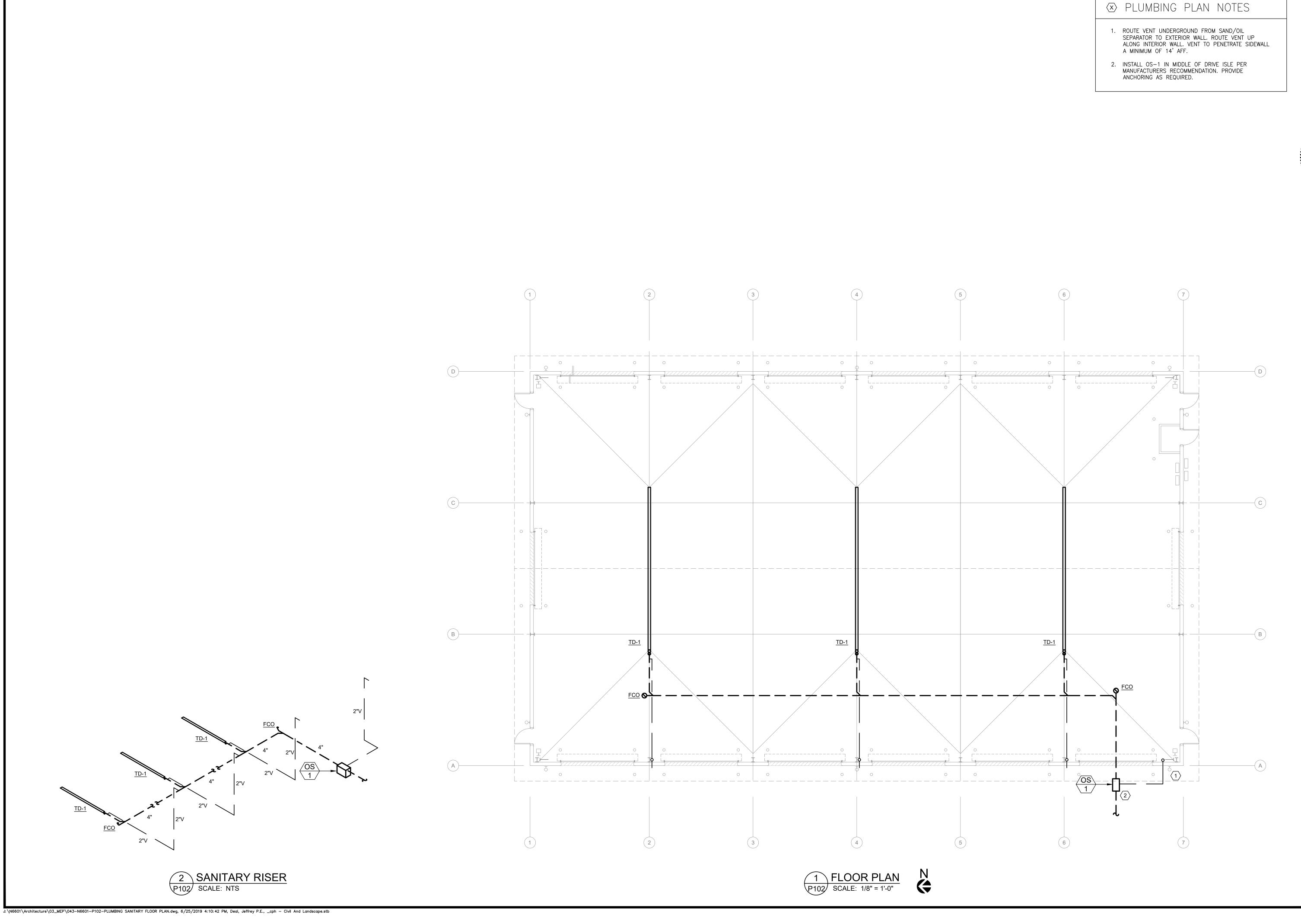
THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

Sheet No.





