

SECTION 01 25 13  
PRODUCT SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Administrative and procedural requirements for consideration of request for substitution during the design and construction phases.
- B. Substitution Request Form.

1.2 REFERENCES

- A. Section 01 33 00 – Submittal Procedures.
- B. Section 01 42 00 – References.
- C. Section 01 45 00 – Quality Control.
- D. Section 01 78 00 - Closeout Submittals.

1.3 SUBMITTAL PROCEDURES

- A. Transmit each substitution request on company letterhead with completed Form 01 25 00 A. Form is as indicated in Para. 3.02.
  - 1. During bidding phase, substitution requests shall be directed to Project Architect.
  - 2. During construction phase substitution requests shall be directed to Contractor/CM.
- B. Substitution Form shall identify project, Contractor/CM and Architect during bidding phase plus Subcontractor or supplier during construction phase indicating Specification Section and Paragraph number of specified material and pertinent drawing and detail numbers, as appropriate.
- C. Include complete information as required in the Substitution Form. Incomplete information will result in automatic rejection of the substitution request.
- D. Apply contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information are in accordance with the requirements of the work and contract documents.
- E. Schedule submittals to expedite the project, and deliver to Architect or Contractor/CM at business address. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from Architect or CM/Contractor.
  - 1. Identify variations from contract documents and product or system limitations, which may be detrimental to successful performance of the completed work.
  - 2. Provide space for Contractor/CM and Architect review stamps.
  - 3. When revised for resubmission, identify all changes made since previous submission.
  - 4. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
  - 5. Submittals not requested will not be recognized or processed.

1.4 SUBSTITUTION REQUESTS

- A. Requests for substitutions shall be made not later than ten (10) calendar days prior to bid date by prospective bidders, or time set by Owner for receipt of GMP (Guaranteed Maximum Price) from CM. Requests received after the above dates may not be considered.

PART 2 PRODUCTS

2.1 Not Used.

PART 3 EXECUTION

3.1 FORM EXECUTION

- A. Contractor/CM shall submit Product Substitution Request on Form 01 25 00A on following page with transmittal letter and self-addressed stamped envelope for Architect's use in returning response to substitution request.

3.2 SUBSTITUTION FORM 01 25 13A - PRODUCT SUBSTITUTION REQUEST

A. Specified Product \_\_\_\_\_

B. Sheet No./Specification Section and Paragraph \_\_\_\_\_

C. Contractor/CM has reviewed and approved proposed substitution?

Yes \_\_\_\_\_ No \_\_\_\_\_

D. Requested Product Substitution: \_\_\_\_\_  
\_\_\_\_\_

E. Does Product Meet or Exceed Specified Product Requirements? Yes \_\_\_ No \_\_\_  
(If answer is no, explain.) \_\_\_\_\_

F. Does Product Substitution affect dimensions shown on Drawings? Yes \_\_\_ No \_\_\_  
(If answer is no, explain.) \_\_\_\_\_

G. Reason for Requested Substitution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

H. Cost Difference between Product Specified and Product Proposed:  
Add \$ \_\_\_\_\_ Subtract \$ \_\_\_\_\_

I. Electrical Requirements equal to Specified Product: Yes \_\_\_ No \_\_\_ N/A \_\_\_  
(If No or N/A, explain): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

J. Plumbing Requirements equal to Specified Product: Yes \_\_\_ No \_\_\_ N/A \_\_\_  
(If No or N/A, explain): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

K. Mechanical Requirements equal to Specified Product: Yes \_\_\_ No \_\_\_ N/A \_\_\_  
(If No or N/A, explain): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

L. Does the Product Substitution have any effect on other trades? Yes \_\_\_ No \_\_\_  
(If yes, explain): \_\_\_\_\_  
\_\_\_\_\_

M. Contractor/CM agrees to pay for changes in building design, including engineering and detailing costs, caused by requested product substitution. Yes \_\_\_ No \_\_\_

N. Signature of Bidder/Contractor/CM shall indicate function, appearance and quality of proposed substitution is equivalent or superior to specified item.

O. Contractor/CM assumes responsibility for delay or claims arising from review and evaluation of requested product substitution.

P. Approval of proposed substitution shall have no effect on coordination and installation of work in accord with contract documents.

Submitted by: \_\_\_\_\_ For Use by the Architect and Owner: \_\_\_\_\_

\_\_\_\_\_  
Contractor/CM

\_\_\_\_\_ Received Too Late

\_\_\_\_\_  
Firm

\_\_\_\_\_ Not Accepted

\_\_\_\_\_ Approved As Noted

\_\_\_\_\_  
Submittal of Information in  
Accord with this Section

\_\_\_\_\_ Approved For Bidding Only,  
Final Approval Contingent Upon Address

\_\_\_\_\_  
Date

\_\_\_\_\_  
Architect

\_\_\_\_\_  
Date

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Date

END OF SECTION

SECTION 01 29 00  
PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Procedures for preparation and submittal of Applications for Payment.
- B. Unit pricing shall be in conformance with 2007 Edition of AIA A201 General Conditions of the Contract and as amended by Owner on July 13, 2009. Copy is included in Division 1, Section 00 72 00 – General Conditions.

1.2 RELATED SECTIONS

- A. Section 01 22 00 – Unit Prices.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 01 78 00 – Closeout Submittals.

1.3 FORMAT

- A. Payment format shall in accord with AIA G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheets.
- B. Contractor/CM's AIA G702/703 equivalent forms including continuation sheets may be substituted for AIA Payment Forms if preapproved by Owner's Project Manager.

1.4 PREPARATION OF APPLICATIONS

- A. Present handwritten pre-application draft payment forms to Owner for review before submitting applications for payment.
- B. After revising draft payment forms, prepare and submit six typewritten copies or on electronic media printout Pay Application as preapproved by Owner.
- C. Execute certification by signature of authorized officer.
- D. Use data from Owner preapproved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- E. List each authorized Change Order as extension on AIA G703 - Continuation Sheet, listing Change Order number and dollar amount as for original item of Work.
- F. Prepare Application for Final Payment as specified in Section 01 78 00 – Closeout Submittals.

1.5 SUBMITTAL PROCEDURES

- A. Submit six copies of each Application for Payment.
- B. Submit an updated construction schedule with each Application for Payment.
- C. Payment Period: Submit at monthly intervals not later than the fifteenth of the month unless otherwise stipulated in the Agreement.
- D. Submit Release of Liens waivers with each Application for Payment.

1.6 SUBSTANTIATING DATA

- A. When Architect or Owner requires substantiating information, submit data justifying dollar amounts.
- B. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.
- C. Include following data with application.
  - 1. Partial release of liens from major subcontractors and vendors.
  - 2. Affidavits attesting to off-site stored products.
  - 3. Construction progress schedule, revised and corrected to reflect project status at time of payment application.

1.7 PAYMENTS

- A. Payments may be made for materials stored off-site if preapproved by Owner's Project Manager and off-site facility is insured and bonded air conditioned warehouse, and only if project site doesn't allow storage or protection for equipment and supplies.
- B. Payments will normally be made to Contractor/CM by 10<sup>th</sup> of each month, if copies are preapproved by Owner's Project Manager and received by 25<sup>th</sup> of previous month, unless otherwise stipulated in Agreement.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 00  
PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Project management, coordination of construction activities, interface with Owner's staff for existing facilities and project conditions related to project for new and existing facilities.
- B. Meetings for field engineering and project coordination, preconstruction, construction procedures, pay application and progress meetings, pre installation and project closeout meetings.
- C. Site mobilization, materials and equipment storage, site cleanup and demobilization.

1.2 RELATED SECTIONS

- A. Section 01 25 13 – Product Substitution Procedures.
- B. Section 01 29 00 – Payment Procedures.
- C. Section 01 33 00 – Submittal Procedures.
- D. Section 01 35 53 – Security.
- D. Section 01 42 00 – References.
- E. Section 01 45 00 – Quality Control.
- F. Section 01 66 00 – Project Storage and Handling Requirements.
- G. Section 01 78 00 – Closeout Submittals.
- H. Section 01 91 00 – Commissioning.

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating Owner's occupancy of completed portions of project or existing building on site, and items to be furnished or installed by Owner.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements, supports and installation of mechanical and electrical work that is indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. In finished areas with exposed ceilings, piping and conduits shall either concealed or be run at right angles and be attached to underside of floor or deck above. Wiring shall not be exposed. Exposed ductwork shall be painted spiral duct.
- E. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accord with Contract Documents, to minimize disruption of Owner's activities.
- G. Owner will not consider change orders for extra work required by Contractor due to his inadequate coordination.

1.4 FIELD ENGINEERING FOR PROJECT LAYOUT

- A. Employ Land Surveyor registered in State of Florida acceptable to Owner's Project Manager.
- B. Locate and protect survey control and reference points.
- C. Control datum for survey is that established by Owner's provided survey.
- D. Verify setbacks and easements; confirm drawing dimensions and elevations.
- E. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- F. Submit copy of site drawing and certificate signed by Land Surveyor that elevations and locations of Work are in accord with Contract Documents.

1.5 FLOOR SLAB VERIFICATION SURVEY

- A. Separate from Field Engineering noted above, Contractor/CM shall provide topographic survey of building floor slabs on grade to indicate that finish floor elevations and slab locations are per contract documents, water management and building department requirements.
- B. Survey shall be submitted upon completion of slabs on grade. Remaining work shall not proceed until Owner's Project Manager has reviewed survey information and verified that floor slabs are constructed at proper elevation and locations.
- C. Survey shall be prepared, signed and sealed by Florida licensed surveyor, other than the surveyor noted in Para. 1.04 Field Engineering.
- D. Surveyor shall be selected from one of Owner's annual surveying vendors. List may be obtained from Owner's Project Manager.

1.6 PRECONSTRUCTION MEETING

- A. Owner's Project Manager will schedule pre construction conference after Notice to Proceed.
- B. Attendance Required: Owner, Architect, and Contractor/CM.
- C. Agenda:
  - 1. Execution of Owner-Contractor Agreement, if not executed.
  - 2. Submission of executed bonds and insurance certificates.
  - 3. Distribution of Contract Documents.
  - 4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
  - 5. Designation of personnel representing the parties in Contract, and Architect.
  - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders and Contract closeout procedures.
  - 7. Scheduling.
  - 8. Scheduling activities of Geotechnical Engineer.
  - 9. Issuance of Notice to Proceed.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

1.7 SITE MOBILIZATION MEETING

- A. Owner will schedule meeting at Project site prior to Contractors start of work.
- B. Attendance Required: Owner, Architect, Special Consultants, and Contractor, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
  - 1. Use of premises by Owner and Contractor.



2. Owner's requirements and partial occupancy.
  3. Construction facilities and controls provided by Owner.
  4. Temporary utilities provided by Owner.
  5. Survey and building layout.
  6. Security and housekeeping procedures.
  7. Schedules.
  8. Application for payment procedures.
  9. Procedures for testing.
  10. Procedures for maintaining record documents.
  11. Requirements for start-up of equipment.
  12. Inspection and acceptance of equipment put into service during construction period.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

#### 1.8 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of work at weekly intervals. Less frequent meetings may be requested for projects or work stages if requested in writing to the Owner's Project Manager.
- B. Make arrangements for meetings, prepare agenda with copies for participants, and preside meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner's Project Manager, Architect, as appropriate to agenda topics for each meeting.
- D. Agenda:
  1. Review minutes of previous meetings.
  2. Review previous Work progress.
  3. Field observations, problems, and decisions.
  4. Identification of problems that impede planned progress.
  5. Review of submittals schedule and status of submittals.
  6. Review of off-site fabrication and delivery schedules.
  7. Maintenance of progress schedule.
  8. Corrective measures to regain projected schedules.
  9. Planned progress schedule during succeeding work period.
  10. Coordination of projected progress.
  11. Maintenance of quality and work standards.
  12. Effect of proposed changes on progress schedule and coordination.
  13. Other business relating to work.
- E. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

#### 1.9 PREINSTALLATION MEETINGS

- A. When required in individual specification section, convene pre-installation meeting at site prior to commencing work of section.
- B. Require attendance of parties directly affecting, or affected by, work of specific section.
- C. Notify Owner and Architect five working days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  1. Review conditions of installation, preparation and installation procedures.
  2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

## PART 2 PRODUCTS

### 2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A. Motors: Refer to Electrical Sections for specific motor types.
- B. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.
- C. Cord and Plug: Provide minimum 6' cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

## PART 3 EXECUTION

### 3.1 EXISTING BUILDING PROJECT PROCEDURES

- A. Materials: As specified in Product sections; match existing Products and work for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- D. Remove, cut and patch Work in manner to minimize damage and to provide means of restoring Products and finishes to original or specified condition.
- E. Refinish existing visible surfaces to remain in renovated rooms and spaces, to specified condition for each material, with neat transition to adjacent finishes.
- F. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- G. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at natural line of division and submit recommendation to Architect for review.
- H. Where change of plane of 1/4" or more occurs, submit recommendation for providing a smooth transition to Architect for review.
- I. Patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections.
- J. Work that penetrates fire or smoke rated partitions or floors shall be repaired to provide original fire or smoke rating.
- K. Finish surfaces as specified in individual Product Specification Sections.

END OF SECTION

SECTION 01 32 16  
CONSTRUCTION PROJECT SCHEDULE

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Preparation of preliminary Construction Schedule, Contractor's/CM/GC final master Construction Schedule, hereinafter called the Construction Schedule, Short Interval Schedules (look ahead), and monthly updates.
- B. Scope of work and project completion are as indicated. Bidders shall include with their bid, a proposed project schedule indicating each item of work in CSI numbering format showing each work division in CPM (Critical Path Method) work sequencing. Schedule shall base critical path on Owner's providing pre purchase of long lead items, and assuming that those products and services are delivered to the Contractor/CM on time for meeting proposed project schedule.

1.2 SUBMITTALS

- A. Submit schedule in accord with Section 01 33 00 – Submittal Procedures.
- B. Preliminary Project Schedule:
  - 1. Purpose of preliminary schedule is to determine Bidder's intent as to how work can be prosecuted to allow project completion in specified time frame.
  - 2. Bidder's shall comply with "The Use of CPM in Construction – A Manual for General Contractors" published by Associated General Contractors of America, Inc. Schedules shall utilize nationally recognized scheduling format such as Primavera or Microsoft Project. Software version selected shall be compatible with Owner's Microsoft Word or Office software so that schedule can be reviewed and saved in Owner's computer system.
  - 3. Schedule shall be on 11" x17" paper indicating project activities, duration, start and finish dates of each activity, float or slack time, critical path, and total number of days for project.
  - 4. Include float or slack time in Schedule. Float is defined as amount of time between earliest start date and latest start date or days between earliest end date and latest end date.
  - 5. Construction schedule shall begin based on Owner's intent to issue Notice to Proceed Letter to Contractor/CM, and be completed within "x" Calendar Days from NTP. Substantial Completion is "date", with "x" calendar days to Final Completion or "date".
  - 6. Preliminary Project Schedule shall be submitted with Bid Proposal. Failure to do so will be grounds for rejection of the Bid Proposal.

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Bidders are responsible for verification of existing conditions to the extent that they are observable and can be inferred by visual inspection.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements, supports and installation of mechanical and electrical work that is indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

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- D. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. In finished areas with exposed ceilings, piping and conduits shall either concealed or painted and be run at right angles, and attached to underside of floor or deck above. Wiring shall not be exposed. Exposed ductwork shall be painted.
- F. Coordinate scheduling to allow time for submittals, Owner's approval, Building Dept. review, permitting and inspections to ensure efficient and orderly sequence of installation of interdependent construction elements. Schedule shall provide for accommodating Owner's occupancy of other buildings on site, and items to be furnished or installed by Owner.
- G. Owner will not consider change orders for extra work required by Contractor due to his inadequate coordination.

PART 2        NOT USED

PART 3        NOT USED

END OF SECTION

SECTION 01 33 00  
SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Administrative and procedural requirements for processing of submittals during construction process. Submittals may include the following:
  - 1. Proposed Products Lists.
  - 2. Proposed Vendor List.
  - 3. Product Data.
  - 4. Shop Drawings.
  - 5. Samples.
  - 6. Design Data.
  - 7. Field Test Reporting.
  - 8. Quality Control Reporting.
  - 9. Certificates.
  - 10. Manufacturer's Installation, Handling and Storage Instructions.
  - 11. Manufacturer's Field Reports.
  - 12. Erection Drawings.
  - 13. Closeout Documents
  - 14. Warranties.
  - 15. Scheduling of Work.
  - 16. Construction Progress Schedule.
  - 17. Submittals Schedule.
  - 18. Survey and Layout Data.
  - 19. Construction Progress Reporting.
  - 20. Periodic Work Observation.
  - 21. Photographic Documentation.
  - 22. Purchase Order Tracking.
  - 23. Operation and Maintenance Documentation.

1.2 RELATED SECTIONS

- A. Section 01 29 00 – Payment Procedures.
- B. Section 01 31 12 – Project Coordination.
- C. Section 01 42 00 – References.
- D. Section 01 45 00 – Quality Control.
- E. Section 01 66 00 – Product Storage and Handling Requirements.
- F. Section 01 78 00 – Closeout Submittals.

1.3 SUBMITTAL PROCEDURES

- A. Submittal Procedures shall be in conformance with AIA A201 General Conditions of the Contract and as amended by Owner on July 13, 2009. Copy is included in Division 1, Section 00 72 00 – General Conditions.
- B. Transmit each submittal with AIA Form G810-2001 or Owner's Standard Transmittal form.
- C. Sequentially number each transmittal forms. Revise submittals with original number and a sequential alphabetic suffix.
- D. Identify project, Contractor/CM, subcontractor or supplier pertinent drawing and detail number, and specification section number, as appropriate.

