INVITATION TO BID
FT. White Community Center Concessions Building
BID NO. 2017-E

Please be advised that Columbia County desires to accept bids for the construction of a Concessions Building at the Ft. White Community Center ball fields. Bids will be accepted until 11:00 a.m. on March 7, 2017 in the office of the Board of County Commissioners located at 135 NE Hernando Ave. Room 203, Lake City, Florida 32055.

There will be a non-mandatory pre-bid meeting on February 21, 2017 at 2:15 P.M. at the site.

Specifications and bid forms may be downloaded at the County web site, https://webportal.columbiacountyfla.com/list-purchasing-projects.aspx. Columbia County reserves the right to reject any and/or all bids and to accept the bid in the County's best interest.

Columbia County Board of
County Commissioners

_____

Ronald Williams, Chair

Fort White Community Center
Concessions Building
Fort White, Florida

Construction Documents
Project Manual

Architect's Project No. 1642
February 6, 2017

Prepared for
Board of County Commissioners
Columbia County, Florida

District No. 1 – Ronald Williams
District No. 2 – Rusty DePratter
District No. 3 – Bucky Nash
District No. 4 – Everett Phillips
District No. 5 – Tim Murphy

Mechanical & Electrical Engineer
Coburn & Associates, Inc.
370 S.W. Unity Court
Fort White, Florida 32038

Architect
Kail Partners Architecture & Interiors
PO Box 359055
Gainesville, Florida 32635

Columbia County, Florida
Purchasing Department
General Instructions to Bidders

These instructions will bind bidders and conditions herein set forth, except as specifically qualified in special bid and contract terms issued with any individual bid.

1. The following criteria are used in determining low responsible bidder:

    A. The ability, capacity and skill of bidder to perform required service.
    B. Whether the bidder can perform service promptly or within specified time.
    C. The character, integrity, reputation, judgment, experience and efficiency of bidder.
    D. The performance of previous contracts with Columbia County.
    E. The suitability of equipment or material for county use.
    F. The ability of bidder to provide future maintenance.

2. Payment Terms are net (30) unless otherwise specified. Favorable terms, discounts, may be offered and will be considered in determining low bids if they are deemed by Purchasing Department to be advantageous to the County.

3. All bids should be tabulated, totaled and checked for accuracy. Unit price will prevail in case of errors.

4. All requested information shall be included in the envelope. All desired information must be included for your bid to receive full consideration.

5. If anything on the bid request is not clear, you should contact the Purchasing Director immediately.

6. A bidders list is available at the Purchasing Office.

7. Quote all prices F.O.B. our warehouse or as specified in bid documents.

8. Each proposal shall be clearly marked on the outside of the envelope including Fed Ex, UPS or other delivery service envelopes, as a sealed bid. The name of the item being bid shall be shown on the outside in full.

9. No responsibility shall attach to any County representative or employee for the premature opening of bids not properly addressed or identified.

10. If only one (1) bid is received, the bid may be rejected and re-advertised or excepted if determined to be in the counties best interest.

11. Bids received late will not be accepted, and the County will not be responsible for late mail delivery.

12. Telephone and facsimile bids will not be acceptable in formal bid openings (sealed bids). Should a bid be misplaced by the County and found later, it will be considered. Any bidder may request and shall receive a receipt showing the day and time any bid is delivered to the appropriate office of the County from the personnel thereof.

13. Bids requiring bid bonds will not be accepted if bond is not enclosed. Cash or certified check will be accepted in lieu of bond except on construction projects where cost exceeds $40,000.

14. All bidders must be recognized dealers in the materials or equipment specified and is qualified to advise in their application or use. A bidder at any time requested must satisfy the Purchasing Office and the County Manager that he has the requisite organization, capital, plant, stock ability and experience to satisfactorily execute the contract in accordance with the provisions of the contract in which he is interested.

15. Any alterations, erasures, additions, or admissions of required information or any changes to specifications or bidding schedule are done at the risk of the bidder. Any bid will be rejected that has a substantial variation, that is; a variation that affects price, quantity, and quality or delivery date (when delivery is required by a specific time).

16. When requested, samples will be furnished to the County free of expense, properly marked for identification and accompanied by a list where there is more than one (1) sample. The County reserves the right to mutilate or destroy any sample submitted whenever it may be to the best interest of the County to do so for the purpose of testing.

17. The County will reject any material, supplies or equipment that did not meet the specifications, even though the bidder lists the trade names or names of such material on the bid or price quotation form.

18. The unauthorized use of patented articles is done entirely at the risk of the successful bidder.

19. The ESTIMATED QUANTITY given in the specifications or advertisements is for the purpose of bidding only. The County may purchase more or less than the estimated quantity and the vendor must not assume that such estimated quantity is part of the contract.

20. Only the latest model equipment as evidenced by the manufacture's current published literature will be considered. Obsolete models of equipment not in production will not be acceptable. The equipment shall be composed of new parts and materials. Any unit containing used parts or having seen any service other than the necessary tests will be rejected. In addition to the equipment specifically called for in the specification, all equipment catalogued by the manufacturer as standard or required by the State of Florida shall be furnished with the equipment. Where required by the State of Florida Motor Vehicle Code, vehicles shall be inspected and bear the latest inspection sticker of the Florida Department of Revenue.

21. The successful bidder on motor vehicle equipment shall be required to furnish with delivery of vehicle, certificate of origin and any other appropriate documentation as required by the Florida Motor Vehicle Department.

22. Prospective bidders are required to examine the location of the proposed work or delivery and determine, in their own way, the difficulties, which are likely to be encountered in the prosecution of the same.

23. All materials, equipment and supplies shall be subject to rigid inspection, under the immediate supervision of the Purchasing Department, its designee and /or the department to which they are delivered. If defective material, equipment, or supplies are discovered, the contractor, upon being instructed by the Purchasing Department or designee, shall remove, or make good such material, equipment, or supplies without extra compensation. It is expressly understood and agreed that the inspection of materials by the County will in no way lessen the responsibility of the Contractor release him from his obligation to perform and deliver to the County Sound and satisfactory materials, equipment, or supplies. The Contractor agrees to pay the costs of all tests upon defective material, equipment, or supplies or allow the costs to be deducted from any monies due him from the County.

24. Unless otherwise specified by the Purchasing Department all materials, supplies, or equipment quoted herein must be delivered within thirty (30) days from the day of notification or exceptions noted on bid sheets.

25. A contract will not be awarded to any corporation, firm, or individual who is, from any cause, in arrears to the County or who has failed in former contracts with the County to perform work satisfactorily, either to the character of the work, the fulfillment or guarantee, or the time consumed in completing the work.

26. Reasonable grounds for supposing that any bidder is interested in more than one proposal for the same item will be considered sufficient cause for rejection of all proposals in which he is interested.

27. Submitting a proposal when the bidder intends to sublet the contract may be a cause for rejection of bids or cancellation of the contract by the County Manager.

28. Unless otherwise specified the County reserves the right to award each items separately or on a lump sum basis whichever is in the best interest of the County.

29. The County reserves the right to reject any and/or all quotations, to waive any minor discrepancies in the bids for all bidders equally, quotations, or specifications, when deemed to be in the best interest of the County and also to purchase any part, all or none of the materials, supplies, or equipment specified.

30. Failure of the bidder to sign the bid or have the signature of an authorized representative or agent on the bid proposal in the space provided will be cause for rejection of the bid. Signature must be written in ink. Typewritten or printed signatures will not be acceptable.

31. Any bidder may withdraw his bid at any time before the time set for the opening of the bids. No bid may be withdrawn in the thirty- (30) day period after bids are opened.

32. It is mutually understood and agreed that if at any time the Purchasing Department or designee shall be of the opinion that the contract or any part thereof is unnecessarily delayed or that the rate of progress or delivery is unsatisfactory, or that the contractor is willfully violating any of the conditions or covenants of the agreement, or executing the same in bad faith, the Purchasing Department or his designee shall have the power to notify the aforesaid contractor of the nature of the complaint. Notification shall constitute delivery of notice, or letter to address given in the proposal. If after three (3) working days of notification the conditions are not corrected to the satisfaction of the Purchasing Director, he shall thereupon have the power to take whatever action he may deem necessary to complete the work or delivery herein described, or any part thereof, and the expense thereof, so charged, shall be deducted from any paid by the County out of such monies as may become due to the said contractor, under and by virtue of this agreement. In case such expense shall exceed the last said sum, then and in that event, the bondsman or the contractor, his executors, administrators, successors, or assigns, shall pay the amounts of such excess to the County on notice made by the Purchasing Department or his designee of the excess due.

33. If the bidder proposes to furnish any item of foreign make or product, he shall write "foreign" together with the name of the originating country opposite such item on a proposal.

34. Any complaint from bidders relative to the invitation to bid or attached specifications shall be made prior to the time of opening bids; other wise, the bidder waives any such complaint.

35. Contracts may be cancelled by the County with or without cause on thirty- (30) days advance written notice.

36. All contractors submitting bids for road projects in excess of $150,000 must be pre-qualified with the Florida Department of Transportation and shall provide proof of such qualification upon request.

37. Any bidder affected adversely by an intended decision with respect to the award of any bid, shall file with the Purchasing Department for Columbia County, a written notice of intent to file a protest not later than seventy-two (72) hours (excluding Saturdays, Sundays and legal holidays), after the posting of the bid tabulation. Protest procedures may be obtained in the Purchasing Department.

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

39. Vendor/Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system, in accordance with the terms governing use of the system, to confirm the employment eligibility of;

A. all persons employed by the Vendor/Contractor during the term of the Contract to perform employment duties within Florida; and

B. all persons, including subcontractors, assigned by the Vendor/Contractor to perform work pursuant to the contract with the County.

TABLE OF CONTENTS

END OF TABLE OF CONTENTS

SECTION 00 2113

INSTRUCTIONS TO BIDDERS

PART 1 - DEFINITION OF TERMS: Whenever in this Project Manual the following term(s) are used, their intent and meaning shall be interpreted as follows:

1.1 OWNER

COLUMBIA COUNTY, FLORIDA
POST OFFICE BOX 1529
LAKE CITY, FLORIDA 32056-1529

1.2 BUILDING CODE ADMINISTRATOR

A. The Building Code Administrator, licensed by the Department of Professional Regulation as a Building Official.

1.3 CONTRACTOR

A. Individual, firm, partnership or corporation entering into a construction Contract to perform as "General" or "Prime" Contractor the work specified in the Contract Documents.

1.4 ARCHITECT

A. The firm of Kail Partners Architecture & Interiors, P.O. Box 359055, Gainesville, Florida, 32635-9055.

1.5 SUBCONTRACTOR

A. Individual, firm, partnership or corporation entering into an agreement to furnish materials and labor for the work specified and described in the Contract Documents. Subcontractors shall have a current occupational license for the State of Florida, as applicable.

1.6 MANUFACTURER OR SUPPLIER

A. Individual, firm, partnership or corporation entering into an agreement to furnish materials only for the work specified and described in the Contract Documents.

1.7 BIDDER

A. Individual, firm, partnership or corporation submitting a proposal for the work contemplated.

1.8 PROJECT

A. Work specified and described in the Contract Documents.

1.9 ADDENDA

A. Written and/or graphic revisions issued prior to the award and execution of the Contract which modify and/or interpret the Contract Documents by additions, deletions, clarifications or corrections. Addenda will become part of the Contract Documents when the Contract is awarded and executed.

1.10 CONTRACT DOCUMENTS

A. Consist of the Contract, the Project Manual, Drawings, Addenda issued prior to the award and execution of the Contract, and Change Orders issued after the award and execution of the Contract, and such other documents as are made a part of same by reference in the Contract Documents.

1.11 PROPOSAL

A. The forms, including all items related to, envelopes and other information pertaining to the complete bid, complete and properly executed, which the Bidder has submitted as his Proposal for the work contemplated.
   1. Base Bid: The sum stated in the Proposal for which the Bidder offers to perform the work described in the Contract Documents as the base, to which work may be added to or deducted from for sums stated in Alternate Bids.
   2. Alternate Bid: An amount stated in the Proposal to be added to or deducted from the amount of the Base Bid if the corresponding change in Project scope or materials or methods of construction described in the Contract Documents is accepted.
   3. Unit Price: An amount stated in the Proposal as a price per unit of measurement for materials and labor or services as described in the Contract Documents.

1.12 DRAWINGS

A. The official plans and other Drawings or reproductions thereof, pertaining to the work to be performed, with index of Drawings on Sheet G-1.

1.13 PROJECT MANUAL

A. Written and graphic data bound together for Specifications.

1.14 BUILDING PERMIT

A. Issued to the Contractor after requirements of the application process have been satisfied and compliance with the appropriate Codes and Standards have been achieved. Construction Plans and Specifications shall be submitted for review by the Building Code Administrator for the issuance of a Building Permit.

1.15 CONTRACT

A. The Owner-Contractor Agreement consisting of: the agreement text preceding the signature of the parties, the Certificates of Insurance and other documents as may be required by the Contract Documents.

1.16 APPLICATION FOR PAYMENT

A. Statement of amounts claimed by Contractor as payments due on account of work performed or materials suitably stored.

1.17 ARCHITECT'S ACCEPTANCE

A. Architect's acknowledgement that a material is acceptable or in accordance with Contract requirements.

1.18 RECORD DRAWINGS

A. Drawings made during progress of construction illustrating how various elements of the work were actually installed.

1.19 CHANGE ORDER

A. A work order, issued after the award and execution of the Contract, prepared by the Architect, signed by the Owner authorizing a change in the scope of the work during construction.

1.20 FIELD REPRESENTATIVE

A. A person in the field designated to represent a responsible party during construction.

1.21 SCHEDULE OF VALUES

A. A statement furnished to the Architect by the Contractor reflecting the amounts to be allotted for the principal parts of the work. It is to serve as a guide for reviewing the Contractor's Applications for Payment.

1.22 SHOP DRAWINGS AND PRODUCT DATA

A. Drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by the Contractor or Subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the work shall be fabricated, erected and/or installed.

1.23 SAMPLES

A. Physical examples furnished by the Contractor which illustrate materials, equipment or workmanship, and which establish standards by which the work will be reviewed.

1.24 TIME OF COMPLETION

A. The number of calendar days, or the actual date, by which the work is required to be completed.

PART 2 - EXAMINATION

2.1 DRAWINGS, PROJECT MANUAL AND PROJECT SITE AND PRE-BID CONFERENCE

A. Bidders are required to examine the Drawings, Project Manual and Addenda to become familiar with work to be performed under the Contract.

B. Bidders are encouraged to visit the project site to become familiar with the local conditions that may affect the work to be performed, and the equipment, materials and labor required.

C. Pre-Bid Conference: Bidders are encouraged to attend a Pre-Bid Conference on the date, time and place set forth. This Pre-Bid Conference will be held in order to review the scope of work of the Contract Documents and to allow questions to be asked by the Bidders. If deemed necessary, Architect will then issue an Addendum to the Drawings and Project Manual to change, modify or explain any decisions or other information that comes out at this Pre-Bid Conference.

PART 3 - CLARIFICATION TO BIDDERS

3.1 CLARIFICATION

A. No oral clarification in regard to the meaning of Drawings and Project Manual and no oral instructions will be given before the award and execution of the Contract. Discrepancies, omissions or doubts as to the meaning of Contract Documents shall be given in writing to the Architect for interpretation not later than five calendar days prior to Bid Date.

PART 4 - FAMILIARITY WITH LAWS

4.1 KNOWLEDGE OF LAWS

A. The Bidder shall be familiar with Federal, State, and Local laws, ordinances, codes, rules, and regulations that affect the Bid or the work under this Contract. Lack of knowledge on the part of the Bidder will not provide relief from responsibility of compliance with the above, whether or not specifically called for or shown in the Contract Documents.

PART 5 - PREPARATION AND SUBMISSION OF BIDS

5.1 PREPARATION

A. Each Bidder shall use the Proposal Form included or one provided by the Owner, indicating base bid amount and alternate bid amount(s). Erasures or other corrections in the Proposal shall be explained or noted over the signature of the Bidder. Proposals containing conditions, omissions, unexplained erasures, alterations, items not called for, or irregularities may be rejected by the Owner.

B. Each Proposal shall give the full business address of the Bidder and state whether it is an individual, corporation or partnership. Proposals by a corporation, shall be signed with the legal name and seal of the corporation, followed by the name of the State of its incorporation, and by the manual signature and designation of an officer, agent, or other person authorized to bind the corporation, and if the person signing is not the President, be accompanied by a duly authenticated document evidencing the authority to the officer or agent. Proposals by partnerships shall show the names of all partners and must be signed in the partnership name by one of the partners. The partnership signature shall be followed by the manual signature of the partner signing. The name of the person signing and his designation shall be typed or printed below his signature. Proposals by a person who affixes to his signature the word "President", "Secretary", "Agent", or other designation without disclosing his principal may be held to the terms of the Proposal by the individual so signing. Satisfactory evidence of the authority of an officer, agent, attorney, or other person signing for a corporation, and agent, attorney, etc., signing for a partnership or an individual shall be furnished.

5.2 SUBMISSION

A. Proposals shall be enclosed in a sealed envelope and delivered or mailed to the proper address provided by the Owner. Failure to comply with these requirements may be cause for rejection of the Proposal.

B. Each bidder shall submit per requirements of Section 00 4300 the following:

1. A list of names of the Subcontractors or other persons or organizations, including those who are to furnish materials for equipment fabricated to a special design, proposed for such portions of the work as may be designated in the Contract Documents, or if no portions are so designated, the names of the Subcontractors proposed for the principal portions of the work. If the Contractor uses his own work force for any of the above, insert the names of his firm in the appropriate blank and be properly licensed as applicable for the specific type work listed.

PART 6 - DISQUALIFICATION OF BIDDERS

6.1 DISQUALIFICATION

A. More than one Proposal from an individual, firm, partnership, corporation, or association under the same or different names shall not be considered. Reasonable grounds for believing that a Bidder is interested in more than one Proposal for the same work shall cause rejection of all Proposals in which such Bidders are believed to be interested. Proposals may be rejected if there is reason to believe that collusion exists among the Bidders. Proposals in which the prices obviously are unbalanced may be rejected.

PART 7 - RECEIPT AND OPENING OF BIDS

7.1 RECEIPT AND OPENING

A. Bids will be opened at the time and place provided by the Owner. The Owner or Owner's Agent whose duty it is to open the Proposals will decide when the specified time has arrived, and Proposals received after will be considered. No responsibility will be attached to the Owner or any Owner’s Agent for the premature opening of a Proposal not properly addressed and identified.

PART 8 - BID MODIFICATIONS

8.1 MODIFICATIONS

A. Bid modifications will be accepted from Bidders provided the modification(s) is (are) clearly written, and signed and dated by an authorized agent of the Bidder, at the place where Proposals are to be received, and if received prior to the Bid Opening.

PART 9 - WITHDRAWAL OF BIDS

9.1 WITHDRAWAL

A. Bids may be withdrawn on request received from Bidders prior to the time fixed for Bid opening. Negligence on the part of the Bidder in preparing his Proposal confers no right for the withdrawal of his Proposal after it has been opened.

PART 10 - AWARD OF CONTRACT

10.1 AWARD OF CONTRACT

A. The Construction Contract will be awarded as soon as possible to the lowest responsible Bidder, provided his Proposal is reasonable and it is to the best interest of the Owner to accept it.

10.2 RIGHT TO WAIVER

A. The Owner reserves the right to waive any informality in bids received when such waiver is in the best interest of the Owner.

10.3 FURTHER REQUESTS

A. Each Bidder shall, if so requested by the Owner, present evidence of his experience, qualifications and ability to carry out the terms of the Contract, including a financial statement.

10.4 The Contractor shall purchase at his expense sets of Drawings and Project Manual and related Addenda as required for his use and furnish for the use of all the Subcontractors on the project upon award of the Contract.

PART 11 - REJECTION OF BIDS

11.1 REJECTION

A. The Owner reserves the right to reject any and all Proposals when rejection is in the best interest of the Owner and to reject the Proposal of a Bidder who, in the opinion of the Owner, is not in a position to perform the Contract.

PART 12 - COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

12.1 TIME OF COMPLETION

A. Contractor shall execute the Owner/Contractor Contract within seven calendar days from date of receipt and return to the Owner for his execution. Submit required insurance certificates within five calendar days from date of receipt of the executed Owner / Contractor Contract. Contractor shall begin work within three calendar days from date of receipt of a Building Permit and Notice to Proceed issued by the appropriate authority.

B. All work shall be Substantially Complete within 150 calendar days from date of Notice to Proceed and Finally Completed within 14 calendar days from the date the Project is declared Substantially Complete.

C. Contractor shall maintain sufficient labor and supervision on the project site until items have been completed, including Architect's Substantial Completion Review Punch List. A Final Review with the Owner's Representative, Architect and Contractor will be scheduled upon completion of items on Architect's Punch List.

12.2 COMMENCEMENT

A. At the Preconstruction Conference, the Owner and Architect shall make arrangements with the Contractor for the assignment of staging area to be used at the site for storage of materials, parking, etc. During the construction, the Contractor shall maintain the areas. The storage of materials for use in construction of this Contract shall not interfere with existing walkways, driveways, etc. Existing trees and landscaping shall be protected from injury.

PART 13 - SUBSTANTIAL COMPLETION

13.1 DEFINITION

A. The term Substantial Completion shall mean that materials required by the Contract Documents are incorporated in the project, that labor has been performed and that the work is ready for review.

PART 14 - FINAL COMPLETION

14.1 FINAL REVIEW

A. If, upon Final Review, more than ten items on the original Substantial Completion Review Punch Lists are found to be uncorrected, the Architect reserves the right to terminate the Final Review, until such time as items on the Punch Lists are completed.

PART 15 - LIQUIDATED DAMAGES

15.1 LIQUIDATED DAMAGES

A. If project is not Substantially Completed, the Contractor shall pay to the Owner, as liquidated damages, two hundred dollars for each calendar day elapsing between the date for Substantial Completion and the date such Substantial Completion shall have been accomplished. If the project is not Finally Completed, the Contractor shall pay to the Owner, as liquidated damages, two hundred dollars per calendar day.

B. Liquidated Damages shall be payable in addition to other excess expenses or costs payable by the Contractor to the Owner or Architect under the provisions of the General Conditions and Supplementary Conditions and shall not exclude the recovery of damages by the Owner under other provisions of the Contract Documents.

C. The provision for Liquidated Damages for delay shall not affect the Owner's right to terminate the Contract and the Owner's exercise of the right to terminate shall not release the Contractor from his obligation to pay Liquidated Damages. Said Liquidated Damages shall be payable in addition to other expenses or costs payable by the Contractor and shall not exclude the recovery of damages by the Owner under other provisions of the Contract.

PART 16 - REQUIREMENTS FOR CERTIFICATES OF INSURANCE

16.1 RELATED REQUIREMENTS

A. Refer to Supplementary Conditions for specific requirements.

PART 17 - BASIS FOR BIDDING

17.1 BASIS FOR BIDDING PRODUCTS (SHALL BE AS FOLLOWS:

A. Products Specified by Reference Standards or by Description Only: Products meeting those standards or descriptions.

B. Products Specified by Naming One or More Manufacturers with a Provision for Pre-Bid or Post-Bid Substitutions. See individual Sections for specific requirements.

C. Products Specified by Naming Only One Manufacturer: No options, no substitutions allowed.

17.2 SUBSTITUTIONS

A. Pre-Bid and Post-Bid Substitutions: Refer to Section 01 6000.

PART 18 - EXECUTION OF CONTRACT

18.1 SIGNATURES

A. If the Contractor be an individual, the Contract shall be signed with his manual signature.

B. If the Contractor be a firm or company owned by an individual, the Contract shall be executed in the name of the firm or company by the manual signature of the Owner.

C. If the Contractor be a partnership, the Contract shall be executed in the name of the partnership by the manual signature of a partner or partners.

D. If the Contractor be a corporation, the Contract shall be executed in the name of the corporation and shall bear the corporate seal. It may be signed for the corporation by the President and attested by the Secretary; if signed for the corporation by any officer other than the President, the signature of each officer signing shall be attested by the Secretary, and the executed Contract shall be accompanied by a duly authenticated document, bearing the seal of the corporation, quoting the section of the By-Laws of the corporation authorizing the Board of Directors to designate such officer, and a copy of the Resolution designating and authorizing him to execute on behalf of the corporation. That document must contain a statement that the authority is in effect on the date of execution of the Contract, and may not be dated earlier than the date of the execution of the Contract. The same officer may not execute the Contract and authenticate the document of authority.

PART 19 - INTENT

19.1 INTENT

A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the work. The Contract Documents are complementary, and what is required by any one element of the Contract Documents shall be binding as if required by all. The Contractor shall be responsible for the construction and coordination of the parts, and all systems shall be completely compatible and fully functional without additional cost to the Owner.

PART 20 - PRECEDENCE

20.1 PRECEDENCE

A. Supplementary General Conditions shall govern over the General Conditions; but neither the Supplementary General Conditions nor the General Conditions shall govern over the basic Owner/Contractor Contract. Addenda and Change Orders supersede only affected portions of the Construction Documents.

B. Should any provision of the Florida Statutes or other State Regulations conflict with any of the General Conditions, the provisions of the State requirements shall govern; where there are no State requirements involved, the General Conditions shall govern.

C. Should the Construction Documents (Drawings and Specifications) conflict on any point, the work shall be performed according to the Specifications, in-so-far as the quality of materials and workmanship is concerned; but the Drawings shall govern in-so-far as the form or extent of the work is concerned. Should an item be shown on the Drawings, but not specified, or specified but not shown on the Drawings, Contractor shall provide the item as "standard of the industry", or as specified insofar as quality is concerned.

D. Should details and schedules shown on the Drawings conflict on any point, the schedules shall prevail. Large scale details shall prevail over small-scale details, plans or elevations. Figure dimensions shall prevail over scaled dimensions.

END OF SECTION

SECTION 00 4113

BID FORM

TO: COLUMBIA COUNTY, FLORIDA
POST OFFICE BOX 1529
LAKE CITY, FLORIDA 32056-1529

PROJECT: FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
FORT WHITE, FLORIDA

The undersigned Contractor, "Bidder", proposes to furnish all labor and materials for the construction of the above project, in accordance with the Contract Documents, as prepared by Kail Partners Architecture & Interiors for the following bid amounts:

BASE BID:_____DOLLARS ($_____)

The undersigned agrees that if this Proposal is accepted, construction of this project will begin within time specified after award of Contract, and shall be Finally Completed within the specified time as evidenced by my willingness to sign and execute a Contract so stating.

The Bidder agrees, that this Proposal shall remain valid for a period of thirty calendar days after the time of the opening of this Proposal, and that the Bidder will not revoke nor cancel this Proposal or withdraw from the competition within said thirty calendar day period; that in the event the Contract is awarded to this Bidder, they will enter into a written Contract with the Owner in accordance with the accepted bid.

Acknowledgment is hereby made of receipt of the following Addenda issued during the bidding period:

ADDENDUM NO._____ DATED: _____

ADDENDUM NO._____ DATED: _____

In witness, the Bidder has set his signature and affixed his seal

this _____ day of _____, 20__.

_____
(FIRM NAME) (SEAL)

BY:_____ _____
(Authorized Signature) (Typed Name and Title)

Certificate Number and Type _____ as issued to

_____ by the
(Name of Holder Representing Firm)

State of Florida Construction Industry Licensing Board.

BID MODIFICATION FORM

(To be submitted in a sealed envelope marked “BID MODIFICATION” along with the proposal prior to Bid Opening. Use only if Bid Modification needed.)