J:\N6601\Architecture\03_MEP\052-N6601-FP101-FIRE PROTECTION FLOOR PLAN.dwg, 6/25/2019 4:11:16 PM, Deal, Jeffrey P.E., _cph - Civil And Landscape.stb

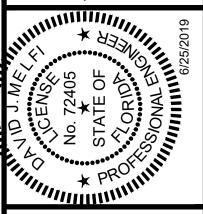


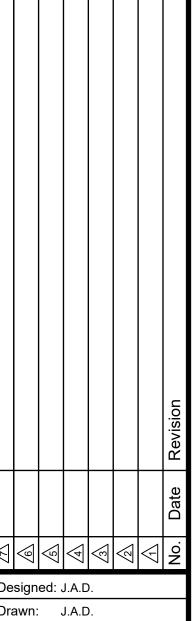
www.cphcorp.com A Full Service

A & E Firm 500 West Fulton Street

Sanford, FL 32771 Ph: 407.322.6841 Plans Prepared By:

CPH, Inc.
State of Florida Licenses:
Engineer No. 3215
Surveyor No. LB7143
Architect. No. AA26000926
Landscape No. LC000298





Checked: D.J.M. Job No.: N6601

© 2019 Date: 4-2-19

SANITARY FLOOR PLAN

THIS SHEET NOT VALID FOR CONSTRUCTION WITHOUT COMPLETE SET OF PLANS. SEE GENERAL NOTES FOR MASTER LEGEND.

ATTACHMENT B

PERMITS AND OTHER DOCUMENTATION



21 West Church Street
Jacksonville, Florida 32202-3139

WATER SEWER

RECLAIMED

Kayla Sheffield April 16, 2019

CPH, Inc 5200 Belfort Rd, Suite 220 Jacksonville, Florida, 32256

Project Name: 76001 Bobby Moore Circle - Sheriff Vehicle Storage Garage

Availability#: 2018-2828

Attn: Kayla Sheffield,

Thank you for your inquiry regarding the availability of electric, potable water, sanitary sewer and reclaimed water (WS&R) service. The eight digit availability number referenced in this letter will be the number JEA uses to track your project. Please reference this number when making inquiries and submitting related documents. This availability letter will expire one year from the date above.

Point of Connection:

A summary of connection points for WS&R services are identified on the following page. JEA recognizes Connection Point #1 as the primary point of connection (POC); however, a secondary, conditional POC will be listed if available. JEA assumes no responsibility for the inaccuracy of any service connection portrayed on a JEA utility system record drawing. JEA strongly recommends field verification of all POCs prior to any construction to ensure connection availability. If this availability request is for a sewer lateral, prior to relying on the described POC and/or any reference drawings, the applicant shall request and pay for a JEA field locate, for a cost of \$491.00, to determine the actual location and suitability of this potential POC. Please note the Special Conditions stated in each section contain pertinent information and additional requirements as well as further instructions.

Offsite Improvements:

For all utilities located in the public Right of Way or JEA easement, the new WS&R utilities shall be dedicated to JEA upon completion and final inspection, unless otherwise noted. It shall be the applicant's responsibility to engage the services of a professional engineer, licensed in the State of Florida. All WS&R construction shall conform to current JEA Water, Sewer & Reuse Design Guidelines which may be found on jea.com.

Reservation of Capacity:

This availability response does not represent JEA's commitment for or reservation of WS&R capacity. In accordance with JEA's policies and procedures, commitment to serve is made only upon JEA's approval of your application for service and receipt of your payment of all applicable fees.

A detailed overview of the process can be found at JEA.com. This document along with other important forms and submittal processes can be found at the subsequent link, JEA Stages of a Project or by following the steps below:

⇒ Visit www.jea.com

Select Working with JEA

Select Stages of a Project

Sincerely,

JEA Water, Sewer Reclaim Availability Request Team



21 West Church Street Jacksonville, Florida 32202-3139

ELECTRIC WATER SEWER RECLAIMED

Availability#: 2018-2828

Request Received On: 10/17/2018

Availability Response: 4/16/2019

Prepared by: Roderick Jackson

Project Information

Name: 76001 Bobby Moore Circle - Sheriff Vehicle Storage Garage

Type: Warehouse

Requested Flow: 30 gpd

The site is west of the existing EOC building (76001 Bobby Moore Circle) and Location:

adjacent to the pond.

Parcel ID No.: 08-2N-27-0000-0003-0040

Sheriff Vehicle Storage Garage. It will serve as an accessory structure for vehicle

Description: storage. Water service is needed for hose bibs and to sprinkle the building. There

will be no restrooms.

Potable Water Connection

Water Treatment Grid: NASSAU/LOFTON OAKS

Connection Point #1: Existing 8-inch water main within the 20 ft JEA Easement, adjacent to this property.

Connection Point #2: NA

Fire protection needs to be addressed. POC location to be field verified by developer during project design. If needed a pre-design meeting can be scheduled prior to submitting a plan set. Send pre-design meeting requests, with availability

number, to wsedevprojrequests@jea.com. Copies of reference drawings may be requested from the JEA Record online at

https://www.jea.com/engineering_and_construction/request_an_as-built_drawing/.