- E. Apply Contractor/CM's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information are in accord with requirements of the work and contract documents.
- F. Schedule submittals to expedite the project, and deliver to Engineer and Contractor/CM at business address. Coordinate submission of related items.
- G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor/CM.
- H. Identify variations from contract documents and product or system limitations, which may be detrimental to successful performance of the completed work.
- I. Provide space for Contractor/CM and Engineer review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

#### 1.4 PROPOSED PRODUCTS LIST

- A. Within 15 work days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

#### 1.5 PRODUCT DATA

- A. Product Data for Review:
  - 1. Submit to Engineer for review for purpose of checking for conformance with information given and design concept expressed in Contract Documents.
  - 2. After review, provide copies and distribute per Submittal Procedures article above and for record documents purposes described in Section 01 78 00 – Closeout Submittals.
- B. Product Data for Information:
  - 1. Submittal for Engineer's knowledge as contract administrator or for Owner.
- C. Product Data for Project Close-out:
  - 1. Submit for Owner's benefit during and after project completion.
- D. Submit number of copies required by Contractor/CM plus two copies for transmittal to Engineer and two copies for transmittal to Owner's Project Manager.
- E. Mark each copy to identify applicable products, models, options, and other data.
- G. Supplement manufacturers' standard data to provide information unique to project.
- H. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- I. After review, distribute in accord with Submittal Procedures article above and provide copies for record documents described in Section 01 78 00 - Closeout Documents.

#### 1.6 CONSTRUCTION SUBMITTALS

- A. Submit one copy of Building Permit, Site Permits, Environmental Permits, or other permits required for construction of work.
- B. Submit Payment Applications to Engineer for review for purpose of checking conformance with information given and design concept expressed in Contract Documents.
- C. Shop Drawings: Provide following information:
  - 1. Fabrication and installation Drawings and details.
  - 2. Template placement diagrams.
  - 3. Manufacturer's installation instructions.

4. Product patterns and colors.
  5. Coordination Drawings.
  6. Schedules.
  7. Product product mix formulae.
  8. Product design or engineering calculations.
  9. Other information as required by project.
  10. After review, produce copies and distribute per Submittal Procedures article above and for record documents purposes described in Section 01 78 00 – Closeout Submittals.
  11. Submit to Engineer for purpose of checking conformance with information given and design concept and Owner’s Project Manager.
- D. Project Closeout Documents:
1. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
  2. Submit number of copies required by Contractor, plus one copy for Engineer and two copies for Owner.
  3. Submit to Engineer for Owner's benefit during and after project completion.
    - a. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
    - b. Submit one copy and one reproducible copy required by Contractor/CM, plus one copy for Engineer and two copies for Owner.
- E. Product Samples
1. Submit to Engineer for purpose of checking conformance with information given and design concept expressed in the documents.
  2. After review, Engineer shall submit color board to Owner’s Project Manager per Submittal Procedures.
  3. Sample finishes and colors shall be from full range of manufactures' standard colors, textures, and patterns for Engineer’s selection and preparation of color board for Owner’s approval.
  4. After review and approval by Owner, provide duplicates and distribute per Submittal Procedures.
  5. Submit samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  6. Include identification on each sample, with full project information.
    - a. Submit number of samples specified in specification, one of which Engineer shall retain.
    - b. Reviewed samples may be used in work, if indicated.
- F. Product Design Data and Test Reports:
1. Submit to Engineer as contract administrator and for Owner’s Project Manager for purpose of checking conformance with information given and completed work on project.
- G. Certificates:
1. When specified, submit certification by manufacturer, installation/application subcontractor, or contractor to Engineer, in quantities specified for Product Data.
  2. Indicate material or Product conforms to or exceeds specified requirements.
  3. Submit supporting reference date, affidavits, and certifications as appropriate.
  4. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.
- H. Manufacturer’s Instructions:
1. When specified, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.

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2. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
  3. Refer to Section 01 45 00 – Quality Control for quality assurance requirements.
- J. Manufacturer’s Field Reports:
1. Submit reports to Engineer and Owner’s Project Manager.
  2. Submit report within 30 days of observation to Engineer.
  3. Submit for information for purpose of assessing conformance with information given and design concept expressed in Documents.
- K. Erection Drawings:
1. Submit drawings to Engineer and Owner’s Project Manager.
  2. Submit for information for purpose of assessing conformance with information given and design concept expressed in Documents.
  3. Data indicating inappropriate or unacceptable work is subject to rejection by Engineer or Owner.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION



SECTION 01 35 53  
SECURITY PROCEDURES

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Development of site security program, project entry control procedures, personnel screening and identification in compliance with Florida Statute FS1012.465 – Jessica Lunsford Act for vendors, and Contractor/CM's.

1.2 RELATED SECTIONS

- A. Section 01 31 00 – Project Management and Coordination.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 01 56 00 – Temporary Barriers and Enclosures.

1.3 JESSICA LUNSFORD ACT

- A. Contractor/CM, his subcontractors, vendors and suppliers who are to be permitted access to school grounds while students are present, or have direct contact with students or have access to or control of school funds shall obtain Level 2 background screening in accord with Florida Statute FS1012.465 – Jessica Lunsford Act.
  - 1. Level 2 screening excludes personnel working on school district property where students are present who have criminal records that include sexual offender, sexual misconduct with developmentally disabled or mental health patients, terrorism, murder, kidnapping, lewd, lascivious or indecent acts or exposure, incest, child abuse or neglect.
  - 2. Persons screened as noted above with other types of criminal history may be allowed on school grounds provided under following conditions:
    - a. Contractor/CM, subcontractors, vendors and suppliers shall be under continuous direct supervision of school district employee or Level 2 screened and cleared employee as noted above.
    - b. Contractor/CM, subcontractors, vendors and suppliers may be allowed on a student occupied site if area of construction is isolated from students by continuous six foot high chain link fence separating work area and school.
    - c. Persons with current Level 2 clearance who are subsequently arrested for disqualifying offenses shall be disqualified from access to school sites and shall immediately surrender their Photo ID Badge to their employer who shall be responsible for returning badge to Martin County School District's Department of Human Resources with 48 hours of arrest or notice of arrest or criminal offense.
    - d. Persons failing to notify their employer and Martin County School District's Department of Human Resources with 48 hours of arrest will be charged with 3<sup>rd</sup> degree felony, punishable by up to five years imprisonment and \$1,000 fine.
    - e. Employers of persons having been arrested for disqualifying offenses who subsequently allows said employee to continue working on school property may also be charged with 3<sup>rd</sup> degree felony, punishable by up to five years imprisonment and \$1,000 fine.
- B. Contractor/CM, his subcontractors, vendors and suppliers working on school board sites shall be fingerprinted and obtain work badges.
  - 1. Contractor/CM, his subcontractors, vendors and suppliers have worked and obtained in other school districts must be screened to obtain new badges.

2. Questions regarding fingerprinting or identification badge processing may be directed to District Personnel Department at (772)219-1200, Ext. 30296.
  3. Fingerprinting services are provided by private vendor through Florida Dept. of Education. DOE sponsored website will direct individuals to nearest fingerprinting location.
  4. Cost of fingerprinting is (Check with the School District) per person and shall be prepaid either by money order to (Check with the School District) or by credit card payment via Internet. Website is <http://www.flprints.com>. For information, telephone (877) 357-7456.
  5. Money orders shall be made out to 3M Cogent. Money order must be brought to appointment.
  6. Individuals shall register online prior to their appointment:
    - a. Navigate to [https://www.cogentid.com/fl/index\\_fdoe.htm](https://www.cogentid.com/fl/index_fdoe.htm) and select "register online".
    - b. For County select Martin County from pull-down box.
    - c. For CRI Literal select: FL931392Z Contractors & Vendors.
    - d. Fill out remaining information and submit.
    - e. Use Internet Explorer.
  7. Individuals being fingerprinted shall provide valid, government issued driver's license, identification card or passport.
  8. After fingerprinting and criminal background check is complete, individuals shall make appointment for photo ID's by making appointments at Martin County School District Personnel Department located in Building 20 at School District Administration Center, 500 E. Ocean Blvd., Stuart, FL 34994.
  9. Appointments for ID photo badges shall be made after completion of fingerprinting with Martin County School District Personnel Department by phone at (772) 219-1200, Ext. 30296
  10. Photo ID applicants shall have registration confirmation receipt with them when they arrive for appointment.
  11. Cost of Photo ID's is (Check with the School District). Payment may be made with company check, money order or personal check. Checks shall be made payable to Martin County School District.
- C. Non-Instructional Contractors with current Martin County School District ID Photo Badges shall update their badges to the State Uniform Badge required by Florida Statute 1012.467, effective July 1, 2014.
1. There is no cost for individuals with current Martin County School District ID Photo Badges to upgrade their badges.
  2. Badges from other individual School Districts are no longer accepted on school sites in Florida.
  3. New state wide badges are accepted in any School District regardless of where it was issued.
  4. Non-Instructional Contractors and their employees working on School sites shall apply for State-Wide Badges as noted above.
  5. Non-Instructional Contractors shall submit lists of their badged employees via email to Eileen Loreti at the Martin County School District Personnel Department at [loretie@martin.k12.fl.us](mailto:loretie@martin.k12.fl.us).

#### 1.4 SECURITY PROGRAM

- A. Protect new work, existing facilities and grounds from damage, theft, vandalism, and unauthorized entry.
- B. Initiate security program in coordination with Owner's existing security system at time of project mobilization to ensure safety of students, faculty and visitors to the unaffected portions of the school facilities.

- C. No student contact is permitted between the Contractor's personnel and students. Any breach of this requirement will result in the immediate removal of the personnel from the job site upon direction by the Owner.
- D. Smoking is not allowed on School Board property. Any breach of this restriction will result in immediate removal of personnel from the site upon direction by Owner's Project Manager.
- E. Maintain security program throughout construction period until Owner's project acceptance.

#### 1.5 ENTRY CONTROL

- A. Restrict entrance of persons and vehicles into Project site and existing facilities as indicated by Owner approved security plan.
  - 1. Allow entrance only to authorized persons with proper identification.
  - 2. Maintain log of workers and visitors, make available to Owner on request.
  - 3. Coordinate access of Owner's personnel to site in coordination with Owner's security forces.

#### 1.6 PERSONNEL IDENTIFICATION

- A. Contractor/CM on-site staff, subcontractors and vendors on site shall wear identification badges at all times on site.
- B. Identification badges shall be current at time of project and shall be reverified and reissued yearly if project extends past original badge expiration date.

#### 1.7 SUBMITTALS

- A. Comply with Section 01 33 00 – Submittal Procedures.
- B. Provide list of personnel proposed to be used on project for fingerprinting and background checks (only required for existing school projects).
- C. Contractor/CM shall submit initial list of accredited persons and provide monthly updated lists to Owner.
- D. Provide security plan to Owner indicating how construction site is to be secured and separated from existing school and its operations including normal and emergency egress and exiting from the operational portion of school and for new additions and existing portion under construction.

### PART 2 PRODUCTS

2.1 Not Used.

### PART 3 EXECUTION

3.1 Not Used.

END OF SECTION

SECTION 01 42 00  
REFERENCE STANDARDS

PART 1 GENERAL

1.1 REFERENCE STANDARDS

- A. Reference and design standards referenced in Florida Building Code and Florida Fire Prevention Code, 6<sup>th</sup> Editions are applicable.
- B. Documents listed shall be standard references currently in effect at time of project building permitting.
- C. American Society of Testing Materials (ASTM):
  - 1. See individual product specification sections for applicable ASTM standards.
- D. American National Standards Institute (ANSI)/Underwriters Laboratories (UL):
  - 1. See individual product specification sections for applicable ANSI standards.
- E. Underwriters Laboratories (UL) - Fire Resistance Directory.
- F. Warnock-Hersey - Product Directory.
- G. Building Industry Consulting Services International (BICSI):
  - 1. BICSI-568-2001: Installing Commercial Building Telecommunications Cabling.
  - 2. BICSI Telecommunications Distribution Methods Manual (TDMM).
  - 3. BICSI Telecommunications Cabling Installation Manual (TCIM).
  - 4. BICSI Outside Plant Design Reference Manual, 5th Edition.
- H. FCC (Federal Communications Commission) Rules.
- I. National Electrical Code (NEC):
  - 1. NFPA 70 National Electrical Code, 2008 Edition.
- J. National Fire Protection Association (NFPA):
  - 1. NFPA 101: Life Safety Code - National Fire Protection Association (NFPA).
  - 2. NFPA 70: National Electrical Code - National Fire Protection Association (NFPA).
- K. Occupational Health and Safety (OSHA): State and Federal Requirements.
- L. Telecommunications Industry Association (TIA)/Electronics Industry Association (EIA):
  - 1. TIA/EIA-568-B.1 and addenda: Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements.
  - 2. TIA/EIA-568-B.2 and addenda: Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted-Pair.
  - 3. TIA/EIA-568-B.2-1: Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling.
  - 4. TIA/EIA-568-B.3 and addenda: Commercial Building Telecommunications Cabling Standard - Part 3: Optical Fiber Cabling and Components Standard.
  - 5. TIA/EIA-568-B.3-1: Additional Transmission Performance Specifications for 50/125 ohm Optical Fiber Cables.
  - 6. TIA/EIA-569-A and Addenda: Commercial Building Standard for Telecommunications Pathways and Spaces, CSA T530.
  - 7. TIA/EIA-606-A and Addenda: Administration Standard for Telecommunications Infrastructure of Commercial Buildings, CSA T528.
  - 8. ANSI-J-STD-607-A and Addenda: Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications, CSA T530.
  - 9. TIA/EIA-526-7 and Addenda: Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant.
  - 10. TIA/EIA-526-14A and Addenda: Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant.
  - 11. TIA/EIA-758: Customer Owned Outside Plant Telecommunications Cabling Standard.

- M. International Electrical Code (IEC):
  - 1. TR3 61000-5-2 - Ed. 1.0 and amendments: Electromagnetic compatibility (EMC) - Part 5: Installation and mitigation guidelines – Section 2: Earthing and Cabling”.
  - 2. ISO/IEC 11801: 2000 Edition, 1.2 and amendments: Information Technology – Generic cabling for customer premises.
- N. International Standards Organization (ISO/IEC): 11801: 2000 Ed. 1.2 and amendments: Information technology - Generic cabling for customer premises.
- O. NACE (National Association of Corrosion Engineers) - Industrial Maintenance Painting.
- P. NPCA (National Paint and Coatings Association) - Guide to U.S. Government Paint Specifications.
- Q. PDCA (Painting and Decorating Contractors of America) - Painting - Architectural Specifications Manual.
- R. SSPC (Steel Structures Painting Council) - Steel Structures Painting Manual.
  - 1. SSPC-SP 1 – Solvent Cleaning.
  - 2. SSPC-SP 2 – Hand Tool Cleaning.
  - 3. SSPC-SP 3 – Power Tool Cleaning.
  - 4. SSPC-SP 13 – Nace No 6 Surface Preparation for Concrete.
- S. WDMA (Window and Door Manufacturer’s Association) I.S. 1-A-2004.

## 1.2 DEFINITIONS

- A. Communication Definitions:
  - 1. ITS: Information Transport System: Copper cabling or optical fiber for transmission of information on School District property. Transmission includes data, video, voice, fire alarm, security, access control, and other low-voltage networks. Information Transport System is not limited to School District-owned cabling, but includes copper and optical fiber, and equipment owned by outside providers carrying School District’s information. Pathways are not limited by School District’s ownership, but include those owned by third parties. Information Transport System may be referred to as “the network” within project documents.
  - 2. ICP: Inside Cable Plant: Part of Information Transport System running within buildings. ICP elements include workstation outlet assembly, cabling to the workstation from network rooms, backbone cabling within building, backbone cabling running between physically contiguous buildings, network racks and hardware (routers, switches, hubs, firewalls, etc.), patch panels, punch blocks, fiber distribution panels, patch cords, and cross-connect cables/wires.
  - 3. OCP: Outside Cable Plant: Part of Information Transport System running between buildings, from building to definable exterior point, between definable exterior points, or from non-School District source to School District building or definable exterior point. OCP includes termination punch blocks, fiber distribution panels, interior splices for outside to inside optical fiber transition, and other initial device into which outside cable attaches. OCP does not include backbone cable running between physically contiguous buildings unless cabling enters OSP pathway element (e.g. OSP conduits, maintenance holes, etc.). OCP includes underground cabling and aerial cabling.
  - 4. Cable: An assembly of one or more insulated conductors or optical fibers, within an enveloping sheath.
  - 5. DP: Dead pairs: Unused copper pairs terminating within splice case, but without being splices to outgoing cable.
  - 6. GP: Grounding electrode: Conductor (rod, pipe or plate or group of conductors) in direct contact with earth for purpose of providing low-impedance connection to earth.

7. GEC: Grounding electrode conductor: Conductor used to connect grounding electrode to equipment grounding conductor, or to grounded conductor of circuit at service equipment, or at source of separately derived system.
  8. Handbox: Rectangular or square underground pathway element similar to small maintenance hole, which cannot be fully entered, that allows for pulling point or splice point in power, security or communications pathway.
  9. Handhole: A round underground pathway element similar to a handbox, which cannot be fully entered, that allows for a pulling point in a pathway.
  10. Identifier: An item of information that links a specific element of the Information Transport System infrastructure with its corresponding record.
  11. Infrastructure (Information Transport System): A collection of those Information Transport System components, excluding equipment, that together provides the basic support for the distribution of all information within a building or campus.
  12. Linkage: A connection between a record and an identifier or between records.
  13. Maintenance (man) holes: Underground pathway element large enough for person to fully enter work, used to provide access to underground cable to pull, splice, and maintain.
  14. Media (Information Transport System): Wire, cable, or conductors used for Information Transport System.
  15. OB: Outlet box: Metallic or nonmetallic box used to hold Information Transport System outlets/connectors or transition devices.
  16. Outlet (Connector) (Information Transport System): Connecting device in work area on which horizontal cable or outlet cable terminates.
  17. Pathway: Facility for the placement of Information Transport System cable.
  18. Record: Collection of detailed information related to specific element of Information Transport System infrastructure.
  19. Report: Presentation of collection of information from various records.
  20. Space (Information Transport System): Area used for housing installation and termination of Information Transport System equipment and cable, e.g., equipment rooms, network rooms, work areas, and maintenance holes/handboxes/handholes.
  21. Splice: Joining of conductors in splice closure, meant to be permanent.
  22. Splice box: Box, located in pathway run, intended to house cable splice.
  23. Splice closure: Device used to protect splice.
  24. Termination position: Discrete element of termination hardware where information Transport System conductors are terminated.
  25. Work Area (work station): Building space where occupants interact with Information Transport System terminal equipment.
- B. Painting Definitions:
1. ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products for interpretation of terms used herein.