ADD TO BASE BID:_____DOLLARS ($_____)

DEDUCT FROM BASE BID:_____DOLLARS ($_____)

END OF SECTION

SECTION 00 4300

PROCUREMENT FORM SUPPLEMNTS

Submit with the Bid, in a separate sealed envelope a list of "SUBCONTRACTORS, MANUFACTURES OR SUPPLIERS" indicated below:

FIRM NAME: _____

ADDRESS: _____

The undersigned, "Bidder" lists below the names of the Subcontractors who will perform the portions of the work included in the project. Once approved by the Owner and Architect, Subcontractors listed cannot be changed without the express written approval of the Owner and Architect. The Contractor can only change a Subcontractor upon submittal of a signed and notarized statement from the Subcontractor who is withdrawing from the project, stating the reasons for withdrawing.

Subcontractors not meeting the requirements listed below may be cause for rejection of that Subcontractor. The undersigned declares that they have reviewed each Subcontractor listed and has in his files evidence that each Subcontractor listed is currently and appropriately licensed in the State of Florida and engaged that he maintains an organization capable, technically and financially, of performing the pertinent work.

If Contractor lists himself as a Subcontractor they shall meet all the above requirements, including licenses, occupational licenses and/or certifications for each trade for which they are listed.

Subsequent to execution of Contract, Contractor will be required to submit copies of all Subcontractors' occupational licenses and evidence of compliance with the above requirements.

1. Masonry _____
2. Roofing _____
3. Mechanical _____
4. Plumbing _____
5. Electrical _____

IN WITNESS, the Bidder has set his signature and affixed his seal this _____ day of _____, 20__.

(FIRM NAME) (SEAL)

By:

(Type Name and Title) (Authorized Signature)

END OF SECTION

SECTION 00 5214

AGREEMENT FORM

GENERAL CONDITIONS

ARTICLE 1.00

CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the following:

(a) The executed Agreement between Owner and Contractor
(b) Conditions of the Contract (General, Supplementary, and Special Conditions) and Attachments
(c) Drawings
(d) Project Manual
(e) Addenda issued prior to execution of the Contract
(f) Modifications issued after execution of the Contract

1.1.2 THE CONTRACT

The contract shall be executed on Attachment One to these General Conditions, titled Agreement between Owner and Contractor. The Contract Documents form the Contract. The Contract represents the integrated agreement between the parties and supersedes prior negotiations, representations, or agreements, either written or oral, and including the bidding documents. The Contract may be amended or modified only by a Modification.

1.1.3 THE PROJECT

The Project is the construction to be built or renovated as designed by the Architect.

1.1.4 THE WORK

The work is defined as all labor, materials and equipment to be incorporated into the project under the terms of this contract.

1.1.5 MODIFICATION TO THE CONTRACT

A Modification may be made only after execution of the Contract, and is one of the following:

(a) A written Amendment to the Contract signed by both parties;
(b) An executed Change Order;
(c) A written interpretation issued by the Architect pursuant to the General Conditions;
(d) A written Field Order for a minor change in the work and issued by the Architect pursuant to the General Conditions.

1.2 EXECUTION, CORRELATION, INTENT AND INTERPRETATIONS

1.2.1 The Contract Agreement shall be signed in triplicate by the Owner and Contractor for distribution to the Owner, Contractor and Architect.

1.2.2 By executing the Contract, the Contractor agrees that he has examined the Contract Documents together with the site of the proposed work as well as its surrounding territory, that he is informed regarding the conditions affecting the work to be done and the labor and materials to be furnished for the completion of the work.

1.2.3 The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. The intention is to include all labor, materials, supplies, equipment and tools necessary for the proper execution and completion of the work. It is not intended that work not covered under any heading, section, or division of the Specifications shall be supplied unless it is required elsewhere in the Contract Documents or is reasonably inferable therefrom as being necessary to produce the intended results. Words which have well-known technical or trade meanings are used in accordance with such recognized meanings.

1.2.4 Drawings and Specifications are intended to be complementary and to provide for a complete work.

The Contractor acknowledges that the Contract consideration includes sufficient monetary allowances to make the work complete and operational and in compliance with good practice and agrees that inadvertent minor discrepancies or the failure to show details or to repeat on any part of the Contract Documents, the figures or notes given on another, shall not be the cause of additional charges or claims.

Where contradictions occur within the Specifications or the Drawings, with regard to the quantity, quality or method of installation of a particular item, the Contractor shall include in his bid the cost for furnishing the more expensive item or installation of the greater quantity.

The following shall be given preference in the order set forth to determine what work the Contractor is to perform: 1) Addenda (later dates to take precedence over earlier dates), 2) Modifications, 3) Agreement, 4) Specifications, 5) Schedules, 6) Large Scale Detail Drawings, 7) Small Scale Plan and Section Drawings.

Dimensioned Drawings shall govern over scaled drawings.

Existing conditions, including dimensions, shall be verified by the Contractor before laying out the work.

1.2.5 Much of these specifications are written in an abbreviated form and may include sentence fragments. Omissions of words or phrases as "the Contractor shall", "in conformity with", "shall be", "as noted on the Drawings", "according to the plans", "a", "an", "the", and "all" are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

1.2.6 Where such words as "as shown", "as indicated", "as noted", or words of similar import are used, they shall refer to the Drawings. Where references are made to "sections" and "divisions" it shall mean sections and divisions of the Specifications unless otherwise stated. Where such words as "as selected", "as approved", "acceptable" or "approved" occur, they shall have reference to the selection and approval of the Architect unless otherwise stated. Where sentences contain verbs such as "provide", "install", and "furnish", they shall mean that the Contractor shall "furnish and install or cause to be furnished and installed" complete, the material or item specified, excepting those materials indicated to be Owner furnished and Contractor installed.

1.2.7 The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the work among the Subcontractors or in establishing the extent of work to be performed by any trade.

1.2.8 Written interpretations necessary for the proper execution of progress of the work, in the form of Drawings or other format, shall be issued with reasonable promptness by the Architect for such interpretations. Such interpretations shall be consistent with and reasonably inferable from the Contract Documents and shall be rendered by the Architect.

1.3 COPIES FURNISHED AND OWNERSHIP

1.3.1 The Contractor shall furnish copies of Drawings and Specifications to Subcontractors as provided in the Supplementary Conditions.

1.3.2 Drawings, Specifications and copies of are, and shall remain, the Owner's property. They are not to be used on any other project, and, with the exception of one contract set for each party to the Contract, are to be returned to the Owner on request at the completion of the work.

ARTICLE 2.00

ARCHITECT

2.1 DEFINITIONS

2.1.1 The Architect shall be the firm of Kail Partners Architecture & Interiors, and shall act as defined below either directly or through duly authorized personnel.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.1 The Architect will provide general Administration of the Construction Contract.

2.2.2 The Architect will be the Owner's representative during construction and until final payment. The Architect will have authority to act on behalf of the Owner as Owner's representative to the extent provided in the Contract Documents. The Architect will advise and consult with the Owner and Owner's instructions to the Contractor shall be issued through the Architect.

2.2.3 The Architect and the Owner shall at all times have access to the work wherever it is in preparation and progress.

2.2.4 The Architect shall provide on-site reviews to check the quality and progress of the work and to determine in general if the work is being installed in accordance with the Contract Documents.

On the basis of on-site reviews, the Architect shall keep the Owner informed on the progress of the work and will endeavor to protect him against defects and deficiencies in the work of the Contractor.

The Architect will not be responsible for construction means, methods, techniques, sequences or procedures of construction, or safety precautions and programs in connection with the work, and will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.

2.2.5 Based on on-site reviews and the Contractor's Application for Payment, the Architect will review the amounts owing to the Contractor and will sign Certificates for Payment in amounts consistent with the approved Schedule of Values.

The Architect shall review that the work installed is in conformance with the construction documents.

The Architect shall certify on each application for payment that such payment is due before payment is made.

Such certification by the Architect does not in any way relieve the Contractor of his final responsibility for conformity with the Contract Documents.

2.2.6 The Architect will be the interpreter of the requirements of the Contract Documents and review the performance of the Contractor. The Architect will provide such interpretations as necessary for the proper execution and progress of the work.

2.2.7 Claims, disputes and other matters in question relating to the execution or progress of the work or the interpretation of the Contract Documents shall be referred initially to the Architect and the Owner for a decision.

2.2.8 Interpretations and decisions of the Architect shall be consistent with the intent of the Contract Documents.

2.2.9 Claims, disputes or other matters that has been referred to the Architect, except those waived by the making or acceptance of final payment, shall be subject to arbitration upon the written demand of any party. However, no demand for arbitration of any such claim, dispute or other matter may be made until the earlier of:

(a) the date on which a written decision has been rendered, or,

(b) the tenth day after the parties have presented their evidence to the Architect or have been given a reasonable opportunity to do so, if no written decision has been rendered by that date.

2.2.10 If a decision is made in writing and states that it is final but subject to appeal, no demand for arbitration of a claim, dispute or other matter covered by such decision may be made later than thirty days after the date on which the party making the demand received the decision. The failure to demand arbitration within said thirty days period will result in the Architect's decision becoming final and binding upon the Contractor. If a decision is rendered after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede any arbitration proceedings unless the decision is acceptable to the parties concerned.

2.2.11 The Architect will have authority to reject work which does not conform to the Contract Documents or has been damaged prior to approval of final payment. Whenever, in reasonable opinion, Architect considers it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, Architect will have authority to require special inspection or testing of the work, whether or not such work then be fabricated, installed or completed. However, neither authority to act under this Subparagraph, nor any decision made in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the work.

2.2.13 The Architect will review shop drawings and samples as provided.

2.2.14 The Architect will prepare change orders with Contractors back-up paperwork.

2.2.15 The Architect will conduct reviews to determine the dates of Substantial Completion and Final Completion and will receive and review written guarantees and related documents required by the Contract and assembled by the Contractor and will recommend a Final Certificate of Payment to the Owner.

2.2.16 The duties, responsibilities and limitation of authority of the Architect as the Owner's representative during construction will not be modified or extended without written consent of the Owner, Contractor and Architect.

2.2.17 The Architect will not be responsible for the acts or omissions of the Contractor, any Subcontractors or any of their agents or employees or any other persons at the site or otherwise performing of the work.

ARTICLE 3.00

OWNER

3.1 DEFINITION

3.1.1 The Owner is Columbia County, Florida and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or his authorized representative.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

3.2.1 The Owner, through the Architect, shall furnish surveys describing the physical characteristics, subsurface conditions, legal limits and utility locations for the site of the project including investigative reports, all of which have been relied upon by the Architect in preparing Drawings and Specifications, where applicable.

3.2.2 Should conditions encountered below the surface of the ground vary to an unreasonable extent from the conditions indicated by the Drawings and Specifications, the Architect shall be notified by the Contractor and instructions shall have been received from the Architect prior to the Contractor's proceeding with the work involved. Core boring data, including ground-water elevations or conditions, if shown on the Drawings or attached to these Specifications, are presented only as information that is available indicating certain conditions found and limited to the exact locations shown. Neither the Owner nor the Architect shall be responsible for variations found to exist between the data referred to and actual field conditions that develop through the period of construction. The Contractor shall be responsible for making his own determination of water table variations prior to bidding and shall not assume that any water levels shown by the core boring data will necessarily be maintained at the level indicated.

3.2.3 The Owner shall secure and pay for easements for permanent structures or permanent changes in existing facilities.

3.2.4 Information or services under the Owner's control shall be furnished by the Owner to avoid delay in the orderly progress of the work.

3.2.5 The Owner shall issue all instructions to the Contractor through the Architect.

3.2.6 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Payment and Insurance.

3.3 OWNER'S RIGHT TO STOP THE WORK

3.3.1 If the Contractor fails to correct defective work, or has significant safety violations, or persistently fails to supply materials or equipment in accordance with the Contract Documents, the Owner may order the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated. The Contractor will not be entitled to a time extension of the contract completion time in the event the Owner exercises his rights under this paragraph.

3.4 OWNER'S RIGHT TO CARRY OUT THE WORK

3.4.1 If the Contractor defaults or neglects to carry out the work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven days written notice to the Contractor and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments due the Contractor the cost of correcting such deficiencies, including the cost of the Architect's additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

ARTICLE 4.00

CONTRACTOR

4.1 DEFINITION

4.1.1 The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative who is licensed to do business by the State of Florida.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall review and compare the Contract Documents and shall at once report to the Architect errors, inconsistencies or omissions he may discover. The Contractor shall not be liable to the Owner or the Architect for any damage resulting from any such errors, inconsistencies or omissions in the Contract Documents provided they are reported as outlined above. The Contractor shall not work without Contract Documents.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct his work. He shall be responsible for construction means, methods, techniques, sequences and procedures and for coordinating portions of the work under the Contract.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise specifically noted, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services necessary for the proper execution and completion of the work.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformity with the Contract Documents. All work not so conforming to these standards at the time of acceptance or at the time of inspections, tests or approvals, shall be considered defective. If requested by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of material and equipment.

4.6 TAXES

4.6.1 The Contractor shall pay sales, consumer, use and other similar taxes required by law.

4.7 PERMITS, FEES AND NOTICES

4.7.1 The Contractor shall secure and pay for permits, governmental fees and licenses necessary for the proper execution and completion of the work, which are applicable at the time the bids are received. Contractor shall submit a current copy of Professional License(s) with executed contract.

4.7.2 The Contractor shall give notices and comply with laws, ordinances, rules, regulations and order of public authority bearing on the performance of the work. If the Contractor observes that the Contract Documents are at variance, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted by appropriate Modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect he shall assume full responsibility and shall bear costs attributed to.

4.7.3 Contractor shall hold harmless the Owner and Architect against any claim or liability arising from or based upon the violation of law, ordinance or regulation, whether by himself, his employees, or any subcontractor.

4.8 ALLOWANCES

4.8.1 No allowances are specified in the project.

4.9 SUPERINTENDENT

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the project site during the progress of the work. The Superintendent shall be satisfactory to the Architect and shall not be changed except with the consent of the Owner, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The Superintendent shall represent the Contractor and communications given to the Superintendent shall be as binding as if given to the Contractor. Important communications will be confirmed in writing.

4.10 RESPONSIBILITY FOR THOSE PERFORMING THE WORK

4.10.1 The Contractor shall be responsible to the Owner for the acts and omissions of his employees and Subcontractors, their agents and employees, and Sub-subcontractors, their agents and employees, and other persons performing any of the work under a contract with the Contractor.

4.10.2 The Contractor shall not employ on the work any unfit person or anyone not skilled in the task assigned to him. The Owner may require the removal of disorderly employees.

4.10.3 There shall be no alcohol, firearms or drugs allowed on the job site. No unprofessional interaction with public or staff will be allowed.

4.11 PROGRESS SCHEDULE

4.11.1 The Contractor, after being awarded the Contract, shall prepare and submit for the Architect's approval an estimated progress schedule for the work. The progress schedule shall be related to the entire project to the extent required by the Contract Documents. This schedule shall indicate the dates for the starting and completion of the various stages of construction and shall be revised as required by the conditions of the work, subject to the Architect's approval.

4.11.2 Within five working days after the commencement of any condition which is causing or may cause delay in completion, the Contractor must notify the Architect and the Owner in writing of the effect, if any, of such conditions on the time progress schedule, and must state why and in what respects, if any, the condition is causing or may cause such delay.

4.12 DRAWINGS AND SPECIFICATIONS AT THE SITE

4.12.1 One set of Drawings, marked to record all changes made during construction, shall be delivered to the Architect for the Owner upon completion of the work.

4.13 SHOP DRAWINGS AND SAMPLES

4.13.1 Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the work.

4.13.2 Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the work will be reviewed.

4.13.3 The Contractor shall furnish to the Architect a schedule of shop drawings and samples to be submitted for review. This schedule shall indicate an estimated total number of drawings and samples and a timed sequence for their submission and approval. When approved by the Architect this shop drawing schedule shall be incorporated into the overall schedule.

4.13.4 The Contractor shall review, stamp with his approval and submit in accordance with the above schedules, Shop Drawings and Samples required by the Contract Documents. Shop Drawings and Samples shall be identified in a manner acceptable to the Architect. At the time of submission the Contractor shall inform the Architect in writing of any deviation in the Shop Drawings or Samples from the requirement of the Contract Documents.

4.13.5 The Contractor shall submit to the Architect electronic copies (PDF format) of all Shop Drawings required for the work of the various trades.

Shop Drawings will be annotated as appropriate by the Architect and returned to the Contractor with appropriate review indicated.

4.13.6 By approving and submitting Shop Drawings and Samples, the Contractor thereby agrees that he has determined and verified field measurements, field construction criteria, materials, catalog numbers and similar data, and that he has checked and coordinated each Shop Drawing and Sample with the requirements of the work and of the Contract Documents.

In checking his Shop Drawings prior to submittal, the Contractor is requested to note his corrections or comments on the Drawings.

4.13.7 The Architect will review and approve Shop Drawings and Samples with reasonable promptness, but only for conformity with the design concept of the project and with the information given in the Contract Documents. The Architect's approval of a separate item shall not indicate approval of an assembly in which the item functions.

4.13.8 Drawings returned to the Contractor will be stamped either: "NO EXCEPTIONS TAKEN", "EXCEPTIONS AS NOTED", "REVISE AND RESUBMIT", OR "REJECTED". Those drawings stamped "EXCEPTIONS AS NOTED" need not be returned for further approval if the notations are acceptable to the Contractor and Subcontractors. Drawings stamped "REVISE AND RESUBMIT" or "REJECTED" shall require new submission.

4.13.9 The Contractor shall make corrections provided by the Architect and shall resubmit the corrected copies of Shop Drawings or submit new samples until approved. The Contractor shall direct attention in writing to revisions other than the corrections requested by the Architect on previous submissions.

4.13.10 Appropriate and specific catalogue cuts may be submitted for approval by the Contractor where applicable.

4.13.11 The Architect's approval of Shop Drawings or Samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the submission and the Architect has given written approval to the specific deviation, nor shall the Architect's approval relieve the Contractor from responsibility for errors or omissions in the Shop Drawings or Samples.

4.13.12 No portion of the work requiring a Shop Drawing or sample submission shall commence until the submission has been approved.

4.14 USE OF SITE

4.14.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.14.2 The Contractor shall be responsible for any encroachments on rights or property of the public or adjoining property owners and shall hold the Owner and Architect harmless because of any encroachments which may be a result of his lack of proper layout. In this regard he shall, without extra cost to the Owner, remove any work or that portion of any work that encroaches on the property of others, or that is built beyond legal building or setback limits, and he shall rebuild the affected work or portion of work at the proper location and in full compliance with the Contract Documents.

4.14.3 Contractor will coordinate at least 48 hours in advance any utility or access interruption that will impact other buildings or portions of that building in use.

4.15 CUTTING AND PATCHING OF WORK

4.15.1 The Contractor shall be responsible for any cutting, fitting and patching that may be required to complete his work except as otherwise specifically provided in the Contract Documents. The Contractor shall not endanger any work of any other contractors by cutting, excavating or otherwise altering any work and shall not cut or alter the work of any other contractor.

4.16 COMMUNICATIONS

4.16.1 The Contractor shall forward communications to the Owner through the Architect.

4.17 INDEMNIFICATION

4.17.1 To the full extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of personal property including the loss of use resulting therefrom, and (2) is caused in whole or in part by an negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by the negligence of a party indemnified hereunder. Such obligations shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person.

4.17.2 In any and all claims against the Owners or the Architect or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

4.17.3 The obligations of the Contractor shall not extend to the liability of the Architect, his Agent or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, his Agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

4.18 CLEANING UP

4.18.1 The Contractor shall keep the premises free from accumulation of waste materials or rubbish caused by work. At the completion of the work, Contractor shall remove waste materials and rubbish from and about the project as well as tools, construction equipment, machinery and surplus materials, and shall clean all glass surfaces and leave the work clean.

4.18.2 If the Contractor fails to clean up, the Owner may do so and the cost of shall be charged to the Contractor.

4.18.3 If a dispute arises between the separate contractors as to their responsibility for cleaning up, the Owner may clean up and charge the cost of to the several contractors as the Owner may determine to be just.

ARTICLE 5.00

SUBCONTRACTORS

5.1 DEFINITION

5.1.1 A Subcontractor is a person or organization who has a direct contract with the Contractor to perform work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative who is licensed to do business by the laws of the State of Florida. It shall be the Contractor's responsibility to provide the current license number of each Subcontractor and to confirm their license is still valid.

5.1.2 A Sub-subcontractor is a person or organization who has a direct or indirect contract with a Subcontractor to perform work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof who is licensed to do business by the law of the place where the project is located.

5.1.3 Nothing contained in the Contract Documents shall create any contractual relation between the Owner or the Architect and any Subcontractor or Sub-subcontractor.

5.1.4 The Owner retains the right and privilege to reject any Subcontractor or Sub-subcontractor and further retains the right and privilege to approve any and all Subcontractors or Sub-subcontractors.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 The Supplementary Conditions include a requirement for the identification of specified Subcontractors.

5.2.2 The Contractor shall not make a substitution for Subcontractor or person or organization that has been accepted by the Owner and the Architect, unless the substitution is acceptable to the Owner and the Architect.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 Work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor (and where appropriate between Subcontractor and Sub-subcontractors) which shall contain provisions that

5.3.1.1 Preserve and protect the rights of the Owner and the Architect under the Contract with respect to the work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;

5.3.1.2 Require that such work be performed in accordance with the requirements of the Contract Documents;

5.3.1.3 Required submission to the Contractor of applications for payment under each subcontract to which the Contractor is a party, in reasonable time to enable the Contractor to apply for payment.

5.3.1.4 Required that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the work shall be submitted to the Contractor in sufficient time so that the Contractor may comply in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner;

5.3.1.5 Waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance, except such rights as they may have to the proceeds of such insurance held by the Contractor as trustee and

5.3.1.6 Obligate each Subcontractor specifically to consent to the provisions.

5.3.1.7 When the Contractor receives payment form the Owner for labor, services, or materials furnished by subcontractors and suppliers hired by the Contractor for the project, the Contractor shall remit payment due to those subcontractors and suppliers, less the value of any item contested in accordance with the Contract, and suppliers, less the value of any item contested in accordance with the Contract, within ten days after the Contractor's receipt of payment from the Owner. When the payment due the subcontractor is for final payment, including retainage, the subcontractor must include with the invoice for final payment a conditional release of lien and all appropriate warranties and closeout documentation. When the subcontractor receives payment from the Contractor for labor, services, or materials furnished by subcontractors and suppliers hired by the subcontractor, the subcontractor shall remit payment due to those subcontractors and suppliers, less the value of any item contested in accordance with the Contract, within ten days after the subcontractor's receipt of payment. This provision shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the Owner and a Subcontractor or Sub-subcontractor, between the Owner and Architect or between any persons or entities other than the Owner and Contractor.

5.4 PAYMENT TO SUBCONTRACTORS

5.4.1 The Contractor shall pay each Subcontractor, upon receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's work, less the percentage retained from payment to the Contractor. The Contractor shall also require each Subcontractor to make similar payment to his Sub-subcontractors.

5.4.2 If the Architect fails to issue a Certificate for Payment for cause which is the fault of the Contractor and not the fault of a particular Subcontractor, the Contractor shall pay the Subcontractor, after the Certificate for Payment should otherwise have been issued, for his work to the extent completed, less the retained percentage.

5.4.3 The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and he shall require each Subcontractor to make similar payment to his Sub-subcontractors.

5.4.4 The Architect may, on request and at his discretion, furnish to Subcontractor information regarding percentage of completion certified to the Contractor on account of work done by such Subcontractors.

5.4.5 Neither the Owner nor the Architect shall have any obligation to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.

ARTICLE 6.00

SEPARATE CONTRACTS

6.1 OWNER'S RIGHT TO AWARD SEPARATE CONTRACTS

6.1.1 Prior to and during the progress of the work, the Owner reserves the right to award other contracts relating to the project or in connection with other work within the boundaries of the project.

6.1.2 When separate contracts are awarded for different portions of the project, "the Contractor" in the Contract Documents in each case shall be the contractor who signs each separate contract.

6.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

6.2.1 The Owner shall coordinate the work of the Contractor with that of other Contractors on the site. The Contractor shall cooperate with the Owner in this activity and shall afford other Contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate his work with theirs.

6.2.2 If the project will be constructed using phased design and construction methods, the work of the Contractor will depend upon proper execution and results of the work of another Contractor.

The Contractor shall inspect and promptly report apparent discrepancies or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor to inspect and report shall constitute an acceptance of the other Contractor's work as fit and proper to receive his work, except as to defects which may develop in the other separate Contractor's work after the execution of the Contractor's work.

6.2.3 Should the Contractor cause damage to the work or property of any separate Contractor on the project, the Contractor shall settle with such other Contractor by agreement or mediation, if he will so settle. If such separate Contractor sues the Owner or initiates an mediation proceeding on account of damage alleged to have been so sustained, the Owner shall notify the Contractor who shall defend such proceedings, and if judgment or award against the Owner arises, the Contractor shall pay or satisfy it and shall reimburse the Owner for attorney's fees and court or mediation costs which the Owner has incurred.

ARTICLE 7.00

MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

7.1.1 The Contract shall be governed by the law of the State of Florida and all local ordinances and codes, and exclusive venue shall be Columbia County, Florida.

7.2 SUCCESSORS AND ASSIGNS

7.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party and to the partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him without the previous written consent of the Owner.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 CLAIMS FOR DAMAGES

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of an act or omission of the other party or of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 RIGHTS AND REMEDIES

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

7.6 ROYALTIES AND PATENTS

7.6.1 The Contractor shall pay royalties and license fees. He shall defend suits or claims for infringement of patent rights and shall hold the Owner harmless from loss on account of, except that the Owner shall be responsible for such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner.

7.7 TESTS

7.7.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of public authority having jurisdiction require work to be inspected, tested or approved, the Contractor shall give the Architect timely notice of its readiness and of the date arranged so the Architect may observe such inspection, testing or approval. The Contractor shall bear costs of such inspections, tests, and approvals unless otherwise provided.

7.7.2 If after the commencement of the work, the Architect determines that work requires special inspection, testing or approval, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing or approval. If such special inspection or testing reveals a failure of the work to comply with the requirements of the Contract Documents or with respect to the performance of the work, with laws, ordinances, rules, regulations or orders of public authority having jurisdiction, the Contractor shall bear costs of, including the Architect's additional services made necessary by such failure; otherwise the Owner shall bear such costs.

7.7.3 Required certificates of inspection, testing or approval shall be secured by the Contractor and submitted.

7.7.4 Neither the observations of the Architect in his administration of the Construction Contract, nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the work in accordance with the Contract Documents.

7.8 ARBITRATION

7.8.1 The parties agree that controversies between the Owner and the Contractor arising out of or relating to this agreement or breach of shall not be subject to arbitration, but may be submitted to mediation or a court of competent jurisdiction in Columbia County, Florida.

7.9 EQUALITY AND SUBSTITUTIONS

7.9.1 In general, the preparation of the Drawings and Specifications has been based upon sizes, loads, and requirements of specific items of materials or equipment and, as such, it is the basis of bidding. Therefore, all substitutions must be in accordance with the following provision:

7.9.2 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and recommendation for approval, and in accordance with a Change Order, if required.

7.10 PRECONSTRUCTION CONFERENCE

7.10.1 Before starting construction work on the project, a conference may be held at a place as designated for the purpose of verifying general procedures, expediting and handling of Shop Drawings and Schedules and to establish a working understanding between the parties concerned with this project. Present at the conference shall be a responsible representative of the Contractor and representatives of the Architect and Owner. If Contractor so desires, he may have present with him representatives of major subcontractors. The date and time of the conference shall be agreed upon by the Owner, Contractor and Architect.

7.11 REFERENCED SPECIFICATIONS AND DOCUMENTS

7.11.1 Documents, materials, systems or operations specified by reference shall be provided in compliance with the requirements of the specified reference, except as modified by the requirements of the Contract Documents. Unless a particular edition is called for, the reference used shall be the latest published edition on the date of the project Specifications.