Sewer Connection

Special Conditions:

Sewer Treatment Plant: NASSAU

Connection Point #1: Existing JEA sewer account.

Connection Point #2: NA

Special Conditions: N/A

Reclaimed Water Connection

Sewer Region/Plant: N/A

Connection Point #1: No reclaim main abuts this property. Existing 10-inch reclaim main within the

Wildlight Av ROW, approx. 1200 LF W of the property.

Connection Point #2: NA

Special Conditions: Reclaim water for irrigation purposes only

General Comments:

POC location to be field verified by developer during project design. Copies of reference drawings may be requested from the JEA Record online at https://www.jea.com/engineering_and_construction/request_an_asbuilt_drawing/.



Ann B. Shortelle, Ph.D., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500 On the Internet at www.sirwmd.com.

March 13, 2019

Nassau County Board of County Commissioners PO Box 1010 Fern Bch, FL 32035-1030

Re: Sheriff Vehicle Storage Garage

Letter Modification Number 66891-9

(Please reference the above number on any submittal)

Dear Sir/Madam:

The St. Johns River Water Management District is in receipt of your request for letter modification to Permit Number 66891-1. Based upon staff review of the information you submitted, the proposed modification qualifies for a letter modification pursuant to 40C-4.331(1)(b), Florida Administrative Code (F.A.C.), A copy of the modified permit is enclosed for your records.

Please be advised that the District has not published a notice in the newspaper to advise the public that it is issuing this letter of modification. If you do not publish a notice in the newspaper, a party's right to challenge the issuance of this letter modification extends for an indefinite period of time. If you wish to have certainty that the period of filing such a challenge is closed. then you may publish, at your own expense, such a notice in a newspaper of general circulation within the area that includes the project to which the modification applies. A copy of the form of the notice is attached for your use. If you have any questions, please contact Rocky Thompson at (904) 448-7901 or Michael Fortune at (904) 448-7919

Sincerely,

Michelle Reiber, Bureau Chief

Michelle Reiber

Environmental Resource Regulation

Enclosures: Permit

CC: District Permit File

Consultant: Wade Olszewski

> CPH. Inc. Ste 220

5200 Belfort Rd

Jacksonville, FL 32256-6056

VERO BEACH

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT Post Office Box 1429 Palatka, Florida 32178-1429

PERMIT NO: 66891-9 **DATE ISSUED:** March 13, 2019

PROJECT NAME: Sheriff Vehicle Storage Garage

A PERMIT AUTHORIZING:

Letter Modification of Permit No. 40-089-66891-1 for Sheriff Vehicle Storage Garage, a 2.76 – acre project to be constructed and operated as per plans received by the District on March 11, 2019.

LOCATION:

SECTION(S): 7 TOWNSHIP(S): 2N RANGE(S): 27E

Nassau County

ISSUED TO:

Nassau County Board of County Commissioners PO Box 1010 Fern Bch, FL 32035-1030

The permittee agrees to hold and save the St. Johns River Water Management District and its successors harmless from any and all damages, claims, or liabilities which may arise from permit issuance. Said application, including all plans and specifications attached thereto, is by reference made a part hereof.

This permit does not convey to the permittee any property rights nor any rights or privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation or requirement affecting the rights of other bodies or agencies. All structures and works installed by permittee hereunder shall remain the property of the permittee.

This permit may be revoked, modified or transferred at any time pursuant to the appropriate provisions of Chapter 373, Florida Statutes.

PERMIT IS CONDITIONED UPON:

See conditions on attached "Exhibit A", dated March 13, 2019

AUTHORIZED BY: St. Johns River Water Management District

Division of Regulatory Services

Wally Esser

Supervising Regulatory Scientist

"EXHIBIT A" CONDITIONS FOR ISSUANCE OF PERMIT NUMBER 66891-9 Sheriff Vehicle Storage Garage DATE ISSUED March 13, 2019