### 1.3 ABBREVIATIONS AND ACRONYMS

- A. Abbreviations noted in Florida Building Code, Chapter 2 are applicable.
- B. General Abbreviations:
1. AC: Above Counter/Air Conditioning.
  2. ACR: Attenuation-to-Crosstalk Ratio.
  3. ADA: Americans with Disabilities Act.
  4. AFF: Above finished floor.
  5. AFG: Above finished grade.
  6. ANSI: American National Standards Institute.

7. ARCH: Architect or Architectural.
8. ASTM: American Society for Testing and Materials (ASTM International).
9. AWG: American Wire Gauge.
10. BD: Building distributor (replacing main-cross connect and MDF as “building service” room identifiers).
11. BICSI®: Building Industry Consulting Service International, Inc.
12. BTU: British Thermal Unit.
13. CAT6: Category 6 cable.
14. CATV: Community Antenna Television (cable television).
15. CD: Campus distributor (replacing main-cross connect and MDF as “campus-wide service” room identifiers). Also, compact disk for storage of audio or video information.
16. CO: Communications Outlet.
17. COAX: Coaxial Cable.
18. CP: Communications Panel.
19. dB: Decibel.
20. EMS: Energy Management System or Emergency Management System.
21. EMT: Electrical metallic tubing.
22. ENT: Electrical nonmetallic tubing.
23. EDPM: Ethylene-polypropylene-diene membrane.
24. EF: Entrance Facility.
25. EIA: Electronic Industries Alliance.
26. ELFEXT: Equal Level Far-End Crosstalk.
27. EMC: Electromagnetic Compatibility.
28. EMI: Electromagnetic Interference.
29. ER: Equipment Room. Replacing “TR”
30. FMC: Flexible metallic conduit.
31. FCC: Federal Communications Commission.
32. FD: Floor distributor (replacing network room, intermediate and horizontal cross-connect, and telecommunications as “building service” room identifiers). Also, Floor Drain as part of building plumbing system.
33. FDDI: Fiber Distribution Data Interface.
34. FEXT: Far-End Crosstalk.
35. FO: Fiber Optic.
36. Freq: Frequency.
37. GE: Grounding equalizer (replacing TBBIBC).
38. Gnd: Ground.
39. HB: Handbox. Also, hose bibb for water supply part of plumbing system.
40. HC: Horizontal Cross-Connect (replaced by floor distributor “FD”).
41. HH: Handhole.
42. HVAC: Heating, Ventilation, and Air Conditioning.
43. Hz: Hertz.
44. IC: Intermediate Cross-Connect (replaced by building distributor “BD”).
45. IDC: Insulation Displacement Connectors.
46. IDF: Intermediate Distribution Frame (replaced by “BD” or “FD”).
47. IEEE: Institute of Electrical and Electronics Engineers.
48. IMC: Intermediate metal conduit.
49. IN: Inches.
50. ISO: International Organization for Standardization.
51. ISP: Inside Cable Plant.
52. JB: Junction Box.
53. LBS: Pounds.

54. LED: Light Emitting Diode.
55. LFMC: Liquidtight flexible metal conduit.
56. LFNC: Liquidtight flexible nonmetallic conduit.
57. Mbps: Megabits per second.
58. MC: Main Cross-Connect (replaced by campus distributor “CD”).
59. MDF: Main Distribution Frame (replaced by “CD” or “BD”).
60. MER: Main Equipment Room.
61. MH: Maintenance Hole.
62. MHz: Megahertz.
63. NBR: Acrylonitrile-butadiene rubber.
64. NEC: National Electrical Code, NFPA 70.
65. NEMA: National Electrical Manufacturers Association.
66. NESC: National Electric Safety Code, C2-1997.
67. NFPA: National Fire Protection Association.
68. NIC: Not in Contract.
69. NR: Network Room.
70. #: Number.
71. OFCI: Owner Furnished Contractor Installed.
72. OFOI: Owner Furnished Owner Installed.
73. OSHA: Occupational Safety and Health Administration.
74. OCP: Outside Cable Plant.
75. OTDR: Optical Time Domain Reflectometer.
76. PR: Pair.
77. PVC: Polyvinyl Chloride.
78. RCDD®: Registered Communications Distribution Designer.
79. RFI: Radio Frequency Interference.
80. RGC or GRC: Rigid Galvanized Conduit.
81. RH: Relative Humidity.
82. RNC: Rigid nonmetallic conduit.
83. SCS: Structured Cabling System.
84. SS: Stainless Steel.
85. SM: Single Mode.
86. TIA/EIA: Telecommunications Industry Association/Electronic Industry Association.
87. TBB: Telecommunication Bonding Backbone.
88. TBBIBC: Telecommunication Bonding Backbone Interconnecting Bonding Conductor (replaced by grounding equalizer “GE”).
89. TE: Telephone Equipment (Wall Mounted Equipment Rack).
90. TEL: Telephone.
91. TGB: Telecommunications Grounding Buss bar.
92. TMGB: Telecommunications Main Grounding Buss bar.
93. TR: Telecommunications Room. (Replaced with Main-MDF or Intermediate-IDF Distribution Frame Locations).
94. TYP: Typical.
95. UL: Underwriters Laboratory.
96. UPS: Uninterruptible Power Supply.
97. UTP: Unshielded Twisted Pair.
98. V: Volt.
99. WAO: Work Area Outlet.

#### 1.4 UNITS OF MEASURE



Martin County School District

- A. Weights and Measures shall be as identified by Weights and Measures Division, NIST, U. S. Department of Commerce, 100 Bureau Dr., Stop 2600, Gaithersburg, MD 20899-2600.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 45 00  
QUALITY CONTROL

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Quality assurance procedures to control labor and product installation including tolerances, adherence to references and standards.
- B. Construction of mockups and field samples to set standard of quality for product installation.
- C. Independent inspecting and testing laboratory services for quality control and adherence to contract documents.
- D. Manufacturers' field services for quality control and adherence to contract documents.
- E. Work shall be in conformance with 2007 Edition of AIA A201 General Conditions of the Contract and as amended by Owner on July 13, 2009. Copy is included in Division 1, Section 00 72 00 – General Conditions.

1.2 RELATED SECTIONS

- A. Section 01 22 00 – Unit Prices.
- B. Section 01 29 00 – Payment Procedures.
- C. Section 01 31 00 – Project Management and Coordination.
- D. Section 01 33 00 – Submittal Procedures.
- E. Section 01 42 00 – References.
- F. Section 01 66 00 – Product Storage and Handling Requirements.
- G. Section 01 78 00 – Closeout Submittals.
- H. Section 01 91 00 – Commissioning.
- I. Section 23 05 93 – Testing, Adjusting and Balancing of HVAC.
- J. Section 23 08 00 – Commissioning of HVAC.

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and work to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements, supports and installation of mechanical and electrical work that is indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel or perpendicular with line of building. Conduits and piping shall be spaced neatly, consistently and uniformly when in groupings. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

- G. Owner will not consider change orders for extra work required by Contractor/CM due to improper or untimely coordination.

#### 1.4 FIELD ENGINEERING

- A. Employ a Land Surveyor registered in the State of Florida, acceptable to Architect and Owner for construction layout.
- B. Contractor/CM shall locate and protect survey control and reference points.
- C. Control datum for survey is that established by Owner provided survey.
- D. Verify setbacks and easements; confirm drawing dimensions and elevations.
- E. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- F. Upon completion of project, surveyor noted above, shall prepare and submit copy of site drawing and certificate signed by Land Surveyor that elevations and locations of Work are in accord with Contract Documents.

#### 1.5 QUALITY ASSURANCE

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with contract documents, request clarification from Architect before proceeding, and document any instructions or directions that may invalidate warranty.
- D. Comply with specified standards as a minimum quality for work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.
- H. Schedule work so no absorbent materials are installed and no concealed areas are closed up until building is dried-in and permanent doors and windows are installed to prevent development of mold or entrapment of mold or moisture inside concealed spaces or moisture absorption into interior materials.
- I. See Section 01 31 00 – Project Management and Coordination for services of Florida licensed land surveyor to verify locations and elevation of floor slabs after floor slab placement and before continuation of construction activities.

#### 1.6 TOLERANCES:

- A. Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with contract documents, most stringent tolerance shall prevail.
- C. Adjust products to appropriate dimensions; position before securing products in place.

#### 1.7 REFERENCES AND STANDARDS:

- A. Comply with Section 01 42 00 – References for reference standards, definitions, abbreviations and acronyms applicable to project.
- B. Workmanship shall comply with requirements of standards specified by product or trade association, or other consensus standards of specified products, except when applicable code requirements are more stringent.
- C. Use current reference standard(s) in effect at time of contract execution.
- D. Obtain copies of standards where required by product specification sections.
- E. Contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect shall be altered from contract documents by mention or inference otherwise in reference documents.

1.8 MOCKUPS AND FIELD STANDARDS:

- A. Comply with Section 01 43 39 – Mockups general requirements and individual product sections for specific requirements. Construct mockups as indicated for review by Architect and Owner's Project Manager.
- B. Assemble and erect specified items with required attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be basis of work quality standard for work.
- D. Where Architect accepts mockups as quality standard of work required, maintain mockups until work is complete.
- E. Upon Architect's approval mockups and work samples may be incorporated in completed work. Otherwise, remove mock-up and clear area.

1.9 TESTING SERVICES:

- A. Owner will appoint and pay for services specified for independent firm to perform testing.
- B. Independent firm will perform tests and other specified services as outlined in individual specification sections and as required by Owner.
- C. Testing and quality control may occur on or off project site.
- D. Independent firm shall submit reports to Owner and Architect and Contractor/CM, indicating observations and results of tests and compliance or non-compliance with contract documents.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
  - a. Notify Owner, Architect and independent firm 24 hours prior to expected time for operations requiring services.
  - b. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
  - c. Testing does not relieve Contractor to perform work per contract requirements.
  - d. As directed by Architect, independent testing firm shall re-test as result of non-conformance with requirements. Contractor shall pay for re-testing cost by deducting testing charges from the Contract Sum/Price.

1.10 BUILDING INSPECTION SERVICES:

- A. Owner will employ in-house Building Official, or hire independent Building Official and Construction Inspectors as required to perform Document review and approval, and on-site building inspections in accord with Florida Building Code, Section 423 State Requirements for Educational Facilities and other applicable codes.
- B. Building Official and Inspectors will perform code interpretation, document review, project inspections, and other services specified and required in individual specification sections, and shall be paid by Owner.
- C. Inspections firm will conduct inspections and observations of work, indicate compliance or non-compliance with applicable codes and contract documents, and will submit reports to Architect, Contractor/CM and Owner.
- D. Cooperate with inspection firm; provide safe access and assistance by incidental labor as requested.
- E. Notify Owner and Architect and inspection firm 24 hours prior to expected time for operations requiring services.
- F. Inspection of work does not relieve Contractor of performing work in accord with contract requirements.

1.11 MANUFACTURERS' FIELD SERVICES:

- A. Where specified, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to the Architect 30 days in advance of required observations, the observer is subject to Owner's approval.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Comply with Section 01 33 00 – Submittal Procedures.

1.12 COMMISSIONING

- A. Comply with Section 01 91 00 – Commissioning for training of Owner's personnel in operation and maintenance of equipment identified in this Section.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 EXAMINATION:

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work, beginning new work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work.
- C. Examine and verify specific conditions described in individual specification sections. Immediately notify AE or Owner's Project Manager of conditions that would prevent meeting contractual requirements.
- D. Verify that utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION:

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance in manner approved by product manufacturer.
- C. Apply manufacturer's required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.3 CLEANING AND WASTE MANAGEMENT

- A. Comply with Section 01 74 00 – Cleaning and Waste Management.

END OF SECTION

SECTION 01 66 00  
PRODUCT STORAGE AND HANDLING REQUIREMENTS

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Packaging and transportation, delivery and receiving, product handling, storage, conditions and location, maintenance, protection, repair and replacement of products damaged while handling or in storage.

1.2 RELATED DOCUMENTS

- A. Section 01 31 00 – Project Management and Coordination.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 01 35 53 – Security Procedures.
- D. Section 01 45 00 – Quality Control.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 TRANSPORTATION AND HANDLING

- A. Packaging and Transportation:
  - 1. Supplier shall package finished products in boxes or crates to provide protection during shipment, handling and storage at site.
  - 2. Products shall be protected against exposure to outside storage against damage due to weather conditions.
  - 3. Protect products sensitive to damage against impact, abrasion, puncture and other damage during handling and transport to project.

3.2 DELIVERY AND RECEIVING

- A. Arrange deliveries of products in accord with project schedule to allow installation and project completion per approved project schedule.
- B. Prior to project commencement, Contractor's personnel shall meet with Owner's Project Manager and School staff for renovation and new construction to delineate areas for materials storage lay-down areas.
- C. Restrict access of persons to storage areas in accord with Section 01 35 33 – Security Procedures.
- D. Material deliveries to Owner occupied sites shall be coordinated with Owner's Project Manager to ensure availability of personnel and handling equipment for safe and secure unloading and storage of equipment.
- E. Deliver products in undamaged, dry condition, in original unopened containers or packaging with identifying labels intact and legible.
- F. Clearly mark partial deliveries of component parts of equipment to identify equipment and contents, to permit easy accumulation of parts, and to facilitate assembly.
- G. Upon delivery, Contractor/CM shall inspect shipments for following items:
  - 1. Products received match reviewed submittals and Contract Documents.
  - 2. Correct quantities.

3. Accessories and installation hardware are included.
  4. Containers and packages are intact and labels are legible.
  5. Products are adequately protected for conditions and are undamaged.
- H. Product Handling:
1. Provide equipment and personnel to handle products to prevent product damage.
  2. Handle products to avoid bending, flexing or overstressing.
  3. Lift large or heavy components by using designated lifting points in accord with manufacturers written directions.

### 3.3 STORAGE AND PROTECTION

- A. General Requirements:
1. Store products immediately upon delivery in accord with manufacturers written directions.
  2. Arrange for storage location to allow access, maintenance and inspection of products.
  3. Stored products shall not conflict with work conditions. construction is contiguous to or within existing school, Provide demising walls to physically separate new or renovation work from existing on-going school operations.
- B. Enclosed Storage:
1. Store products subject to damage by weather in weathertight enclosure.
  2. Maintain temperature and humidity within ranges stated in manufacturer's instructions.
  4. Provide temperature and humidity control within ranges stated in manufacturer's instructions.
  5. Store unpacked or loose products on shelves, in bins, or in neat groups of like items.
- C. Exterior Storage:
1. Provide platforms, blocking or skids to support fabricated products above ground, and sloped to allow drainage.
  2. Protect products to avoid soiling or staining.
  3. Provide product cover to prevent water or condensation on product while allowing ventilation.
  4. Store loose granular materials on clean, solid surfaces such as pavement or on rigid sheet materials to prevent mixing with foreign matter.
  5. Provide for surface drainage to prevent humidity, mold or algae growth.
- D. Maintenance of Storage:
1. Periodically inspect stored products on scheduled basis.
  2. Verify storage facilities and environmental conditions are in compliance with manufacturer's written requirements.
  3. Verify that product surfaces exposed to weather are undamaged, stolen, or have otherwise been adversely affected.
- E. Maintenance of Equipment Storage:
1. Stored mechanical and electrical equipment shall comply with manufacturer's written service instructions for each item, with notice of instructions attached to each item of equipment.
  2. Stored equipment shall be serviced on regular basis, maintaining log of services, and submitted to Architect in accord with Section 01 78 00 – Submittal Procedures as part of Project Record Documents.
- F. Storage of Owner's Salvaged Furnishings and Equipment:
1. Contractor/CM shall provide temporary storage facilities for items to be salvaged and reinstalled.

### 3.4 PROTECTION OF FINISHED WORK



- A. Protect finished surfaces, including doors, door jambs, soffits of openings used as passageways, through which equipment and materials are handled.
- B. Protect finished floor surfaces in traffic areas prior to allowing equipment or materials to be moved.
- C. Keep finished surfaces clean, unmarked, and suitably protected until Owner's project acceptance.

### 3.5 REPAIRS AND REPLACEMENTS

- A. Promptly replace or repair damaged equipment or building surfaces caused by moving equipment at no additional cost to Owner.
- B. Additional time required to repair or replace damaged equipment or building surfaces shall not be grounds for Contract time extension or Contractor's additional expense, unless Owner specifically authorizes time extension or additional costs.

END OF SECTION

SECTION 01 74 00  
CLEANING AND WASTE MANAGEMENT

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Administrative and procedural requirements for waste management and cleaning during construction and final cleaning at Substantial Completion.
- B. Development and implementation of Waste Management Plan to indicate following procedures:
  - 1. Limiting amount of project waste through planning, scheduling, and project management.
  - 2. Recycling demolished structures and construction and waste materials, and reuse of recycled or salvaged materials whenever possible.
  - 3. Procedures to reduce construction noise, fumes, vibration, dust or other airborne contaminants.
  - 4. Adherence to Federal, State and local environmental and anti-pollution regulations and ordinances.
  - 5. Waste materials shall be suitably disposed off site in approved landfill sites.
  - 6. Development of contamination containment plan to include procedures for addressing volatile and hazardous materials or their waste products, cleaning materials and residue.
- C. Cleaning and Protection:
  - 1. Development of daily and periodic construction cleaning and protection of products stored on site or erected in project, and shall include sequence and frequency policy and schedule for project duration.
  - 2. Development of evacuation, fire and life safety plan, staff training procedures in handling and disposal of materials deleterious to human contact or exposure.
  - 3. Final cleaning leaving project ready for Owner's acceptance.

1.2 RELATED SECTIONS

- A. Section 01 31 00 – Project Management and Coordination.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 01 42 00 – References.
- D. Section 01 66 00 – Product Storage and Handling Requirements.
- E. Section 01 78 00 – Closeout Submittals.