7.11.2 In case of conflict between references and the project Specifications, the project Specifications shall govern. In case of conflict between references, the references having the more stringent requirement shall govern.

ARTICLE 8.00

TIME

8.1 DEFINITIONS

8.1.1 The Contract Time is the period of time allotted in the Contract Documents, Refer to Section 00 2113 for completion of the work.

8.1.2 The date of commencement of work is the date established in the Notice to Proceed.

8.1.2.1 If there is no Notice to Proceed, commencement of the work shall be the date of the Agreement.

8.1.3 The date of Substantial Completion of the work is the date certified by the Architect when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner may occupy the work for the use for which it is intended.

8.1.4 The term day as used in the Contract Documents shall mean calendar day.

8.2 PROGRESS AND COMPLETION

8.2.1 Time is of the essence.

8.2.2 The Contractor shall begin the work on the date of commencement. He shall carry the work forward expeditiously with adequate forces and shall complete it within the Contract Time.

8.3 DAMAGES FOR DELAY

8.3.1 Where the Architect and the Contractor cannot agree that the delay in the prosecution of the work is justified, liquidated damages will be assessed.

8.3.2 If the project is not Substantially Completed in accordance with the provisions of the Contract Documents, the Contractor shall pay to the Owner as liquidated damages, TWO HUNDRED DOLLARS FOR EACH CALENDAR DAY ELAPSING BETWEEN THE DATE FIXED FOR SUBSTANTIAL COMPLETION AND THE DATE SUCH SUBSTANTIAL COMPLETION SHALL HAVE BEEN FULLY ACCOMPLISHED.

It is also hereby agreed that if the project is not Finally Completed, in accordance with the requirements of the Contract Documents, the Contractor shall pay to the Owner as liquidated damages, TWO HUNDRED DOLLARS FOR EACH CALENDAR DAY ELAPSING BETWEEN THE DATE FIXED FINAL COMPLETION AND THE DATE SUCH FINAL COMPLETION SHALL HAVE BEEN FULLY ACCOMPLISHED.

8.3.3 Said Liquidated Damages shall be payable in addition to any excess expenses or costs payable by the Contractor to the Owner under the provisions of the General Conditions, and shall not exclude the recovery of damages by the Owner under other provisions of the Contract Documents.

8.3.4 The provision for Liquidated Damages for delay shall not affect the Owner's right to terminate the Contract as provided in the General Conditions, and the Owner's exercise of the right to terminate shall not release the Contractor from his obligation to pay Liquidated Damages in the amounts stipulated. Liquidated Damages shall be payable in addition to any excess expenses or costs payable by the Contractor as set fourth in the General Conditions, and shall not exclude the recovery of damages by the Owner under other provisions of the Contract, except for Contractor's delays.

ARTICLE 9.00

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Agreement and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 The Contractor shall submit to the Architect a schedule of values of the various portions of the work, including quantities aggregating the total Contract Sum, divided so as to facilitate payments to Subcontractors in accordance with Schedule of Values and work in place, as the Architect and the Contractor may agree upon, and supported by such data to substantiate its correctness as the Architect may require. Each item in the schedule of values shall include its proper share of overhead and profit. This schedule, when approved by the Architect, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 PROGRESS PAYMENTS

9.3.1 Not less than thirty days after the previous application, the Contractor shall submit to the Architect an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment in the General Conditions, and three originals shall be forwarded to the Architect for distribution.

9.3.2 At the discretion of the Owner, payment will be made on account of materials and equipment not incorporated in the work but delivered and suitably stored at the site or at some other location agreed upon. Such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest including applicable insurance and transportation to the site.

9.3.3 The Contractor warrants and guarantees that title to all work, materials and equipment covered by an Application for Payment, will pass to the Owner upon receipt of such payment by the Contractor, free and clear of all liens, claims, security interest or encumbrances, "Liens"; and that no work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the work at the site or furnishing materials and equipment for the project, subject to an agreement under which an interest in or an encumbrance on is retained by the seller or otherwise imposed by the Contractor or such other person.

9.4 CERTIFICATES FOR PAYMENT

9.4.1 If the Contractor has made Application for Payment, the Architect will issue the Certificates for Payment to the Owner, for such amount as he determines to be properly due, or state reasons for withholding a Certificate.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the data comprising the Application for Payment, that the work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the work is in accordance with the Contract Documents and that the Contractor is entitled to payment in the amount certified. In addition, the final Certificate for Payment will constitute a further representation the conditions precedent to the Contractor's being entitled to final payment have been fulfilled. However, by issuing a Certificate for Payment, the Architect shall not thereby be deemed to represent that he has made any examination to ascertain how or for what purpose the Contractor has used the monies previously paid on account of the Contract Sum.

9.4.3 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Agreement.

9.4.4 No certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the project by the Owner, shall constitute an acceptance of work not in accordance with the Contract Documents.

9.5 PAYMENTS WITHHELD

9.5.1 The Architect may decline to approve an Application for Payment and may hold his Certificate in whole or in part, to the extent necessary to reasonably protect the Owner. The Architect may also decline to approve Applications for Payment, because of subsequently discovered evidence or subsequent reviews, he may nullify the whole or part of a Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

9.5.1.1 Defective work not remedied or completed work that has been damaged requiring correction or replacement,

9.5.1.2 Third party claims have been filed or there is reasonable cause to believe such will be filed,

9.5.1.3 Reasonable evidence of the failure of the Contractor to make payments properly to Subcontractors for labor, materials or equipment,

9.5.1.4 Reasonable doubt that the work can be completed for the unpaid balance of the Contract Sum,

9.5.1.5 Damage to another contractor,

9.5.1.6 Reasonable indication that the work will not be completed within the Contract Time, or

9.5.1.7 Unsatisfactory prosecution of the work including failure to furnish acceptable submittals and adhere to the provision of the Special Conditions appended to.

9.5.2 When the above grounds are removed, payment shall be made for amounts withheld because of them.

9.6 SUBSTANTIAL COMPLETION

9.6.1 When the Contractor determines that the work is substantially complete, the Contractor shall give notice of such to the Architect. When the Architect determines that the work is substantially complete, he will then prepare a Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their acceptance of the responsibilities assigned to them in such certificate.

9.6.2 The Contractor shall cooperate with the Owner if it is the Owner's desire to occupy a substantially completed structure or portion of a structure. When such occupancy takes place the applicable warranty periods for the occupied portion shall be as provided in the Certificate of Substantial Completion.

9.6.3 The assessment of liquidated damages shall terminate on the date of Substantial Completion, or Final Completion, as applicable.

9.7 FINAL PAYMENT

9.7.1 Upon receipt of notice from the Contractor that the work is complete and ready for final inspection, the Architect will make a final review and will notify the Contractor of particulars in which this review reveals the work to be incomplete or defective. The Contractor shall take such measures as are necessary to remedy such deficiencies.

9.7.2 After the Contractor has corrected deficiencies and delivered Maintenance and Operating Instructions, Record Drawings, Guarantees, Bonds, Certificates of Inspection and other documents as required by the Contract Documents, he may make Application for Final Payment following the procedure for progress payments. The Application for Final Payment shall be accompanied, in addition to the supporting data and schedules submitted with progress payments, by submittals as follows: (a) Certificate of Completion of the Punch List, signed by the Owner's Representative; (b) An Affidavit, sufficient to establish compliance with the provisions that lienors have been paid in full; (c) If required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases, and waivers of liens arising out of the Contract to the extent and in such form as designated by the Owner.

If Subcontractors, fabricators or suppliers fail to furnish a release or waiver in full, the Contractor shall furnish a Bond or other collateral satisfactory to the Owner to indemnify him against lien. If lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner monies that the latter may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

9.7.3 If the Architect is satisfied that the Work has been completed and the Contractor has fulfilled his obligations under the Contract Documents, he will issue a final Certificate of Payment to the Owner. Otherwise he will return the application to the Contractor, indicating reasons for not approving final payment, in which case the Contractor will make the necessary corrections and resubmit the application. The Owner will within thirty days after receipt by him of an approved final Certificate of Payment from the Architect pay the Contractor the full amount of the Contract Sum, less the aggregate of all previous payments and any assessment of liquidated damages.

9.7.4 The making of final payment shall constitute a waiver of claims by the Owner except those arising from:

9.7.4.1 Unsettled claims,

9.7.4.2 Faulty or defective work,

9.7.4.3 Failure of the work to comply with the requirements of the Contract Documents, or

9.7.4.4 Terms of any special guarantees required by the Contract Documents.

9.7.5 The acceptance of final payment shall constitute a waiver of claims by the Contractor except those previously made and still unsettled.

9.8 MISCELLANEOUS PROVISIONS

9.8.1 Unless otherwise provided or agreed upon, the amount certified for payment on each certificate, except the final payment certificate, shall be ninety percent (90%) of the amount approved less previous amounts certified for payment.

9.8.2 Certificate for Payment shall be on the prescribed form as provided in Attachment Two.

9.8.3 The Contractor shall execute and submit the Contractor's Affidavit to Owner on Attachment Three to these General Conditions.

ARTICLE 10.00

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising safety precautions and programs in connection with the work. Owner shall have the right to stop work on the project until Contractor corrects noted safety issues. Contractor shall absorb cost associated with this work stoppage.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take precautions for the safety of, and shall provide protection to prevent damage, injury or loss to:

10.2.1.1 Employees on the work and other persons who may be affected thereby;

10.2.1.2 The work and materials and equipment to be incorporated, whether in storage on or off the site, under the care, custody or control of the Contractor or of his Subcontractors or Sub-subcontractors and;

10.2.1.3 Other property at the site or adjacent to including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall comply with applicable laws, ordinances, rules, regulations and lawful orders of public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain as required by existing conditions and progress of the work, safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Owners and users of adjacent utilities.

10.2.3 When the use or storage of hazardous materials or equipment is necessary for the execution of the work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.4 Damage or loss to property caused in whole or in part by the Contractor, Subcontractor, Sub-subcontractor, or anyone directly or indirectly employed by them, or by anyone for whose acts they may be liable, shall be remedied by the Contractor.

10.2.5 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor to the Owner and Architect.

10.2.6 The Contractor shall not load or permit parts of the work to be loaded so as to endanger its safety.

10.2.7 Contractors and Subcontractors will comply with Owner’s Security program(s) and ensure enforcement of same or similar program.

10.2.8 Trench Safety Act.

10.3 EMERGENCIES

10.3.1 In an emergency affecting the safety of persons or property, the Contractor or Owner shall act, at his discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined.

ARTICLE 11.00

INSURANCE

11.1 CONTRACTOR'S LIABILITY INSURANCE (See Supplementary Conditions.)

11.2 PROPERTY INSURANCE (See Supplementary Conditions.)

ARTICLE 12.00

CHANGES IN THE WORK

12.1 CHANGE ORDERS

12.1.1 The Owner may order changes in the work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. Such changes in the work shall be authorized by Change Order, and shall be executed under the applicable conditions of the Contract Documents.

12.1.2 A Change Order is a written order to the Contractor signed by the Owner and the Architect, issued after the execution of the Contract, authorizing a change in the work or an adjustment in the Contract Sum or the Contract Time. A Change Order will also be signed by the Contractor if he agrees to the adjustment on the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order.

12.1.3 The cost or credit to the Owner resulting from a change in the work shall be determined in one or more of the following ways:

12.1.3.1 By mutual acceptance of a lump sum properly itemized;

12.1.3.2 By unit prices stated in the Contract Documents or subsequently agreed upon; or

12.1.3.3 By cost and a mutually acceptable fixed or percentage fee.

12.1.4 If none of the methods set forth are agreed upon and the Owner and Architect deem it necessary that the added work in question be performed without delay, the Contractor shall promptly proceed with the added work in question. The cost of such work shall then be determined by the Architect on the basis of the Contractor's reasonable expenditures and savings, including, in the case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, the Contractor shall keep and present in such form as the Architect may request, an itemized accounting together with appropriate supporting data. Pending final determination of cost to the Owner, payments on account shall be made on Certificate for Payment approved by the Architect. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in cost will be the amount of the actual net decrease as confirmed by the Architect. When both additions and credits are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net amount, if any. Change Orders extending Contract Time for completion will not automatically entitle the Contractor to increased costs for overhead during the extended period unless specifically allowed in the Change Order.

12.1.5 If the Architect, the Owner and the Contractor agree that the unit costs set forth in the Contract Documents are not applicable to the quantities of added work in question, they shall not be utilized.

12.1.6 If the Contractor claims that additional cost is involved because of interpretation issued, order by the Owner to stop the work where the Contractor was not at fault, or order for a minor change in the work, the Contractor shall make such claim.

12.1.7 When the amount of cost or credit is to be based on mutual acceptance of a lump sum, whether such an amount is an extra, a credit, or no-change-in-contract price, the Contractor shall submit a change order estimate on forms furnished by the Owner which shall be substantiated by a complete itemized breakdown (including breakdowns from each Subcontractor on the same form) showing direct costs for the change or changes in the work. The breakdown shall list quantities and unit prices for materials, labor, equipment and other items of cost when the amount of cost is to be based on actual direct cost plus overhead and profit. The Contractor shall submit receipts or other evidence as the Architect may direct, showing actual direct costs and his right to the payment claimed.

12.1.8 The following factors shall be applicable to methods of arriving at extra or credit for Change Orders except where unit prices are stated in the Contract Documents:

12.1.8.1 For work done by his own organization, the Contractor may add ten percent of his net increase in direct costs for combined overhead and profit;

12.1.8.2 For work done by Subcontract, the respective Subcontractors may add ten percent of their net increase in direct costs for combined overhead and profit and the Contractor may then add five percent of the above Subcontractor's total for his overhead and profit;

12.1.8.3 Where changes involve the Contractor and one or more Subcontractors, the breakdown shall itemize the above percentages separately, by use of individual change order estimate forms;

12.1.8.4 Overhead and profit percentages will be deducted on items which have a net decrease;

12.1.8.5 When both additions and deductions are involved, the overhead and profit shall apply to the net amount, if any;

12.1.8.6 Direct costs shall include labor, materials, worker's compensation, taxes on labor and sales, and other direct taxes, health and retirement benefits, social security, and the expense of work performed after regular working hours to the extent authorized by the Owner;

12.1.8.7 Proportionate necessary transportation, traveling and subsistence expenses of Contractor's employees incurred for the project; materials, supplies and temporary facilities, including project office expenses; equipment rental by agreement approved by Owner, including transportation and unloading; telephone service at the site and other normal overhead expenses as approved by Owner shall be included in the Contractor's compensation for overhead and profit.

12.1.9 The above added percentages are defined to include overhead and additional costs resulting from the change in scope of work including time extensions.

12.1.10 It is mutually understood that the time extensions for changes in the work will depend upon the extent by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements so delayed and that the remaining contract completion dates for other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages pursuant to the new completion schedule.

12.2 CLAIMS FOR ADDITIONAL COSTS

12.2.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the Architect notice of such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property, in which case the Contractor shall proceed. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum it shall be determined by Arbitration. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.3 FIELD ORDERS

12.3.1 The Architect may issue written Field Orders which interpret the Contract Documents in accordance without change in Contract Sum or Contract Time. The Contractor shall carry out such Field Orders.

ARTICLE 13.00

UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If work should be covered contrary to the request of the Architect, it must, if required by the Architect, be uncovered for observation and replaced, at the Contractor's expense.

13.1.2 If work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect may request to see such work and it shall be uncovered by the Contractor. If such work is found in accordance with the Contract Documents, the cost of uncovering and replacement shall be charged to the Owner. If such work is found not in accordance with the Contract Documents, the Contractor shall pay such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall correct work rejected by the Architect as defective or as failing to conform to the Contract Documents. The Contractor shall bear costs of correcting such rejected work, including the possible cost of the Architect's additional services.

13.2.2 If, within one year after the date of the submittal of the Certificate of Final Inspection or by the terms of any applicable special guarantee required by the Contract Documents, any of the work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it after receipt of notice from the Owner to do so.

13.2.3 Such defective or non-conforming work shall be removed from the site if necessary, and the work shall be corrected to comply with the Contract Documents without cost to the Owner.

13.2.5 The Contractor shall bear the cost of making good work of separate contractors destroyed or damaged by such removal or correction.

13.2.6 If the Contractor does not remove such defective or non-conforming work within a reasonable time fixed by notice from the Owner, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage, the Owner may upon notice sell such work and shall account for the net proceeds of, after deducting the costs that should have been borne by the Contractor including compensation for possible additional architectural services. If such proceeds of sale do not cover costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.7 If the Contractor fails to correct such defective or non-conforming work, the Owner may correct it.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1 If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the Contract Sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

ARTICLE 14.00

TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 If the work is stopped for a period of thirty days under order of court or other public authority having jurisdiction, or as a result of an act of government, through no act or fault of the Contractor or a Subcontractor or their agents or employees or other persons performing work under a contract with the Contractor, or if the work should be stopped for a period of thirty days by the Contractor for the Owner's failure to make payment, then the Contractor may, upon notice to the Owner, terminate the Contract and recover from the Owner payment for work executed and for proven loss sustained upon materials, equipment, construction equipment, tools, and machinery, including reasonable profit and damages accruing to the date work has been stopped for thirty days.

14.2 TERMINATION FOR DEFAULT-DAMAGES FOR DELAY-TIME EXTENSIONS

14.2.1 If the Contractor fails, except in cases for which extension of time is provided, to prosecute the work, with such diligence as will insure its completion within the time specified in this Contract, or fails to complete work within such time, the Owner may, upon notice to the Contractor, terminate his right to proceed with the work. In such event the Owner may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, as may be on the site of the work and necessary for. Whether or not the Contractor's right to proceed with the work is terminated, he shall be liable for damage to the Owner resulting from his failure to complete the work within the specified time.

14.2.2 If fixed and agreed liquidated damages are provided in the Contract and if the Owner so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Owner in completing the work.

14.2.3 If fixed and agreed liquidated damages are provided in the Contract and if the Owner does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

14.2.4 The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

14.2.4.1 The delay in the completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of a public enemy, acts of the Owner in its contractual capacity, acts of other Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather conditions not reasonably anticipated for the contract period, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and if:

The Contractor notifies the Owner in writing of the causes of delay. The Architect shall ascertain the facts and extent of the delay and, with agreement of the Owner, extend the time for completing the work when, in his judgment, the findings of facts justify such an extension. A Change Order will be executed to reflect the change in Contract Time.

14.2.5 If, after notice of termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the Contract shall be equitably adjusted to compensate for such termination and the Contract modified accordingly.

14.2.6 The rights and remedies of the Owner are in addition to other rights and remedies provided by law or under this Contract.

14.3 TERMINATION FOR OTHER REASONS

14.3.1 If the Contractor is adjudged bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he fails to supply properly skilled workmen or proper materials, or if he fails to make payment to Subcontractors for materials or labor, or disregards laws, ordinances, rules, regulations or orders of public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then the Owner, may, without prejudice to right or remedy and after giving the Contractor written notice, terminate the employment of the Contractor and take possession of the site and of materials and equipment and may finish the work by methods he may deem expedient.

14.4 FURTHER PAYMENTS

14.4.1 In the event of termination the Contractor shall not be entitled to receive further payment until the work is finished. If the unpaid balance of the Contract Sum exceeds the costs of finishing the work, including possible compensation for the Architect's additional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

14.5 ABANDONMENT OF THE PROJECT

14.5.1 Upon written notice to the Contractor and the Architect, the Owner may, without cause and without prejudice to right or remedy, elect to abandon the project and terminate the Agreement. In such case, the Contractor shall be paid for work executed and expense sustained, plus a reasonable profit.

ARTICLE 15.00

EQUAL OPPORTUNITY

15.1 EQUAL OPPORTUNITY

15.1.1 All jobs let based on bids received or contracts negotiated will be guaranteed by the individual Contractor or Subcontractor or Sub-subcontractor as to compliance with applicable laws, rules and regulations relating to equal employment opportunity, and Federal, State and Local Laws, rules and regulations pertaining to. The Contractor shall execute the certificate as provided in Attachment Number 4 as evidence of such compliance and file it with the Owner simultaneously with the Contractor's execution of the agreement.

ARTICLE 16.00

PROTEST

16.1 BID PROTEST

16.1.1 A respondent who wishes to file a protest pertaining to a bid shall file such notice in accordance with procedures prescribed by Florida Statutes. Protests shall be filed with the Columbia County, Florida, Director of Purchasing. A protest is officially filed when it is received by the Director.

16.1.2 Person who is adversely affected by the decision or intended decision shall file with the Director of Purchasing a notice of protest in writing within 72 hours after the bid opening. Failure to file a protest within the time prescribed in Florida Statutes shall constitute a waiver of proceedings under Florida Statutes. The formal written protest shall state with particularity the facts and law upon which the protest is based. Saturdays, Sundays and state holidays shall be excluded in the computation of the 72 hour time period.

16.1.3 As prescribed by Florida Statures, any protestor who files an action protesting a decision or intended decision pertaining to a bid pursuant to Florida Statutes shall post at the time of filing the formal written protest, a bond payable to the Columbia County, Florida in an amount equal to twenty-five thousand dollars or two percent of the lowest accepted bid, whichever is greater, for projects valued over five hundred thousand dollars or five percent of the lowest accepted bid for other projects. The bond shall be conditioned upon payment of costs and fees which may be adjudged against the protester in the administrative hearing in which the action is brought and in subsequent appellate court proceedings. In lieu of a bond, a cashier's check, certified bank check, bank certified company check, money order or U.S. currency would be acceptable form of security. If, after completion of the administrative hearing process and appellate court proceedings, the district prevails, it shall recover costs and charges, which shall be included in the final order or judgment, but excluding attorney's fees. Upon payment of such costs and charges by the protester, the protest security shall be returned. If the protester prevails, he shall recover from the Columbia County, Florida costs and charges which shall be included in the final order of judgment, excluding attorney's fees.

16.1.4 Disposition of the protest shall follow Florida Statutes. In the event that the protest cannot be resolved as specified, the standard of proof for further proceedings shall be whether the proposed Columbia County, Florida action was clearly erroneous, contrary to competition, arbitrary or capricious. In bid protest proceeding contesting an intended Columbia County, Florida action to reject bids, the standard of review by administrative law judge shall be whether Columbia County, Florida intended action is illegal, arbitrary, dishonest or fraudulent.

ATTACHMENTS TO THESE GENERAL CONDITIONS

The following forms and informational sheets are attached as acceptable guides for various submittals called for:

Agreement between Owner and Contractor	Attachment No. 1
Application and Certificate for Payment	Attachment No. 2
Equal Opportunity Certificate of Compliance	Attachment No. 3
Supplementary Conditions	Attachment No. 4

ATTACHMENT NO. 1

COLUMBIA COUNTY, FLORIDA

LAKE CITY, FLORIDA

AGREEMENT BETWEEN OWNER AND CONTRACTOR

THIS AGREEMENT, made this ___ day of _____ in the year Two Thousand and _____ between the Owner: **COLUMBIA COUNTY, FLORIDA**, a political subdivision of the State of Florida, whose mailing address is Post Office Box 1529, Lake City, Florida 32056-1529; and the Contractor:

_____, whose mailing address is _____

_____

ARTICLE 1

THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract for Construction (General, Supplementary and other Conditions), the Project Manual and Drawings for Fort White Community Center – Concessions Building, Fort White, Florida, Architect's Project No. 1642, Addenda issued prior to execution of this Agreement and Modifications issued subsequent to. These form the Contract and are as fully a part of the Contract as if attached to this Agreement or repeated in.

ARTICLE 2

THE WORK

The Contractor shall perform the work required by the Contract Documents in accordance with the Drawings, Project Manual and Addenda for Fort White Community Center – Concessions Building, Fort White, Florida, Architect's Project No. 1642, and shall execute the work described in the documents, working whatever schedule is required to complete the work in the time allotted, including overtime work and weekend work as required.

ARTICLE 3

TIME OF COMMENCEMENT AND COMPLETION

Contractor shall execute the Owner/Contractor Contract within five calendar days from date of receipt and return to the Owner for his execution, along with required insurance certificates. Contractor shall begin work within seven calendar days from date of receipt of a Letter of Intent, Building Permit and/or Notice to Proceed issued by the appropriate authority.

All work shall be Substantially Complete within 150 calendar days from date of Notice to Proceed and Finally Completed within 14 calendar days from the date the project is declared Substantially Complete.

Where delays are not justified under the General Conditions of the Contract for Construction or otherwise, the Contractor shall be liable for and shall pay to the Owner liquidated damages as follows:

If the Project is not Substantially Completed, the Contractor shall pay to the Owner as liquidated damages, Two Hundred Dollars for each calendar day elapsing between the date fixed for Substantial Completion and the date such Substantial Completion shall have been accomplished. It is also hereby agreed that if the project is not Finally Completed, the Contractor shall pay to the Owner as liquidated damages, Two Hundred Dollars per calendar day past Final Completion date.

ARTICLE 4

CONTRACT SUM

The Owner shall pay the Contractor for the performance of the work, subject to additions and deductions by Change Orders as provided in the conditions of the Contract, in current funds, the Contract Sum of

_____ DOLLARS ($_____)

ARTICLE 5

PROGRESS, FINAL PAYMENTS AND CONTRACTOR PAYMENT TO SUBCONTRACTORS

Upon Application for Payment submitted by the Contractor to the Architect and Certificates of Payments, the Owner shall make progress payments on account of the Contract Sum and a final payment to the Contractor as provided in the conditions of the Contract and as follows:

5.1 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month.

a. Contractor shall present to the Architect an Application for Payment. Owner shall remit payment, less any contested amount, not later than the 25th business day after the date on which the payment request or invoice is stamped as received.

b. The Owner may reject the payment request or invoice within 20 business days after the date on which the payment request or invoice is stamped as received. The rejection shall specify the deficiency in the payment request and the action necessary to make the payment request proper.

c. If a payment request or an invoice is rejected and the Contractor submits a corrected payment request or invoice which corrects the deficiency specified, the corrected payment request or invoice shall be paid or rejected not later than the 10th business day after the date the corrected payment request or invoice is stamped as received.

d. If a dispute between the Owner and the Contractor cannot be resolved, the dispute shall be resolved in accordance with the dispute resolution procedure prescribed in the construction contract.

e. If the Owner disputes a portion of a payment request or an invoice, the undisputed portion shall be paid timely.

f. Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Application for Payment.

g. Applications for Payment shall indicate the percentage of completion of each portion of the work as of the end of the period covered by the Application for Payment.

5.2 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

a. Until such time as the contract work reaches 50% completion, the Owner shall, within the time period set forth above, make a progress payment to the Contractor in the amount provided in such certificate; provided such payment in addition to previous payments does not exceed ninety percent (90%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the work plus ninety percent (90%) of the Contract Sum properly allocable to materials and equipment not incorporated in the work but delivered and suitably stored at the site or at a location suitable to Owner when agreed upon by the parties.

b. After such time as the Contract work reaches or exceeds 50% completion, the Owner shall, within the time period set forth above, make a progress payment to the Contractor in the amount provided in such certificate; provided such payment in addition to all previous payments does not exceed ninety-five percent (95%) of the portion of the Contract Sum properly allocable to labor, materials and equipment incorporated in the work plus ninety-five percent (95%) of the Contract Sum properly allocable to materials and equipment not incorporated in the work but delivered and suitably stored at the site or at a location suitable to Owner when agreed upon by the parties.

c. Any progress payments of this Agreement shall be reduced by any amounts that are the subject of a good faith dispute, the subject of a claim brought or otherwise the subject of a claim or demand by the Owner or Contractor.

d. The Contractor has fourteen days from the date the Owner accepts the work as Substantially Complete to complete punch list items for the project. If punch list items are not completed and Finally Accepted by the Architect and the Owner, liquidated damages for each calendar day of such delay will be assessed. The Contractor will be liable for and shall pay the Owner such amount. Waiver of this provision shall be approved by the Owner. When final punch list items have been completed to the satisfaction of Owner and Architect, and Final Closeout Documents have been reviewed and approved, Final Payment of the remaining 5% will be made upon Final Acceptance by Columbia County, Florida.