- 1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
- 2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
- 3. Activities approved by this permit shall be conducted in a manner which do not cause violations of state water quality standards.
- 4. Prior to and during construction, the permittee shall implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment onsite and to prevent violations of state water quality standards. All practices must be in accordance with the guidelines and specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988), which are incorporated by reference, unless a project specific erosion and sediment control plan is approved as part of the permit, in which case the practices must be in accordance with the plan. If site specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the permittee shall implement additional best management practices as necessary, in accordance with the specifications in chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988). The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
- 5. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
- 6. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a Construction Commencement Notice Form No. 40C-4.900(3) indicating the actual start date and the expected completion date.
- 7. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an Annual Status Report Form No. 40C-4.900(4). These forms shall be submitted during June of each year.
- 8. For those systems which will be operated or maintained by an entity which will require an easement or deed restriction in order to provide that entity with the authority necessary to operate or maintain the system, such easement or deed restriction, together with any other final operation or maintenance documents as are required by subsections 7.1.1 through 7.1.4 of the Applicant's Handbook: Management and Storage of Surface Waters, must be submitted to the District for approval. Documents meeting the requirements set forth in these subsections of the Applicant's Handbook will be approved. Deed restrictions, easements and other operation and maintenance documents which require recordation

either with the Secretary of State or the Clerk of the Circuit Court must be so recorded prior to lot or unit sales within the project served by the system, or upon completion of construction of the system, whichever occurs first. For those systems which are proposed to be maintained by county or municipal entities, final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local governmental entity. Failure to submit the appropriate final documents referenced in this paragraph will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system.

- 9. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by the portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to local government or other responsible entity.
- 10. Within 30 days after completion of construction of the permitted system, or independent portion of the system, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing As Built Certification Form 40C-1.181(13) or 40C-1.181(14) supplied with this permit. When the completed system differs substantially from the permitted plans, any substantial deviations shall be noted and explained and one copy of as-built drawings submitted to the District. Submittal of the completed form shall serve to notify the District that the system is ready for inspection. The statement of completion and certification shall be based on on-site observation of construction (conducted by the registered professional engineer, or other appropriate individual as authorized by law, or under his or her direct supervision) or review of as-built drawings for the purpose of determining if the work was completed in compliance with approved plans and specifications. As-built drawings shall be the permitted drawings revised to reflect any changes made during construction. Both the original and any revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawing. All surveyed dimensions and elevations shall be certified by a registered surveyor. The following information, at a minimum, shall be verified on the as-built drawings:
 - 1. Dimensions and elevations of all discharge structures including all weirs, slots, gates, pumps, pipes, and oil and grease skimmers;
 - 2. Locations, dimensions, and elevations of all filter, exfiltration, or underdrain systems including cleanouts, pipes, connections to control structures, and points of discharge to the receiving waters;
 - 3. Dimensions, elevations, contours, or cross-sections of all treatment storage areas sufficient to determine state-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems, when appropriate;
 - 4. Dimensions, elevations, contours, final grades, or cross-sections of the system to determine flow directions and conveyance of runoff to the treatment system;
 - 5. Dimensions, elevations, contours, final grades, or cross-sections of all conveyance systems utilized to convey off-site runoff around the system;
 - 6. Existing water elevation(s) and the date determined; and Elevation and location of benchmark(s) for the survey.

- 11. The operation phase of this permit shall not become effective until the permittee has submitted the appropriate As-Built Certification Form, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District in accordance with subsections 7.1.1 through 7.1.4 of the Applicant's Handbook: Management and Storage of Surface Waters, accepts responsibility for operation and maintenance of the system. The permit may not be transferred to such an approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the responsible approved operation and maintenance entity, if different from the permittee. Until the permit is transferred pursuant to section 7.1 of the Applicant's Handbook: Management and Storage of Surface Waters, the permittee shall be liable for compliance with the terms of the permit.
- 12. Should any other regulatory agency require changes to the permitted system, the permittee shall provide written notification to the District of the changes prior implementation so that a determination can be made whether a permit modification is required.
- 13. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and chapter 40C-4 or chapter 40C-40, F.A.C.
- 14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
- 15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under rule 40C-1.1006, F.A.C., provides otherwise.
- 16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of rule 40C-1.612, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
- 17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.
- 18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District.
- 19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.
- 20. All wetland areas or water bodies that are outside the specific limits of construction authorized by this permit must be protected from erosion, siltation, scouring or excess turbidity, and dewatering.

- 21. Prior to construction, the permittee must clearly designate the limits of construction on-site. The permittee must advise the contractor that any work outside the limits of construction, including clearing, may be a violation of this permit.
- 22. This permit for construction will expire two years from the date of issuance.
- 23. The proposed project shall be constructed and operated as per plans received by the District on March 11, 2019
- 24. No work in, on or over wetlands or other surface waters is authorized by this permit modification.