1.3 SUBMITTALS

- A. Comply with Section 01 33 00 – Submittal Procedures.
- B. Submit MSDS sheets for products requiring special care or handling in storage, application or cleanup.
- C. Submit Waste Management and Cleaning Plans identifying and providing operational procedures for each item noted in Scope of Work.

1.4 COORDINATION

- A. Coordinate scheduling and implementation of Waste Management and Cleaning Plans with each trade on site.
- B. Ensure enforcement to promote efficient and orderly sequence of installation of interdependent construction elements, with intent to reduce waste maximize efficient and safe work environment.

- C. Coordinate periodic and final clean up of Work of each trade in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy.

#### 1.5 QUALITY ASSURANCE

- A. Monitor each trade, product suppliers, product deliveries, waste generation, site conditions, and workmanship, to minimize waste and maximize recycled materials and reuse of retained materials.

#### PART 2 PRODUCTS

NOT USED (See individual product specifications for cleaning products recommended by manufacture.)

#### PART 3 EXECUTION

NOT USED (See individual product specifications for written cleaning procedures and instructions recommended by manufacture.)

END OF SECTION

SECTION 01 78 00  
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Spare parts and maintenance Products.
- G. Warranties and bonds.
- H. Maintenance service.
- I. Training.

1.2 RELATED SECTIONS

- A. Section 01 29 00 - Payment Procedures.
- B. Section 01 33 00 – Submittal Procedures.
- C. Section 01 91 00 – Commissioning.
- D. Section 27 60 00 – Integrated Audio System.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that contract documents were reviewed, work inspected, and that work is complete in accord with contract documents and ready for Owner's Project Manager and AE's review.
- B. Provide submittals to AE and Owner's Project Manager that are required by building and fire authorities.
  - 1. Submit final application for payment identifying total adjusted contract sum, previous payments, and sum remaining due.
  - 2. Owner may opt to occupy all or portions of completed facilities upon substantial completion of those portions of work.
  - 3. Contractor/CM shall provide punch list to AE identifying items remaining to be completed.
  - 4. AE shall inspect project to determine completion of punch list and project compliance with Contract Documents.

1.4 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances.
- C. Clean equipment and fixtures to sanitary condition with cleaning materials per manufacturer's written recommendations.
- D. Remove waste and surplus materials, rubbish, and construction facilities from the site.

## 1.5 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

## 1.6 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of record documents, recording accurate field revisions to contract documents to include:
  - 1. Drawings/specifications and addenda.
  - 2. Change orders and other modifications to work.
  - 3. Reviewed shop drawings, product data, and samples.
  - 4. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling ready access and reference by Owner's Project Manager.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications shall be legibly marked and recorded for each product used indicating the following:
  - 1. Manufacturer's name, product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by addenda and modifications.
- F. Record drawings and shop drawings shall be legibly marked with each item recorded to indicate actual construction as follows"
  - 1. Measured depths of foundations in relation to finish first floor datum.
  - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.
  - 4. Field changes of dimension and details.
  - 5. Details not on original contract drawings.
- H. Upon project completion, transfer project record drawing information to Autocad (2010 or later format) files and provide four copies of CD's to Architect for review and transmitted to Owner, prior to claim for final Application for Payment.
  - 1. Contractor/CM shall also submit two hard copies of record drawings and project manual maintained during project to Owner's Project Manager.
  - 2. Owner will be responsible for making prints from CD's and for their distribution to Owner's user groups.

## 1.7 OPERATION AND MAINTENANCE DATA

- A. Submit documentation as noted in individual product specifications and as noted herein.

## 1.8 SPARE PARTS AND MAINTENANCE PRODUCTS

- 1. Provide spare parts, maintenance, and extra products in quantities specified in specification.
- 2. Deliver to Owner; obtain receipt prior to final payment.

## 1.9 WARRANTIES

- A. Submit documentation as noted in individual product specifications and as noted herein.
- B. Provide duplicate notarized copies.
- C. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers.
- D. Provide Table of Contents and assemble in D-side 3-ring white binders with typed title sheet of contents inside durable plastic front cover.
- E. Submit prior to final application for payment.
- F. For items of work delayed beyond date of substantial completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

## 1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of components indicated in specification sections for one-year from date of project substantial completion.
- B. Examine, clean, adjust, and lubricate system components as required for reliable operation.
- C. Include systematic examination, adjustment, and lubrication of components repairing or replacing parts as required with parts produced by the manufacturer of the original component.
- D. Owner shall approve in writing of transfers or reassignments of maintenance service tasks.

## 1.11 ASBESTOS CERTIFICATION

- A. Provide notarized letter from Contractor/CM certifying that “to the best of his/her knowledge no asbestos containing building materials were used as a building material in the project”, per FS 255.40.

## 1.12 PROJECT CLOSE-OUT PROCEDURES

- A. Items are to be submitted to the School District’s Construction Manager’s Office once the request for final payment has been submitted.
  - 1. \_\_\_\_ 4 Copies: AIA Application For Payment, Signed and Sealed, Noted as Final Payment.
  - 2. \_\_\_\_ Consent of Surety to make final payment.
  - 3. \_\_\_\_ Release of Lien from all Sub-Contractors or Laborers who have filled an Intent to Lien.
  - 4. \_\_\_\_ Warranty/Guarantee from Construction Manager for one-year from the date of Substantial Completion.
  - 5. \_\_\_\_ Warranty/Guarantee from each Sub-Contractor for one-year from the date of Substantial Completion.
  - 6. \_\_\_\_ Copy of the approval by the Architect-Engineer and the transmittal to the end user of manuals, shop drawings, as-builds, brochures, warranties, list of sub-contractors with phone numbers, addresses and contact persons.
  - 7. \_\_\_\_ Verification that all applicable district personnel have been trained in the operation of their new equipment (per system: HVAC, controls, etc.)

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8. \_\_\_\_ Executed Roof Warranty in the name of the Martin County School District.
9. \_\_\_\_ 4 Copies: OEF Form 209, Certificate of Final Inspection.
10. \_\_\_\_ 4 Copies: Completed Punch-list.
11. \_\_\_\_ SREF 4.2(3)(e) Architect's Certificate of Specification of Asbestos Containing Materials.
12. \_\_\_\_ SREF 4.2(3)(e) Contract's Certificate of Asbestos Use.
13. \_\_\_\_ SREF 4.2(3)(d) Threshold inspector's statement that building complies with Threshold Plan.
14. \_\_\_\_ 4 Copies: OEF Form 110B, Certificate of Occupancy.
15. \_\_\_\_ OEF Form 564 for new construction or additions to existing schools only  
(Return to Director's Secretary)
16. \_\_\_\_ Inspection Log Book

PART 2 PRODUCTS

2.1 APPROVED PRODUCTS

- A. Use only cleaning and maintenance products approved for use in Florida Educational Facilities.

PART 3 EXECUTION

- 3.1 Not used.

END OF SECTION

SECTION 32 31 13  
CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 DEFINITION

- A. A fence is defined as a physical or visual barrier between areas. It can be constructed of various materials to perform the function it is designed to do. A physical and visual fence is described in this standard in fences A thru H and can be regimental or architectural. This type of fencing is used to separate areas that have different functions and for security.
- B. A fence or barrier can be made with landscape materials such as ground cover, bushes, trees and earthen berms. Refer to DGM Standard 02930, Exterior Plants, for materials. This type of fencing will be used in low security areas and for an aesthetic accent to the facility.
- C. It is the intent of Martin County School District to have an “open street” concept at each campus. We also realize that some situations may call for additional security in the form of fencing.

1.2 APPLICATION

- A. This Standard designates the areas that receive fencing, gates and accessories; the heights of the fencing and the materials used at each location.
- B. Fencing and Site requirements for fencing shall comply with Florida Building Code, current edition with supplements.

1.3 FENCE TYPE: A through H

- A. Chain-Link Fabric: Black PVC coated, steel, ASTM F 668
- B. Framework: Black Polymer coated steel
  - 1. Gates: ASTM F 900-05
  - 2. Posts and Rail: ASTM F 1043-06 Material Group 1A and 1C
  - 3. Fence Fittings: ASTM 626-96a
  - 4. Padlocks: Provide as specified in DC 08 71 00 – Door Hardware.
- C. Installation: ASTM F 567-00, Installation of Chain-Link Fences

1.4 SUBMITTALS, GENERAL INSTRUCTIONS, PRODUCT DATA, SHOPDRAWINGS, SAMPLES, CERTIFICATES

- A. Supply product data, details, dimensions and finishes for the following:
  - 1. Fence and gateposts, rails and fittings
  - 2. Chain-link fabric, reinforcement and attachments
  - 3. Gates and hardware
  - 4. Privacy slats (where shown on drawings) (possible at dumpsters)
  - 5. Tension wire
  - 6. Concrete footings
- B. Shop Drawings: Show locations of fence, gates, posts, rails, tension wires, attachments, heights and finish.
- C. Warranty Requirements: One (1) year from date of Substantial Completion.



1.5 QUALITY ASSURANCE

- A. Installer Qualifications
  - 1. An experienced installer who has successfully completed chain-link fences and gate projects.
- B. Contractor Qualifications
  - 1. The Contractor shall be licensed in Martin County, Florida to install the work described in this section.
- C. Pre-Construction Surveys/Conferences
  - 1. Contractor shall verify information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures and verify field dimensions before work begins.
- D. Preparation/Field Verification
  - 1. Contractor shall secure information on locations of underground conduits and utility locations before work begins.
  - 2. Do not interrupt utilities serving facilities occupied by the Owner. Repair of interrupted underground conduits and utilities shall be the responsibility of the Contractor.
- E. Samples
  - 1. Supply samples for approval for each item listed in paragraph 1.4 Submittals.

1.6 SAFETY PROCEDURES

- A. Construction, dealing with School Safety, of fencing shall be done as follows:
  - 1. During hours when school is not occupied by students or in areas that are marked and barricaded as construction areas.
  - 2. Do not interrupt campus operation with fence construction.
- B. Construction shall comply with OSHA Standards on safety during construction.

1.7 FENCING PERMIT

- A. A permit for the installation of the fence is necessary and the responsibility of the fencing contractor.

PART 2 - PRODUCT/ SYSTEM

2.1 COMPONENTS: MATERIALS, SIZES, FINISHES

- A. Fabric, posts, gates & accessories.

2.2 MANUFACTURERS: Chain Link Types A-H

- A. Ameristar
- B. Master – Halco
- C. Stephens Pipe & Steel
- D. Merchant Metals

2.3 MANUFACTURER: Architectural Fence (Type I)

A. Omega II Fence System

2.4 TYPE A Chain-Link Fence

A. The location of this fence is around the perimeter of a school facility, to be located within 1 foot of the property line. Also, for water retention areas, drainage ditches and canals (in which case a 20'-0" maintenance swath shall be provided between the fence and the water line).

1. Fence height: 6'-0" above grade.
2. Mesh and wire size: 2-inch mesh, .148-inch diameter, steel core, vinyl coated with the top and bottom selvage knuckled. Provide mesh fabricated in one piece width (height).
3. Top and bottom tension wire No. 6 gauge, spring coil vinyl coated.
4. Brace rail: Round, 1-5/8" OD. With 3/8" truss rod.
5. Stretcher bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. One stretcher bar for each gate and end post & two bars for each corner and pull post.
6. Tie Wire: No. 9 gauge vinyl coated steel tie wire.
7. Posts: (Maximum 10'-0" o.c.)
  - a) Terminal; 3" OD, pull post @ 350' max.
  - b) Line; 2 1/2" OD, 10' maximum spacing.
8. Gate or gates: Site specific.
9. Post for swing gates, leafs up to and including 6' wide = 3" OD.
  - a) Over 6' to 12' wide = 4" OD.
  - b) Over 12' to 18' wide = 6 5/8" OD.
  - c) Over 18' = 8 5/8" OD.
10. Hardware
  - a) Hinges: Per ASTM F900-05.
  - b) Latches: Lockable with padlock. Per ASTM F900-05
11. Footing: Concrete 2500 psi, Per ASTM F567

B. Non-Climb Mini mesh.

1. Fence height: 8'-0" above grade.
2. Mesh and wire size: 1-inch mini mesh/non-climb, .148-inch diameter, steel core, vinyl coated with top and bottom selvage knuckled. Provided mesh fabricated in one piece widths (height).
3. Bottom & Middle tension wire: No. 6 gauge spring coil vinyl coated.
4. Top rail: Round, 1-5/8" OD, located 6" below top of knuckled mesh.
5. Brace rail: Not applicable, n/a.
6. Stretcher/tension bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. Two stretcher bars for each gate, one stretcher bar each end post, and two stretcher bars for each corner and pull post.
7. Tie wire: No. 9 gauge vinyl coated steel core tie wire.
8. Posts: (Maximum 10'-0" OC)
  - a) Terminal post and End post. Pull post @ 350' LF max.
  - b) Line: 2-1/2" OD sch. 40, 11'-6" length with 10' maximum spacing.
9. Gate or Gates: Not applicable, n/a.
10. Post for swing gates, leaf's up to and including 6' wide – 3" OD.
  - a) Over 6' – 12' wide – 4" OD
  - b) Over 12' – 18' wide – 6-5/8" OD

- c) Over 18" – 8-5/8" OD.
- 11. Hardware:
  - a) Hinges: Per ASTM F900-05.
  - b) Latches: Lockable with padlock, Per ASTM F900-05.
  - c) Tamper proof anchors: when required to anchor mini mesh to concrete in a secure manner the use of zinc plated steel or stainless-steel anchors are required. A style similar to Torx-Pin. The use of large diameter washer is also required.
  - d) Tension wire anchors: Earth anchors 15" length min – 3" OD min steel anchor with a min of one flight will be required. Earth anchors will have a closed top for tension wire to be secured. Earth anchors are required between each line post that has a 6'-0" min span or greater. Earth anchors shall be centrally located when practical. Should soil conditions not allow earth anchors to be twisted/turned into soil, the use of concrete is required. Concrete footing to be twice diameter of the anchor and min 15" depth.
- 12. Footing: Concrete 2500 psi, Per ASTM F567.

## 2.5 TYPE B Chain-Link Fence

- A. This fence encloses the Kindergarten Tot Lot (Fence is not required at the YouthLot).
  - 1. Fence height: 4'-0" above grade.
  - 2. Mesh and wire size: 2-inch mesh, .148 diameters, steel core, vinyl coated with the top and bottom selvage knuckled. Provide mesh fabricated in one-piece width (height).
  - 3. Top rail: Round, 1-5/8" OD.
  - 4. Bottom Tension Wire: 6 gauge spring coil vinyl coated.
  - 5. Stretcher Bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. One stretcher bar for each gate and end post & two bras for each corner and pull post.
  - 6. Tie wire: No. 9 gauge vinyl coated steel tie wire.
  - 7. Posts: (Maximum 10'-0" o.c.)
    - a) Terminal; 3" OD.
    - b) Line; 2 1/2" OD.
  - 8. Gate: Double 4'-0" wide, double swing. Gate shall swing out.
  - 9. Post for swing gates, leafs up to and including 6' wide = 3" OD.
  - 10. Hardware:
    - a) Hinges: Per ASTM F900-05.
    - b) Latches: Lockable with padlock. Per ASTM F900-05.
  - 11. Footing: Concrete 2500 psi, Per ASTM F567
- B. Non-Climb Mini mesh.
  - 1. Fence height: 8'-0" above grade.
  - 2. Mesh and wire size: 1-inch mini mesh/non-climb, .148-inch diameter, steel core, vinyl coated with top and bottom selvage knuckled. Provided mesh fabricated in one piece widths (height).
  - 3. Bottom tension wire: No. 6 gauge spring coil vinyl coated.
  - 4. Top rail: Round, 1-5/8" OD, located 6" below top of knuckled mesh.
  - 5. Brace rail: Not applicable, n/a.
  - 6. Stretcher/tension bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. Two stretcher bars for each gate, one stretcher bar each end post, and two

- stretcher bars for each corner and pull post.
7. Tie wire: No. 9 gauge vinyl coated steel core tie wire.
  8. Posts: (Maximum 10'-0" OC)
    - a) Terminal post and End post. Pull post @ 350'LF max.
    - b) Line: 2-1/2" OD sch. 40, 11'-6" length with 10' maximum spacing.
  9. Gate or Gates: Not applicable, n/a.
  10. Post for swing gates, leaf's up to and including 6' wide – 3" OD.
    - a) Over 6' – 12' wide – 4" OD
    - b) Over 12' – 18' wide – 6-5/8" OD
    - c) Over 18" – 8-5/8" OD.
  11. Hardware:
    - a) Hinges: Per ASTM F900-05.
    - b) Latches: Lockable with padlock, Per ASTM F900-05.
    - c) Tamper proof anchors: when required to anchor mini mesh to concrete in a secure manner the use of zinc plated steel or stainless-steel anchors are required. A style similar to Torx-Pin. The use of large diameter washer is also required.
    - d) Tension wire anchors: Earth anchors 15" length min – 3" OD min steel anchor with a min of one flight will be required. Earth anchors will have a closed top for tension wire to be secured. Earth anchors are required between each line post that has a 6'-0" min span or greater. Earth anchors shall be centrally located when practical. Should soil conditions not allow earth anchors to be twisted/turned into soil, the use of concrete is required. Concrete footing to be twice diameter of the anchor and min 15" depth.
  12. Footing: Concrete 2500 psi, Per ASTM F567.