5.3 The Application for Payment for the final payment under the contract shall include the following forms:

a. Contractor’s Affidavit to Owner stating that liens have been paid in full. If Subcontractor, fabricator or supplier fails to furnish a release or waiver in full, the prime Contractor will furnish an Indemnity Bond for release of lien to the Owner, or other collateral satisfactory to the Owner, to indemnify the Owner against lien.

b. Consent of Surety to Final Payment on appropriate A.I.A. Document or other form acceptable to the Owner.

c. Contractor's Affidavit of Release of Liens on A.I.A. Documents G706 and G706A, or other forms acceptable to the Owner, certifying that the prime Contractor, Subcontractors, suppliers of materials and equipment, and performers of work, labor or services on the project release or waive lien against the Owner arising in the construction project.

5.4 Subcontractors, forty-five days after satisfactory completion of their work on the Contractor’s project, can invoice the Contractor for the remainder of unpaid work, including the full value of the retainage related to their work, less the value of any item contested in accordance with the terms and conditions of the construction Contract.

a. The Contractor shall require the Subcontractor to include a conditional release of lien and appropriate warranties and closeout documentation with this final payment invoice to the Contractor.

b. The Contractor shall include this subcontractor payment request in the next Application for Payment in the pay application cycle to the Architect following the receipt of the subcontractor payment request, if deemed to be complete and in compliance with this section.

c. When a Contractor receives payment from the Owner for labor, services or materials furnished by subcontractors and suppliers hired by the Contractor, the Contractor shall remit payment due to those subcontractors and suppliers, less the value of any item contested in accordance with the terms and conditions of the construction Contract, within ten days after the Contractor's receipt of payment.

5.5 Paragraph 5.4 shall not be construed to create a contractual relationship (1) between the Architect and Contractor, (2) between the Owner and a Subcontractor or Sub-subcontractor, (3) between the Owner and Architect or (4) between persons or entities other than the Owner and Contractor.

5.6 Columbia County, Florida may occupy the facilities prior to the completion of punch list items; however, retainages specified will remain in force.

ARTICLE 6

MISCELLANEOUS PROVISIONS

6.1 Terms used in the Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

6.2 The Contract Documents shall constitute the Agreement between the Owner and the Contractor, except for Modifications issued after execution of this Agreement, and shall include Alternates set forth in. In the event of a conflict between the Project Manual, then specific provisions of the Project Manual shall control.

6.3 The Owner's representative is:

Tommy Matthews, Columbia County Building & Zoning
Columbia County, Florida
Lake City, Florida
(386) 758-1039 - Telephone

6.4 The Contractor's representative is:

Name and Title:
Name of Company:
Address:
Telephone:

6.5 The Contractor's representative shall not be changed without notice to, and approval of, the Owner.

ARTICLE 7

ENUMERATION OF CONTRACT DOCUMENTS

7.1 The Specifications are those contained in the Project Manual; see Exhibit A (Table of Contents to be provided after bid opening) and incorporated by reference.

7.2 The Drawings are as follows and are dated February 6, 2017. See Exhibit B (Sheet Index to be provided after bid opening) and incorporated by reference.

7.3 The Addenda, if any, (to be provided after bid opening) are as follows:

Number	Date	Pages

THIS AGREEMENT executed as of the day and year first above written, and is executed in at least three original copies of which one is to be delivered to the Contractor, one to the Architect for use in the administration of the Contract, and the remainder to the Owner.

Signed, sealed and delivered in the presence of:

COLUMBIA COUNTY, FLORIDA

_____ _____

ATTEST: By:

_____

Signature

_____

Print or type name

STATE OF FLORIDA
COUNTY OF COLUMBIA

The foregoing instrument was acknowledged before me this __ day of _____ 20___, by _____, as **COLUMBIA COUNTY**, who is personally known to me.

_____

Notary Public, State of Florida

(**NOTARIAL SEAL**)

_____

(Print or Type Name)

My Commission Expires:

Signed, sealed and delivered
in the presence of:

GENERAL CONTRACTOR

_____
Witness

By: _____
Name and Title

_____
Print or type name

_____
Witness

_____
Print or type name

STATE OF FLORIDA
COUNTY OF _____

The foregoing instrument was acknowledged before me this ___day of _____, 20_____, by_____, as _____ of _____, a Florida corporation, on behalf of the corporation, who is personally known to me or who has produced _____ as identification.

_____
Notary Public, State of Florida

(**NOTARIAL SEAL**)

_____
(Print or Type Name)
My Commission Expires:

ATTACHMENT NO. 2

APPLICATION AND CERTIFICATE FOR PAYMENT

Date_____ For Period Ending_____ Payment No._____

CONTRACTOR:_____

CONTRACT FOR: FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
FORT WHITE, FLORIDA
ARCHITECT'S PROJECT NUMBER: 1642

Original Contract Sum	$ _____	Contract Time	_____	Calendar Days	_____
Adds to Date	$ _____	Authorized Ext	_____	Calendar Days	_____
Total	$ _____	Pending Requests	_____	Calendar Days	_____
Deducts to Date	$ _____	Time Lapsed To Date	_____	Calendar Days	_____
Adj. Contr. Sum	$ _____		_____	Calendar Days	_____

WORK PERFORMED TO DATE	$_____
MATERIAL SUITABLY STORED	$_____
(Itemized list of materials attached)	
TOTAL TO DATE	$_____
Less Retainage	$_____
Less Previous Payments	$_____
TOTAL	$_____
DUE THIS PAYMENT	$_____

CERTIFICATION OF THE CONTRACTOR: I certify that items and amounts shown on the face of this Certificate are correct and that work has been performed and material supplied in full accordance with the terms and conditions of the Contract. I further certify that just and lawful bills against the undersigned and his subcontractors have been paid in full accordance with their terms and conditions and that Subcontractors listed on the previous month's Application and Certificate for Payment have been paid the full amount listed on that Application as evidenced by Partial Releases of Liens attached.

Date:_____ Contractor:_____(Printed Name)
(Notarized Signature Required)

Date:_____ Notary:_____

CERTIFICATE OF THE ARCHITECT: I certify that I have checked and verified this Certificate and the accompanying Partial Releases of Liens; that to the best of my knowledge and belief it is a true statement of the value of the work performed and material suitably stored on the site or other approved location by the Contractor; that work and material included in this Certificate have been reviewed; and that work has been performed and material supplied in accordance with the terms of the Contract.

Date:_____ Architect:_____

APPROVED FOR PAYMENT:

Date:_____ Owner:_____

_____

(Authorized Signature)

ATTACHMENT NO. 3

EQUAL OPPORTUNITY

CERTIFICATE OF COMPLIANCE

PROJECT TITLE:

FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
FORT WHITE, FLORIDA
ARCHITECT'S PROJECT NO. 1642

This is to certify that the undersigned Contractor on subject project does now and will during the length of this project comply with applicable laws, rules and regulations relating to equal employment opportunity, and Federal, State, or Local laws, rules or regulations pertaining to; and further certifies compliance specifically with Executive Order 11246 originally issued by the President of the United States on September 24, 1965, as amended from time to time thereafter, including:

1. The Contractor does not discriminate in its employment policies as to race, color, religion, sex or national origin; and,

2. The Contractor does maintain an affirmative action plan to recruit, employ and promote qualified members of groups that may have been formerly excluded because of race, color, religion, sex or national origin.

CONTRACTOR

By: _____
Name / Title

Date: _____

ATTACHMENT NO. 4

SUPPLEMENTARY CONDITIONS

1. **Conditions of the Contract** General Conditions, these Supplementary Conditions and Divisions 00 and 01 are applicable to divisions and sections of the specifications and it is the Contractor's responsibility to so inform parties who should be influenced by.

2. **Applicable Drawings** The Drawings applicable to this work are titled:

   Fort White Community Center
   Concessions Building

   Dated: February 6, 2017

   Prepared by: Kail Partners Architecture & Interiors
   PO Box 359055
   Gainesville, Florida 32635-9055

   The Drawings accompany these Specifications and become a part of. The applicable Drawings consist of the sheets listed on Sheet G-1, Sheet Index.

   The Contractor shall purchase sets of Drawings and Project Manual as required of his use and the use of the Subcontractors on the project.

3. **Contract Time** The work shall be commenced within seven calendar days after receipt of the Notice to Proceed and shall be Substantially Complete within 150 calendar days, and shall be Finally Completed within 14 calendar days after the date of Substantial Completion.

4. **Liquidated Damages** Since actual damages for delay are impossible of agreed determination, the fixed, agreed and liquidated damages described in the General Conditions shall be for each calendar day beyond the specified Contract Time as described in the Project Manual, shall be Two Hundred Dollars per calendar day past the date of Substantial Completion and Two Hundred Dollars per calendar day past Final Completion.

5. **Notice to Owner** - If a Subcontractor or supplier files a Notice to Owner under the Florida Lien Law, the Owner will notify the Contractor of its receipt. Payment request delivered subsequent to receipt of that Notice to Owner that contains payment in full or in part for that Subcontractor or supplier shall require a Final or Partial Release of Lien from each Subcontractor or supplier so affected.

6. **Contractor's Liability Insurance**

   a) The Contractor shall purchase and maintain in a company or companies licensed to do business in the State of Florida, possess an AM Best rating of A-, and acceptable to the Owner and his Insurance Counselor such insurance as will protect him from claims, which may rise out of or result from the Contractor's operations under the Contract, whether such operations be by himself or by Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone else for whose acts any of them may be liable. The specific delineation of coverage in this paragraph is a minimum guide only, it being the specific intent of the Owner that it shall be fully and completely protected and indemnified from any and all claims which may arise out of Contractor's operation under the Contract; including among others those checked below:

      a)i claims under workers' compensation, disability benefit and other similar employee benefit acts;

      a)ii claims for damages because of bodily injury, occupational sickness or disease, or death of his employees;

a)iii claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees;

a)iv claims for damages by usual personal injury coverage including but not limited to libel, slander, and false arrest which are sustained (1) by any person including, but not limited to, a Contractor, Subcontractor or Sub-subcontractor or their employees as a result of an occurrence directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;

a)v claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom;

a)vi claims resulting from explosion, collapse, or underground accident, (X-C-U coverage required) and other on-premises operations.

a)vii claims resulting from owned, hired and non-owned motor vehicles and equipment;

a)viii claims for damage resulting from the actions or inactions of independent Contractors;

a)ix claims arising under products and completed operations insurance.

b) The insurance required shall be written for not less than the limits of liability specified below, or that required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations in the General Conditions. Contractor shall provide Owner with Certificate of Insurance evidencing that Owner shall receive a thirty day (30) notice of cancellation, nonrenewal or material change in coverage with a ten (10) day notice if cancellation is for nonpayment of premium. Contractor shall provide Owner with Certificate of Insurance prior to beginning any work.

b)i Workers' Compensation:

State, Florida Statutes	Statutory
Applicable Federal	Statutory
Employer's Liability	$200,000

b)ii Comprehensive General Liability:
Including Premises-Operations; Products Completed Operations; Contractor's Liability Broad Form Property Damage; Contractual Liability.

General Liability	$1,000,000 per Claimant
Property Damage	$1,000,000 per Occurrence
Personal Injury	$1,000,000 per Claimant
Liability	$1,000,000 per Occurrence
	$2,000,000 per Annual Aggregate

Property Damage Liability Insurance will provide X, C, or U coverage as applicable.

The Owner shall be named as additional insured on the Contractor's Comprehensive General Liability Policy.

Personal Injury Liability shall be separate coverage from Bodily Injury.

b)iii Owner's Protective Liability:

The Owner shall be named as the insured; ORIGINAL policy shall be submitted to the Owner.

Bodily/Personal Injury	$1,000,000 per Claimant $1,000,000 per Occurrence
Property Damage	$1,000,000 Single Limit per Occurrence

b)iv Contractor's Protective Liability:

The Owner shall be named as additional insured on the Contractor's Protective Liability Policy.

Bodily/Personal Injury	$1,000,000 per Claimant $1,000,000 per Occurrence
Property Damage	$1,000,000 Single Limit per Occurrence

b)v Comprehensive Automobile Liability:

The Owner shall be named as additional insured on the Contractor's Comprehensive Automobile Liability Policy. Policy shall cover owned, hired and all classes of non-owned vehicles.

Bodily Personal Injury:	$1,000,000 per Claimant $1,000,000 per Occurrence
Property Damage:	$1,000,000 Single Limit per Occurrence

b)vi Coverage to be certified by the Contractor (and Subcontractors) shall include, but not be limited to the following:

- x Workers' Compensation
- x Automobile owned, hired and non-owned
- x Premises
- x Operations
- x Contractual
- x Personal injury - Hazards, A, B and C with employee exclusion removed
- x Broad Form Property Damage
- x Removal of X, C and U exclusions
- x Products and Completed Operations
- x Independent Contractors

c) A Certificate of Insurance, executed on a standard ACORD form, shall be filed with the Owner simultaneously with the Contractor's execution of the Agreement. The certificate shall contain a provision that coverages afforded under the policies will not be cancelled until at least thirty days prior written notice has been given to the Owner. The Certificate of Insurance will include the following statement: "Interest of the Certificate Holder is included as an Additional Insured."

7. **Property Insurance**

a) Until the work is completed and accepted by the Owner, the Contractor shall purchase and maintain property insurance upon the entire work at the site to the full insurable value of. This insurance shall include the interest of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the work and shall insure against the perils of fire, extended coverage, vandalism and malicious mischief. Coverage shall include damages, losses, and expenses arising out of or resulting from any insured property including fees and charges of Architects, Engineers and Attorneys.

b) The Contractor shall purchase and maintain such machinery insurance as may be required by the Contract Documents or by law. The insurance shall include the interest of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the work.

c) The Contractor shall file a copy of policies with the Owner and the Architect.

d) The Owner and Contractor waive rights against each other or damages caused by fire or other perils to the extent covered by insurance provided, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee. The Contractor shall require similar waivers by Subcontractors and Sub-subcontractors. In waiving rights of recovery under terms, the term "Owner" shall be deemed to include his employees and the Architect, and its employees as the Owner's representative.

e) Such insurance shall be no less than that required by the Project Manual.

8. General Contractor contract / subcontract shall use State of Florida licensed contractors / subcontractors.

SECTION 01 0145

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Requirements and limitations for cutting and patching of work.

B. "Cutting and Patching" is hereby defined to include, but is not limited to, the cutting and patching of nominally completed or previously existing work in order to accommodate the coordination of work, or the installation of other work, or to uncover other work for access or inspection, or to obtain samples for testing or for similar purposes; and is defined to exclude integral cutting and patching during the manufacturing, fabricating, erecting and installing process for individual units of work.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SUBMITTALS: Submittals shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Submit request in advance of cutting or alteration which affects: Structural integrity of any element, integrity of weather-exposed or moisture-resistant element, efficiency, maintenance or safety of any operational element, visual qualities of sight-exposed elements and/or work of Owner or other separate Contractors performing work at the same time.

B. Include in Request: Identification of project, location and description of affected work, necessity for cutting or alteration, description of proposed work and products to be used, alternatives to cutting and patching, effect on work of Owner or other Contractors on site, permission of affected Contractor and date and time work propose to be executed.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide materials for cutting and patching which will result in equal-or-better work than the work being cut and patched in terms of performance characteristics, including visual effect where applicable. Use materials identical with the original materials where feasible and where recognized that satisfactory results can be produced.

PART 3 - EXECUTION

3.1 GENERAL

A. Execute cutting, fitting and patching to complete work, and to: Fit the parts together and to integrate with other work, uncover work to install ill-timed work, remove and replace defective and non-conforming work, remove samples of installed work for testing and provide openings in elements of work for penetrations of mechanical and electrical work.

3.2 INSPECTION

A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

B. After uncovering, inspect conditions affecting performance of work.

C. Beginning of cutting or patching means acceptance of existing conditions.

3.3 PREPARATION

A. Provide supports to assure structural integrity of surroundings and devices and methods to protect other portions of project from damage.

B. Provide protection from elements for areas which may be exposed by uncovering work and maintain excavations free of water.

3.4 PERFORMANCE

A. Execute work by methods to avoid damage to other work and which will provide proper surfaces to receive patching and finishing.

B. Employ original installer to perform cutting and patching for weather-exposed, moisture-resistant elements and sight-exposed surfaces.

C. Cut rigid materials using masonry saw or core drill within a 1/4 inch tolerance of size of opening needed. Pneumatic tools not allowed without prior approval.

D. Fit work to pipes, sleeves, ducts, conduit and other penetrations through surfaces. All voids around penetrations shall be grouted.

E. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit; for patches in walls, refinish wall-to-wall and floor-to-ceiling; for patches in masonry walls, cut out face shell of block and replace or cut out individual units as required and replace.

F. All penetrations through fire rated construction shall be fire stopped using a through penetration fire stop system listed in the “Underwriters Laboratory Fire Resistance Directory”.

3.5 CLEANUP AND DEBRIS DISPOSAL

A. Contractor shall clean up and remove debris resulting from these operations from the site on a regular basis and not exceeding one week intervals. More frequent cleanup in specific areas of extensive demolition may be required by the Owner.

B. It is envisioned that a construction dumpster will be placed on the site and emptied at an approved off-site as required.

C. The primary concern is that safety of the students, staff and workers not be compromised in any way as a result of the demolition work required under this contract. Debris will not be allowed to collect and remain in the areas of demolition.

END OF SECTION

SECTION 01 0390

COORDINATION AND MEETINGS

PART 1 - PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

A. Preconstruction Conference.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 PRECONSTRUCTION CONFERENCE / PROGRESS MEETINGS

A. Contractor will administer the preconstruction conference for review of the contract requirements, clarification of responsibilities and use of project site and for review of administrative procedures. Date, time and place for Preconstruction Conference will be announced after award of the contract.

B. At the Preconstruction Conference, the Owner shall make arrangements with the Contractor for the assignment of staging areas to be used for storage of materials, parking, etc.

C. Contractor shall prepare agenda with copies for participants, attend progress meetings, record minutes and distribute copies to participants and those affected by decisions made.

D. Attendance: Owner, Contractor and Architect.

E. The dates and times of the progress meetings will be discussed at the Preconstruction Conference.

1.4 SUBCONTRACTOR PRECONSTRUCTION CONFERENCES

A. Review conditions of installation, preparation and installation procedures and coordination with related work.

END OF SECTION

SECTION 01 0811

RELEASE OF LIEN FORMS

THIS FORM TO BE USED FOR ATTACHMENT TO EACH APPLICATION AND CERTIFICATE FOR PAYMENT.

PARTIAL WAIVER AND RELEASE OF LIEN UPON PROGRESS PAYMENT

The undersigned lienor, in consideration of the sum of $_____, hereby waives and releases its lien and right to claim a lien for labor, services or materials furnished through _____ (insert date) to _____ (insert name of your Contractor) on the site of the following property:

FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
FORT WHITE, FLORIDA

This waiver and release does not cover any retention, labor, services or materials furnished after the date specified above.

DATED on _____, 20__.

BY:_____
(Lienor)

DATE:_____ NOTARY:_____

THIS FORM TO BE USED FOR ATTACHMENT TO REQUEST FOR FINAL APPLICATION AND CERTIFICATE FOR PAYMENT.

FINAL WAIVER AND RELEASE OF LIEN UPON FINAL PAYMENT

The undersigned lienor, in consideration of the final payment in the amount of $_____, hereby waives and releases its lien and right to claim a lien for labor, services or materials furnished to _____ on the site of the following property:
(insert name of Contractor)

FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
FORT WHITE, FLORIDA

DATED on _____, 20__.

BY:_____
(Lienor)

DATE:_____ NOTARY:_____

END OF SECTION

SECTION 01 2000

PRICE AND PAYMENT PROCEDURES

Date_____ For Period Ending_____ Payment No._____

CONTRACTOR:_____

CONTRACT FOR: FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
FORT WHITE, FLORIDA

Original Contract Sum	$ _____	Contract Time	_____	Calendar Days	_____
Adds to Date	$ _____	Authorized Ext	_____	Calendar Days	_____
Total	$ _____	Pending Requests	_____	Calendar Days	_____
Deducts to Date	$ _____	Time Lapsed To Date	_____	Calendar Days	_____
Adj. Contr. Sum	$ _____		_____	Calendar Days	_____

WORK PERFORMED TO DATE	$_____
MATERIAL SUITABLY STORED	$_____
(Itemized list of materials attached)	
TOTAL TO DATE	$_____
Less Retainage	$_____
Less Previous Payments	$_____
TOTAL	$_____
DUE THIS PAYMENT	$_____

CERTIFICATION OF THE CONTRACTOR: I certify that all items and amounts shown on the face of this Certificate are correct and that all work has been performed and material supplied in full accordance with the terms and conditions of the Contract. I further certify that all just and lawful bills against the undersigned and his subcontractors have been paid in full accordance with their terms and conditions and that all Subcontractors listed on the previous month's Application and Certificate for Payment have been paid the full amount listed on that Application as evidenced by Partial Releases of Liens attached.

Date:_____ Contractor:_____(Printed Name)
(Notarized Signature Required)

Date:_____ Notary:_____

CERTIFICATE OF THE ARCHITECT: I certify that I have checked and verified this Certificate and the accompanying Partial Releases of Liens; that to the best of my knowledge and belief it is a true statement of the value of the work performed and material suitably stored on the site or other approved location by the Contractor; that all work and material included in this Certificate have been reviewed; and that all work has been performed and material supplied in full accordance with the terms of the Contract.

Date:_____ Architect:_____

APPROVED FOR PAYMENT:

Date:_____ Owner:_____

_____
(Authorized Signature)

END OF SECTION

SECTION 01 3000

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Scope of work covered by Contract Documents.

B. Coordination of all trades.

C. Codes and reference standards.

D. Ordinances and regulations.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SCOPE OF WORK COVERED BY CONTRACT DOCUMENTS

A. Project Description: New stand-alone Concessions Building at the Fort White Community Center as outlined in the documents. The work includes, but is not limited to, concrete forming and accessories, concrete reinforcing, expansion and contraction joints, cast-in-place concrete, concrete finishing, masonry mortaring and grouting, reinforced unit masonry, structural steel framing, metal fabrications, miscellaneous rough carpentry, shop-fabricated wood trusses, finish carpentry, water repellents, blanket insulation, foamed-in-place insulation, vapor retarders, sheet metal roofing, sheet metal flashing and trim, roof specialties, joint protection, door schedule, hollow metal doors and frames, access doors and frames, insulated rolling service doors, door hardware, finish schedule, acoustical panel ceilings, painting and coating, specialties, signage, toilet compartments, toilet accessories, site clearing, earth moving, rough grading, termite control. Drawings include General Project Cover Sheet, Foundation Plan, Floor Plan, Exterior Elevations, Roof Plan, Reflected Ceiling Plan, Building Sections, Life Safety Plan, Mechanical, Plumbing and Electrical Sheets.

1.4 COORDINATION

A. Coordinate work of the various specifications sections to assure efficient and orderly sequence of installation of construction elements with provisions for accommodating items installed later.

B. Verify that characteristics of elements of interrelated operating equipment are compatible. Coordinate work of various sections having interdependent responsibilities for installing, connecting to and placing in service such equipment.

C. Coordinate requirements of Mechanical, Plumbing and Electrical work. Utilize space efficiently to maximize accessibility for other installations, maintenance and repairs.

D. Execute cutting and patching to integrate elements of work, uncover ill-timed, defective and non-conforming work, provide proper openings for penetrations of existing surfaces and provide samples for testing. Seal all penetrations through roofs, walls and soffits with appropriate materials.

1.5 REGULATIONS, CODES AND STANDARDS

A. Design and construction shall conform to the Florida Building Code 5th Edition 2014 and the Florida Fire Prevention Code 5th Edition.

B. For products specified in the individual specifications sections by association or trade standards, comply with requirements of the applicable standard, except when more rigid requirements are specified or are required by applicable codes.

C. All work shall conform to all applicable Florida Building Code, ordinances and regulations governing the construction. Applicable codes are as follows:
   1. ACI 318. American Concrete Institute.
   2. AHERA. Asbestos Hazard Emergency Response Act, 40 CFR, Part 763.
   3. AISC. American Institute of Steel Construction, Allowable Stress Design - Manual of Steel Construction.
   4. AISI. American Iron and Steel Institute, Specifications for the Design of Cold-Formed Steel Structure Members.
   5. ANSI. American National Standards Institute.
   6. ASCE. American Society of Civil Engineers. References to ASCE 7-10 shall be the edition listed in these State requirements.
   7. ASHRAE. American Society of Heating, Refrigeration, and Air Conditioning Engineers.
   8. ASTM. American Society for Testing Materials.
   9. DCA. Department of Community Affairs. Florida Americans with Disability Implementation Act and the Florida Accessibility Code for Building Construction as adopted by the State Board of Building Codes and Standards, which has become the Florida Building Commission. Florida Energy Efficiency Code for Building Construction (FEEC), as outlined in Chapter 13 of F.B.C.
   10. DOT - AASHTO. American Association of State Highway and Transportation Officials "Standard Specifications for Highway Bridges", as modified by Florida DOT "Structures Design Guidelines for Load and Resistance Factor Design."
   11. FDOT. Florida Department of Transportation. **"**Standard Specifications for Road and Bridge Construction."
   12. FEMA. Federal Emergency Management Agency.
   13. Florida Building Code. Florida Building Code (FBC) 5th Edition 2014.
   14. NEC. National Electrical Code (NFPA 70). Adopted by reference in the FBC.
   15. OSHA. Occupational Safety and Health Administration, U.S. Department of Labor.
   16. SJI. Steel Joist Institute.
   17. TMS. The Masonry Society Standards.
   18. Such other codes and standards as enumerated in the technical specifications sections and included by reference. Such codes and standards shall be "current accepted edition" in effect as of the bid date, except when a specified date is specified in the individual specification sections.

1.6 TOXIC SUBSTANCES

A. The Contractor shall meet all the requirements of the State of Florida Toxic Substance Law, Chapter 87-202, Laws of Florida. The law states in part, that all toxic substances enumerated in the Florida substance list that are to be used in the construction, repair or maintenance of educational facilities are subject to certain provisions.

B. Before any such substance may be used, the Contractor shall notify the Owner at least three working days prior to using the substance. The notification shall contain the following: The name of the substance to be used, where the substance is to be used and when the substance is to be used.

END OF SECTION

SECTION 01 3300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Procedures for submittals during construction, including shop drawings and product data and samples.

B. Construction progress schedules.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SHOP DRAWINGS

A. Present in a clear and thorough manner. Title each drawing with project name and number, identify each element of shop drawings by reference to sheet number, detail or schedule of contract documents.

B. Identify field dimensions and show relation to adjacent or critical features of work or products.

C. Minimum sheet size shall be 8-1/2 x 11 inches.

1.4 PRODUCT DATA

A. Submit only pages which are pertinent and mark each copy of standard printed data to identify products, referenced to specifications section number. Show reference standards, performance characteristic and capacities; diagram, component parts, finish, dimensions and required clearances.

B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the work. Delete information not applicable. Indiscriminate submittal of unmarked product data will not be accepted.

C. As required by Florida Statute 553.842 and Florida Administrative Code 9N-3 State Product Approval, provide the information and approval numbers on all building components that will be utilized on this construction project. Statewide approved products are listed online at www.floridabuilding.org

D. Manufacturers' Certificates: When required by individual specifications section, submit applicable manufacturer's certificates that products meet or exceed specified requirements.