Notice Of Rights

- 1. A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P. O. Box 1429, Palatka Florida 32178-1429 (4049 Reid St., Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-six (26) days of the District depositing the notice of District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. The District will not accept a petition sent by facsimile (fax), as explained in paragraph no. 4 below.
- 2. Please be advised that if you wish to dispute this District decision, mediation may be available and that choosing mediation does not affect your right to an administrative hearing. If you wish to request mediation, you must do so in a timely-filed petition. If all parties, including the District, agree to the details of the mediation procedure, in writing, within 10 days after the time period stated in the announcement for election of an administrative remedy under Sections 120.569 and 120.57, Florida Statutes, the time limitations imposed by Sections 120.569 and 120.57, Florida Statutes, shall be tolled to allow mediation of the disputed District decision. The mediation must be concluded within 60 days of the date of the parties' written agreement, or such other timeframe agreed to by the parties in writing. Any mediation agreement must include provisions for selecting a mediator, a statement that each party shall be responsible for paying its pro-rata share of the costs and fees associated with mediation, and the mediating parties' understanding regarding the confidentiality of discussions and documents introduced during mediation. If mediation results in settlement of the administrative dispute, the District will enter a final order consistent with the settlement agreement. If mediation terminates without settlement of the dispute, the District will notify all the parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Florida Statutes, is resumed. Even if a party chooses not to engage in formal mediation, or if formal mediation does not result in a settlement agreement, the District will remain willing to engage in informal settlement discussions.
- 3. A person whose substantial interests are or may be affected has the right to an informal administrative hearing pursuant to Sections 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must also comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.

Notice Of Rights

- 4. A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District's regular business hours. The District's regular business hours are 8:00 a.m. 5:00 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District's regular business hours shall be deemed filed as of 8:00 a.m. on the District's next regular business day. The District's acceptance of petitions filed by email is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at www.sjrwmd.com. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile is prohibited and shall not constitute filing.
- 5. Failure to file a petition for an administrative hearing within the requisite timeframe shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, Florida Administrative Code).
- 6. The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. A person whose substantial interests are or may be affected by the District's final action has the right to become a party to the proceeding, in accordance with the requirements set forth above.
- 7. Pursuant to Section 120.68, Florida Statutes, a party to the proceeding before the District who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.
- 8. A District action is considered rendered, as referred to in paragraph no. 7 above, after it is signed on behalf of the District and filed by the District Clerk.
- 9. Failure to observe the relevant timeframes for filing a petition for judicial review as described in paragraph no. 7 above will result in waiver of that right to review.

NOR.Decision.DOC.001 Revised 12.7.11

Notice Of Rights

Certificate of Service

I HEREBY CERTIFY that a copy of the foregoing Notice of Rights has been sent to the permittee:

Nassau County Board of County Commissioners PO Box 1010 Fern Bch, FL 32035-1030

This 13th day of March, 2019.

Michelle Reiber, Bureau Chief

Michelle Reiber

Permit Number: 66891-9

NOTICING INFORMATION

Dear Permittee:

Please be advised that the St. Johns River Water Management District will not publish a notice in the newspaper advising the public that it has issued a permit for this project.

Newspaper publication, using the District's notice form, notifies members of the public of their right to challenge the issuance of the permit. If proper notice is given by newspaper publication, then there is a 21-day time limit for someone to file a petition for an administrative hearing to challenge the issuance of the permit.

To close the point of entry for filing a petition, you may publish (at your own expense) a onetime notice of the District's decision in a newspaper of general circulation within the affected area as defined in Section 50.011 of the Florida Statutes. If you do not publish a newspaper notice to close the point of entry, the time to challenge the issuance of your permit will not expire and someone could file a petition even after your project is constructed.

A copy of the notice form and a partial list of newspapers of general circulation are attached for your convenience. However, you are not limited to those listed newspapers. If you choose to close the point of entry and the notice is published, the newspaper will return to you an affidavit of publication. In that event, it is important that you either submit a scanned copy of the affidavit by emailing it to <code>compliancesupport@sjrwmd.com</code> (preferred method) <code>or</code> send a copy of the original affidavit to:

If you have any questions, please contact the Office of Business and Administrative Services at (386) 329-4570.