## 2.6 TYPE C Chain-Link Fence

- A. This fence is used to enclose equipment, dumpster and bicycle rack areas.
  1. Fence height: 6'-0" above grade.
  2. Mesh and wire size: 2-inch mesh, .148 diameter, steel core, vinyl coated with the top and bottom selvage knuckled. Provide mesh fabricated in one-piece width (height).
  3. Top rail: Round, 1-5/8" OD.
  4. Brace rail: Round, 1-5/8" OD with 3/8" truss rod.
  5. Bottom Tension Wire: 6 gauge spring coil vinyl coated.
  6. Stretcher bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. One stretcher bar for each gate and end post & two bars for each corner and pull post.
  7. Tie wire: No. 9 gauge vinyl coated steel tie wire.
  8. Posts: (Maximum 10'-0" o.c.)
    - a) Terminal; 3" OD.
    - b) Line; 2 1/2" OD.
  9. Gate: Bicycle rack: One gate 8' gate (4'-0" double leaf). All gates shall swing out. Gates shall be at opposite ends of enclosure.
  10. Gate: Equipment, Dumpster Enclosure: Gate shall be sized for equipment and dumpster repair and removal. Minimum size 4'-0" single leaf. For gates 5'-0" and larger, use double leaf. All gates shall swing out 180 degrees.
  11. Hardware:

- a) Hinges: Per ASTM F900-05
  - b) Latches: Lockable with padlock. Per ASTM F900-05
  12. Footing: Concrete 2500 psi, Per ASTM F900-05
- B. Non-Climb Mini mesh.
1. Fence height: 8'-0" above grade.
  2. Mesh and wire size: 1-inch mini mesh/non-climb, .148-inch diameter, steel core, vinyl coated with top and bottom selvage knuckled. Provided mesh fabricated in one piece widths (height).
  3. Bottom tension wire: No. 6 gauge spring coil vinyl coated.
  4. Top rail: Round, 1-5/8" OD, located 6" below top of knuckled mesh.
  5. Brace rail: Not applicable, n/a.
  6. Stretcher/tension bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. Two stretcher bars for each gate, one stretcher bar each end post, and two stretcher bars for each corner and pull post.
  7. Tie wire: No. 9 gauge vinyl coated steel core tie wire.
  8. Posts: (Maximum 10'-0" OC)
    - a) Terminal post and End post. Pull post @ 350' LF max.
    - b) Line: 2-1/2" OD sch. 40, 11'-6" length with 10' maximum spacing.
  9. Gate or Gates: Not applicable, n/a.
  10. Post for swing gates, leaf's up to and including 6' wide – 3" OD.
    - a) Over 6' – 12' wide – 4" OD
    - b) Over 12' – 18' wide – 6-5/8" OD
    - c) Over 18" – 8-5/8" OD.
  11. Hardware:
    - a) Hinges: Per ASTM F900-05.
    - b) Latches: Lockable with padlock, Per ASTM F900-05.
    - c) Tamper proof anchors: when required to anchor mini mesh to concrete in a secure manner the use of zinc plated steel or stainless-steel anchors are required. A style similar to Torx-Pin. The use of large diameter washer is also required.
    - d) Tension wire anchors: Earth anchors 15" length min – 3" OD min steel anchor with a min of one flight will be required. Earth anchors will have a closed top for tension wire to be secured. Earth anchors are required between each line post that has a 6'-0" min span or greater. Earth anchors shall be centrally located when practical. Should soil conditions not allow earth anchors to be twisted/turned into soil, the use of concrete is required. Concrete footing to be twice diameter of the anchor and min 15" depth.
  12. Footing: Concrete 2500 psi, Per ASTM F567.

## 2.7 TYPE D Chain-Link Fence

- A. The location of this fence is around the perimeter of Middle and High School tennis courts and basketball courts. (Refer to DC 11 16 10 for plan layouts.)
1. Fence height: 10'-0" above court surface.
  2. Mesh and wire size: 2-inch mesh, .148 diameters, steel core, vinyl coated with top and bottom selvage knuckled. Provide mesh fabricated in one-piece width (height).
  3. Top rail: Round, 1-5/8" OD.
  4. Brace rail: Round, 1-5/8" OD with 3/8" truss rod.

5. Bottom Tension Wire: 6 gauge spring coil vinyl coated.
6. Stretcher bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. One stretcher bar for each gate and end post & two bars for each corner and pull post.
7. Tie wire: No. 9 gauge vinyl coated steel tie wire.
8. Posts: (Maximum 10'-0" o.c.)
  - a) Terminal; 3" OD.
  - b) Line; 3" OD.
9. Gates: Provide two (2) gates at opposite corners of each court. The size of each gate shall be 4'-0" wide x 7'-0" high. Gates shall swing outward 180degrees.
10. Post for swing gates, leafs up to and including 6'-0" wide = 3" OD.
11. Hardware:
  - a) Hinges: Per ASTM F900-05
  - b) Latches: Lockable with padlock. Per ASTM F900-05
12. Wind Block: Provide reinforced woven fabric to act as a wind block on all fencing. Wind block shall be 6'-0" and centered in the 10'-0" high fence.
  - a) Note: No wind block is required for basketball court.
13. Footing: Concrete 2500 psi, Per ASTM F567

## 2.8 TYPE E Chain-link Fence

- A. The location of this fence is on Elementary School and Middle Schools softball field backstops. (Refer to DC 11 16 10 for plan layout.)
  1. Backstop height: 16' above grade (16' vertical section w/ 4' over-hang).
    - a) Note: Additional height and overhang may be necessary for protection of public safety of adjoining sites from foul ball trajectories.
  2. Mesh and wire size: Lower 8'-0" height shall be 2-inch mesh, No. 6 gauge core wire. Top 8'-0" height shall be 2-inch mesh, No. 9 gauge core wire. Both gages shall be vinyl coated with top & bottom selvage knuckled.
  3. Top of overhang, top, bottom and center (four total) rails: Round, 1-5/8" OD.
  4. Posts: Round, 3" OD. (Maximum 10'-0" o.c.)
  5. Overhang 45° Arms: 2" OD, welded to post.
  6. Tie wire: No. 9 gauge vinyl coated steel tie wire.
  7. Footing: Concrete 2500 psi, Per ASTM F567, 16" diameter x 48" deep footings.

## 2.9 TYPE F Chain-Link Fence

- A. The location of this structure (backstop) is on High School softball fields. (Refer to DC 11 16 10 for plan layout.)
  1. Backstop Fence:
    - a) Height: 24' above grade.
    - b) Mesh and wire size: Lower 12'-0" height shall be 2-inch mesh. No. 6 gauge core wire. Top 12'-0" height shall be 2-inch mesh, No. 9 core wire. Both gauges shall be vinyl coated with the top & bottom selvage knuckled. Provide mesh fabricated in one-piece width (height) for each 12' section.
    - c) Top, bottom & intermediate (five total) rails: Round, 1-5/8" OD
    - d) Posts: Round, 4" OD (Maximum 10'-0" o.c.)
    - e) Tie Wire: No. 9 gauge vinyl coated steel tie wire.

- f) Footing: Concrete 2500 psi 18" dia. x 48" deep.
- 2. Backstop To Dugout Fence:
  - a) Height: 18' above grade.
  - b) Mesh and wire size: 2-inch mesh, .148 inch diameter, steel core, vinyl coated with the top & bottom selvage knuckled.
  - c) Top, bottom & two intermediate (four total) rails: Round, 1-5/8" OD
  - d) Posts: Round, 3" OD (Maximum 10'-0" o.c.)
  - e) Tie wire: No. 9 gauge vinyl coated steel tie wire.
  - f) Footing: Concrete 2500 psi 12" dia. x 36" deep.
- 3. Outfield Fence from Dugout to Dugout:
  - a) Height: 6' above grade.
    - 1. Note: Additional height and overhang may be necessary for protection of public safety of adjoining sites from foul ball trajectories.
  - b) Mesh and wire size: 2-inch mesh, .148 diameter, steel core, vinyl coated with the top and bottom selvage knuckled. Provide mesh fabricated in one- piece width(height).
  - c) Top rail: Round, 1-5/8" OD.
  - d) Brace rail: Round, 1-5/8" OD. With 3/8" truss rod.
  - e) Bottom Tension Wire: 6 gauge spring coil vinyl coated.
  - f) Stretcher Bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. One stretcher bar for each gate and end post & two bars for each corner and pull post.
  - g) Tie wire: No. 9 gauge vinyl coated steel tie wire.
  - h) Posts: (Maximum 10'-0" o.c.)
    - 1. Terminal; 3" OD.
    - 2. Line; 2 1/2" OD.
  - i) Footing: Concrete 2500 psi, Per ASTM F567

#### 2.10 TYPE G Chain-Link Fence

- A. The location of this fence is on High School baseball fields. (Refer to DC 11 16 10 for plan layouts.)
  - 1. Backstop Fence:
    - a) Height: 28' above grade.
    - b) Mesh and wire size: Lower 12'-0" height shall be 2-inch mesh. No. 6 gauge core wire. Top 16'-0" height shall be 2-inch mesh, No. 9 core wire. Both gauges shall be vinyl coated with the top & bottom selvage knuckled. Provide mesh fabricated in one-piece width (height) for each 12' section.
    - c) Top, bottom & intermediate (five total) rails: Round, 1-5/8" OD
    - d) Posts: Round, 6-5/8" OD (Maximum 10'-0" o.c.)
    - e) Tie Wire: No. 9 gauge vinyl coated steel tie wire.
    - f) Footing: Concrete 2500 psi 24" dia. x 48" deep.
  - 2. Backstop To Dugout Fence:
    - a) Height: 18' above grade.
    - b) Mesh and wire size: 2-inch mesh, .148 inch diameter, steel core, vinyl coated with the top & bottom selvage knuckled.
    - c) Top, bottom & two intermediate (four total) rails: Round, 1-5/8" OD
    - d) Posts: Round, 3" OD (Maximum 10'-0" o.c.)

- e) Tie wire: No. 9 gauge vinyl coated steel tie wire.
- f) Footing: Concrete 2500 psi 12" dia. x 36" deep.
- 3. Outfield Fence from Dugout to Dugout:
  - a) Height: 6' above grade.
    - 1) Note: Additional height and overhang may be necessary for protection of public safety of adjoining sites from foul ball trajectories.
  - b) Mesh and wire size: 2-inch mesh, .148 diameter, steel core, vinyl coated with the top and bottom selvage knuckled. Provide mesh fabricated in one- piece width(height).
  - c) Top rail: Round, 1-5/8" OD.
  - d) Brace rail: Round, 1-5/8" OD. With 3/8" truss rod.
  - e) Bottom Tension Wire: 6 gauge spring coil vinyl coated.
  - f) Stretcher Bars: 3/16" x 3/4" hot dipped galvanized steel, vinyl coated. One stretcher bar for each gate and end post & two bars for each corner and pull post.
  - g) Tie wire: No. 9 gauge vinyl coated steel tie wire.
  - h) Posts: (Maximum 10'-0" o.c.)
    - 1) Terminal; 3" OD.
    - 2) Line; 2 1/2" OD.
  - i) Footing: Concrete 2500 psi, Per ASTM F567

#### 2.11 TYPE H Chain-Link Fence

- A. The location of this structure is behind and around the discus circle. (Refer to DC 11 16 10 for plan layout.)
  - 1. Backstop height: 12"-0".
  - 2. Configuration: Forming a "U" shape around the discus circle in five equal sections of approximately 12'-0" each. Mesh and wire size: 2-inch mesh, .148 diameter, steel core, vinyl coated with the top and bottom selvage knuckled. Provide mesh fabricated in one-piece width (height).
  - 3. Top, bottom & center (three total) rails. Round, 1-5/8" OD
  - 4. Posts: Size determined for wind load. Round, 3" OD.
  - 5. Tie Wire: No. 9 gauge vinyl coated steel wire.
  - 6. Footing: Concrete 2500 psi 12" dia. x 36" deep.
- B. Exit Hardware: BHMA A156.3, Grade 1, Type 1 (rim exit device), with push pad actuating bar, suitable for exterior use. Provide at locations indicated on drawings.
  - 1. Function: Entrance by trim when latch bolt is released by key or set in a retracted position by key.
  - 2. Mounting Channel: Bent-plate channel formed from 1/8-inch thick, aluminum plate. Channel spans gate frame. Exit device is mounted on channel web, recessed between flanges, with flanges extending 1/8 inch beyond push pad surface.

### PART 3 - QUALITY ASSURANCE DURING EXECUTION

#### 3.1 PROPER SEQUENCE AND SCHEDULING

- A. Do not begin installation before final grading is completed.





3.2 INSTALLATION PROCEDURES/ADJUSTMENT PROCEDURES

- A. Installation of chain-link fencing shall comply with:
  - 1. ASTM 567
  - 2. Florida Building Code, current edition w/ supplements
  - 3. Martin County, Florida and local codes
- B. Installation instructions and procedures of Architectural fencing shall be by fencing Manufacturer. Spikes in the fabric shall be down.

3.3 SAFETY REQUIREMENTS FOR INSTALLATION

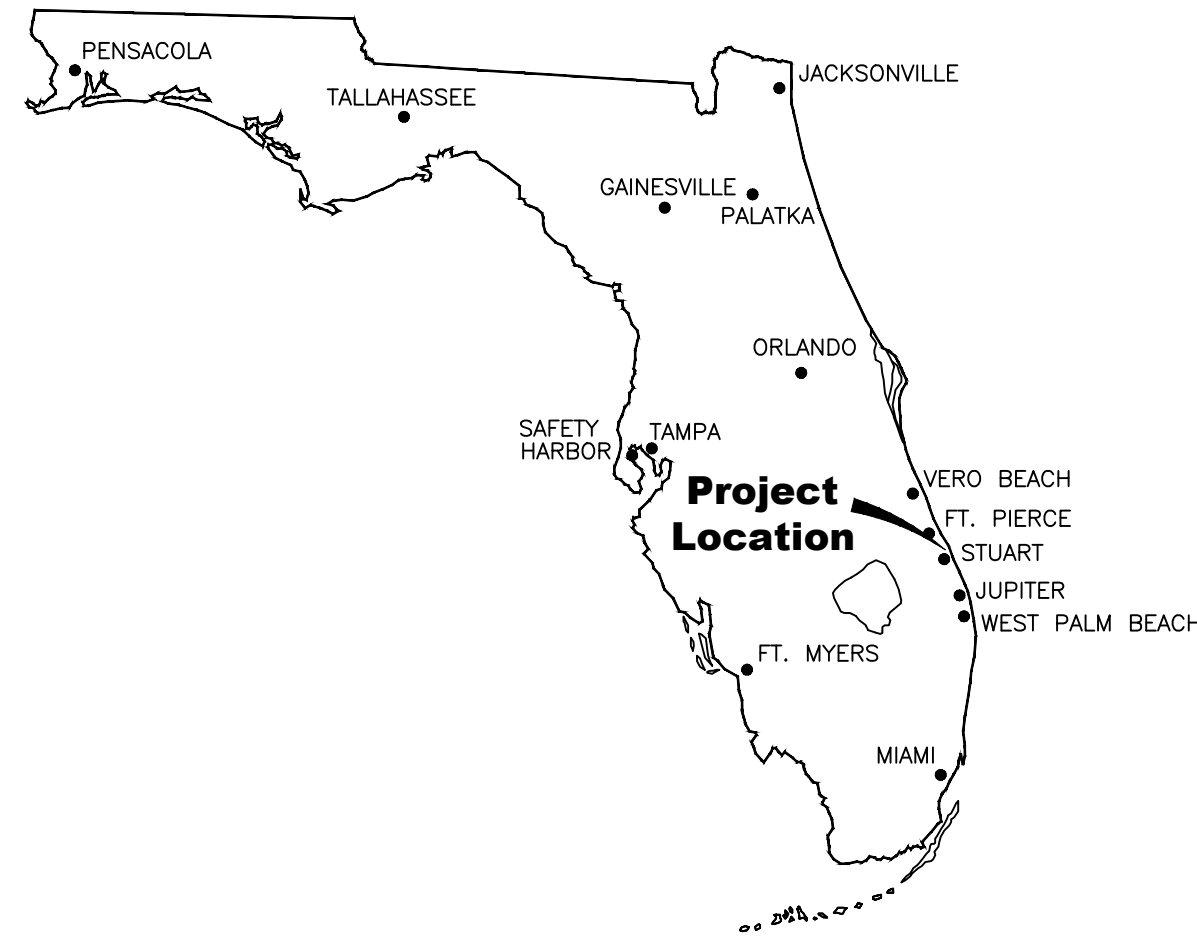
- A. Fencing shall be installed in accordance with OSHA Standards.

3.4 PROTECTION DURING CONSTRUCTION

- A. Care and protection of the construction site shall be made by the contractor to assure that there is no access by students, teachers or visitors at the facility.