E. Manufacturers' Printed Instructions: Submit applicable manufacturer's instructions for delivery, storage, assembly, installation, adjusting and finishing.

1.5 SAMPLES

A. Submit full range of manufacturer's standard finishes, except when more restrictive requirements are specified, indicating colors, textures or patterns for selection. Early in the construction period, the contractor shall submit the names of all manufacturers and trade names of all materials involving color, texture or pattern selection which are proposed for actual use in the project. Color items, even in the same range, vary among different manufacturer's products, and it is therefore important that samples be submitted and selections be made from items actually intended for use in the work.

B. Submit samples to illustrate functional characteristics of products, including parts and attachments.

C. Label each sample with identification required for transmittal letter.

D. Provide field samples of finishes at project, at location acceptable to Owner, as required by individual specifications section. Install each sample complete and finished. Acceptable finishes in place may be retained in the completed work, except where otherwise noted or specified.

1.6 CONSTRUCTION PROGRESS SCHEDULES

A. Submit network analysis system using the critical path method, generally as outlined in Associated General Contractors of America (AGC) publication "The Use of CPM in Construction - A Manual for General Contractors". Other progress schedule methods may be submitted subject to the Owner's review and approval.

B. Show complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities. Show projected percentages of completion for each item of work as of time of each application for payment.

C. Show submittal dates required for shop drawings, product data and samples and product delivery dates.

1.7 CONTRACTOR'S REVIEW

A. Review all submittals prior to transmittal, determine and verify field measurements, field construction criteria, manufacturers' catalog numbers and conformance of submittal with requirements of contract documents. Submittals without Contractor's review stamp indicating approval will not be processed.

B. Coordinate submittals with requirements of work and of contract documents.

C. Sign or initial shop drawings and product data and each sample label to certify compliance with requirements of contract documents. Provide notification, at time of submittal, of any deviations from requirements of contract documents.

D. Do not fabricate products or begin work which requires submittals until return of submittal with Architect's acceptance.

1.8 SUBMITTAL REQUIREMENTS

A. Transmit submittals in accordance with approved progress schedule and in such sequence to avoid delay in the work.

B. Apply Contractor's stamp, signed or initialed, certifying to review and approval, verification of products, field dimensions and field construction criteria and coordination of information with requirements of work and contract documents. Do not send submittals until item is approved by Contractor.

C. Coordinate submittals into logical groupings to facilitate interrelation of the several items.

D. Submit electronic copies of all shop drawings and product data for each item as specified in individual specifications sections.

E. Submit under Contractor's standard transmittal letter, each transmittal letter shall be numbered for ease of reference during construction. Identify project by title and number and identify work and product by specifications section number.

1.9 RESUBMITTALS

A. Make resubmittals under procedures specified for initial submittals and identify changes made since previous submittal. Transmittal letter shall be numbered the same as initial submittal, except with suffix "A", "B", etc. for each time resubmittal occurs until accepted.

B. Delays caused by the need for resubmittals shall not constitute reason for an extension of contract time.

1.10 REVIEW

A. Review of shop drawings, product data and samples shall be as promptly as possible and submittals shall be returned to Contractor for distribution within fourteen calendar days from date received.

B. The review of submittals will be limited to general design requirements only, and shall in no way relieve the Contractor from responsibility for errors or omissions contained therein or from supplying materials specified.

C. Submittals reviewed will be marked in one of the following ways: NO EXCEPTIONS TAKEN, EXCEPTIONS AS NOTED, REVISE AND RESUBMIT or REJECTED.

1.11 DISTRIBUTION

A. Contractor shall distribute copies of shop drawings and product data and samples, which bear stamp of approval to project site file, Subcontractors, Suppliers, other affected Contractors and other entities requiring information.

B. Shop drawings that do not bear the Architect's shop drawing stamp shall not be allowed on the job site.

END OF SECTION

SECTION 01 4000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. General quality control.

B. Workmanship.

C. Manufacturers' instructions.

D. Testing laboratory services.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 QUALITY CONTROL

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.

1.4 WORKMANSHIP

A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

C. Secure products in place with positive anchorage devices designed and sized to withstand code stresses, vibration and racking.

1.5 MANUFACTURERS' INSTRUCTIONS

A. Comply with manufacturers' instructions including each step in sequence. If instructions conflict with contract documents request clarification prior to starting work.

1.6 TESTING LABORATORY SERVICES

A. Contractor shall employ at his sole expense the services of an approved independent testing laboratory to perform tests and other services required by individual specification sections.

B. Services will be performed in accordance with requirements of governing authorities and with specified standards.

C. Reports will be submitted giving observations and results of tests, indicating compliance or non-compliance with specified standards and with contract documents.

D. Contractor shall cooperate with testing laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested. Notify testing laboratory 24 hours prior to expected time for operations requiring testing services. Make arrangements with testing laboratory and pay for additional samples and tests for Contractor's convenience.

END OF SECTION

SECTION 01 5000

TEMPORARY FACILITIES AND CONTROL

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED: The Contractor shall provide the following at his sole expense, except as specified otherwise herein, including all related costs for operation, maintenance and utilities, during the entire construction period until final completion of the project.

A. Temporary electricity power. Charges relative to the cost of power consumption will be paid by the Owner. However, costs associated with facilities and connections to provide for power are to be paid by the Contractor.

B. Heat and ventilation.

C. Phone service.

D. Water provided by Owner.

E. Sanitary facilities.

F. Barriers.

G. Enclosures.

H. Protection of installed work.

I. Security. Coordinate with Owner.

J. Construction use fire extinguishers.

K. Water control.

L. Cleaning during construction.

M. Offices and sheds at Contractor's option.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 ELECTRICITY AND CONSTRUCTION LIGHTING

A. Provide service required for construction operations, with branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords.

B. Provide temporary lighting as required for construction operations. Maintain lighting and make routine repairs.

1.4 HEAT AND VENTILATION

A. Provide as required to maintain specified conditions for construction operations and to protect materials and finishes from damage due to temperature or humidity.

B. Prior to operation of permanent facilities for temporary purposes, verify that installation is approved for operation.

C. Provide ventilation of enclosed areas to cure materials, to disperse humidity and to prevent accumulations of dust, fumes, vapors or gases.

1.5 TELEPHONE SERVICE

A. Provide phone service.

1.6 WATER

A. Contractor may connect to nearest available existing water service for construction operations as well as potable water.

1.7 SANITARY FACILITIES

A. Provide and maintain required temporary toilet facilities and enclosures in accordance with requirements of governing State and local health authorities. Contractor will not be allowed to use existing toilet facilities.

1.8 BARRIERS

A. Construction site as designated by the Owner. Protect against vehicular traffic, stored materials, dumping, chemically injurious materials or water.

B. Upon issuance of the building permit and notice to proceed, a safety plan shall be provided by the Contractor which clearly delineates areas for construction, safety barriers, exits and construction traffic during the various phases of the project and when conditions change.

1.9 ENCLOSURES

A. Provide temporary weather-tight closures of any openings in exterior roofs, walls or soffits to provide acceptable working conditions and protection for materials, to allow for temporary heating or ventilation and to prevent entry of unauthorized persons.

1.10 PROTECTION OF INSTALLED WORK

A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.

B. Provide protective coverings at walls, projections, jambs, sills and soffits of openings. Protect surfaces from traffic and movement of heavy objects and storage.

C. Prohibit traffic and storage on landscaped areas.

1.11 SECURITY

A. Provide security program and facilities to protect work, and Owner's operations from unauthorized entry, vandalism and theft. Coordinate with Owner's security program. Owner will not be responsible for the Contractors' losses due to theft or vandalism to property during the construction period.

B. Owner will assist and cooperate with Contractor's security program.

1.12 CONSTRUCTION USE FIRE EXTINGUISHERS

A. Provide types, sizes, numbers and locations as would be reasonably effective in extinguishing fires by personnel at project site. Provide Type A extinguishers at locations of low-potential for either electrical or grease-oil-flammable liquids fires; provide Type ABC dry chemical extinguishers at other locations; comply with recommendations of NFPA . Post warning and quick-instructions at each extinguisher location and instruct personnel at project site at time of their first arrival on proper use of extinguishers.

1.13 CLEANING DURING CONSTRUCTION

A. Control accumulation of waste materials and rubbish and periodically dispose of off-site at approved dump.

B. Clean areas prior to start of finish work and maintain areas free of dust and other contaminants during finishing operations.

1.14 OFFICES AND SHEDS

A. Contractor's Field Office: At Contractor’s option, provide mobile structure or other structure approved by Owner, weather-tight, with lighting, electrical outlets, heating, cooling and ventilating equipment.

B. Storage sheds for tools, materials and equipment: At Contractor’s option, provide weather-tight, with heat and ventilation for products requiring controlled conditions, with adequate space for organized storage and access and lighting for inspection of stored materials. Coordinate location with Owner.

1.15 REMOVAL

A. Remove temporary materials, equipment, services and construction prior to substantial completion review.

B. Clean and repair damage caused by installation or use of temporary facilities.

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Products.

B. Transportation and handling.

C. Storage and protection.

D. Product options.

E. Substitutions.

F. Systems demonstration.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 PRODUCTS

A. Products include material, equipment and systems.

B. Comply with specifications and referenced standards as minimum requirements.

C. As required by Florida Statute 553.842 and Florida Administrative Code 9N-3 State Product Approval, provide the information and approval numbers on all building components that will be utilized on this construction project. Statewide approved products are listed online at www.floridabuilding.org

D. Components required to be supplied in quantity within a specification section and like items shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturers' service.

E. Do not use materials and equipment removed from existing structures, except as specifically required or allowed by contract documents.

1.4 TRANSPORTATION AND HANDLING

A. Transport products by approved methods to avoid product damage, deliver in undamaged condition in manufacturers' unopened containers or packaging, dry.

B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.

C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.

1.5 STORAGE AND PROTECTION

A. Store products in accordance with manufacturers' instructions with seals and labels intact and legible. Store sensitive products in weather-tight enclosures and maintain within temperature and humidity ranges required by manufacturers' instructions.

B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.

C. Store loose granular materials on solid surfaces in a well-drained area and prevent mixing with foreign matter.

D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged and are maintained under required conditions.

1.6 PRODUCT OPTIONS

A. Products specified by reference standards or by description only. Any product meeting those standards or descriptions.

B. Products specified by naming one or more manufacturers with a provision for either pre-bid or post-bid substitutions. Submit a request for substitution for any manufacturer not specifically named.

C. Products specified by naming several manufacturers: products of named manufacturers meeting specifications: no options, no substitutions allowed.

D. Products specified by naming only one manufacturer: no options, no substitutions allowed.

1.7 SUBSTITUTIONS

A. Pre-Bid Substitutions:

1. Bidders may submit bids on approved substitute products only. Acceptance and approval of all products submitted as substitutes remains the sole prerogative of the Architect and will be determined by quality and other overall assimilation of the products into the design of the project. It is requested that each prospective bidder immediately peruse the drawings and project manual upon receipt to determine which, if any, pre-bid substitutions they plan to submit for approval.
2. Bidders having substitute products to be evaluated must submit prior to bid date, the following information, in addition to specific information required in the individual specifications sections for pre-bid substitutions: Complete specifications, full size samples, photographs, available colors and finishes, a clear statement on each substitute product stating exactly where and how the products varies, if any, from the specified products in dimensions, structure, material and design.
3. Upon receipt and thorough evaluation of the requested information, the Architect will do one of the following: Approve by Addendum the substitute products per the submitted materials; approve by Addendum the substitute products with revisions requiring the vendor to modify his substitute products accordingly; or reject the substitute products. Approval of a manufacturer other than the manufacturer specified does not indicate the approved manufacturer's standard products are acceptable. The approved manufacturers must comply with products as specified. Samples: should samples of substitute products be required for evaluation, said sample must be submitted prior to bid date. Samples submitted by successful bidders will be impounded by the Owner to insure that products delivered to site conform in every respect to the sample. The Owner will not buy samples and will not assume any costs incidental thereto. Return of samples: Samples not destroyed in testing may be claimed by the unsuccessful bidders up to thirty calendar days after bid date, and by successful bidder up to fourteen calendar days after final payment. The Owner will assume no responsibility for samples not claimed within the time specified and will not pay for samples damaged in testing.

B. Post-Bid Substitutions (after award and execution of contract):

1. Document each request with complete data substantiating compliance of proposed substitution with contract documents.

2. Request constitutes a representation that Contractor: Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product and will provide the same warranty for substitution as for specified product. Will coordinate installation and make other changes which may be required for work to be complete in all respects. Waives claims for additional costs which may subsequently become apparent; however, deductions from contract sum will be considered and must be so noted on request.
3. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate request per provisions specified hereinbefore.
4. Architect will determine acceptability of proposed substitution and will notify Contractor of acceptance or rejection in writing within a reasonable time.

1.8 SYSTEMS DEMONSTRATION

A. Prior to final review, instruct Owner's personnel in operation, adjustment and maintenance of equipment and systems, using the operation and maintenance manual as the basis of instruction.

B. See Section 01 7000 - Execution and Closeout Requirements.

END OF SECTION

SECTION 01 7000

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Closeout procedures.

B. Final cleaning.

C. Prerequisites to final payment.

D. Record drawings.

E. Operation and maintenance manuals.

F. Warranties, guarantees and bonds.

G. Spare parts and maintenance materials.

H. Correction during contractor's one year guarantee period.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 CLOSEOUT PROCEDURES

A. Comply with procedures stated in general conditions of the contract. When the work is substantially complete, in accordance with the definition and requirements for the project to be reviewed for substantial completion, the contractor shall notify the Architect who shall make a substantial completion review and after said review is made, the Contractor shall remedy any defects or make any corrections on the Architect's punch lists to prepare the project for a final completion review.

B. Prerequisites to Substantial Completion Review: Before the project will be consider the project ready for substantial completion review, all of the following, as a minimum, shall be performed:

1. All general construction completed and all materials and equipment installed and operating as intended.

2. All mechanical, controls, data and all electrical work complete, fixtures in place, connected and ready for test.

3. All painting and joint sealants completed, checked by the Contractor for number of coats and ready for inspection.

4. All equipment cleaned, connected and in full working order.

5. Grounds clear of all temporary materials, equipment, services and construction, field offices and storage sheds, surplus materials and equipment and raked clean of all debris with all debris removed from the site.

6. Sections of all walks, drives and other permanent features which have been damaged during construction shall be removed and replaced; patches not acceptable.

1.4 FINAL CLEANING

A. Execute prior to final review.

B. Clean exterior surfaces exposed to view, remove temporary labels, stains and foreign substances and polish transparent and glossy surfaces. Clean equipment and fixtures to a sanitary condition.

C. Clean project site, sweep paved areas and rake clean other surfaces.

1.5 PREREQUISITES TO FINAL REVIEW: When the Contractor considers the work has reached final completion, and all items on the punch lists have been corrected and final cleaning has been completed, submit notice to Architect that work is complete in accordance with the contract documents and ready for final review.

A. If all items are found in order, the Architect will recommend final acceptance of the project by the Owner, upon receipt of all final closeout documents including, but not limited to, the following: final releases of liens from all Subcontractors and Suppliers. Guarantees and warranties as outlined in each section of the specifications. Note length of guarantees and warranties may vary from section to section. All O&M manuals, Final reports and all other closeout requirements outlined in the specifications.

1.6 PREREQUISITES TO FINAL PAYMENT (ALL APPLICABLE ITEMS LISTED BELOW SHALL BE SUBMITTED IN DUPLICATE IN ONE COMPLETE PACKAGE):

A. Contractor's affidavit that responsible representatives of the Owner have been properly instructed and informed as to all working characteristics of mechanical and electrical systems and equipment as required under the individual specifications sections and in accordance with the provisions of Section 01 6000 - Product Requirements, as applicable to:

1. Heating and ventilating and air conditioning - operation and control.

2. Electrical control switches, panels, fans, motors, etc.

3. Miscellaneous equipment operation.

4. Other systems as required - sound, energy management system, data, etc.

B. Record drawings, operation and maintenance manuals, warranties, guarantees and bonds.

C. Contractor's affidavit that spare parts and maintenance materials have been delivered to the facilities department of the Owner.

D. Submit satisfactory evidence using the latest editions of the following forms, unless otherwise stipulated by the Owner, showing that all labor employed on the project has been paid in full and that all materials and/or equipment and incidentals used directly or indirectly in connection with the project have been paid for in full and that no claims are outstanding against the work.

1. Contractor's Affidavit of Payment of Debts and Claims (A.I.A. Document G706), Conditional Final Releases of Lien.

2. Contractor's Affidavit of Release of Liens (A.I.A. Document G706A).

3. Consent of Surety Company to Final Payment (A.I.A. Document G707).

E. The Contractor shall submit on his letterhead a type written list of all Subcontractors used for this project and include their address, telephone number and email for use by the Owner during the warranty period.

F. Provide all submittals, approvals and certificates required by governing authorities for this project and submit a final statement of accounting giving total adjusted contract sum, previous payments, and sum remaining due.

1.7 RECORD DRAWINGS

A. Keep record drawings current and do not permanently conceal any work until required information has been recorded.

B. Procedure:

1. During the progress of the work, the Contractor's Superintendent will be responsible for recording any changes in the drawings.

2. Upon completion of the work, this data shall be transferred to a clean copy of the original drawings and submitted to the Owner.

1.8 OPERATION AND MAINTENANCE MANUALS

A. Provide Operation and Maintenance Manuals for: Mechanical equipment and controls, electrical equipment and controls and as specified in individual specification sections.

B. Submit two sets bound in 8-1/2 x 11 inch three-ring side binders with durable plastic covers, unless otherwise specified in individual specifications sections.

C. Provide a separate volume for each system with a table of contents and index tabs for each volume.

1. Part 1: Directory, listing names, addresses and telephone numbers of: Architect, Contractor and Subcontractor.

2. Part 2: Operation and maintenance instructions arranged by system. For each system give names, addresses and telephone numbers of Subcontractors and Suppliers. List: appropriate design criteria, list of equipment, parts list, operating instructions, maintenance instructions, equipment, maintenance instructions, finishes, shop drawings and product data and warranties.

1.9 WARRANTIES, GUARANTEES AND BONDS

A. Execute Contractor's applicable documents and assemble documents executed by Subcontractors, Suppliers and Manufacturers. Provide table of contents and assemble all documents in binder with durable plastic cover.

1.10 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts and maintenance materials in quantities specified in individual specifications sections, in addition to that used for construction of work. Coordinate with Owner and deliver to project site.

1.11 CORRECTION DURING CONTRACTOR'S ONE YEAR GUARANTEE PERIOD

A. Contractor shall report to the proper officials regarding corrections to be made after job completion.

1. Owner will notify Contractor of deficiency.

2. Contractor shall accomplish agreed upon corrective measures and notify the Owner and secure a release on the item.

3. Should the Contractor fail to perform corrective work within fourteen calendar days, Owner shall notify Architect. Architect will contact the Contractor for corrective work. If work is not begun within three working days from Architect's notification the surety company may be notified of Contractor's non-performance.

END OF SECTION

SECTION 03 1000

CONCRETE FORMING AND ACCESSORIES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Formwork for cast-in-place concrete, with shoring, bracing and anchorage.

B. Openings for other affected work.

C. Form accessories.

D. Stripping forms.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 03 2000 – Concrete Reinforcement

B. Section 03 2510 – Expansion and Contraction Joints

C. Section 03 3000 – Cast-in-Place Concrete

1.4 REFERENCES

A. ACI 301 - Specifications for Structural Concrete for Buildings.

B. ACI 347 - Recommended Practice for Concrete Formwork.

C. PS 1 - Preconstruction and Industrial Plywood.

D. ACI 318 - Building Code Requirements for Reinforced Concrete.

1.5 SYSTEM DESCRIPTION

A. Design concrete formwork, shoring and bracing to meet design requirements of the Florida Building Code so that resultant concrete forms to required shapes, lines and dimensions.

1.6 QUALITY ASSURANCE

A. Construct and erect concrete formwork in accordance with ACI 301 and 347.

1.7 SUBMITTALS: Submittals during construction shall be made in accordance with section 01 3300. In addition, the following specific information shall be provided.

A. Submit product data for all formwork accessory items.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials under provisions of Section 01 6000.

B. Store form materials off ground in ventilated and protected area to prevent deterioration from moisture or damage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general concrete configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.

2.2 FORM MATERIALS

A. Finished Work: Douglas Fir plywood, 5/8-inch minimum thickness with select sheathing tight face grade. Provide sound and undamaged sheets with straight edges.

B. Concrete Concealed Work: Construct forms of any material which will ensure against leakage of liquid concrete and which will provide the required shapes, lines and dimensions.

2.3 FORMWORK ACCESSORIES

A. Form Ties: Concrete type snap-off metal of adjustable length with one inch break back dimension. Provide free of defects that will leave holes no larger that one inch diameter in concrete surface.

B. Form Release Agent: Colorless material which will not stain concrete or absorb moisture. Silcoseal 77 or equal.

C. Fillets for Chamfered Corners: Wood strips of type and size as required in maximum possible lengths.

D. Nails, Spikes, Lag Bolts, Through Bolts and Anchorages: Size as required with strength and character to maintain formwork in place while placing concrete.

PART 3 - EXECUTION

3.1 GENERAL

A. Verify lines, levels and measurements before proceeding with formwork.

B. It is desirable that, wherever possible, concrete footings shall be placed in earth trenches without forms. In instances, however, where the walls of earth trenches are soft or crumbly, forms shall be provided for the sides of footings as required. Excavations shall be carried far enough to permit the removal of these forms without damage to the work before backfilling.

3.2 PREPARATION

A. Hand-trim sides and bottoms of earth forms and remove loose dirt and thoroughly dampen prior to placing concrete.

B. Minimize form joints and symmetrically align joints.

C. Arrange and assemble formwork to permit dismantling and stripping so that concrete is not damaged during its removal.

D. All forms shall be clean and free from shavings and other debris prior to placing concrete.

3.3 ERECTION

A. Provide bracing to ensure stability of formwork. Strengthen formwork liable to be overstressed by concrete construction loads.

B. Camber slabs and beams to achieve ACI 301 tolerances.

C. Provide temporary ports in formwork to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain. Close ports with tight fitting panels, flush with inside face of forms, neatly fitted so that joints will not be apparent in exposed concrete surfaces.

D. Concrete construct formwork to maintain tolerances in accordance with ACI 301.

E. Provide bulkheads with keyed joints at all cold joints as required. Cold joints shall only be transverse to the main longitudinal direction of a member.

F. Contractor shall provide minimum 48 hour notice to for inspection of formwork prior to casting concrete. Concrete shall not be cast until formwork, reinforcing, embedded items and other related work is approved.

3.4 APPLICATION OF FORM RELEASE AGENT

A. Apply form release agent on formwork in accordance with manufacturer's instructions. Apply prior to placing reinforcing steel, anchoring devices and embedded items.

B. Do not apply form release agent where concrete surfaces are scheduled to receive special finishes which may be affected by agent. Soak contact surfaces of untreated forms with clean water. Keep surfaces wet prior to placing concrete.

3.5 INSERTS, EMBEDDED PARTS AND OPENINGS

A. Provide formed openings where required for work embedded in or passing through concrete.

B. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors and other inserts.

C. Install accessories in accordance with manufacturer's instructions, level and plumb. Ensure items are not disturbed during concrete placement.

3.6 CLEANING

A. Clean forms to remove foreign matter as erection proceeds.

B. Ensure that water and debris drain to exterior through cleanout ports.

3.7 FORM REMOVAL

A. Provide minimum 48 hour notification prior to removing formwork or shoring.

B. Do not remove forms and shoring bracing until concrete has sufficient strength to support its own weight and concrete construction and design loads which may be imposed upon it. Remove load supporting forms only when concrete has attained 100 percent of required 28 day compressive strength.

C. Shore structural members due to design requirements or concrete construction concrete conditions to permit successive concrete construction.

D. Remove formwork progressively so no unbalanced loads are imposed on structure.

E. Do not damage concrete surfaces during form removal.

F. All tie holes shall be filled with non-shrink and nonmetallic grout. Color of grout after curing shall match color of adjacent concrete.

END OF SECTION

SECTION 03 2000

CONCRETE REINFORCING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Reinforcing steel bars and welded steel wire fabric for cast-in-place concrete.

B. Support chairs, bar supports and spacers for supporting reinforcement.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 03 1000 – Concrete Forming and Accessories

B. Section 03 2510 – Expansion and Contraction Joints

C. Section 03 3000 – Cast-In-Place Concrete

1.4 REFERENCES

A. ACI 301 - Specifications for Structural Concrete for Buildings.

B. ACI 315 - Details and Detailing of Concrete Reinforcement.

C. ASTM Standards and Test Procedures as referenced herein.

D. AWS D1.4 - Structural Welding Code Reinforcing Steel.

E. CRSI - Manual of Practice.

F. CRSI 63 - Recommended Practice for Placing Reinforcing Bars.

G. CRSI 65 - Recommended Practice for Placing Bar Supports, Specifications and Nomenclature.

H. ACI 531 - Building Code Requirements for Concrete Masonry structures.

I. ACI 318 - Building Code Requirements for Reinforced Concrete.

1.5 QUALITY ASSURANCE

A. Perform concrete reinforcement work in accordance with CRSI Manual of Standard Practice.

B. Conform to ACI 315.

1.6 SUBMITTALS:

A. Submit mill test certificates of supplied reinforcing, steel indicating physical and chemical analysis.

B. Submit shop drawings for fabrications, bending and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures" showing bar schedules, diagrams of bent bars and arrangement of concrete reinforcement. Include special reinforcement required and openings through concrete structures. Shop drawings shall indicate cold joint locations and details and shall detail reinforcing splices.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Reinforcing Steel: ASTM A615 grade 60 billet-steel deformed bars with uncoated finish. ASTM A615 grade 40 bars may be used for #3 and #4 ties and stirrups.

B. Welded Steel Wire Fabric: ASTM A185 plain type with coiled rolls and uncoated finish.

2.2 ACCESSORY MATERIALS

A. Tie Wire: Minimum 16 gauge annealed type.

B. Chairs, bolsters, bar supports and spacers shall be made specifically for intended use. Size and shape for strength and support of reinforcement during installation and placement of concrete. Brick or CMU is not acceptable for support of reinforcing.

2.3 FABRICATION

A. Fabricate in accordance with ACI 315. All bars shall be bent cold.

B. Locate reinforcing splices at points of minimum stress.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Before placing concrete, clean reinforcement of loose scale, rust, oil, mud or other foreign particles or coatings. Reinforcing steel shall be free of kinks and non-shop bends. Any field bends shall be verified and approved prior to installation.

B. Place, support and secure reinforcement against displacement. Do not deviate from alignment or measurement.

C. Lap splices shall be in accordance with ACI 318 class C lap splices for concrete reinforcing unless greater laps are indicated on drawings. Lap splices shall be in accordance with ACI 531 for masonry reinforcing unless otherwise indicated on drawings. In the event of a conflict with the drawings or details, ACI 318 and ACI 531 shall govern.

3.2 INSPECTION

A. Notification: The Contractor shall provide 48 hours prior to placing concrete to permit the inspection of the formwork and reinforcing.

B. Inspection of Steel Reinforcing: Concrete shall not be poured until the steel has been inspected and approved.

END OF SECTION

SECTION 03 2510

EXPANSION AND CONTRACTION JOINTS

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Forming integral control joints in concrete.

B. Expansion joints in concrete.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 03 1000 – Concrete Forming and Accessories

B. Section 03 3000 – Cast-In-Place Concrete

C. Section 07 9000 – Joint Protection

1.4 REFERENCES

A. ASTM Standard and Test Procedures as referenced herein.

1.5 SUBMITTALS

A. Provide 12-inch long sample of each expansion joint and control joint material specified herein.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered.