Sincerely,

Michelle Reiber, Bureau Chief

Michelle Reiber

Regulatory Services

NOTICE OF AGENCY ACTION TAKEN BY THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Notice is given that the following	g permit was issued on _	:
(Name and address of applican	t)	
permit#	. The project is located i	inCounty, Section
, Township	South, Range	East. The permit authorizes a surface
water management system on	acres for	
		known as
. The i	receiving water body is	-

A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code (F.A.C.), the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P.O. Box 1429, Palatka FL 32178-1429 (4049 Reid St, Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes (F.S.), and Chapter 28-106, F.A.C. The District will not accept a petition sent by facsimile (fax). Mediation pursuant to Section 120.573, F.S., may be available and choosing mediation does not affect your right to an administrative hearing.

A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District's regular business hours. The District's regular business hours are 8 a.m. – 5 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District's regular business hours shall be deemed filed as of 8 a.m. on the District's next regular business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at www.sjrwmd.com. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile (fax) is prohibited and shall not constitute filing.

The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, F.A.C.).

If you wish to do so, please visit www.sjrwmd.com/nor_dec/ to read the complete Notice of Rights to determine any legal rights you may have concerning the District's decision(s) on the permit application(s) described above. You can also request the Notice of Rights by contacting the Office of Business and Administrative Services, 4049 Reid St., Palatka, FL 32177-2529, tele., no 386-329-4570.

NEWSPAPER ADVERTISING

ALACHUA

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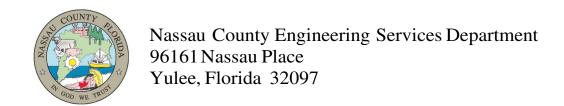
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ATTACHMENT C

AS-BUILTS REQUIREMENT CHECKLIST



AS-BUILT REQUIREMENT CHECKLIST:

The following list is intended to highlight the majority of the as-built requirements for Construction projects in Nassau County. This list should not be considered to be all-inclusive as each project is unique in nature and may require additional information that can only be determined during the course of the project's completion. Generally, however,the AS-BUILT information shall contain the following:

- 1. AS-BUILTS should be based on the design plans as approved through the DRC process. The submitted as-builts should be at the same scale and have the same orientation as the design files.
- 2. AS-BUILTS should have the same page numbering as the design plans, and the cover of the AS-BUILT plans should have all sheets from the design plans listed with sheets not "AS-BUILTED" stricken through.
- 3. AS-BUILTS should display the original design information as displayed on the plan sheets with the design information stricken through and the as-built information displayed in bold adjacent to the design information.
- 4. AS-BUILTS shall be accompanied by an "Engineer's Certification" form from the Engineer of Record. (Exhibits 3 & 4)
- 5. Three {3) sets of fully signed and sealed AS-BUILTS should be submitted along with CD containing the PDF file(s) and CADD file(s) of the AS-BUILT information. CADD files should be in State Plane coordinates (NAD 83) with a vertical datum of NAVD88 or NGVD 1929 (with the datum shift noted). Furthermore, CADD files should only be submitted in ACAD version 2013 or later.
- 6. Northing and Easting of all drainage structures should be included.
- 7. The plans should be clearly legible, and all structure notes, distances, angles and elevations should be clearly readable.
- 8. If the plan represents a phase of a development, then that phase should be clearly identified for clarity and avoid confusion with future phases.
- 9. There should be a north arrow and scale on each sheet.
- 10. A legend should be included explaining the symbols used in the plans.
- 11. ALL sheets must be signed and sealed by a surveyor licensed in the State of Florida.

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- 12. There should be sufficient "plan" and "as-built" elevations shown to verify that the streets were constructed substantially in accordance with the approved construction plans. Generally, the County will review all low points and high points in the street and verify that the minimum grade exists for each street. On straight sections between high and low points elevations should be taken every 200 feet.
- 13. All street curve radii should be shown on the plans or in a table.
- 14. Street widths and curb type should be identified for each street on each sheet.
- 15. Whenever there are islands within the streets the as-builts should include dimensions for these islands.
- 16. The paved radii of all Cui-de-Sacs should be listed and Cul-De-Sac center and edge of pavement or gutter elevations at quarter points shall be shown.
- 17. All underdrains should be shown with size, lengths, inverts and cleanouts all shown.
- 18. Where swales are utilized there should be sufficient flow line elevations and ditch cross sections to verify capacity of the channel.
- 19. There should be a comparison table of design and as-built pipe sizes, lengths, invert elevations, and pipe slopes.
- 20. The as-built surface area of the pond(s) at Normal Water Level (design) and Top of Bank (as-built) should be included.
- 21. The bottom elevation and area should be shown (2 locations min. per pond).
- 22. The surveyor shall certify by note (for each pond) that no slope is greater than 1:4 above the design NWL, unless the pond is fenced.
- 23. All structures in the pond (overflow weirs, etc.) should be included.
- 24. All water main and sewer main locations, size, lengths, inverts, etc.
- 25. All easements required (or on a plat) should be shown on the "As- Builts" and improvement located so as to verify improvements are within the easement. Easement not recorded as part of the recorded plat including drainage and right-of-way easements shall also be identified as "as-built". For these easements the book and page of their record, property to whom easement is dedicated and date of filing should be shown on as the "as-built". All improvements intended to be within these easements shall be shown as the "as-builts" to verify the improvements are within the easement. Wetlands are not reviewed by Nassau County and need not be shown.
- 26. Depict all storm drain and utility repair locations and methods.