END OF SECTION

# CONSTRUCTION PLANS AND SPECIFICATIONS FOR MARTIN COUNTY SCHOOL BOARD JENSEN BEACH HIGH SCHOOL FIELD REGRADING LYING WITHIN THE SECTION 20, TOWNSHIP 37 S., RANGE 41 E. MARTIN COUNTY, FLORIDA



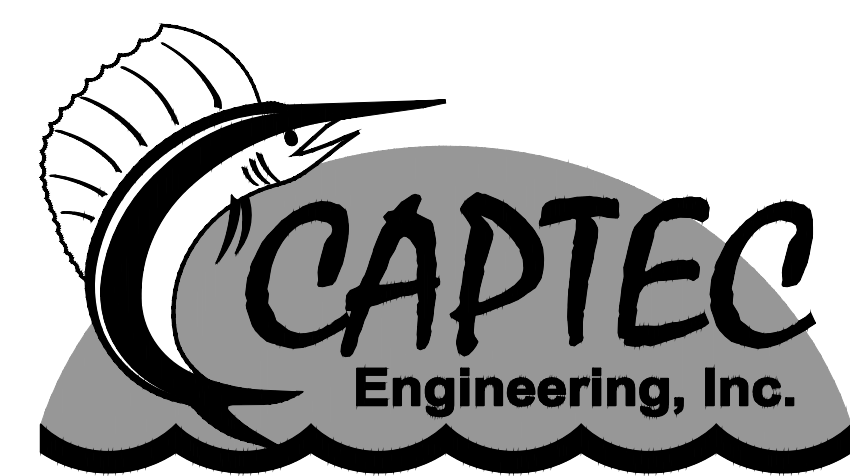
**LOCATION MAP**

**CLIENT**

**MARK SECHRIST**  
DIRECTOR OF FACILITIES  
AND PLANNING  
MARTIN COUNTY  
SCHOOL DISTRICT  
1050 SE 10TH STREET  
STUART, FL. 34996  
PHONE: (772) 214-6649

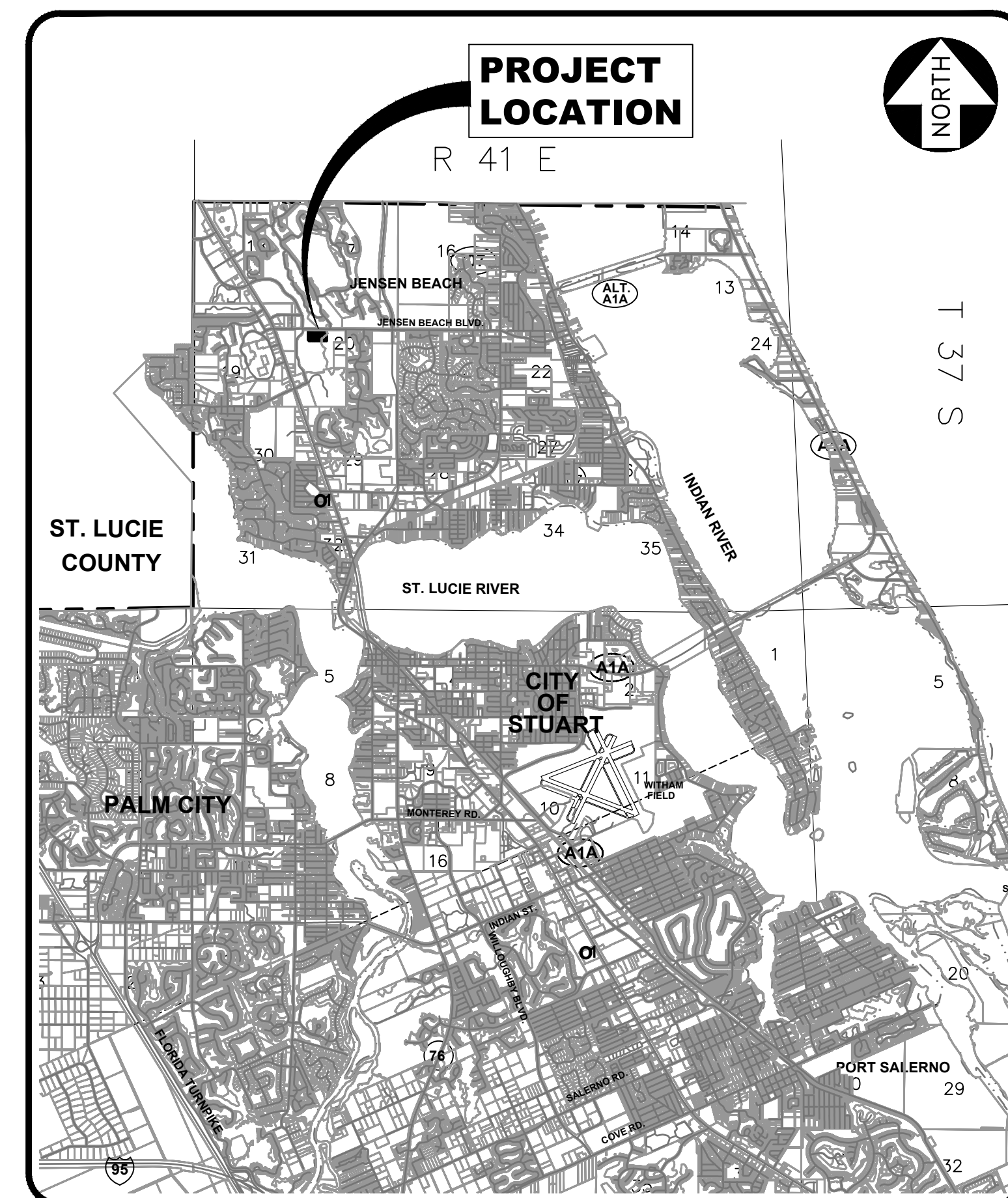
**ENGINEER**

**JOSEPH W. CAPRA, P.E.**  
FLORIDA P.E. NO. 37638  
CAPTEC ENGINEERING, INC.  
301 N.W. FLAGLER AVENUE  
STUART, FLORIDA 34994  
PHONE: (772) 692-4344  
EMAIL: CAPTECinfo@goCAPTEC.com



Civil Engineering Professionals

Engineering Business  
No. EB-0007657



**VICINITY MAP**

N.T.S.



**SITE MAP**

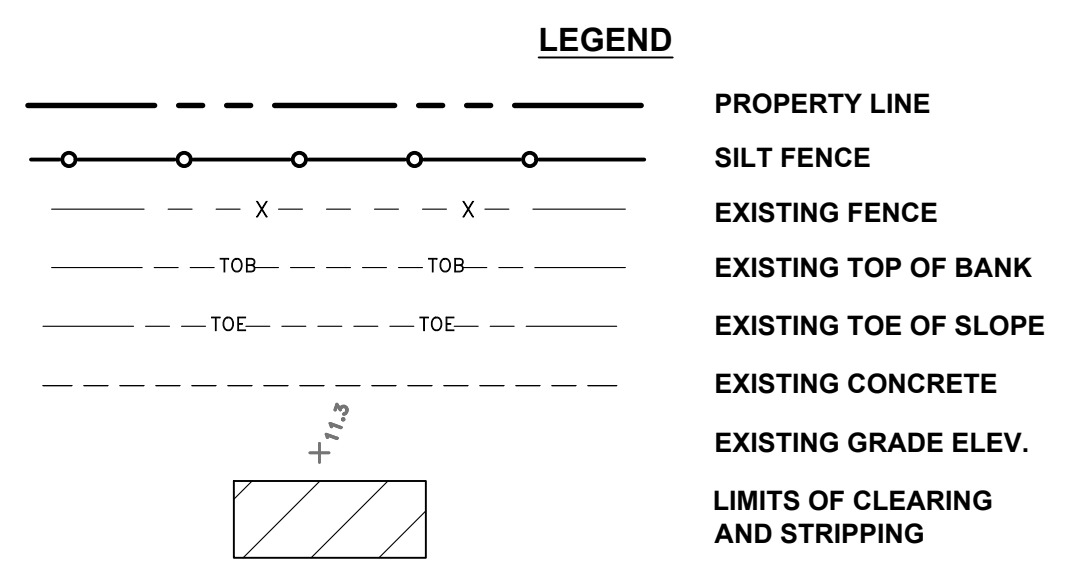
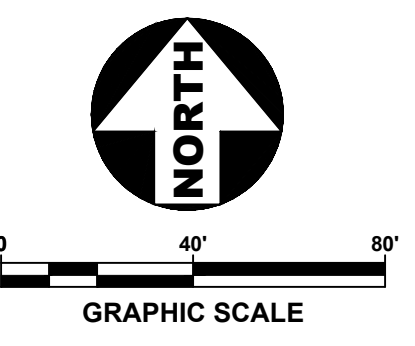
1" = 500'

**SHEET INDEX**

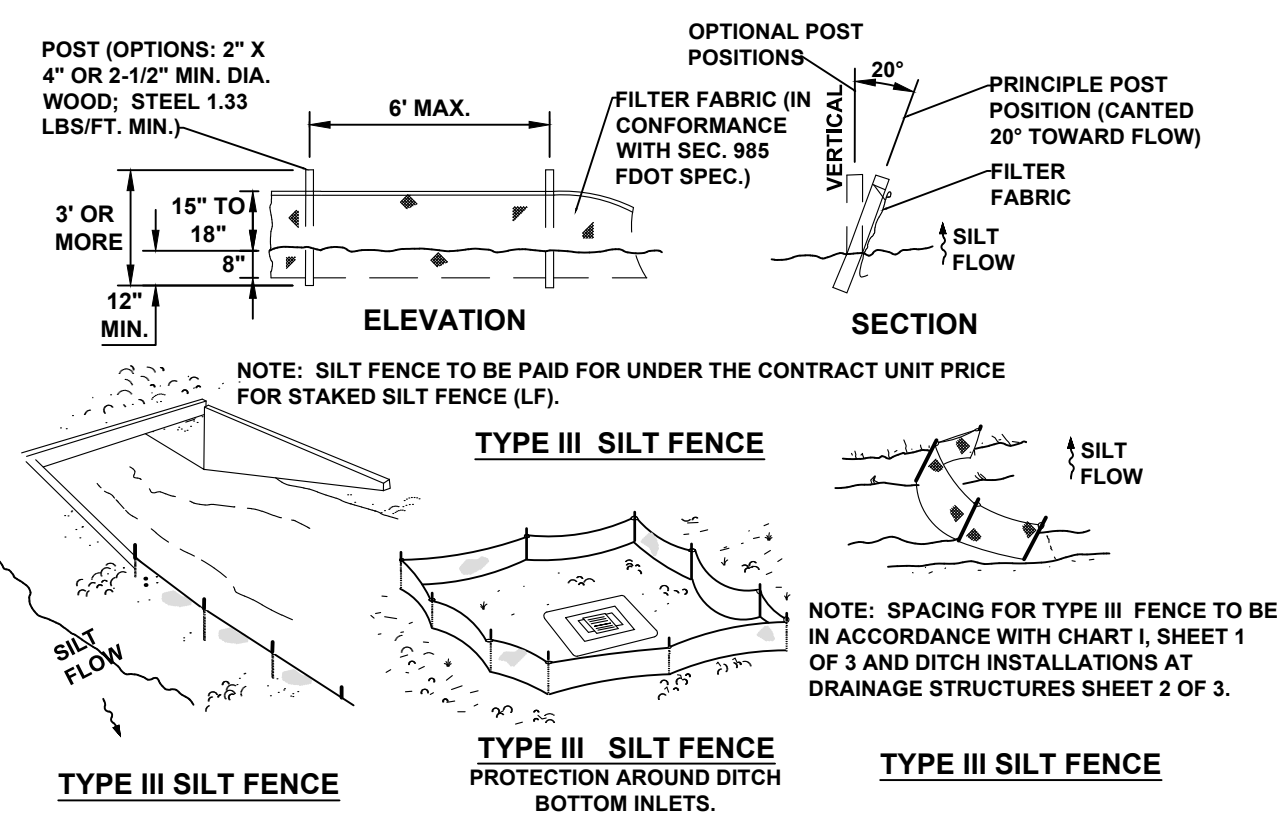
SHEET NUMBER	SHEET TITLE/DESCRIPTION
1	COVER SHEET
2	EROSION CONTROL PLAN
3	BASE GRADING PLAN
4	FINAL GRADE AND DRAINAGE PLAN
5	GENERAL NOTES

**BID SET  
12/17/19**

THESE PLANS REFERENCE THE NORTH  
AMERICAN VERTICAL DATUM 1988 (NAVD88)



- NOTES:**
- PROPERTY CORNERS SHALL BE LOCATED BY A LICENSED LAND SURVEYOR AND CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION.
  - AUTHORIZATION TO INSTALL EROSION CONTROL DEVICES AND PRESERVE BARRICADES WILL BE GRANTED AT THE PRE-CONSTRUCTION MEETING. THIS AUTHORIZATION SHALL BE POSTED ON THE SITE.
  - NO CLEARING, INCLUDING THE INSTALLATION OF EROSION CONTROL DEVICES, IS AUTHORIZED UNTIL AFTER THE PRE-CONSTRUCTION MEETING.
  - NO ADDITIONAL LAND CLEARING SHALL BE AUTHORIZED.
  - ALL CONSTRUCTION BARRICADES AND SILT FENCES WILL REMAIN IN PLACE AND MONITORED FOR COMPLIANCE DURING CONSTRUCTION ACTIVITIES.
  - SOIL STABILIZATION SHALL BE COMPLETED WITHIN 30 DAYS OF VEGETATION REMOVAL. STABILIZATION TO CONSIST OF PLACEMENT OF SOD OR SEED / MULCH (3" MIN.) OF ALL DISTURBED AREAS.
  - FOLLOWING CERTIFICATION OF COMPLETION, ALL BARRICADES AND EROSION CONTROL DEVICES SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
  - ADJUSTMENT OF UTILITY LINES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - PRIOR TO WORK ON PRIVATE PROPERTY, CONTRACTOR TO OBTAIN PERMISSION FROM PROPERTY OWNER. ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITIONS.



**SILT FENCE APPLICATIONS**  
(FDOT INDEX NO. 102, SHT. 3)

Engineering Business No. EP5006067

**CAPTEC**  
Engineering, Inc.  
Civil Engineering Professionals

301 NW Flagler Ave., Ste. 201  
Stuart, Florida 34994  
Phone: (772) 692-4344  
Fax: (772) 692-4341

DATE: 12/16/2019

DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT NO.:	1666.2
HOOR. SCALE:	1" = 40'
VERT. SCALE:	N/A
CADD FILE:	1666.2 \$B\$hp

NO.	DATE	BY	REVISIONS
1	12/17/19	JWC	BID SET
2	9/12/19	JWC	100% PLANS

**SCALE VERIFICATION**

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SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED ACCORDINGLY.

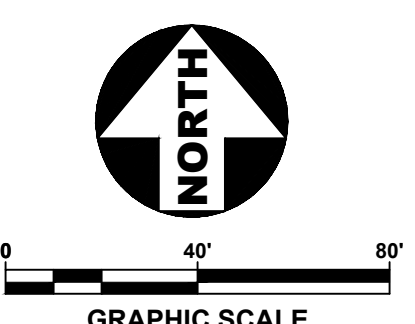
**MARTIN COUNTY SCHOOL BOARD  
JBBS FIELD REGRADING  
MARTIN COUNTY, FL**

**EROSION CONTROL PLAN**

Joseph W. Capra  
301 N.W. Flagler Ave., Ste. 201  
Stuart, Florida 34994  
P.E. No. 37638

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**LEGEND**

- X --- X --- PROPERTY LINE
- TOB --- TOB --- EXISTING FENCE
- TOE --- TOE --- EXISTING TOP OF BANK
- TOE --- TOE --- EXISTING TOE OF SLOPE
- TOE --- TOE --- EXISTING GRADE
- TOE --- TOE --- PROPOSED GRADE
- TOE --- TOE --- PROPOSED FLOW

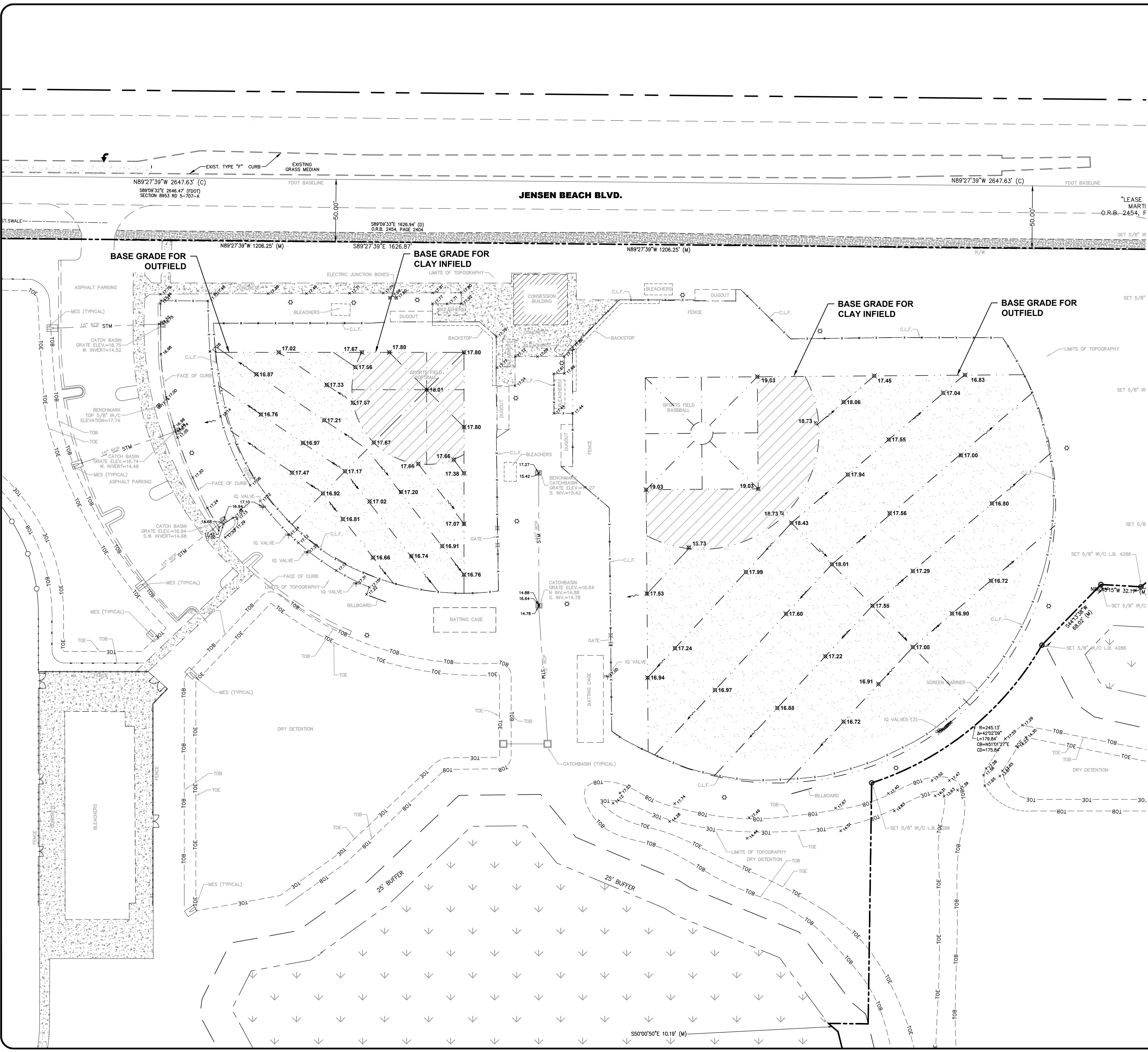
**NOTES FOR CLAY INFIELD:**

- REMOVE EXISTING CLAY FROM PITCHERS MOUND, SKINNED AREA, HOME PLATE, AND WARNING TRACK TO THE DEPTH OF SIX (6") INCHES; COLLECT AND STOCKPILE FOR LATER USE.
- SET CLAY BASE TO GRADES SHOWN (LASER-GRADE)
- FILL WITH STOCKPILED CLAY, ALLOWING ROOM FOR NEW CLAY.
- PLACE NEW 80/20 CLAY AND GRADE TO FINISHED PROPOSED GRADE ON SHEET 4.