2.2 INTEGRAL JOINT MATERIALS

A. Expansion Joint Filler: ASTM D994, bituminous impregnated fiberboard.

B. Control Joint: Form all control joints with galvanized steel, tongue and groove type, ribbed steel spikes with tongue to fit top screed edge.

2.3 SEALANTS

A. Sealant and Primer: Specified in Section 07 9000.

B. Pourable Sealant: Hot poured rubber, synthetic rubber or coal tar and rubber compound type in accordance with ASTM D1190.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Locate and form expansion and control joints.

B. Install joint cover anchorage in accordance with manufacturer's instructions. Install joint covers after adjacent construction activity is complete.

C. Install expansion joint fillers in accordance with manufacturer's instructions.

D. Apply sealants in accordance with Section 07 9000.

E. Place formed control joints in floor slabs and other slabs on grade, per concrete placement sequence. Set top screed to required elevations. Secure to resist movement of wet concrete. Maximum spacing of control joints shall be 20' x 20'. Closer spacing may be required to suit special conditions.

END OF SECTION

SECTION 03 3000

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Cast-in-place concrete slabs on grade, exterior and interior.

B. Concrete slabs on the interior shall be Color-Conditioned Concrete..

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 03 1000 – Concrete Formwork and Accessories

B. Section 03 2000 – Concrete Reinforcing

C. Section 03 2510 – Expansion and Contraction Joints

D. Section 03 5000 – Concrete Finishing

1.4 REFERENCES

A. ACI 301 - Specifications for Structural Concrete for Buildings.

B. ASTM Standards and Test Procedures as referenced herein.

C. ACI 318-05 - Building Code Requirements for Reinforced Concrete.

1.5 REGULATORY REQUIREMENTS

A. Applicable Codes: The American Concrete Institute Building Code (ACI-318-05) and the Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI-318-05).

1.6 TESTING

A. Testing laboratory services shall be performed under provisions of Section 01 4000, at the Contractor's sole expense.

B. A set of four concrete test cylinders shall be taken for up to a maximum of every 25 cubic yards of concrete placed each day. One cylinder shall be tested at the expiration of seven days after concrete is placed; two at the expiration of twenty-eight days after concrete is placed, and the fourth held in reserve for additional testing in the event of failure which might indicate a defective cylinder.

C. Two additional test cylinders shall be taken during cold or hot weather and cured on site under same conditions as represented concrete.

D. One slump test shall be taken for each set of test cylinders taken.

E. Tests shall be made by an independent testing laboratory under the direction of an Engineer registered in the State of Florida. Test cylinders shall be prepared and stored by the testing laboratory and said laboratory shall be charged with the full responsibility for cylinder handling and curing prior to testing. The testing laboratory shall transport all cylinders, at the proper time, to the testing facility and, after performance of tests, transmit the results.

F. If test cylinders fail under laboratory tests to meet the strength requirements specified for the particular type of concrete involved, the Owner shall have the right to order such changes in mix and water-cement ratio as necessary to secure the strength required. The Owner shall also have the right to order additional testing at the Contractor's sole expense, including load tests on any portion of the structure where test cylinders fail to show proper strength. Load tests shall be made in accordance with applicable Sections of ACI 301 for that portion of the structure affected. If members or portions of the structure show evident failure, such changes or modifications as are necessary to make the structure adequate for the rated capacity shall be made at the Contractor's sole expense.

G. Strength level of an individual class of concrete shall be considered satisfactory if both of the following requirements are met:
   1. Every arithmetic average of any three consecutive strength tests equals or exceeds f = c.
   2. No individual strength test (average of two cylinders) falls below f >c by more than 500 psi (3450 kPa)

1.7 SUBMITTALS: Submittals during construction shall be made in accordance with section 01 3300. In addition, the following specific information shall be provided:

A. Provide product data for specified products.

B. Submit manufacturers' instructions for specified products.

C. Submit concrete mix design for each type of concrete based on either laboratory trial batch or field experience methods in accordance with ACI 318-05 Chapter 4. Concrete design mixes shall include a specification for water added in the field to the mix in accordance with the mix design provisions of ACI 318-05 Chapter 4. Submit for approval.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.

B. Like items of materials or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 CONCRETE MATERIALS

A. Cement: ASTM C150, Type I Portland cement; grey color.

B. Fine and Coarse Aggregates: Natural aggregates, free from deleterious coating, thoroughly washed before use; conforming to ASTM C33.

C. Water: Clean and not detrimental to concrete.

2.3 ADMIXTURES

A. Air Entrainment: ASTM C260, except it shall be nontoxic after 30 days and shall contain no chlorides.

B. Chemical Admixture: ASTM C494, Type A - water reducing or Type D - water reducing and retarding, except shall contain no chlorides, shall be nontoxic after 30 days, and shall be compatible with the air-entraining admixtures. Super plasticizer shall comply with ASTM C494 Type F water reducing - high range or ASTM C494, Type G - water reducing, high range and retarder, shall be added at the site to mixed and batched concrete and shall be nontoxic after 30 days and shall be compatible with the air-entraining admixture and shall contain no cholides.

C. Chromix Admixtures for Color-Conditioned Concrete for all interior slabs. Color selection shall be made during construction submittals process. Admixture shall be equal to Scofield Systems, www.scofield.com

2.4 ACCESSORIES

A. Bonding Agent: As manufactured by Sika Chemical Corporation Lyndhurst, NJ; or Adhesive Engineering Company, San Carlos, CA; or equal. Product shall be recommended by manufacturer as suitable to meet job requirements with regard to surface, pot life, set time, vertical or horizontal application, forming restrictions, etc. Furnish manufacturer's specific instructions for this job application.

B. Non-Shrink Grout: Premixed compound consisting of nonmetallic aggregate, cement, water reducing and plasticizing agents; SET nonshrink grout as manufactured by Master Builders Co., Cleveland, OH; Crystex as manufactured by L&M Construction Chemicals, Inc., Omaha, NE; or equal.

C. Expansion Joint Filler and Control Joints: Per Section 03 2510.

D. Absorptive cover shall be burlap cloth weighing approximately 9 oz. per sq. yd., complying with AASHTO M182, Class 2.

E. Moisture-retaining cover shall be waterproof paper, or polyethylene film, or polyethylene-coated burlap. All moisture-retaining cover materials shall comply with ASTM C-171.

2.5 CONCRETE MIX

A. Mix concrete in accordance with ASTM C94. Delivery tickets shall contain time of departure from plant, design mix designation, design strength and shall indicate any changes to concrete mix such as added water, added superplasticizer, etc.

B. Provide concrete with the following characteristics:

Unit	Measurement
Comprehensive Strength (28 days):	3000 psi
Concrete Aggregate Size (maximum):	1-inch
Masonry Grouting Aggregate Size (maximum):	3/8-inch
Air Entrainment:	1-1/2 to 4-1/2 % by volume
Use Slump Range:	
Slab on Grade or Fill	4 inches plus or minus 1 inch
Footings, Beams, Pile Caps	4 inches plus or minus 1 inch
Columns	2-1/2 to 5 inches
Masonry grouting	8 to 10 inches

C. Use admixtures in cold weather or hot weather as required only when approved. Use of admixtures will not relax cold weather placement requirements.

D. Add air entraining admixture to concrete mix for exposed concrete work above grade and as otherwise required when approved.

E. When air temperature is between 85 and 90 degrees, the mixing and delivering time shall be less than 75 minutes. When air temperature is higher than 90 degrees, the mixing and delivering time shall be less than 60 minutes.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, held securely, and will not cause hardship in placing concrete.

3.2 PREPARATION

A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Apply bonding agent in accordance with manufacturer's instructions.

B. Install vapor barrier as specified in Section 07 2600. Do not disturb or damage vapor barrier while placing concrete.

3.3 PLACING CONCRETE

A. Notify inspector minimum 48 hours prior to commencement of concreting operations.

B. Place concrete in accordance with ACI 301.

C. Concreting shall be carried on at such a rate that concrete is at all times plastic and flows readily into spaces between reinforcement.

D. Depositing of Concrete: Concrete shall be deposited as nearly as is possible in its final location and in such a manner that it will not show segregation. After operation has started, the unit of operation shall be carried on continuously and as rapidly as possible.

E. After concreting is started, it shall be carried on as a continuous operation until placing of a panel or section, as defined by its boundaries or predetermined joints, is completed.

F. Compacting: Concrete shall be deposited in horizontal layers not to exceed 18-inches in depth and thoroughly compacted, by means of recognized methods of mechanical vibration, into all parts of the forms and until air pockets are worked out.

G. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.

H. All concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement and embedded fixtures and into corners of forms.

I. Surface of concrete construction joints shall be cleaned and laitance removed. Immediately before new concrete is placed, all construction joints shall be wetted and standing water removed.

J. Maintain minimum concrete cover around reinforcing as follows:

Item	Coverage
Beams	1-1/2 inches
Column Ties	1-1/2 inches
Surfaces Exposed to Weather	2 inches
Footings and Concrete Formed Against Earth	3 inches
Slabs on Fill	3/4 inches

K. Place floor slabs on fill in checkerboard pattern.

L. Separate slabs on fill from vertical surfaces with expansion joint filler; extend from bottom of slab to within 1/4 inch of finished slab surface. Per Section 03 2510.

M. The following concrete shall be prohibited: Partially hardened concrete, contaminated concrete, retempered concrete and concrete that is re-mixed after it has taken its initial set.

3.4 FINISHING

A. Provide concrete surfaces to be left exposed with smooth rubbed finish. Form joints in exposed columns will not be allowed.

B. Formed concrete surfaces not exposed shall be finished with the texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4-inch in height rubbed down or chipped off. The tops of walls, horizontal offsets and similar unformed surfaces occurring adjacent to formed surfaces shall be smooth and finished with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces.

C. Finish floors in accordance with Section 03 3500.

3.5 COLD WEATHER PLACING

A. Protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures, in compliance with ACI 306 and as follows.

B. When air temperature has fallen to or is expected to fall below 40° F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50° F, and not more than 80° F at point of placement.

C. Do not use calcium chloride, salt and other materials containing antifreeze agents or chemical accelerators in mix designs.

3.6 HOT WEATHER PLACING

A. When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as follows.

B. Cool ingredients before mixing to maintain concrete temperature at time of placement below 95° F. Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is used to calculate total amount of water. Use of liquid nitrogen to cool concrete is Contractor's option.

C. Cover reinforcing steel with water soaked burlap, so that steel temperature will not exceed the ambient air temperature immediately before concrete is placed.

D. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed when temperatures exceed 90° F.

E. Use water-reducing retarding admixture (Type D) when required by high temperatures, low humidity or other adverse placing conditions.

3.7 CONCRETE CURING AND PROTECTION

A. Concrete shall be maintained above 50° F and in a moist condition for at least the first 7 days after placement.

B. Protect freshly placed exposed concrete slab surfaces from premature drying. Start moisture curing as soon as free water has disappeared from concrete surface after placing and finishing. Begin final curing by moisture curing or moisture-cover curing immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. If forms are removed before 7 days, cure formed concrete by methods specified

below, as applicable. Cure other unformed surfaces by application of appropriate moisture curing method.

C. Moisture curing shall be performed by keeping concrete surface continuously wet by continuous water-fog spray, or by covering concrete surface with absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Absorptive cover shall be placed to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.

D. Provide moisture-cover curing by covering concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3-inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3.8 PATCHING

A. Immediately after removal of forms, all concrete surfaces shall be inspected. All honey-comb voids, stone pickets and tie holes shall be patched before the concrete is thoroughly hardened.

B. Defective areas shall be chipped away to a depth of not less than 1-inch, with the edges perpendicular to the surface. The area to be patched and a space at least 6-inches wide entirely surrounding the area to be patched shall be wetted to prevent absorption of water from the patching mortar.

C. Patching mortar shall be made of the same material and in the same proportions as used for the concrete, except that the coarse aggregate shall be omitted. Non-shrink grout specified herein may be used for patching mortar.

D. The patching mortar shall be thoroughly compacted into place, all holes filled solid using an approved tamping device, and shall be screened off so as to leave patch slightly higher than surrounding area. It shall be then left undisturbed for a period of one or two hours, to permit initial shrinkage, before being finally finished. The patch shall be finished in such a manner as to match the surrounding surface.

E. Where defective work is excessive, secure approval to patch. Permission to patch does not relieve the Contractor of the responsibility of removing defective work if patching cannot be done satisfactorily.

3.9 DEFECTIVE CONCRETE

A. Modify or replace concrete not conforming to required levels and lines, details, and elevations.

B. Repair or replace concrete not properly placed or of the specified type as directed.

3.10 FIELD QUALITY CONTROL

A. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature and test samples taken.

3.11 PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperature, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

END OF SECTION

SECTION 03 3500

CONCRETE FINISHING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Finish slabs on fill or grade.

B. Moisture curing materials, etc.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 03 2510 – Expansion and Contraction Joints

B. Section 03 3000 – Cast-In-Place Concrete

1.4 REFERENCES

A. ACI 301 - Specifications for Structural Concrete for Buildings.

B. ASTM Standards and Test Procedures as referenced herein.

C. Federal Specifications as referenced herein.

1.5 SUBMITTALS

A. Provide product data for specified products and applicable manufacturer's instructions.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials under provisions of Section 01 6000.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.

B. Like items of materials or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, some parts and manufacturer's service.

2.2 MATERIALS

A. For curing materials for moisture curing of interior slabs, see Section 03 3000.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify floor surfaces are acceptable for application of this work.

B. Ensure floor surfaces are depressed where required to accommodate finish materials, such as ceramic tile.

C. Beginning of installation means acceptance of surfaces.

3.2 INTERIOR FLOOR FINISHING

A. Finish concrete floor surfaces in accordance with ACI 301.

B. Uniformly spread, screed, tamp with a jitterbug and wood float concrete to a true, even plane.

C. Manually float and lightly rake surfaces which will receive ceramic tile with full bed setting system.

D. Steel trowel surfaces to receive resilient flooring.

E. Steel trowel surfaces which will be left exposed or painted.

F. The finishing tolerance for concrete slabs which receive resilient coverings shall be 1/8” maximum in 10 feet.

3.3 EXTERIOR SLAB FINISHING

A. Prepare exterior slabs as specified hereinbefore for interior floor finishing, except light steel trowel finish and final finish by lightly brooming in a direction perpendicular to traffic.

B. Immediately following placement, slabs shall be protected from premature drying, hot and cold temperatures, rain water, mechanical injury, oil, grease and other injurious materials by covering with roofing felts exterior curing compounds, or other approved methods or materials.

3.4 TOLERANCES

A. Maintain surface flatness with maximum variation of 1/8-inch in 10 feet.

B. In areas of floor drains, maintain floor level at walls and slope surface uniformly to drains at 1/4 inch per foot.

3.5 CURING

A. Cure exterior slab surfaces in accordance with ACI 301. Do not use curing compounds on any interior floor slabs. Apply curing compound on exterior slabs only. Apply in accordance with manufacturer's instructions.

END OF SECTION

SECTION 04 0514

MASONRY MORTARING AND GROUTING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the Work necessary to furnish and install, complete, the following:

A. Mortar and grout for all masonry.

B. Note that the hollow metal door frames are specified to be grout filled.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 04 2016 – Reinforced Unit Masonry

1.4 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

1.5 SUBMITTALS:

A. Submit test reports on grout indicating conformance to ASTM C476 and ASTM C94, as applicable.

B. Submit manufacturers' certificate stating that products specified herein meet or exceed specified requirements.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials under provisions of Section 01 6000.

B. Maintain packaged materials clean, dry and protected against dampness, freezing and foreign matter.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Maintain materials and ambient air temperatures to minimum 50° F prior to, during, and 48 hours after completion of masonry work.

1.8 TESTING

A. Testing laboratory services shall be performed under provisions of Section 01 4000, at the Contractor's sole expense.

B. Testing of Mortar Mix: In accordance with ASTM C780.

C. Testing of Grout Mix: In accordance with ASTM C476 and ASTM C1019. The strength for concrete fill in vertical reinforced masonry cells shall be a minimum of 2,000 psi.

D. Mortar and grout samples for strength testing shall be taken at the beginning of the masonry work.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Portland Cement: ASTM C150, Type I, gray color.

B. Masonry Cement: ASTM C91.

C. Mortar Aggregate: ASTM C144, standard masonry type.

D. Hydrated Lime: ASTM C207, Type S.

E. Grout Aggregate: ASTM C404.

F. Water: Clean and free of deleterious amounts of acids, chlorides and organic materials.

2.2 MORTAR MIXES

A. Mortar for Masonry: Type S utilizing the Proportion Method to achieve 1800 psi strength.

B. Pointing Mortar: Type N.

2.3 MORTAR MIXING

A. Thoroughly mix mortar ingredients in quantities needed for immediate use. The mortar shall be machine mixed in approved mixers. Mixer drums shall be kept clean and free of debris and dried mortar. The mortar shall be in place before the initial setting of the cement has taken place.

B. Do not use anti-freeze compounds to lower the freezing point of mortar. Do not use calcium chloride in the mortar as an accelerator.

C. Use mortar within two hours after mixing at temperatures of 80° F or two-and-one-half hours at temperatures under 50° F.

D. Mortar that has begun to set shall not be re-tempered or reworked and shall be discarded.

2.4 GROUT MIXES

A. Grout shall be 3000 P.S.I. transit mixed pea gravel concrete.

2.5 MORTAR MIXING

A. Thoroughly mix ingredients in quantities needed for immediate use in accordance with ASTM C476 for site mixed mortar.

B. Do not use anti-freeze compounds to lower the freezing point of grout. Do not use calcium chloride in the grout as an accelerator.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install mortar and grout to requirements of the specific masonry Sections and other Sections, as applicable.

END OF SECTION

SECTION 04 2016

REINFORCED UNIT MASONRY

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Concrete masonry units.

B. Split-faced finished CMU veneer.

C. Reinforcement, anchorage and accessories.

D. Precast concrete items.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 03 2000 – Concrete Reinforcing

B. Section 03 3000 – Cast-in-Place Concrete

C. Section 04 0514 – Masonry Mortaring and Grouting

1.4 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300.

A. Submit product data for each item of accessories specified herein.

B. Submit manufacturer's certificate that supplied concrete masonry units meet or exceed specified requirements. Certificate shall be signed by an authorized agent of the manufacturing company and shall contain the following information:

1. Name and address of Contractor
2. Project location
3. Quantities and dates of shipment or delivery
4. Fire Rating and U. L. Certification of Fire Rated CMU, if applicable.
5. Compressive strength (psi)
6. Absorption (psf)
7. Linear shrinkage potential
8. Method of curing
9. Date of manufacture
10. Weight of unit
11. Weight of concrete (pcf)

C. Submit mill test certificates of supplied reinforcing steel indicating physical and chemical analysis.

D. Submit manufacturer's certificate for precast concrete lintels as specified herein.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle materials under provisions of Section 01 6000.

B. Deliver units to the job in dried condition and stack on planking with cells horizontal and cover on top only. Units must be kept absolutely dry at all times.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Maintain materials and ambient air temperature to minimum 50° F prior to, during, and 48 hours after completion of masonry work.

1.8 TESTING

A. If concrete masonry unit certificates as specified above are not submitted, then masonry units may be sampled for testing after delivery to the project site at Contractor's expense. The units shall be tested in accordance with ASTM C140 by an independent testing laboratory. Masonry construction shall not proceed until test results are known and the masonry units are certified by said testing laboratory as complying with these Specifications.

B. Testing laboratory services shall be performed under provisions of Section 01 4000, at the Contractor's sole expense.

C. Precast Concrete Lintels shall be randomly field tested. A sampling of five percent of all precast lintels shall be selected by the Testing Laboratory, at random, from shipments delivered to the project site. Each lintel shall be verified for reinforcing steel with written reports provided for review.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered.

B. Like items of materials or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

C. Furnish trim shapes, cut block, end units, solid units, lintel block and other special units as required for the complete construction of masonry work.

2.2 CONCRETE MASONRY UNITS

A. Medium weight concrete masonry units with an oven-dry density of concrete less than 105 to less than 125 lb./ft3. Color of units shall be standard gray; surface texture shall be standard. Units shall be of modular dimension and size.

B. Nominal eight-inch x eight-inch x sixteen-inch long colored split-faced standard weight units in conformance with ASTM C-90 with integral water proofing equal to those as manufactured by Coastal and Oldcastle Company. Color to be selected during submittals.

C. Furnish trim shapes, cut block, end units, solid units, lintel block and other special units as required for the complete construction of masonry work. Special units shall match color and texture of primary units.

2.3 REINFORCEMENT

A. Horizontal Joint Reinforcing: Galvanized truss-type reinforcing with No. 9 side and cross wires in accordance with ASTM A82, as manufactured by Dur-O-Wal Inc, AA Wire Products or equal.

Provide prefabricated corner and wall intersection members at all corners and wall intersections where horizontal joint reinforcing occurs.

B. Reinforcing Steel: See 03 2000 – Concrete Reinforcing. ASTM A615, 60 yield grade with deformed billet bars and uncoated finish.

2.4 ACCESSORIES

A. Cleaning Solution: Non-acidic and not harmful to masonry work or adjacent materials.

B. Control Joint Filler: Manufactured rubber joints, Dur-O-Wall regular rapid control joint D/A 2002 or AA Wire Products Co., Titewall AA1000.

2.5 PRECAST CONCRETE ITEMS

A. Precast concrete lintels shall be normal weight with a 28 day compressive strength of 3000 psi minimum. Precast window sills shall be sized and shaped as shown on the Drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Verify items provided by other sections of work are properly sized and located.

C. Verify that built-in items are in proper location and ready for roughing into masonry work.

D. Beginning of installation means installer accepts existing conditions.

3.2 PREPARATION

A. Direct and coordinate placement of metal anchors supplied by other sections as applicable.

B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.3 WORKMANSHIP

A. Each mason shall tool and brush his own work at the time of laying CMU, in a workmanlike manner to ensure all joints are tooled and brushed when the mortar has partially set. Masonry units shall be laid to a tight line on the exposed side of the wall. Masonry units that are chipped, warped or have other imperfections shall be set aside.

3.4 COURSING

A. Establish lines, levels and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

C. Lay concrete masonry units in running bond and course one unit and one mortar joint to equal 8 inches. Form concave mortar joints. Lay precast items with maximum of 1/4” flush joints.

3.5 PLACING AND BONDING

A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.

B. Lay hollow masonry units with face shell bedding on head and bed joints. Lay hollow masonry units each side of filled cells with full bed joints including all cross webs.

C. Buttering corners of joints or excessive furrowing of mortar joints are not permitted.

D. Remove excess mortar as work progresses. Interlock all intersections and external corners. Horizontal reinforcing is not acceptable in lieu of interlocking block.

E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.

F. Perform job site cutting of masonry and precast units with proper tools to provide straight, clean and un-chipped edges. Prevent broken masonry unit corners or edges.

G. Cut mortar joints flush where ceramic wall tile is scheduled, or bituminous dampproofing is applied

3.6 LINTELS

A. Install reinforced unit masonry lintels over all openings, except where precast concrete lintels are scheduled or otherwise shown. Allow masonry lintels to attain specified strength before removing temporary supports. Masonry lintels shall bear a minimum of 8" each side.

B. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position. Lap reinforcing bars 48 diameters or 12-inches, whichever is greater, unless otherwise noted.

C. Place and consolidate grout fill without displacing reinforcing.

D. Allow masonry lintels to attain specified strength before removing temporary supports.

3.7 BOND BEAMS

A. Reinforce bond beam with reinforcing bar(s) as indicated on Drawings.

B. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position. Lap reinforcing bars 48 diameters.

C. Place and consolidate grout fill without displacing reinforcing.

3.8 JOINT REINFORCEMENT

A. Install horizontal joint reinforcement 16 inches on center, vertically.

B. Lap horizontal joint reinforcement ends minimum 6 inches.

C. Install horizontal joint reinforcing two courses above window, door openings and two course below all window sills. Reinforcing shall extend 2'-0" each side of openings.

3.9 VERTICAL REINFORCING

A. Lay masonry units with core cells vertically aligned, clear of mortar and unobstructed. Reinforce masonry unit cores with reinforcing bars and grout.

B. Retain vertical reinforcing bars in position at top and bottom of cells. Lap reinforcing bars a minimum of 48 diameters.

C. Grout spaces 2-inches or greater in width with masonry grout.

D. When grouting is stopped for more than one hour, terminate grout 1-1/2 inches below top of upper masonry unit to form a positive key for subsequent grout placement.

E. After each grout lift is poured, consolidate by rodding or vibration.

F. Low lift grouting: Maximum masonry lift permitted is 64 inches (8 block courses). Place vertical reinforcement and grout vertical cells and tie beams where required before proceeding to next masonry lift. Maximum vertical reinforcement segment length is 94 inches (for 64-inch lift). Provide 30-inch lap of vertical reinforcement, or greater lap depending on bar size, per ACI. After each grout lift is poured, consolidate by rodding or vibration. When the time between grout lifts exceeds one hour, horizontal construction joints shall be formed by stopping the pour 1-1/2 inches below the top of the uppermost unit.

3.10 CONTROL JOINTS

A. Do not continue horizontal joint reinforcement through control joints. Provide PVC sleeves for rebar.

B. Install preformed control joint filler in continuous lengths at locations indicated. Seal joints in accordance with manufacturer's instructions.

3.11 BUILT-IN WORK

A. As work progresses, build in metal door and glazed frames, anchor bolts, plates and other applicable items furnished by other sections.

B. Build in items plumb and level.

C. Bed anchors of metal door and glazed frames in adjacent mortar joints.

D. Do not build in organic materials subject to deterioration.

3.12 TOLERANCES

A. Maximum variation from unit to adjacent unit: 1/32 inch.

B. Maximum variation from plane of wall: 1/4 inch in 10 feet and 1/2 inch in 20 feet or more.

C. Maximum variation from level coursing: 1/8 inch in 3 feet and 1/4 inch in 10 feet.

D. Maximum variation of joint thickness: 1/8 inch in 3 feet.

3.13 CUTTING AND FITTING

A. Cut and fit for pipes, conduit, sleeves, grounds and other items as indicated. Coordinate with other sections of work to provide correct size, shape and location.

B. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.14 CLEANING

A. Remove excess mortar and mortar smears. Replace defective mortar to match adjacent work. Clean soiled surfaces with cleaning solution. Use non-metallic tools in cleaning operations.

3.15 PROTECTION OF WORK

A. Without damaging completed work, provide protective boards at exposed external corners which may be damaged by construction activities.

B. Masons shall cover all work daily. Covering shall be of a non-absorbing nature.

END OF SECTION

SECTION 05 1200

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Structural steel framing members and related items.

B. Steel columns.

C. Bearing plates and baseplates.

D. Shop priming, field painting of welded joints and field touch-up of scratches and abrasions.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 05 5000 – Metal Fabrications

B. Section 09 9000 – Painting and Coating

1.4 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. AWS A2.0 - Standard Welding Symbols.

C. AWS D1.1 - Structural Welding Code.

D. AISC - Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, Latest Edition.

E. SSPC - Steel Structures Painting Council.

1.5 SUBMITTALS

A. Shop Drawings: Conform to AISC recommendations and specifications and show all holes, etc., required for other work. Include complete details showing all members and their connections, anchor bolt layouts, schedules for fabrication procedures, and diagrams showing the sequence of erection.

B. Manufacturer's Mill Certificate: Submit certification that products meet or exceed specified requirements.

C. Welders' Certificates: Submit certification(s) of welders employed on the work, verifying AWS qualifications within the previous 12 months. Maintain copies on site.

1.6 QUALITY ASSURANCE

A. Fabricate structural steel members in accordance with AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.

1.7 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported to the Architect for clarification prior to starting fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Structural Steel Members and Baseplates: ASTM A36.