EXHIBIT 1

GENERAL INFORMATION AND MINIMUM INSURANCE REQUIREMENTS

GENERAL INFORMATION AND MINIMUM INSURANCE REQUIREMENTS

COMMERCIAL GENERAL LIABILITY INSURANCE

The Contractor shall purchase and maintain at the Contractor's expense Commercial General Liability insurance coverage (ISO or comparable Occurrence Form) for the life of this Contract. Modified Occurrence or Claims Made forms are not acceptable.

The Limits of this insurance shall not be less than the following limits:

\$1,000,000
\$1,000,000
\$ 300,000
\$ 10,000
\$2,000,000
\$2,000,000

General liability coverage shall continue to apply to "bodily injury" and to "property damage" occurring after all work on the Site of the covered operations to be performed by or on behalf of the additional insureds has been completed and shall continue after that portion of "your work" out of which the injury or damage arises has been put to its intended use.

WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

The Contractor shall purchase and maintain at the Contractor's expense Workers' Compensation and Employer's Liability insurance coverage for the life of this Contract.

The Limits of this insurance shall not be less than the following limits:

<u>Part One</u> – Workers' Compensation Insurance – Unlimited Statutory Benefits as provided in the Florida Statutes and

Part Two - Employer's Liability Insurance

Bodily Injury By Accident\$500,000 Each AccidentBodily Injury By Disease\$500,000 Policy LimitBodily Injury By Disease\$500,000 Each Employee

AUTOMOBILE LIABILITY INSURANCE

The Contractor shall purchase and maintain at the Contractor's expense Automobile Liability insurance coverage for the life of this Contract.

The Limits of this insurance shall not be less than the following limits:

Combined Single Limit – Each Accident \$1,000,000

Covered Automobiles shall include any auto owned or operated by the insured Contractor, insured Subsubcontractor including autos which are leased, hired, rented or borrowed, including autos owned by their employees which are used in connection with the business of the respective Contractor or Subsubcontractor.

^{*}If leased employees are used, policy must include an Alternate Employer's Endorsement

UMBRELLA INSURANCE

The Contractor shall purchase and maintain at the Contractor's expense Umbrella Liability (Umbrella Form) insurance coverage for the life of this Contract.

The Limits of this insurance shall not be less than the following limits:

Each Occurrence Limit \$1,000,000 Aggregate Limit \$1,000,000

ENVIRONMENTAL LIABILITY INSURANCE

This additional coverage will be required by any Contractor performing environmental and/or other investigations involving excavation, drilling, or other site disturbance activities.

The Contractor shall purchase and maintain at the Contractor's expense Environmental Liability insurance (Contractors Pollution Liability) coverage for the life of this Contract.

The Limits of insurance shall not be less than the following limits: \$1,000,000 Each Loss/Aggregate

Such Coverage will include bodily injury, sickness, and disease, mental anguish or shock sustained by any person, including death; property damage including physical injury to destruction of tangible property including resulting loss of use thereof, cleanup costs, and the loss of use of tangible property that has not been physically injured or destroyed; defense including costs charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages; coverage for losses caused by pollution conditions that arises from the operations of the contractor including transportation.

BUILDERS RISK OR INSTALLATION FLOATER

This additional coverage will be required if the contract includes construction of or additions to above-ground buildings or structures, or installation of machinery or equipment.

The minimum amount of insurance shall be 100% of the completed value of such addition(s), building(s), or structure(s), or the installed replacement cost of value.

Contractor shall require each of his Subcontractors to likewise purchase and maintain at their expense Commercial General Liability insurance, Workers' Compensation and Employer's Liability coverage, Automobile Liability insurance, Umbrella Liability Professional Liability, Environmental Liability, Builders Risk or Installation Floater (as applicable) insurance coverage meeting the same limit and requirements as the Contractors insurance.