**NOTES FOR OUTFIELD:**

- LOCATE AND IDENTIFY ALL IRRIGATION HEADS, VALVES, ETC.
- CUT AND REMOVE EXISTING TURF UP TO A DEPTH OF 2".
- ROTOTILL EXISTING SURFACE SOIL TO A DEPTH OF 4".
- LASER GRADE BASE GRADES AS SHOWN, REMOVE ANY EXCESS SOILS.
- PLACE 8" OF NEW SOIL ON BASE GRADE AND BALANCE PLAYING SURFACE PRIOR TO FINAL GRADE
- INSTALL IRRIGATION
- FINAL LASER GRADE AND INSTALL TIFTUF CERTIFIED WIDE ROLL BERMUDA SOD.

10 DAYS PRIOR TO CROSSING EXISTING CONFLICTS, THE CONTRACTOR WILL POTHOLE THE LOCATION OF ALL EXISTING UTILITIES TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATIONS. NO POTHOLES IN PAVEMENT AREA WILL BE ALLOWED.



301 NW Flagler Ave., Ste. 201  
Stuart, Florida 34994  
Phone: (772) 692-4344  
Fax: (772) 692-4341

**CAPTEC**  
Engineering, Inc.  
Civil Engineering Professionals

Engineering Business No. EB060607

DATE:	12/16/2019
DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT NO.:	1666.2
HOOR. SCALE:	1" = 40'
VERT. SCALE:	N/A
CADD FILE#:	2 Bkx Grub

NO.	DATE	BY	REVISIONS
1	12/17/19	JWC	BID SET
2	9/12/19	JWC	100% PLANS

**MARTIN COUNTY SCHOOL BOARD**  
**JBBS FIELD REGRADING**  
MARTIN COUNTY, FL

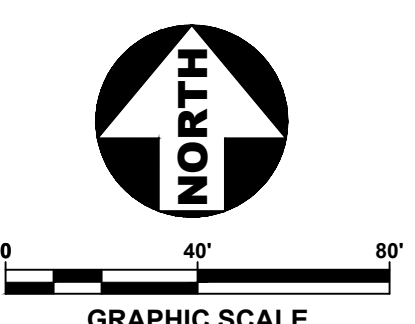
**BASE GRADING PLAN**

Joseph W. Capra  
301 N.W. Flagler Ave., Ste. 201  
Stuart, Florida 34994  
P.E. No. 37638

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**LEGEND**

---	PROPERTY LINE
- - - X - - -	EXISTING FENCE
- - - TOB - - -	EXISTING TOP OF BANK
- - - TOE - - -	EXISTING TOE OF SLOPE
---	EXISTING GRADE
---	PROPOSED GRADE
---	PROPOSED FLOW

301 NW Flagler Ave., Ste. 201  
 Stuart, Florida 34984  
 Phone: (772) 692-4344  
 Fax: (772) 692-4341

**CAPTEC**  
 Engineering, Inc.  
 CIVIL Engineering Professionals

Engineering Business No. EB0606087

DATE: 12/16/2019

DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT NO.:	1666.2
HORIZ. SCALE:	1" = 40'
VERT. SCALE:	N/A
CADD FILE:	1666.2 \$B\$hp

NO.	DATE	BY	REVISIONS

**SCALE VERIFICATION**

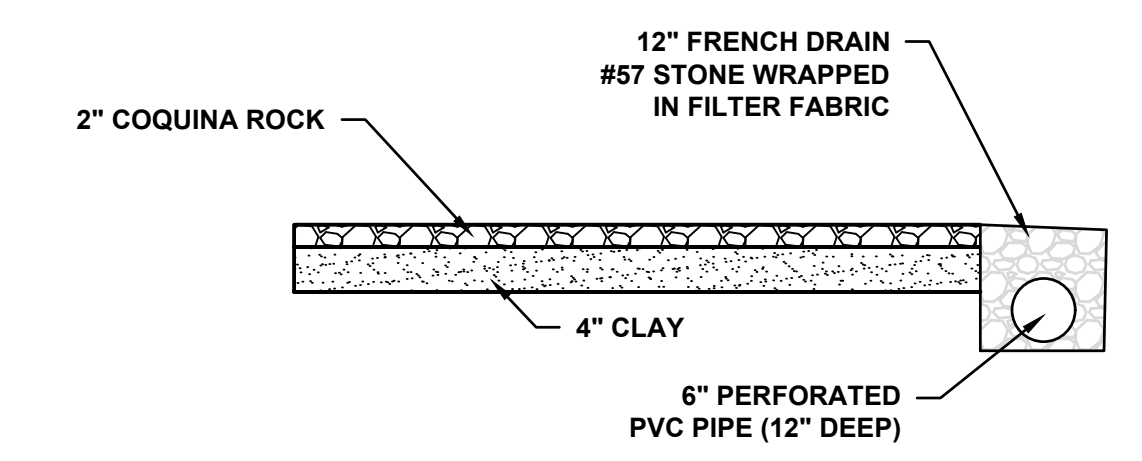
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SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED ACCORDINGLY.	

**MARTIN COUNTY SCHOOL BOARD**  
**JBBS FIELD REGRADING**  
 MARTIN COUNTY, FL

**FINAL GRADE AND DRAINAGE PLAN**

Joseph W. Capra  
 301 N.W. Flagler Ave., Ste. 201  
 Stuart, Florida 34984  
 P.E. No. 37638

Printed Date: \_\_\_\_\_  
 JOB No.: **1666.2**  
 SHEET  
**4** OF **5**

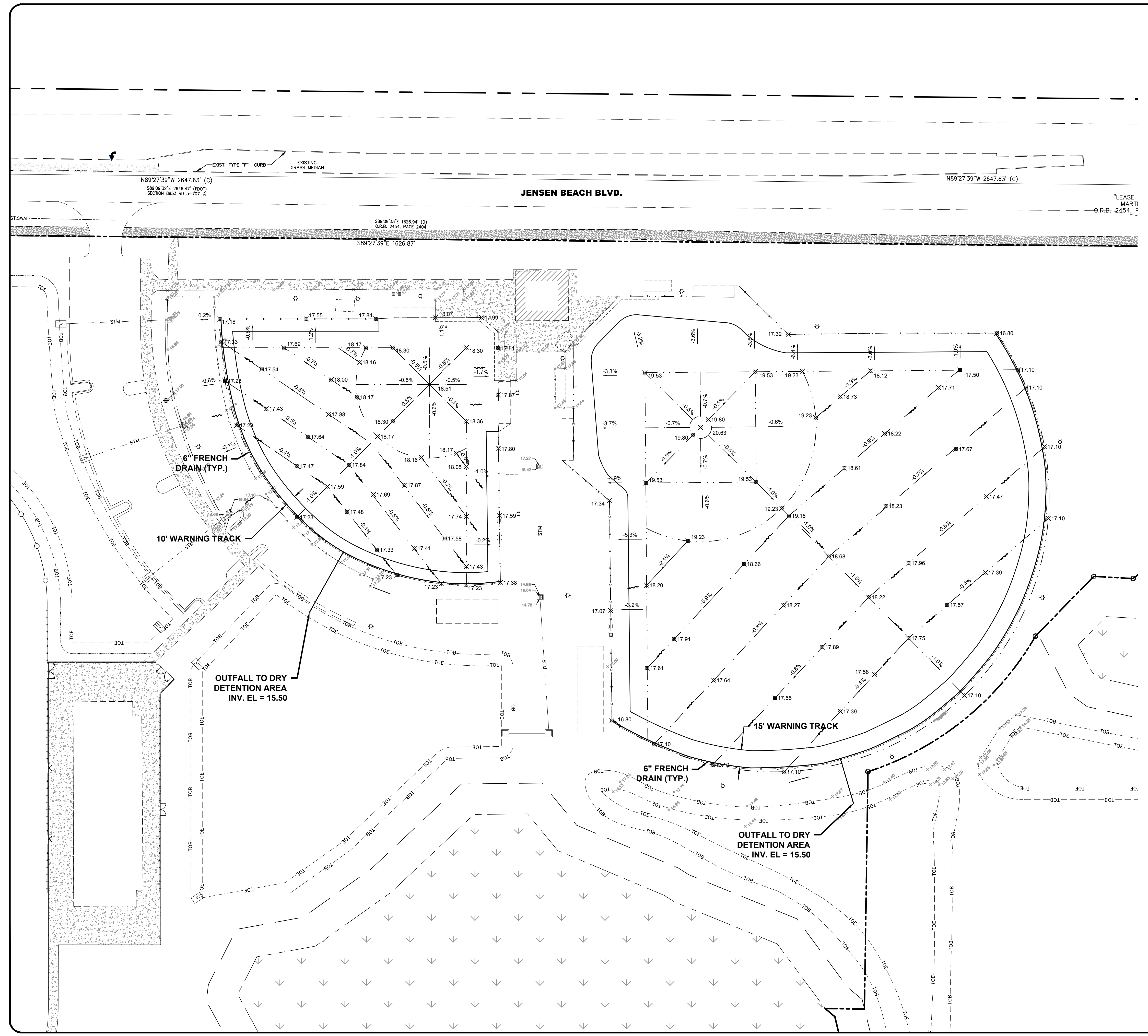


**OUTFIELD WARNING TRACK AND FRENCH DRAIN DETAIL**

NOTE: EXCAVATE AND REMOVE 6" (MIN.) OF EXISTING SOIL / MATERIAL. REPLACE WITH 4" CLAY AND 2" COQUINA ROCK.

10 DAYS PRIOR TO CROSSING EXISTING CONFLICTS, THE CONTRACTOR WILL POTHOLE THE LOCATION OF ALL EXISTING UTILITIES TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATIONS. NO POTHOLES IN PAVEMENT AREA WILL BE ALLOWED.

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**GENERAL NOTES**

1. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGE OR DEVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY ALL UTILITIES TO BE MADE BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS.
2. THE LOCATION AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES BY ELECTRONIC METHODS AND BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. ANY AND ALL CONFLICTS OF EXISTING UTILITIES WITH PROPOSED IMPROVEMENTS SHALL BE RESOLVED BY THE ENGINEER AND THE OWNER PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
3. PROJECT SUPERINTENDENT: THE CONTRACTOR SHALL PROVIDE A QUALIFIED SUPERINTENDENT TO REMAIN ON THE JOB SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. THE SUPERINTENDENT SHALL BE PRESENT AT THE PRE- CONSTRUCTION MEETING. THE CONTRACTOR SHALL NOTIFY THE LOCAL UTILITY COMPANY BY LETTER PRIOR TO THE PRECONSTRUCTION MEETING APPOINTING THE SUPERINTENDENT FOR THIS PROJECT INCLUDING A FORMAL RESUME SHOWING QUALIFICATIONS.
4. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE HIS COMPLETE FAMILIARITY WITH THE PROJECT SITE AND COMPONENTS TO INCLUDING SUBSURFACE CONDITIONS OF SOIL AND GROUNDWATER TABLE. BY SUBMITTAL OF A BID FOR THIS PROJECT, THE CONTRACTOR ACKNOWLEDGES HIS COMPLETE UNDERSTANDING AND RESPONSIBILITIES WITH RESPECT TO THE CONSTRUCTION ACTIVITIES REQUIRED UNDER THE SCOPE OF THIS PROJECT.
5. THE "TRENCH SAFETY ACT" SHALL BE INCORPORATED INTO THIS CONTRACT AS ENHANCED BY THE LEGISLATURE OF THE STATE OF FLORIDA TO BE IN EFFECT AS OF OCTOBER 1, 1990.
6. AS-BUILT PLANS: THE CONTRACTOR SHALL PROVIDE ONE (1) REPRODUCIBLE MYLAR COPY OR PDF, FIFTEEN (15) BLACK LINE COPIES AND ONE (1) DIGITAL FORMAT OF A CERTIFIED AS-BUILT SURVEY. DRAWINGS SHALL BEAR THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE SURVEYOR AND SHALL BE SUBMITTED AFTER THE COMPLETION OF CONSTRUCTION, BUT PRIOR TO FINAL APPROVAL. THE AS-BUILT SURVEY SHALL BE PREPARED IN PLAN AND PROFILE FORMAT BY A LICENSED PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE FLORIDA ADMINISTRATIVE CODE AND CHAPTER 472 OF THE FLORIDA STATUTES. THE DRAWINGS SHALL BE AT A SCALE COMPARABLE TO THE DESIGN DRAWINGS PREPARED BY THE ENGINEER AND SHALL REFERENCE THE BASE LINE OF SURVEY APPEARING ON THE ENGINEERING DRAWINGS. THE HORIZONTAL AND VERTICAL LOCATION OF THE ROADWAYS, DRAINAGE FACILITIES AND ALL APPURTENANCES SHALL BE ACCURATELY DEPICTED TO SCALE AND SHALL BE IDENTIFIED RELATIVE TO THE BASE LINE AND TO READILY IDENTIFIABLE PERMANENT OR SEMI-PERMANENT REFERENCE POINTS EXISTING AFTER THE COMPLETION OF CONSTRUCTION. LOCATIONS SHALL BE DETERMINED FOR ALL DRAINAGE FACILITIES AT CHANGES IN HORIZONTAL AND VERTICAL DIRECTION, AND AT A MINIMUM OF AN INTERVAL NOT EXCEEDING ONE HUNDRED FEET (100'). THE PROFILE SHALL ACCURATELY REFLECT THE VERTICAL PIPE LOCATION AND THE FINISHED GRADE OVER THE PIPE.
7. THE CONTRACTOR SHALL PREPARE A PLAN SHOWING THE SCHEDULE OF WORK, INCLUDING A HIGHLIGHTED PLAN SHOWING THE ORDER OF CONSTRUCTION WHICH WILL FACILITATE MAINTAINING EXISTING SERVICES DURING CONSTRUCTION. THIS PLAN SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC AND STAGING PLAN REQUIREMENTS.
8. ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
9. ALL AT&T, FPL, LOCAL CABLE, AND ALL LOCAL UTILITY COMPANY LOCATIONS SHOWN ARE TAKEN FROM INFORMATION PROVIDED BY THAT UTILITY COMPANY. THESE LOCATIONS HAVE NOT BEEN VERIFIED IN THE FIELD. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXPOSE ALL CROSSINGS WITH AT&T, CABLESATV AND FLOREN POWER AND LIGHT CONDUITS PRIOR TO BEGINNING CONSTRUCTION AND DELIVERY OF PIPE. THE CONTRACTOR IS TO USE EXTREME CAUTION WITHIN THE VICINITY OF PRIVATE UTILITY FACILITIES. THE CONTRACTOR WILL REQUEST A PRIVATE UTILITY REPRESENTATIVES PRESENCE DURING CONSTRUCTION IN THE VICINITY OF THEIR FACILITIES. A PROFILE OF THE PRIVATE UTILITY FACILITIES ARE NOT PROVIDED IN THESE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE PRIVATE UTILITIES AND OBTAINING THE APPROXIMATE LOCATION OF THESE FACILITIES.
10. ANY NORTH AMERICAN VERTICAL DATUM (NAVD) MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHOULD NOTIFY:  
 GEODETIC INFORMATION CENTER  
 ATTN: CHARLIE NOVICE  
 ATTN: M/C S. 462  
 8001 EXECUTIVE BOULEVARD  
 ROCKVILLE, MARYLAND 20852  
 TELEPHONE: (301) 443-8319
11. BENCH MARK DATA IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD-88).
12. CONTRACTOR TO UTILIZE "APPROVED FOR CONSTRUCTION PLANS" ONLY.

**PAVING, GRADING AND DRAINAGE NOTES :**

1. ALL UNSUITABLE MATERIALS, SUCH AS MUCK, ORGANIC MATERIAL AND OTHER DELETERIOUS MATERIAL AS CLASSIFIED BY AASHTO M 145, FOUND SHALL BE REMOVED DOWN TO ROCK OR SUITABLE MATERIAL, AND REPLACED WITH THE SPECIFIED FILL MATERIAL IN MAXIMUM 12 INCH LIFTS COMPACTED TO NOT LESS THAN 98% MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE IN ACCORDANCE WITH AASHTO T-180. THICKNESS OF LAYERS MAY BE INCREASED, PROVIDED THAT THE EQUIPMENT AND METHODS USED ARE PROVEN BY FIELD DENSITY TESTING AND CAPABLE OF COMPACTING THICK LAYERS TO SPECIFIED DENSITIES.
2. ALL AREAS SHALL BE CLEARED AND GRUBBED PRIOR TO CONSTRUCTION THIS SHALL CONSIST OF THE COMPLETE REMOVAL AND DISPOSAL OF ALL TREES, BRUSH, STUMPS, GRASS, WEEDS, RUBBISH AND ALL OTHER OBSTRUCTIONS RESTING ON, OR PROTRUDING THROUGH THE SURFACE OF THE EXISTING GROUND TO A DEPTH OF ONE (1) FOOT. ITEMS DESIGNATED TO REMAIN, TO BE RELOCATED, OR TO BE ADJUSTED SHALL BE SO DESIGNATED ON THE DRAWINGS.
3. FILL MATERIAL SHALL BE CLASSIFIED AS A-1, A-3, OR A-2-4 IN ACCORDANCE WITH AASHTO M-145 AND SHALL BE FREE FROM VEGETATION AND ORGANIC MATERIAL. NOT MORE THAN 10% BY WEIGHT OF FILL MATERIAL SHALL PASS THE NO. 200 SIEVE AND HAVE AN ORGANIC CONTENT LESS THAN 1%.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED MATERIAL TEST RESULTS TO THE ENGINEER OF THE RECORD PRIOR TO THE RELEASE OF FINAL CERTIFICATION BY THE ENGINEER. TEST RESULTS MUST INCLUDE, BUT MAY NOT BE LIMITED TO, DENSITIES FOR SUBGRADE AND BASE DENSITIES AT UTILITY CROSSINGS, MANHOLES, INLETS, STRUCTURES; TEST SHALL INCLUDE ASPHALT GRADATION REPORTS, CONCRETE CYLINDERS, ETC. DENSITY TESTS SHALL BE PERFORMED AT THREE (3) LOCATIONS AROUND ANY STRUCTURE. BEGIN TESTING IN THE FIRST FOOT ABOVE THE BOTTOM OF THE STRUCTURE AND THEN EVERY TWO FEET TO WITHIN TWO FEET OF THE FINISH GRADE.
5. ALL INLETS AND PIPE SHALL BE PROTECTED DURING CONSTRUCTION TO PREVENT SILTATION IN THE DRAINAGE SYSTEMS BY WAY OF TEMPORARY PLUGS AND PLYWOOD OR PLASTIC COVERS OVER THE INLETS. THE ENTIRE DRAINAGE SYSTEMS SHALL BE CLEARED OF ALL DEBRIS PRIOR TO FINAL ACCEPTANCE. ALL CONCRETE SHALL BE A MINIMUM 3,000 PSI.
6. ALL PROPOSED ELEVATIONS REFER TO FINISHED GRADES.
7. THE CONTRACTOR MUST OBTAIN A WATER USE PERMIT PRIOR TO CONSTRUCTION DEWATERING UNLESS THE WORK QUALIFIES FOR A GENERAL PERMIT PURSUANT TO SUBSECTION 40E-20.302(4), F.A.C.
8. ALL LIMEROCK OR COQUINA BASE COURSE 8" THICK OVERLYING A 12" THICK STABILIZED SUBBASE MAY BE USED PROVIDED THAT GRADING AND DRAINAGE PLANS PRECLUDE PERIODIC SATURATION OF THE BASE MATERIAL. A MINIMUM CLEARANCE OF 18" MUST BE MAINTAINED BETWEEN THE BOTTOM OF THE LIMEROCK BASE AND THE SEASONAL HIGH GROUNDWATER TABLE.