B. Structural Tubing: ASTM A500, Grade B.

C. Bolts, Nuts and Washers: ASTM A325.

D. Anchor Bolts: ASTM A307, or A36. Minimum length at masonry or concrete shall be 6".

E. Welding Materials: AWS D1.1; type required for materials being welded.

F. Grout: Non-shrink type, pre-mixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; SET nonshrink grout, as manufactured by Master Builders Co., Cleveland, OH; Crystex, as manufactured by L&M Construction Chemicals, Inc., Omaha, NE; or equal.

G. Shop and Touch-up Primer: Rust-inhibitive primer (single-package steel primers with anti-corrosive pigment loading; may be alkyd, vinyl epoxy ester, chlorinated rubber; 40% volume solids minimum).

2.2 SHOP PAINT PRIMER

A. Prepare surfaces of structural steel members in accordance with SSPC SP-2 or SP-3; insure that all oil, grease, dirt, loose rust, mill scale and other foreign substances are removed from all surfaces.

B. Shop prime structural steel members. Do not prime at welds, bolts, and where embedded in concrete. Apply one coat of specified rust-inhibitive primer at 2.0 mils minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

B. Beginning of installation means erector accepts existing conditions.

3.2 FABRICATION

A. General: Fabricate items of structural steel in accordance with the Drawings, AISC Specifications and as indicated on the final reviewed Shop Drawings. Properly mark materials for field assembly. Where finishing is required, complete the assembly, including bolting and welding of units, before start of finishing operations.

B. Connections: Weld or bolt shop connections, as shown on Drawings. Bolt field connections, except where welded connections or other connections are shown on Drawings. All connections shall develop full strength of members joined and shall conform to AISC standard connections. Pretension bolts which are subject to tension.

C. Welded Construction: Comply with AWS D1.1 for procedures, appearance, quality of welds and welders, and methods used in correcting welding work. Unless otherwise shown on Drawings, all butt welds shall be complete penetration.

D. Holes for Other Work: Provide holes as necessary or as shown on Drawings for securing other work to structural steel framing, and for the passage of other work through steel framing members. Provide threaded nuts welded to framing, and other specialty items as shown on Drawings to receive other work. Torch cut holes are not permitted.

3.3 ERECTION

A. Comply with the AISC Specifications and Code of Standard Practice, and with specified requirements.

B. Allow for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.

C. Do not field cut or alter structural members without approval of Architect.

D. Anchor Bolts: Furnish anchor bolts and other connectors required for securing structural steel to in-place work. Furnish templates and other devices for presetting bolts and other anchors to accurate locations. All anchor bolts for fastening into concrete or masonry shall be minimum 6" in length, unless specifically called out to be different.

E. Setting Baseplates: Clean concrete and masonry bearing surfaces of bond-reducing materials and roughen to improve bond to surfaces. Clean the bottom surface of base plates. Set loose and attached baseplates for structural members on wedges, leveling nuts, or other adjustable devices. Tighten the anchor bolts after the supported members have been positioned and plumbed. Grouting of baseplates shall be with specified non-shrink grout. Grout prior to placing loads on structure; finish exposed surfaces of grout and allow to cure in accordance with manufacturer's specifications.

F. Field Assembly:
   1. Set structural frames accurately to the lines and dimensions indicated. Align and adjust the various members forming a part of a complete frame or structure before permanently fastening. Clean bearing surfaces and other surfaces which will be in permanent contact before assembly. Perform necessary adjustments to compensate for discrepancies in dimensions and alignment.
   2. Level and plumb individual members of the structure within specified AISC tolerances.

G. Misfits at Anchor Bolts and Bolted Connections: Any misalignment between anchor bolts and bolt holes in steel members misfits in erection bolting shall be resolved by submitting a request to the Architect for review. The request shall show an industry acceptable method. Torch cutting to enlarge holes will not be acceptable, except on secondary members which are not under stress when approved by the Architect.

H. Touchup Painting: Immediately after erection, clean and wire brush field welds, bolted connections, and abraded areas of the shop paint primer. Apply touchup paint primer by brush or spray which is the same thickness and material as that used for the shop paint primer, but in no case less than 2.0 mils.

3.4 FIELD QUALITY CONTROL

A. Testing Agency: Engage an independent testing and inspection agency to inspect high-strength bolted connections and welded connections and to perform tests and prepare test reports as required by the Architect.
   1. Testing agency services shall be performed at the Contractor's sole expense.

2. Testing agency shall conduct and interpret tests and state in each report whether test specimens comply with requirements, and specifically state any deviations there from.
3. Provide access for testing agency to places where structural steel work is being fabricated or produced so that required inspection and testing can be accomplished.
4. Testing agency may inspect structural steel at plant before shipment; however, Architect reserves right, at any time before final acceptance, to reject material not complying with specified requirements.

B. Deficiencies: Correct deficiencies in structural steel work which inspections and laboratory test reports have indicated to be not in compliance with requirements. Perform additional tests, at Contractor's expense, as may be necessary to reconfirm any non-compliance of original work, and as may be necessary to show compliance of corrected work.

C. Visual Inspection: All shop and field welding shall be visually inspected. Further testing shall be performed as required by the Architect. Testing, as required by the Architect, shall be by one of the following procedures at the Contractor's option:
1. Liquid Penetrant Inspection: ASTM E-165.
2. Magnetic Particle Inspection: ASTM E-109, performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration not acceptable.
3. Radiographic Inspection: ASTM E-94 and ASTM E-142, minimum quality level "2-2T".
4. Ultrasonic Inspection: ASTM E-164.

D. Contractor shall record types and locations of defects found in work. Contractor shall also record work required and performed to correct deficiencies. Contractor shall submit these records to the Architect.

E. Field bolted connections shall be inspected in accordance with AISC specifications. Contractor shall record types and locations of defects found in work. Contractor shall also record work required and performed to correct deficiencies. Contractor shall submit these records to the Architect.

END OF SECTION

SECTION 05 5000

METAL FABRICATIONS

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Miscellaneous metal fabrications and castings.

B. Anchoring systems.

C. Angle framing.

D. Equipment hangers and supports as required.

E. The tabulation of items herein is not intended to be all-inclusive. It shall be the Contractor's responsibility to provide all metal fabrications and castings shown on the drawings, specified or which can reasonably be inferred as necessary for the completion of this project.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 section of these specifications.

1.3 RELATED WORK

A. Section 09 9000 - Painting and Coating.

1.4 REFERENCES

A. ASTM standards and test procedures.

B. AWS D1.1 - Structural Welding Code.

1.5 SUBMITTALS

A. Shop drawings: indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories of miscellaneous metal fabrications and castings as specified herein.

B. Manufacturer's mill certificate: submit certification that products meet or exceed specified requirements.

1.6 FIELD MEASUREMENTS

A. The contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The contractor shall review the drawings and any discrepancies shall be reported for clarification prior to starting fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired only. Products of other manufacturers, meeting the requirements specified herein, will be considered.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 MATERIALS: unless otherwise shown or specified, conform to the following:

A. Steel Sections: ASTM A36.

B. Steel Tubing: ASTM A500, Grade B.

C. Pipe: ASTM A 501 OR ASTM A53, types E or S, grade B, schedule 40.

D. Bolts, Nuts and Washers: ASTM A325.

E. Anchor Bolts: ASTM A307, or A36.

F. Welding Materials: AWS D1.1; type required for materials being welded.

G. Stainless Steel
Bars and shapes: ASTM A 276, type 316
Steel plate, sheet and strip: ASTM A 167, type 316
Bolts: ASTM A 193, type 316
Nuts: ASTM A 194, type 316

H. Aluminum, Structural Shapes and Plates: Alloy 6061-T6, or 6063-T6, ASTM B209.

I. Galvanized Bolts: ASTM A 307, A 153

J. Cast Iron: ASTM A 48, class 30

K. Shop and touch-up primer: rust-inhibitive primer single packaged steel primers with anti-corrosive pigment loading; may be alkyd, vinyl epoxy ester, chlorinated rubber; 40% volume solids minimum.

L. Isolation coating: single-component, coal-tar pitch based bituminous paint, 68% minimum solids by volume, brush applied, on coat.

2.3 SHOP PAINT PRIMER

A. Prepare ferrous metal surfaces in accordance with SSPC SP-2 or SP-3; insure that all oil, grease, dirt, loose rust, mill scale and other foreign substances are removed from all surfaces.

B. Shop prime; do not prime at welds, bolts and where embedded in concrete. Apply one coat of rust-inhibitive primer at 2 mils minimum dry film thickness.

2.4 GALVANIZING

A. Galvanizing of steel plates, shapes, bars (and products fabricated from these items) shall conform to ASTM A123. Pipe, welded or seamless steel, shall conform to ASTM A120. Material thinner than 1/8 inch shall either be galvanized before fabrication in conformance with the requirements of ASTM A525, coating designation G 210, or after fabrication in conformance with the requirements of ASTM A123.

B. All welded areas shall be thoroughly cleaned prior to galvanizing to remove all slag or other material that would interfere with the adherence of the zinc coating. When it is necessary to straighten any sections after galvanizing, such work shall be performed without damage to the zinc coating.

C. Components of bolted assemblies shall be galvanized separately before assembly.

2.5 ANCHORING SYSTEMS

A. Wedge Anchors: Stainless steel, manufactured by ITT Phillips Drill Division or Hilti Kwik-Bolt, stud type, manufactured by Hilti, Inc.; or equal. Furnish sizes shown on drawings or as required to develop full strength of materials being anchored or connected.

B. Expansion Anchors: Expansion anchors shall not be used except in dry areas where future corrosion is not a problem. In wet or damp areas, use wedge anchors as specified above. Self-drilling anchors, snap-off type or flush type. ITT Phillips Drill Division or Hilti HDI Drop-In Anchors, Hilti, Inc.; or equal. Plastic anchors not allowed.

C. Toggle Clamps: Toggle clamps shall be stainless steel and designed similar to series 235-USS, manufactured by De-Sta-Co, Division of Dover Corporation; series CL-351-TC, manufactured by Carr Lane, or equal.

2.6 ANGLE FRAMING

A. Provide all angle framing required for the support of equipment and all other items requiring support that are not already provided for in the contract documents and other construction. All angles shall be galvanized.

2.7 EQUIPMENT HANGERS AND SUPPORTS

A. Provide unistrut framing system, as manufactured by Unistrut Corporation or equal; unless specified otherwise in applicable mechanical / plumbing / electrical sections; sizes, quantities and configurations as detailed on the drawings or as required to properly support items of equipment. Provide 1/2" - 3/4" - 1" diameter threaded rods depending on weight of equipment to be supported. Length as required.

PART 3 - EXECUTION

3.1 PREPARATION

A. Make provision for erection loads with temporary bracing. Keep work in alignment.

B. Supply items required to be cast into concrete or embedded in masonry with setting templates to appropriate trades.

3.2 WORKMANSHIP

A. Workmanship of all metal fabrications and castings specified under this section shall be the highest grade and equal to the best practice of modern shops for the respective work. Provide all necessary rabbets, lugs and brackets so that the work can be assembled in a neat, substantial manner. Conceal fastenings where practical. Drill metal fabrications as required for attaching hardware or other materials; torch cut holes are not permitted. Weld connections, unless otherwise shown or required.

3.3 ELECTROLYTIC PROTECTION

A. Where aluminum is in contact with dissimilar metals, or to be embedded in masonry or concrete protect surfaces with isolation coating. Allow paint to dry before installation of the material. Protect painted surfaces during installation; should coating become marred, prepare and touch up surface per paint manufacturer's instructions.

3.4 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Install in accordance with the shop drawings, the drawings, and these specifications. Perform field welding and erection work by skilled mechanics. The completed installations shall, in all cases, be rigid, substantial and neat in appearance. Erect structural steel in accordance with the applicable portions of AISC code of standard practice.

C. Install pre-manufactured and prefabricated products in accordance with manufacturers' instructions.

D. Touch-up Painting: Immediately after erection, clean field welds, bolted connections and abraded areas of the shop paint primer. Apply touch-up paint primer by brush or spray which is the same thickness and material as that used for the shop paint primer.

E. Galvanizing Repair: Galvanized surfaces that are abraded or damaged at any time after the application of the zinc coating shall be repaired by solvent cleaning followed by hand or power tool cleaning the damaged areas, removing all loose and cracked coating; after which the cleaned areas shall be painted with two coats of galvanizing repair paint.

END OF SECTION

SECTION 06 1053

MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. General framing, plates, blocking, braces, furring and nailers.

B. Concealed wood blocking and framing for support of electrical devices, mechanical and all other wall or ceiling mounted items where wood blocking is required for proper anchorage of wall or ceiling mounted items.

C. Rough carpentry hardware, including, but not limited to, nails, screws, toggle bolts and other anchorage devices.

D. Treated wood products shall be used where in contact with concrete or CMU.

E. All pressure treated wood shall be arsenic-free.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300.

1.4 RELATED WORK

A. Section 05 5000 - Metal Fabrications

1.5 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported for clarification prior to starting fabrication.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Immediately upon delivery to site, place materials in an area protected from weather.

C. Store materials a minimum of 6 inches above ground on wood blocking and cover with protective waterproof covering providing for adequate air circulation or ventilation.

D. Do not store materials in wet or damp portions of building.

PART 2 - PRODUCTS

2.1 QUALITY ASSURANCE

A. Lumber grading rules and wood species shall be in conformance with U.S. Product Standard PS 20 and the National Forest Products Association. The wood members shall conform to the requirements above and provide design values equal to those published in the "Design Values for

Wood Construction" of National Design Specification for Wood Construction, published by the National Forests Products Association.

2.2 GRADE MARKS

A. Each piece of lumber shall be stamped with the grade as determined by an approved grading association indicating conformance with U.S. Product Standard PS 20.

B. Moisture content shall not exceed 19 percent, unless otherwise specified.

C. Preservative and pressure treated material shall conform to American Wood Preservers Association Standards (AWPA) and bear the appropriate American Wood Preservers Bureau (AWPB) quality mark designation.

2.3 LUMBER

A. Dimensions given are nominal. Surface four sides (S4S); unless indicated otherwise, lumber shall be No. 2 Southern Yellow Pine for general framing, plates, blocking, braces, studs, furring and nailers.

2.4 PRESSURE TREATED WOOD

A. Provide arsenic free pressure treated wood in accordance with AWPA C2 and the quality control standards. AWPB LP-2: above ground application in contact with masonry or concrete. AWPB LP-22: round contact application.

2.5 ROUGH CARPENTRY HARDWARE

A. Nails: Steel common nails in accordance with the fastening schedule of the Florida Building Code, sizes as indicated on Drawings or as required. Use hot-dipped zinc-coated nails wherever exposed to exterior, high humidity and treated wood locations.

B. Bolts and Screws: Conforming to ASTM A 307, sizes as indicated on Drawings, or as required. Use galvanized where exposed to exterior, high humidity and treated wood locations.

C. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or ballistic fasteners for anchorages to steel. No plastic anchors of any type allowed.

PART 3 - EXECUTION

3.1 GENERAL

A. Use only skilled workers and the highest standards of the craft. Plan work in advance and perform in proper sequence to facilitate prompt and continuous progress of the work. Lay out, cut, fit and install all rough carpentry items. Anchor sufficiently to ensure rigidity and permanence.

B. Install items accurate to dimension, true to line, level and square unless indicated otherwise on Drawings. Provide for installation and support of other work.

C. Provide pressure treated wood for all wood blocking, furring and nailing strips in contact with concrete and concrete masonry units.

END OF SECTION

SECTION 06 1753

SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Shop-Fabricated Wood Trusses configured as shown on the Drawings.

B. Extensions, Rafters, Jack Rafters, Outriggers and associated framing and wood blocking associated with the wood trusses.

1.2 RELATED WORK

A. Section 06 1053 – Miscellaneous Rough Carpentry

B. Section 06 2000 – Finish Carpentry

1.3 QUALITY ASSURANCE

A. TPI Standards: Comply with applicable requirements and recommendations of the following Truss Plate Institute (TPI) publications:
   1. "Design Specification for Metal Plate Connected Wood Trusses."
   2. "Commentary and Recommendations for Handling and Erecting Wood Trusses."
   3. "Commentary and Recommendations for Bracing Wood Trusses."
   4. "Quality Control Manual."

B. Wood Structural Design Standard: Comply with applicable requirements of "National Design Specification for Wood Construction" published by N.F.P.A.

C. Lumber Standard: Comply with PS 20 and with applicable rules of the respective grading inspecting agencies for species and grade and fire rating of lumber indicated.

D. Connector Plate Manufacturer's Qualifications: Provide truss connector plates manufactured by a firm which is a member of TPI and which complies with TPI quality control procedures for manufacture of connector plates published in TPI "Quality Control Manual."

E. Fabricator's Qualifications: Provide trusses by a firm which has a record of successfully fabricating trusses similar to type and configuration indicated and which complies with the following requirements for quality control:
   1. Fabricator participates in TPI "Quality Control Inspection Program" as a licensee authorized to apply TPI marks to trusses.

F. Uniformity of Manufacture for Connector Plates: Provide metal connector plates from a single manufacturer.

1.4 SUBMITTALS

A. Product Data: Submit fabricator's technical data covering lumber, metal plates, hardware, fabrication process, treatment, handling and erection.
   1. Submit certificate, signed by an officer of fabricating firm, indicating that trusses to be supplied for project comply with indicated requirements.

B. Shop Drawings: Submit Shop Drawings showing species, sizes and stress grades of lumber to be used; pitch, span, camber, configuration and spacing for each type of truss required; type, size, material, finish, design value and location of metal connector plates; and bearing and anchorage details.

1. Engineering design considerations are fabricator's responsibility. Submit design analysis and test reports indicating loading, section modulus, assumed allowable stress, stress diagrams and calculations, and similar information needed for analysis and to ensure that trusses comply with structural and code requirements for this project.
2. Provide Shop Drawings which have been signed and sealed by a Structural Engineer licensed to practice in the State of Florida.

C. Erection Drawings: Provide erection drawings showing truss framing configuration, bracing details and erection sequence.

1.5 DELIVERY, STORAGE AND HANDLING

A. Handle and store trusses with care, and in accordance with manufacturer's instructions and TPI recommendations to avoid damage from bending, overturning or other cause for which truss is not designed to resist or endure.

B. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying work of other trades whose work must follow erection of trusses.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Lumber

1. Factory mark each piece of lumber with type, grade, mill and grading agency.
2. Nominal sizes shall be indicated, except as may shown by detail dimensions. Provide actual sizes as required by PS 20, for dressed lumber, S4S.
3. Provide seasoned lumber with a maximum moisture content at time of dressing of 19%.

B. Lumber Species: Douglas Fir, Hem-Fir, Western Larch graded by WWPA or WCLIB; or Southern Pine, graded by SPIB; at Fabricator's option.

C. Lumber Grade: For species indicated, provide the following stress-rated grade:

1. Grade: Any grade of lumber fulfilling structural requirements necessary for species, stress ratings and moisture content.

D. Metal Connector Plates, Fasteners and Anchorages:

1. Connector Plate Material: Metal complying with following requirements, unless otherwise indicated; not less than "0.036" thick, coating thickness.
   a. Galvanized Sheet Steel: ASTM A 446, Grade A, Coating G60.
   b. Electrolytic Zinc Coated Steel Sheet: ASTM A 591, Coating Class C, with minimum structural quality equivalent to ASTM A 446, Grade A.

E. Fasteners and Anchorages: Provide size, type, material and finish indicated, complying with applicable specifications for nails, screws, bolts, nuts and washers and anchoring devices.

2.2 FABRICATION

A. Cut truss members to accurate lengths, angles and sizes to produce close fitting joints with wood-to-wood bearing in assembled units.

B. Fabricate metal connector plates to size, configuration, thickness and anchorage details required for types of joint designs indicated on Shop Drawings.

C. Assemble truss members in design configuration indicated on Shop Drawings using means to ensure uniformity and accuracy of assembly with close fitting joints. Position members to produce design camber calculated.

D. Connect truss members by means of metal connector plates accurately located and securely fastened to wood members by means indicated or approved.

PART 3 - EXECUTION

3.1 GENERAL

A. Erect and brace trusses to comply with recommendations of manufacturer and the Truss Plate Institute.

B. Erect trusses with plane of truss webs vertical (plumb) and parallel to each other, located accurately at design spacings indicated on the Contract Drawings.

C. Hoist units in place by means of lifting equipment suited to sizes and types of trusses required, applied at designated lift points as recommended by fabricator, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Provide temporary bracing as required to maintain trusses plumb, parallel and in location indicated, until permanent bracing is installed.

E. Anchor trusses securely at all bearing points to comply with methods and details indicated on the Contract Documents. In the absence of details, anchor per code requirements for the specified wind loading.

F. Install permanent bracing and related components to enable trusses to maintain design spacing, withstand live and dead loads including lateral loads and to comply with other indicated requirements.

G. Do not cut or remove truss members.

END OF SECTION

SECTION 06 2000

FINISH CARPENTRY

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Miscellaneous wood trim.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 06 1053 – Miscellaneous Rough Carpentry

1.4 SUBMITTALS

A. Submit Shop Drawings on all finish carpentry items, indicating materials, component profiles, fastening methods, jointing details, finishes and accessories.

1.5 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported for clarification prior to starting fabrication.

1.6 QUALITY ASSURANCE

A. The "Quality Standards" of the Architectural Woodwork Institute (AWI) shall apply and by reference are hereby made a part of these Specifications. Any reference to Premium, Custom or Economy shall be as defined in the latest edition of the AWI "Quality Standards". Any item not given a specific quality grade shall be Custom grade.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials in dry and well-ventilated areas and do not subject to extreme changes of temperature or humidity.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered.

2.2 HARDWARE

A. Provide all fasteners and miscellaneous hardware required for assembling finish carpentry items.

PART 3 - EXECUTION

3.1 GENERAL

A. Use only skilled craftsmen and the highest standards of workmanship. Plan work in advance and perform in proper sequence to facilitate prompt and continuous progress of the work.

B. Verify that surfaces or openings are ready to receive work and field measurements are as shown on shop drawings.

C. Verify mechanical, electrical and building items affecting work of this Section are placed and ready to receive this Work.

3.2 PREPARATION

A. Before installation, prime paint surfaces of items or assemblies to be in contact with cementitious materials.

3.3 INSTALLATION OF FINISH CARPENTRY ITEMS

A. Install work in accordance with AWI Custom quality standard.

B. Set and secure materials and components in place, plumb and level.

END OF SECTION

SECTION 07 1900

WATER REPELLENTS

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Water repellent coating for all new exterior split-faced CMU and precast units.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 04 2016 – Reinforced Unit Masonry.

1.4 QUALITY ASSURANCE

A. Applicator: Minimum 2 years experience on projects of similar scope.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Include details of product description, limitations to coating, cautionary procedures required during application and chemical properties, including percentage of solids.

B. Submit manufacturer's printed application instructions.

C. Applicator's qualification affidavit: Submit water repellent coating applicator's affidavit of qualification compliance with shop drawing submittal.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Deliver materials in original sealed containers, clearly marked with manufacturer's name, brand name and type of material. Store materials in area where temperatures are not less than 50 degrees F or over 85 degrees F, unless otherwise authorized by manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and configuration desired. Equal products will be considered provided they are equal to the product specified.

B. Acceptable Manufacturer: Professional Products of Kansas, Inc., 4456 S Clifton, Wichita, KS 67216; Tel: 800-676-7346; 316-522-9300; Fax: 316-522-9346; Email: ppk@watersealant.com; Web: www.watersealant.com, or approved equal.

2.2 PENTRATING WATER REPELLENTS

A. Water repellent coating shall be equal to Professional Water Sealant PWS-15 Super Strength. One coat provides water repellent protection, or approved equal.

2.3 PERFORMANCE: Water repellent shall:

A. Penetrate the surface and cure to silicone rubber, which remains below the surface and prevents water from penetrating while permitting moisture vapor transmission. The silicone rubber retains its characteristic 400 percent elongation, allowing for bridging of hairline cracks.

B. Be unaffected by ultraviolet light, airborne pollutants, salt spray or acid rain.

C. Cure to a clear, flat finish.

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect all adjacent surfaces not to be coated by masking off windows, doors, frames, etc. during water repellent operations.

B. Protect plants and vegetation which might be affected by coating spray or fumes with visqueen plastic. Remove immediately after final rinse.

3.2 ENVIRONMENTAL REQUIREMENTS

A. Do not apply water repellent coating in rainy conditions or within a minimum of 3 days after surfaces become wet from rainfall or other moisture.

B. Do not apply water repellent coating when a low temperature of 40 degrees F or less is predicted within a period of 24 hours before or after application.

3.3 INSPECTION

A. Examine surfaces to receive water repellent coating to assure conditions are satisfactory for application and that CMU is clean and ready to receive coating. Do not apply coating to surfaces that are stained, need pointing up or otherwise are not ready to receive coating.

B. Verify that mortar joints found to be unsound, hollow or otherwise defective, have been raked out to a depth of 1/2 inch and tuck pointed with mortar.

C. Product is intended to bridge hairline cracks. If a crack can be seen from 6-8 feet away, it shall be repaired.

3.4 APPLICATION

A. Perform a test patch prior to full-scale application of waterproofing sealant.

B. Apply water repellent coating in strict accordance with manufacturer's directions.

C. Apply PWS-15 Super Strength starting at the top of the designated area, using high volume low pressure spray equipment, create 4-6 inch rundown of product from the point where the spray makes contact with the surface. Work all the way down building being sure to fill in the run-down with an equal volume of material. Avoid excessive overlapping. Brush any excess product that may accumulate on ledges and other areas that may hold excess material.

D. Avoid letting coating dry between passes, beginning at the corner or end of wall.

E. Prohibit fumes from entering the building being treated. Apply only when HVAC system can be shut down during application process. Coordinate with the Contractor as to when HVAC system can be shut down, if it is operating.

3.5 ADJUST AND CLEAN

A. Clean spillage and overspray from adjacent surfaces as recommended by coating manufacturer.

3.6 FIELD QUALITY CONTROL

A. After water repellent coating has dried, spray coat surfaces with water. Proper coating means water will bead up and not be absorbed.

B. Re-coat surfaces that show water absorption.

3.7 GUARANTEE

A. Provide 10 year vertical warranty, which provides for the replacement of sufficient product to retreat the area that has failed. This does not cover application. Warranty shall be provided be both the manufacturer as discussed above and by the applicator to cover the application.

END OF SECTION

SECTION 07 2116

BLANKET INSULATION

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Batt insulation and related fasteners.

B. All batt insulation used on this project shall be Class A.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 09 2116 - Gypsum Board Assemblies

1.4 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. Federal Specifications as referenced herein.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Manufacturer's Literature: Submit manufacturers' technical literature for each type of building insulation specified herein.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Clearly identify manufacturer, contents, brand name, applicable standard and "R" value.

C. Store materials off ground and keep dry at all times. Protect against weather, condensation and damage. Immediately remove damaged material from site.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Batt Insulation and Fasteners: Where noted on the drawing, furnish and install 6” R-38 insulation. Insulation shall have a flame spread rating of not more than 75 and a smoke development rating of not more than 450. All batt insulation used on this project shall be Class A.

PART 3 - EXECUTION

3.1 GENERAL

A. Coordinate installation where other trades whose work or the required inspection of their work, could be affected.

3.2 INSTALLATION

A. Batt Insulation: Install in accordance with the manufacturer's instructions.

3.3 CLEANUP

A. Remove all containers, wrappings and scrap insulation material from site weekly at a minimum. Leave floors broom clean. Do not allow wrappings and scrap material to blow off the site.

END OF SECTION

SECTION 07 2119

FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. Extent of insulation work is shown on drawings and indicated by provisions of this section.