Certificates of Insurance acceptable to Nassau County Board of County Commissioners for the Contractor/Vendor's insurance must be received within ten (10) days of Notification of Selection and at time of signing Agreement.

Certificates of Insurance and the insurance policies required for this Agreement shall contain an endorsement that coverage afforded under the policies will not be cancelled or allowed to expire until at least thirty (30) days prior written notice has been given to Nassau County Board of County Commissioners.

Certificates of Insurance and the insurance policies required for this Agreement will include a provision that policies, except Workers' Compensation and Professional Liability, are primary and noncontributory to any insurance maintained by the Contractor.

Nassau County Board of County Commissioners must be named as an Additional Insured and endorsed onto the Commercial General Liability (CGL), Auto Liability and Umbrella Liability policy (ies). A copy of the endorsement(s) must be supplied to Nassau County Board of County Commissioners ten (10) days following the execution of the agreement or prior to the first date of services, whichever comes first.

CGL policy Additional Insured Endorsement must include Ongoing and Completed Operations (Form CG2010 11 84 **OR** Form CG2010 04 13 <u>and GC2037 04 13</u> edition or equivalent). Other Additional Insured forms might be acceptable but only if modified to delete the word "ongoing" and insert the sentence "Operations include ongoing and completed operations".

CGL policy shall not be endorsed with Exclusion - Damage to Work performed by Subcontractors on Your Behalf (CG2294 or CG2295)

CGL policy shall not be endorsed with Contractual Liability Limitation Endorsement (CG2139) or Amendment of Insured Contract Definition (CG 2426)

CGL policy shall not be endorsed with Exclusion - Damage to Premises Rented to you (CG 2145) CGL policy shall include broad form contractual liability coverage for the Contractors covenants to and indemnification of the Authority under this Contract

Certificates of Insurance and the insurance policies required for this Agreement shall contain a provision under General Liability, Auto Liability and Workers' Compensation to include a Waiver of Subrogation clause in favor of Nassau County Board of County Commissioners.

All Certificates of Insurance shall be dated and shall show the name of the insured Contractor, the specific job by name and job number, the name of the insurer, the policy number assigned its effective date and its termination date and a list of any exclusionary endorsements.

All Insurers must be authorized to transact insurance business in the State of Florida as provided by Florida Statute 624.09(1) and the most recent Rating Classification/Financial Category of the insurer as published in the latest edition of "Best's Key Rating Guide" (Property-Casualty) must be at least A- or above.

All of the above referenced Insurance coverage is required to remain in force for the duration of this Agreement and for the duration of the warranty period. Accordingly, at the time of submission of final application for payment, Contractor shall submit an additional Certificate of Insurance evidencing continuation of such coverage.

If the Contractor fails to procure, maintain or pay for the required insurance, Nassau County Board of County Commissioners shall have the right (but not the obligation) to secure same in the name of and for the account of Contractor, in which event, Contractor shall pay the cost thereof and shall furnish upon demand, all information that may be required to procure such insurance. Nassau County Board of County Commissioners shall have the right to back-charge contractor for the cost of procuring such insurance. The failure of Nassau County Board of County Commissioners to demand certificates of insurance and endorsements evidencing the required insurance or to identify any deficiency in contractors coverage based on the evidence of insurance provided by the contractor shall not be construed as a waiver by Nassau County Board of County Commissioners of contractor's obligation to procure, maintain and pay for required insurance.

The insurance requirements set forth herein shall in no way limit Contractors liability arising out of the work performed under the Agreement or related activities. The inclusions, coverage and limits set forth herein are minimum inclusion, coverage and limits. The required minimum policy limits set forth shall not be construed as a limitation of Contractor's right under any policy with higher limits, and no policy maintained by the Contractor shall be construed as limiting the type, quality or quantity of insurance

coverage that Contractor should maintain. Contractor shall be responsible for determining appropriate inclusions, coverage and limits, which may be in excess of the minimum requirements set forth herein.

If the insurance of any Contractor or any subcontractor contains deductible(s), penalty(ies) or self-insured retention(s), the Contractor or Subcontractor whose insurance contains such provision(s) shall be solely responsible for payment of such deductible(s), penalty(ies) or self-insured retention(s).

The failure of Contractor to fully and strictly comply at all times with the insurance requirements set forth herein shall be deemed a material breach of the Agreement.