**SOIL RECOMMENDATION AND REQUIREMENTS**

**FILL REPLACEMENT:**

1. WHERE FILLS TO BE PLACED ON NATURAL GROUND, THE FILL SHOULD BE A UNIFORM FREE DRAINING GRANULAR SOIL (CLEAN SAND) AND BE PLACED IN LAYERS NOT TO EXCEED 12 INCHES LOOSE MEASURE AND COMPACTED AS OUTLINED ABOVE. SUFFICIENT COMPACTIVE EFFORT SHOULD BE APPLIED TO OBTAIN A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180 (ASTM D-1557).

**EXCAVATION AND BACKFILLING:**

1. WHERE EXCAVATION AND BACKFILLING ARE REQUIRED, THE SOILS SHOULD BE REMOVED TO THE SPECIFIED DEPTH. SUFFICIENT COMPACTIVE EFFORT MUST THEN BE APPLIED TO THE EXCAVATED SURFACE TO OBTAIN A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180 (ASTM D-1557).
2. BACKFILL SHALL BE UNIFORM FREE DRAINING GRANULAR SOIL (CLEAN SAND) AND BE PLACED IN LAYERS NOT TO EXCEED 15 INCHES LOOSE MEASURE. SUFFICIENT COMPACTIVE EFFORT SHOULD BE APPLIED TO EACH LAYER TO OBTAIN A MINIMUM OF 98% OF THE MAXIMUM DRY DENSITY FOR THE ENTIRE DEPTH OF THE FILL AS DETERMINED BY AASHTO T-180 (ASTM D-1557). THE EXCAVATED SURFACE AND EACH LAYER OF BACKFILL SHOULD BE COMPACTED WITH A SELF-PROPELLED STEEL DRUM VIBRATORY ROLLER HAVING A MINIMUM TOTAL APPLIED FORCE OF 10 TONS.
3. IN ORDER TO VERIFY THE CONTRACTOR'S COMPLIANCE WITH THE ABOVE RECOMMENDATIONS, ALL PROFFROLLING AND PLACEMENT OF COMPACTED FILL AND BACKFILL SHOULD BE OBSERVED AND TESTED AS REQUIRED HEREIN.

**GROUNDWATER:**

HEAVY RAINFALL AND/OR A HIGH WATER TABLE MAY OCCUR BEFORE THE EARTHWORK COMMENCES, OR DURING THE EARTHWORK OPERATION. WHEN THESE CONDITIONS OCCUR AND THE SITE PREPARATION CANNOT BE ACHIEVED AS SPECIFIED, AN EXCAVATION OF THE EXISTING CONDITIONS SHOULD BE CONDUCTED AND THE SPECIFICATIONS REVISED ACCORDINGLY. ANY DEWATERING FOR THE SITE MUST REMAIN WITHIN THE DETENTION AREAS AND RECHARGE TRENCHES. NO ADDITIONAL OFFSITE DISCHARGE IS ALLOWED.

**COMPACTION:**

1. WHERE THERE IS EXISTING STRUCTURES ADJACENT TO THE SITE THAT MAY BE AFFECTED BY THE SELF-PROPELLED STEEL DRUM VIBRATORY EQUIPMENT, DENSIFICATION MUST BE PERFORMED USING EQUIPMENT THAT WILL SATISFY THE REQUIRED DENSIFICATION WITHOUT THE RISK OF DAMAGE TO THE EXISTING STRUCTURE(S), LOADERS AND HEAVY PLATE COMPACTORS ARE TWO TYPES OF EQUIPMENT THAT HAVE BEEN USED SUCCESSFULLY. DENSIFICATION PROCEDURES MUST COMPLY WITH THE CAPABILITY OF THE EQUIPMENT EMPLOYED.
2. WHEN SELF-PROPELLED STEEL DRUM VIBRATORY EQUIPMENT CANNOT BE USED AS SPECIFIED, VIBRATORY PLATE COMPACTORS MAY BE USED. WHEN THIS CONDITION OCCURS, THE OVERALL DENSIFICATION PROCEDURE MUST BE REVISED TO COMPLY WITH THE CAPABILITY OF THE EQUIPMENT EMPLOYED. IN GENERAL, SMALL PLATE COMPACTORS WILL BE EFFECTIVE TO A MAXIMUM DEPTH OF 6 TO 8 INCHES.

**STORM SEWER NOTES**

1. ALL DISTURBED OUTFALL DRAINAGE AREAS SHALL BE SODDED UPON COMPLETION OF GRADING AFTER AS-BUILT GRADE ELEVATIONS ARE APPROVED BY THE ENGINEER.
2. PRIOR TO FINAL PAYMENT OF RETENTION, DETENTION, AND DRAINAGE DITCH QUANTITIES, ALL SLOPES AND SWALES SHALL BE SODDED TO AVOID EROSION.
3. BACKFILL SHALL BE COMPACTED IN NO GREATER THAN ONE (1) FOOT LIFTS TO THE DENSITY OF THE UNDISTURBED ADJACENT SOILS.
4. THERE IS TO BE NO OFF-SITE HAULING WITHOUT PRIOR APPROVAL AND ALL EXCAVATED MATERIAL SHALL BE USED ON-SITE.
5. THE CONTRACTOR SHALL CONSTRUCT THE STORMWATER MANAGEMENT SYSTEM IN A MANNER SO AS TO MINIMIZE ANY ADVERSE IMPACTS OF THE WORKS ON FISH, WILDLIFE, NATURAL ENVIRONMENTAL VALUES AND WATER QUALITY ON OR OFF-SITE. THE CONTRACTOR SHALL INSTITUTE NECESSARY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING FULL COMPACTION OF ANY FILL MATERIAL PLACED AROUND NEWLY INSTALLED STRUCTURES TO REDUCE EROSION, TURBIDITY, NUTRIENT LOADING AND SEDIMENTATION IN THE RECEIVING WATERS.
6. WITHIN THIRTY (30) DAYS AFTER COMPLETION OF CONSTRUCTION OF THE SURFACE WATER MANAGEMENT SYSTEM, THE CONTRACTOR SHALL ASSIST THE DESIGN ENGINEER TO PROVIDE A WRITTEN STATEMENT OF COMPLETION AND CERTIFICATION BY A FLORIDA PROFESSIONAL ENGINEER. THESE STATEMENTS MUST SPECIFY THE ACTUAL DATE OF CONSTRUCTION COMPLETION AND MUST CERTIFY THAT ALL FACILITIES HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. THE CONSTRUCTION COMPLETION CERTIFICATION MUST INCLUDE, AT A MINIMUM EXISTING ELEVATIONS, LOCATIONS AND DIMENSIONS OF THE COMPONENTS OF THE SURFACE WATER MANAGEMENT FACILITIES. ADDITIONALLY, IF DEVIATIONS FROM THE APPROVED DRAWINGS ARE DISCOVERED DURING THE CERTIFICATION PROCESS, THE CERTIFICATION MUST BE ACCOMPANIED BY A COPY OF THE APPROVED PERMIT DRAWINGS WITH DEVIATIONS NOTED. SEE AS-BUILT REQUIREMENTS.
7. A STABLE PERMANENT AND ACCESSIBLE ELEVATION REFERENCE SHALL BE ESTABLISHED ON OR WITHIN ONE HUNDRED FEET (100') OF ALL PERMITTED DISCHARGE STRUCTURES NO LATER THAN THE SUBMISSION OF THE CERTIFICATION TO THE WATER MANAGEMENT DISTRICT. THE LOCATION OF THE ELEVATION REFERENCE MUST BE NOTED ON OR WITHIN THE CERTIFICATION REPORT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION OR SHOALING OF THE WATER QUALITY MANAGEMENT SYSTEM.
9. INLETS (425/430 ) INCLUDES THE LIST OF MATERIALS/INSTALLATION/DEWATERING STABILIZATION/AS BUILT/TESTING. ALL STRUCTURES WILL REQUIRE THREE (3) COMPACTION TESTS AT DIFFERENT LOCATION AROUND UNDER STRUCTURES.
10. PIPE CULVERTS AND STORM SEWERS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SECTION 430 F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
11. HDPE (HIGH DENSITY POLYETHYLENE) CULVERT SHALL BE N-12 INSTALLED PER MANUFACTURERS RECOMMENDATIONS. MANUFACTURER IS ADS (ADVANCED DRAINAGE SYSTEMS, INC.). AIR ENTRENCHERD PIPE

**BASIS OF PAYMENT**

THE PRICE AND PAYMENT FOR THIS PROJECT SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, INCIDENTALS, MECHANICAL RESTRAINT, CLEANING & FLUSHING, PIPE BEDDING, SPECIAL BACKFILL, DEWATERING, CLEAN-UP, DISPOSAL OF EXCESS MATERIAL, TESTING, TRENCH SAFETY AND SHORING, MOBILIZATION, MAINTENANCE OF TRAFFIC, CLEARING & GRUBBING, AND ANY OTHER ITEMS OF WORK REQUIRED FOR THE COMPLETED INSTALLATION OF THE PROJECT.

**TRAFFIC**

CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND COUNTY RULES AND REGULATIONS GOVERNING THE USE OF STREETS FOR PROTECTION OF THE WORK AND PUBLIC SAFETY. MAINTENANCE OF TRAFFIC SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION - LATEST EDITION.

**TURBIDITY NOTE**

THE CONTRACTOR SHALL PLACE TURBIDITY BARRIERS AT ALL OUTFALLS PRIOR TO CONSTRUCTION. ALL CUT/FILL WILL BE RELOCATED WITHIN THE BUILDING PAD AREAS AND THEREFORE HAULING OF MATERIAL WILL NOT BE REQUIRED. THE DEWATERING FOR THE SITE MUST REMAIN WITHIN THE DETENTION AREAS. NO ADDITIONAL DISCHARGE ALLOWED.

**CLEAN-UP**

1. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A NEAT CONDITION AT ALL TIMES AND SHALL RESTORE/REPAIR ALL DRIVEWAYS, SIDEWALKS, UTILITIES, LANDSCAPING, IRRIGATION SYSTEMS, ETC., AFFECTED BY CONSTRUCTION ACTIVITIES.
2. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIALS, DEBRIS, EQUIPMENT, ETC., FROM THE JOBSITE IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION OPERATIONS.
3. FOR FURTHER SITE MAINTENANCE REQUIREMENTS THE CONTRACTOR IS REFERRED TO THE "AGREEMENT BETWEEN OWNER AND CONTRACTOR."
4. UNLESS OTHERWISE SPECIFIED OR NOTED; ALL DISTURBED AREAS TO BE RESTORED BY CONTRACTOR TO PRE-CONSTRUCTION CONDITION OR BETTER PRIOR TO ACCEPTANCE BY ST. LUCIE COUNTY SCHOOL BOARD.

**SITE PREPARATION AND GRADING :**

1. PREPARATION OF THE SITE FOR CONSTRUCTION WILL REQUIRE GRUBBING AND STRIPPING OF VEGETATION AND ROOT SYSTEMS THROUGHOUT AREAS TO BE COVERED BY NEW CONSTRUCTION. TRUNKS AND ROOT BALLS FOR TREES SHOULD BE REMOVED. SITE PREPARATION AT FORMER LOCATIONS OF LARGER SHRUBS AND TREES MAY REQUIRE EXCAVATION TO GREATER DEPTHS.
2. FILL MATERIAL MAY BE REQUIRED. FILL SHOULD BE FREE FROM DEBRIS OR OTHER DELETERIOUS MATTER, AND SHOULD CONSIST OF CLEAN GRANULAR MATERIAL THAT HAS A MAXIMUM PARTICLE SIZE NOT GREATER THAN SIX INCHES. IT SHOULD CONTAIN NOT MORE THAN 10 % PASSING THE U.S. STANDARD NUMBER 200 SIEVE, AND HAVE AN ORGANIC CONTENT LESS THAN ONE PERCENT.
3. FILL SHOULD BE PLACED IN ESSENTIALLY HORIZONTAL LIFTS LESS THAN 12 INCHES IN UNCOMPACTED THICKNESS, HAVE A MAXIMUM PARTICLE SIZE NOT GREATER THAN 6 INCHES, BE MOISTURE CONDITIONED AS NECESSARY, AND UNIFORMLY COMPACTED TO AT LEAST 98 PERCENT RELATIVE COMPACTION AS DETERMINED BY THE MODIFIED PROCTOR PROCEDURE (ASTM D1557).
4. AFTER COMPLETION OF THE GENERAL SITE PLAN PREPARATION, WHEN EXCAVATIONS FOR THE CONSTRUCTION OF FOUNDATIONS ARE MADE THROUGH THE COMPACTED NATURAL GROUND, FILL OR BACKFILL THE BOTTOMS OF THE EXCAVATIONS ARE TO BE TAMPED SO AS TO DENSITY SOILS LOOSENED DURING OR AFTER THE EXCAVATION PROCESS, OR WASHED OR SLOUGHED INTO THE EXCAVATION PRIOR TO THE PLACEMENT OF FORMS. A PLATE TAMPER CAN BE USED FOR THIS FINAL DENSIFICATION IMMEDIATELY PRIOR TO THE PLACEMENT OF REINFORCING STEEL, WITH PREVIOUSLY DESCRIBED DENSITY REQUIREMENTS TO BE MAINTAINED BELOW THE FOUNDATION LEVEL.
5. AFTER FOUNDATION FORMS ARE REMOVED, BACKFILL AROUND FOUNDATIONS SHOULD BE PLACED IN LIFTS SIX INCHES OR LESS IN THICKNESS, WITH EACH LIFT INDIVIDUALLY COMPACTED WITH A PLATE TAMPER. THE BACKFILL SHOULD BE COMPACTED TO A DRY DENSITY OF AT LEAST 98% OF THE MODIFIED PROCTOR (ASTM D-1557) MAXIMUM DRY DENSITY.

**SOIL EROSION PLAN**

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A SPECIFIC SOIL EROSION PLAN. IN GENERAL THE SOIL EROSION PLAN SHALL REQUIRE THAT ALL ON-SITE SOILS WILL REMAIN ON-SITE AND WILL NOT ERODE INTO THE ADJACENT ROADSIDE SWALES, ADJACENT PROPERTIES, OR RETENTION DITCHES. ALL EXISTING SWALES SHALL REMAIN SODDED DURING CONSTRUCTION. THE CONTRACTOR SHALL SCARIFY ONLY AS NECESSARY TO CONSTRUCT THE PROJECT. THE CONTRACTOR SHALL SCARIFY AREAS TO PLACE VARIOUS PIPE WORK. AFTER PLACEMENT OF THE PIPE, THESE TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A 98% DENSITY. PRIOR TO DISCHARGE FROM THE SITE, SILTATION BARRIERS AND HAY BALES SHALL BE UTILIZED AS PER FLORIDA DEPARTMENT OF TRANSPORTATION INDEX 102. THE DRAINAGE WHICH OUTFALLS TO THE RETENTION AREAS SHALL BE STABILIZED AND SODDED IMMEDIATELY UPON COMPLETION OF CONSTRUCTION. ANY DEWATERING OR PUMPING OF WATER INTO THE ROADSIDE SWALES, OR RETENTION SWALES SHALL BE STAKED WITH BALED HAY AND SILTATION FENCES AS PER FLORIDA DEPARTMENT OF TRANSPORTATION INDEX 102 TO AVOID FILLING THESE AREAS. UPON COMPLETION OF THE SITE WORK, ALL AREAS SHALL BE SODDED TO AVOID EROSION. CONTRACTOR IS REQUIRED TO COMPLY WITH ALL STATE WATER QUALITY CRITERIA. SPECIFICALLY, NO OFF-SITE DISCHARGES WILL BE ALLOWED WHICH EXCEED THE STATE TURBIDITY CRITERIA.

**10 DAYS PRIOR TO CROSSING EXISTING UTILITIES, THE CONTRACTOR WILL POT HOLE THE LOCATION OF THE EXISTING UTILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION.**


  
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DATE:	12/16/2019
DRAWN BY:	MOR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT NO.:	1666.2
HORIZ. SCALE:	N/A
VERT. SCALE:	N/A

NO.	DATE	BY	REVISIONS
2	12/17/19	JWC	BID SET
1	9/12/19	JWC	100% PLANS

**SCALE VERIFICATION**  
 0 1  
 SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED ACCORDINGLY.

**MARTIN COUNTY SCHOOL BOARD**  
**JBHS FIELD REGRADING**  
 MARTIN COUNTY, FL  
  
**GENERAL NOTES**

Joseph W. Capra  
 301 N.W. Flagler Ave., Ste. 201  
 Stuart, Florida 34984  
 P.E. No. 37638

Printed Date: \_\_\_\_\_

JOB No.: **1666.2**  
 SHEET  
**5** OF **5**



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