B. Applications of insulation specified in this section include the following:
   1. Foamed-In-Place masonry insulation for thermal, sound and fire resistance values.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 04 2016 – Reinforced Unit Masonry.

1.4 SUBMITTALS

A. Product and technical presentation as provided by the manufacturer.

B. Certified Test Reports: With product data, submit copies of certified test reports showing compliance with specified performance values, including R-values, fire performance and sound abatement characteristics.

C. Material Safety Data Sheet: Submit Material Safety Data Sheet complying with OSHA Hazard Communication Standard, 29 CRF 1910 1200.

1.5 QUALITY ASSURANCE

A. Manufacturing Standards: Provide insulation produced by a single and approved manufacturer. The product must come from the manufacturer pre-mixed to ensure consistency.

B. Installer Qualifications for Foamed-In-Place Masonry Insulation: Engage an experienced dealer/applicator who has been trained and licensed by the product manufacturer and which has not less than three years direct experience in the installation of the product used.

C. Warranty: One year product and installation warranty shall be issued by both the manufacturer and installer.

D. Fire Performance Characteristics: Provide insulation materials which are identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is a part, have been determined by testing, per methods indicated below, by a testing agency acceptable to authorities having jurisdiction.

E. Product must be classified by Underwriters Laboratory (“UL”) as to Surface Burning Characteristics
   1. Surface Burning Characteristics: ASTM E-84

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturers of Foamed-In-Place Masonry Insulation: Subject to compliance with requirements, provide products from the following:
   1. "Core-Fill 500TM"; Tailored Chemical Products, P.O. Box 4186, Hickory, N.C. 28603, (800) 627-1687

2.2 INSULATING MATERIALS

A. General: Provide insulating materials which comply with requirements indicated for materials, compliance with referenced standards and other characteristics.

B. Foamed-In-Place Masonry Insulation: Two component thermal insulation produced by combining a plastic resin and catalyst foaming agent surfactant which, when properly ratioed and mixed, together with compressed air produce a cold-setting foam insulation in the hollow cores of hollow unit masonry walls.
   1. Surface Burning Characteristics: Maximum flame spread, smoke developed and fuel contributed of 0, 5 and 0 respectively.
   2. Combustion Characteristics: Must be noncombustible, Class A building material.
   3. Thermal Values: "R" Value of 4.91/inch @ 32 degrees F mean; ASTM C-177.
   4. Sound Abatement: Minimum Sound Transmission Class ("STC") rating of 53 and a minimum Outdoor Indoor Transmission Class ("OITC") rating of 44 for 8" wall assembly (ASTM E 90-90).

PART 3 - EXECUTION

3.1 INSPECTION AND PREPARATION

A. Application Assemblies:
   1. Block Walls: 8" concrete masonry units

3.2 INSTALLATION OF FOAMED-IN-PLACE INSULATION

A. General: Install foamed-in-place insulation from interior, or as specified, prior to installation of interior finish work and after all masonry and structural concrete work is in place; comply with manufacturer's instructions.

B. Installation: Fill all open cells and voids in hollow concrete masonry walls where noted on drawings. The foam insulation shall be pressure injected through a series of 5/8" to 7/8" holes drilled into every vertical column of block cells (every 8" on center) beginning at an approximate height of four feet from finished floor level. Repeat this procedure at an approximate height of ten feet above the first horizontal row of holes (or as needed) until the void is completely filled. Patch holes with mortar and score to resemble existing surface.

END OF SECTION

SECTION 07 2600

VAPOR RETARDERS

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Under-slab 15 mil vapor barrier retarder.

B. Install vapor barrier under all new concrete slabs on grade.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 REFERENCES

A. ASTM standards and test procedures as referenced herein.

1.4 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials as recommended by the manufacturer.

B. Deliver materials to the site in original packages with the manufacturer's labels thereon.

PART 2 - PRODUCTS

2.1 BARRIER

A. Barrier at slabs on grade shall be minimum 15-mil minimum, Class A installation, polyurethane material equal to Stego Wrap. All joints and penetration shall be staggered and taped. Caulk polyurethane sealer around all openings in the slab, including cracks, expansion joints and pipe penetrations.

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify substrate materials are dry and clean and ready to receive work.

B. Coordinate the work of all trades so that all items to be placed under the slab are in place prior to the laying of any barrier.

C. Before beginning installation, inspect and approve quality of subsurface waterproofing and drainage to insure that it is acceptable.

3.2 INSTALLATION – VAPOR BARRIER

A. Under-slab barrier: Install barrier under all concrete floor slabs on grade or fill. After base for the slab has been leveled and tamped, and after soil treatment work has been performed, apply the barrier with the roll width parallel to the direction of the pour with all joints lapped and continuously taped 12 “ minimum.

B. Caution shall be maintained to provide a puncture-free barrier. Any tears or holes shall be repaired by removing defective sheet and replacing with a new sheet.

C. All penetrations in barrier shall be sealed with same material lapped 12" from edge of penetration and taped.

D. Barrier shall be turned up at foundation wall behind the expansion joint material and sealed to the foundation wall so as to completely seal the joint.

3.3 CLEANUP

A. Upon completion of the barrier installation clean up all waste materials and debris resulting from this operation and dispose of such waste materials off the site.

END OF SECTION

SECTION 07 6100

SHEET METAL ROOFING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. The preformed metal roof panels and all related components over plywood roof deck.

B. Self-adhered underlayment over plywood deck.

C. It is the intent of these specifications that the fascias, flashings, reglets and all necessary accessories and trim, for a complete weathertight and watertight installation specified herein be furnished and installed by the metal roofing system manufacturer's approved installer.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 07 6200 – Sheet Metal Flashing and Trim

1.4 QUALITY ASSURANCE

A. Manufacturer's Qualifications: The panel manufacturer shall have been in business as a metal roof panel manufacturer for a minimum of ten years. The manufacturer shall submit at least five projects similar in size and scope prior to shop drawings submittals, listing the Owner, scope of work, location and name of project.

B. Installer Qualifications: The work in this section shall be performed by the metal building manufacturer's own personnel, licensed agent, or subcontractor, trained by the manufacturer, with a minimum of five years of experience installing similar work. The manufacturer shall be contractually responsible for adjustment to dimensions, materials and workmanship on roof and related flashings. Installers of this work shall be licensed in the State of Florida.

C. Installer's current company, other than the manufacturer's own personnel (i.e. licensed and approved as manufacturer's agent or subcontractor) and other than those pre-approved installers listed below, shall submit a minimum of five years company experience installing similar projects; shall submit a list of 5 similar type projects along with the owner's name, material manufacturer and general contractor.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with procedures specified in Section 01 3300. In addition, the following specific information shall be provided:

A. Shop Drawings: Submit complete shop and erection drawings of the metal roofing system indicating, as a minimum, the following:

1. Profile and gauge of roof panels and related components.
2. Location and type of fasteners. Show provisions for thermal movement.
3. Details of edge conditions, joints, corners, panel profiles, supports, trim, closures and related trim. Distinguish between factory and field assembly work.
4. Location, gauge, shape and method of attachment of all trim, including reglets, flashings and associated metal work.
5. Sealant types and properties as recommended by the metal panel manufacturer for each specific application/location.

6. All other items pertinent to fabrication and installation of the complete system specified herein.

B. Samples: Color samples of factory finish items, including roof panels, trim and flashings of all types. Provide sample panels 12 inches long by panel width in profile and color selected. Include clips, fasteners, closures and related accessories.

C. Design Calculations: Submit design calculations per the structural design criteria as shown on the drawings for wind load requirements prepared under the direction of and signed, dated and sealed by a Florida Registered Structural Engineer. The indiscriminate submittal of general structural calculations that have not been specifically prepared for this project will not be approved.

D. Calculations showing compliance with negative pressures must be submitted for approval, signed, dated and sealed by a Structural Engineer registered in the state of Florida. The calculations showing compliance with wind pressure must be based on data outlined on the design criteria shown on the drawings.

E. Manufacturer's Literature: Submit manufacturer's technical literature for each component of the metal roofing panel system. Manufacturer's literature shall be clearly marked for each proposed item. Indiscriminate submittal of unmarked literature will not be accepted. Include performance data on panels, anchor clips and all fasteners proposed for use.

F. Samples of warranties conforming to requirements are stipulated in this section. See warranty forms at the end of this section. Upon completion and acceptance of the work, submit executed copies of the warranties in accordance with requirements of this section and section 01 7000.

1.6 REFERENCES

A. Manufacturer's recommendations and specifications.

B. ASTM standards and test procedures as referenced herein.

C. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): "Architectural Sheet Metal Manual," latest edition.

D. National Association of Architectural Metal Manufacturers (NAAMM) Standards as referenced herein, latest edition.

1.7 GUARANTEES

A. The following guarantees are required for all labor and materials furnished under this section:
   1. Panel manufacturer's twenty year warranty against structural defects and corrosion on galvalume substrate.
   2. Panel manufacturer's twenty year warranty on Kynar 500 paint finish, to include color fastness not more than 5 NBS of color change per ASTM D2244 test procedures; chalk resistance not in excess of test procedure ASTM D659 No. 8 rating; guarantee no checking, blistering, cracking, flaking, chipping or peeling.
   3. Two year leak free warranty issued by the roof system installer from date of substantial completion. This leak free warranty shall cover all systems and items installed under this section and related sections, including, but not limited to, roof panels, flashings, caulking, sealants and all associated accessories. Installer’s representative shall make yearly inspections and submit a written report to the Owner each year.
   4. Twenty year leak free warranty jointly issued by panel manufacturer and installer. This leak free warranty shall cover all systems, accessories and items installed under this section and related sections, including, but not limited to, roof panels, flashings, caulking, sealants and all associated accessories.
   5. See limitations and conditions of warranty and metal roof warranty forms at the end of this section. Complete, sign by authorized agent and submit with shop drawings.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Materials shall be adequately packaged and protected during shipment and shall be inspected for damage, dampness and wet storage stains upon delivery to the site. Damaged or permanently stained materials that cannot be restored to like-new condition shall be removed from the site and shall be replaced at no additional cost to the Owner. Crated materials shall be uncrated until ready for use. Materials shall be stored in dry, weathertight, ventilated areas until immediately before installation. Panels shall be stored on edge, positioned to allow moisture to run off rather than accumulate on the faces and shall be separated so air can circulate around every surface.

1.9 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the drawings and any discrepancies shall be reported for clarification prior to starting fabrication, application or installation.

B. Start of work constitutes acceptance of structure and substrate.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable panel manufacturer for preformed standing seam metal roof, and related components shall be a sole source. Panels shall be equal in all respects to those as manufactured by Berridge, Manufacturing Co., MBCI, Peterson Aluminum Corporation, Englert Metal Roof Panels or approved equal. Color selection chart of manufacturer’s standard colors and panel profile shall be submitted with the shop drawing submittal.

B. Flashing: All flashings including fascia shall be the same material, gauge and finish and color as the metal roofing.

C. Galvalume Sheets: All materials for roof, gutters, downspouts and fascia, shall be 24 gauge galvalume as per ASTM A446 and ASTM A792, Grade 40 with mechanical seaming at roof panels.

D. Metal Finish: All exposed surfaces of panels and fascias shall be given factory applied oven cured fluorpon coating with a minimum of full strength 70 percent solids content of "Kynar 500" resin over a primer in accordance with the manufacturer's written procedures, minimum dry film thickness of 1.0 mils.

E. Sealants and sealing tape shall be as recommended by the panel manufacturer and shall be rated for twenty year service life.

F. Hat Sections/Furring: All hat sections shown on the drawings, or required for a finished product, shall be sized and spaced by panel manufacturer. Provide structural calculations to justify size and spacing. As a minimum, all hat sections to be fabricated from G-90 galvanized steel.

G. Clip Fasteners: Shall be manufacturer's standard non-corrosive type. Length and diameter shall be sufficient to meet design loads of project with a suitable factor of safety, i.e., NFPA, AISI standards and shall extend through metal deck.

H. Exposed fasteners where absolutely necessary, shall be stainless steel. For weathertightness, screws shall have separate washers with bonded neoprene faces, and pop rivets shall be set in wet sealant. Exposed fasteners shall be a minimum #14 or 3/16-inch diameter rivet.

I. Profile closures shall be pre-cut black closed cell foam meeting ASTM D1056 and shall be protected from ultra-violet exposure with a metal closure to match panel finish and color.

J. Anchor clips shall be manufacturer's standard, UL 90 rated clip. Clips to be coordinated with insulation and deck system so fasteners and compression disc do not telegraph through metal roof. If bottom of metal roof comes in contact with substrate, include one layer of rosin paper as separator.

K. Roof Curbs (if required): Panel manufacturer's profile with sizes coordinated with applicable mechanical equipment. See drawings and MEP divisions of the specifications. Furnish and install all roof curbs required for all roof penetrations on this project.

L. Flashing Boot (if required): Panel manufacturer's standard profile with sizes coordinated with mechanical and plumbing vents through roof. Furnish and install all boots at plumbing stacks on this project.

M. Closure Strips: Panel manufacturer's standard matching panel profile.

N. Roofing underlayment shall be equal to LeakBarrier SS400 Ice and Water Armor as manufactured by Tarco. Self-adhesive modified bituminous roofing underlayment reinforced with a heavy weight fiberglass mat for use under sheet metal roofing.

2.2 DESIGN CRITERIA

A. The metal roofing system shall be designed for its own dead load plus the following loads:
   1. Roof Live Load: In accordance with the Florida Building Code 5th Edition (2014).
   2. Design Wind Load: In accordance with ASCE 7-10 and as noted on the drawings. Fasteners shall have a safety factor of 2.5 minimum.
   3. Additional Mechanical Equipment Loads: As indicated on drawings. If not indicated, obtain from Engineer.
   4. Maximum Allowable Deflection: L/180.

B. Expansion Criteria: System shall be designed to accommodate movement of components and tolerances of structural framing without buckling, failure of joints, undue stress of fasteners or other detrimental effects, when subject to seasonal temperature ranges for the project site geographical area. Minimum expansion capability of system shall be 1/4-inch in 10-feet.

2.3 METAL ROOFING SYSTEM: System shall be as indicated on drawings and as specified herein. The tabulation of items herein is not intended to be all inclusive, and it shall be the contractor's responsibility to provide all components of the metal roofing system shown on the drawings, specified or which can be reasonably inferred as necessary to complete this project.

PART 3 - EXECUTION

3.1 ERECTION

A. Erection of the metal roofing system shall be by a qualified erector as hereinbefore specified.

B. Coordinate and schedule the work with that of related trades in order not to delay the progress of the work. Examine all locations where work is to be performed and notify owner if defects exist which are detrimental to the proper or timely performance of the work. Do not begin work until such defects have been remedied or adjusted.

C. Erection of panels and related components shall be in accordance with the manufacturer's current printed instructions, applicable shop and erection drawings and the provisions of SMACNA. Install anchor clips and fasteners as required to meet design criteria as shown on the drawings.

3.2 FINISH

A. Exposed surfaces shall be free of dents, scratches, abrasions or other visible defects. Remove and replace all damaged panels which are not acceptable to the Owner.

3.3 CLEANING

A. After erection, the contractor shall protect exposed portions from damage by the elements, machines, plaster, paint, cement or other harmful compounds. The Contractor shall be responsible for removal of protective materials, as applicable, and cleaning in accordance with manufacturer's recommendations.

3.4 WARRANTY

A. Roofer's Guarantee: The Contractor shall provide a "Final Statement of Compliance" on company letterhead which states that the finished roof installation complies with the approved contract documents.

B. Roofer shall fully guarantee all items furnished hereunder, including sheet metal work, specialties and accessories, for the entire project, against defects in materials or workmanship for a period of two years and shall maintain all work performed under this contract in a completely watertight condition during this time period, from the date of substantial completion. This guarantee shall run concurrently with roofing materials manufacturer's guarantee.

END OF SECTION

SEE FOLLOWING PAGES FOR ADDITIONAL WARRANTY REQUIREMENTS

METAL ROOFING SYSTEM

TWENTY (20) YEAR WARRANTY

LIMITATIONS AND CONDITIONS OF WARRANTY

1. This warranty does not apply if the defects or failures are caused by abnormal weather conditions, falling objects, explosions, fires, civil commotions, radiation, harmful fumes or foreign substances in the atmosphere, corrosion or floods.

2. This warranty does not apply if the defects or failures are due to attachments of signs, the installation of vents or other attachments except as authorized by the manufacturer.

3. This warranty does not apply to any roof panels which have been subjected to misuse, negligence or have been removed from their original place of erection.

4. The warranty on the following page shall not become valid until signed by the manufacturer and the Owner.

5. The warranty on the following page is limited to cost of material and labor necessary to replace or repair parts judged to be defective. The warranty on the following page is limited to either replacing or repairing the materials judged to be defective to the extent necessary to provide a satisfactory building appearance.

6. This warranty is assignable.

NOTICE OF REQUIREMENT

Any claim for an alleged defect or breach of this warranty must be transmitted in writing to the manufacturer within thirty days after the alleged defect has first been detected. Upon receipt of notice of any claim, the manufacturer will have the claim investigated and if a failure has occurred, the manufacturer will furnish the necessary corrective action which will be carried out on the basis of a written release form the owner from any further claims concerning the specific complaint on which such corrective action is to be taken.

METAL ROOFING WARRANTY

TWENTY (20) YEAR WARRANTY

MANUFACTURER WARRANTS ROOFING PANELS AS FOLLOWS:

That said panels and accessories sold to the owner by the manufacturer shall be free from defects in material for a period of twenty years from date of substantial completion.

That said panel material will not rupture, perforate or structurally fail for a period of twenty years from shipment. This provision does not apply if the panels were not installed per manufacturer's specifications or due to defects in design or wind loadings.

That said panel material is designed to provide a weather-tight condition for twenty years. Weather-tightness is defined as the uncontrolled entry of water into the structure. No warranty is extended for air tightness nor against condensation forming on the inside of the panel.

This warranty is subject to the limitations previously listed and shall not be deemed to include any other warranties, whether expressed or implied, and any other warranty of fitness merchantability and manufacturer shall have no liability except as specifically expressed herein.

Project: _____

Location: _____

Date of Shipment: _____

Manufacturer's Project No.: _____

Installer: _____

OWNER	MANUFACTURER
Accepted by: _____	By: _____
Date: _____	Date: _____

SECTION 07 6200

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Field fabricated metalwork.

B. Lead Flashings.

C. Through-Wall flashings.

D. Ancillary items related to field fabricated flashings.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 07 6100 – Sheet Metal Roofing

B. Section 07 9000 – Joint Protection

1.4 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Shop Drawings: Shop drawings of field fabricated work indicating joints, types and location of fasteners and special shapes.

B. Manufacturer's Literature: Catalog data for stock prefabricated items.

C. Samples: Manufacturers' standard Kynar finish color ranges for color selection.

D. Profile and gauge of parapets, flashings and related components, location and type of fasteners, details, profiles and sealants.

1.5 REFERENCES

A. Manufacturers' recommendations and specifications.

B. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): "Architectural Sheet Metal Manual."

C. Federal Specifications as referenced herein.

D. ASTM Standards and Test Procedures as referenced herein.

1.6 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the drawings and any discrepancies shall be reported for clarification prior to starting fabrication, application or installation.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Stack prefabricated materials to prevent twisting, bending, or abrasion and to provide ventilation.

C. Prevent contact with materials during storage which may cause discoloration, straining or damage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 GENERAL

A. The tabulation of items herein is not intended to be all inclusive, and it shall be the Contractor's responsibility to provide all sheet metal flashings and related work shown on the drawings, specified or which can be reasonably inferred as necessary to complete this project.

2.3 LEAD FLASHINGS

A. Vents Through Roof: Solid lead conforming to Federal Specification QQ-L-201, Grade B, minimum weight 3 pounds per square foot, soft temper, except hard temper for flanges.

2.4 METAL FINISH

A. .040 aluminum with all exposed surfaces given factory applied oven cured fluorpon coating with a minimum of full strength 70 percent solids content of “Kynar 500” resin over a primer in accordance with the manufacturer’s written procedures.

2.5 THROUGH-WALL FLASHING

A. Install wall flashings as detailed. Use adhesive compatible with and as recommended by flashing material manufacturer. Lap all joints 4-inches minimum.

2.6 ANCILLARY ITEMS

A. Fastening Devices: Shall be in accordance with manufacturers' recommendations and in general, shall be large headed nails, rivets or screws of the same metal which is being fastened.

B. Solder and Flux: Best commercial quality of type most suited for metal to be soldered.

C. Sealer Tape: Polyisobutylene sealer tape.

D. Isolation Paint for Aluminum and Dissimilar Metals: Single-components, coal-tar pitch based bituminous paint, 68% minimum solids by volume, brush applied at minimum 10 mils dry film thickness.

PART 3 - EXECUTION

3.1 COORDINATION

A. Schedule and coordinate the work of this section and other related sections.

B. Carefully review the drawings for areas or items requiring flashings and provide as required.

3.2 INSPECTION

A. Installation of work specified in this section shall not start until the wood nailers and other items that will be concealed have been inspected. Notify inspector a minimum of 48 hours in advance of the time this Contractor plans to install this work.

3.3 INSTALLATION

A. All workmanship shall be equal to the best standards of practice in modern sheet metal. Work shall be accurately formed to sizes, shapes and dimensions indicated and detailed. Sheet metal work shall be neat, straight, true and without imperfections.

B. Run of sheet metal work shall have provision for expansion control at eight to ten foot centers in accordance with SMACNA standards.

C. Joints in counterflashing shall be lapped minimum 6 inches. Installation of reglets shall be in strict accordance with the manufacturer's latest printed instructions.

D. All other joints in sheet metal work shall be riveted and sealed. Sealant shall be of proper type for use with the particular metal.

E. At any point where two different types of metal join, they shall be separated with bitumastic isolation paint specified.

F. Installation of prefabricated metal systems and flexible flashings shall be in strict accordance with the system manufacturer's latest instructions.

G. Field fabricated metalwork shall be formed of metal specified hereinbefore in configurations indicated on drawings, and shall be installed in accordance with applicable NRCA and SMACNA standards.

END OF SECTION

SECTION 07 7100

ROOF SPECIALTIES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Vents Through Roof (V.T.R.).

B. Coordination of the extension of ductwork, exhaust fans, intake ducts and other items required to be extended through the applicable roofing system.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 07 6100 – Sheet Metal Roofing

B. Section 07 6200 – Sheet Metal Flashing and Trim

C. Mechanical and Electrical

1.4 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Shop Drawings: Showing materials, details, flashing, anchorage and relation to adjacent structure.

B. Manufacturer's Literature: Catalog cuts of all items specified herein.

1.5 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the drawings and specifications and any discrepancies shall be reported for clarification prior to starting fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 VENTS THROUGH ROOF AND MECHANICAL EQUIPMENT

A. All vents through roof (V.T.R.) flashings and curbs associated with curb extensions shall be installed by the metal roofing system installer.

B. Curbs for mechanical equipment including but not limited to exhaust fans, intake fans and related equipment. See mechanical drawings and specifications and coordinate with this section.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and structures to receive the work of this section. Do not proceed until unsuitable conditions have been corrected. Starting work constitutes acceptance of conditions as suitable to the proper execution of the work.

3.2 COORDINATION

A. Schedule and coordinate the work of this section with the work of all other sections involved, including but not limited to metal roofing system, sheet metal flashing work, mechanical curbs and related sections as applicable.

3.3 INSTALLATION

A. Install all items specified herein as detailed and in accordance with manufacturers' instructions.

B. Work shall be weathertight and free of expansion and contraction noise.

C. Work shall be designed, fabricated and installed to compliment the design and installation of the work of other related sections including wind loading and thermal expansion/contraction.

END OF SECTION

SECTION 07 9000

JOINT PROTECTION

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Sealants for all joints related to buildings and structures, both interior and exterior.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 REFERENCES

A. Federal Specifications as referenced herein.

1.4 ENVIRONMENTAL CONDITIONS

A. The ambient temperature shall be between 40 and 90 degrees F when sealant is applied.

B. Surfaces shall be dry to the touch.

1.5 QUALITY ASSURANCE

A. Applicator shall have a minimum of two years of experience installing sealants in projects of similar scope.

B. Color(s) of sealants selected shall be utilized throughout the project; the use of multiple colors on a given bead run shall not be accepted.

1.6 SUBMITTALS

A. Samples and Certificates: Submit small samples of each sealant type specified herein showing full color range. Samples shall be accompanied by a Certificate of Compliance with requirements specified herein for each sealant type.

B. Applicator's Affidavit: Submit applicator's affidavit of qualification compliance.

1.7 GUARANTEE

A. Installed sealants and accessories shall be guaranteed for a period of five years from date of Substantial Completion. Written guarantee shall include coverage of installed sealants and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion or do not cure.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver all sealants to the site in sealed containers, each bearing manufacturer's name and product designation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting all of the requirements specified herein, will only be considered upon submission of complete data in the form of a shop drawing with detailed information on proposed products.

2.2 SEALANTS

A. Sealants shall be self-leveling for horizontal and sloping joints with a maximum slope of 1 percent. Non-sag sealants shall be used for steeper sloped joints, vertical joints and overhead joints. Silicone sealants are not acceptable except at plumbing fixtures.

B. Vertical Joints in Cast-in-Place Concrete and Concrete Masonry Units: Two-part polyurethane sealant conforming to Federal Specification TTS-00227E, Type II, N/S; Mameco Vulken 227; Pecora Dynatrol II, or equal. Color to be selected.

C. Horizontal Joints in Cast-in-Place Concrete and Concrete Masonry Units: Two-part polyurethane sealant conforming to Federal Specification TT-S-00227E, Type I, Class A, S/L; Mameco Vulkem 245; Pecora NR-200; or equal. Color to be selected.

2.3 BACKUP MATERIAL

A. Use closed-cell polyethylene foam rod conforming to ASTM D 1751 and compatible with sealant used. Size as shown or as recommended by manufacturers for all joints greater than 3/16 inch.

2.4 BOND BREAKER AND PRIMER

A. As recommended by sealant manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

A. All surfaces to be sealed shall be clean, dry, sound and free of dust, loose mortar and other foreign materials. Mask adjacent surfaces where necessary to maintain neat edge. Starting of work will be construed as acceptance of all subsurfaces.

3.2 INSTALLATION

A. Apply all materials following manufacturer's recommendation and instructions. Fill sealant joint completely from back to top, without voids.

B. Tool sealant joints slightly concave after sealant is installed on vertical and horizontal joints that are flush with adjacent surfaces. On flashing reglets (if required), sealant shall be installed with convex surface to shed water.

3.3 CLEANING

A. The surfaces next to the sealed joints shall be cleaned of smears or other soiling resulting from sealant applications. At no additional cost to Owner, replace or repair to Owner's satisfaction any damaged surfaces resulting from sealant application or cleaning.

END OF SECTION

SECTION 08 1000

DOOR SCHEDULE

REMARKS

1. DOOR SHALL BE FLUSH WITH NO GLAZING. FRAME SHALL BE 3'-4" WIDE WITH 2" JAMBS AND 7'-4" HIGH WITH 4" HEAD.

2. REFER TO THE DRAWINGS FOR DOOR HEAD AND JAMB DETAILS FOR MASONRY OPENINGS AT DOORS.

3. HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED.

DOOR SCHEDULE

OPEN'G NO.	DOOR WIDTH	DOOR HT.	DOOR THK.	DOOR MAT'L.	FRAME MAT'L.	HDW	REMARKS
101/1	3'-0"	7'-0"	1 ¾"	H.M.	H.M.	1	1, 2, 3
101/2	3'-0"	7'-0"	1 ¾"	H.M.	H.M.	1	1, 2, 3
102	3'-0"	7'-0"	1 ¾"	H.M.	H.M.	2	1, 2, 3
103	3'-0"	7'-0"	1 ¾"	H.M.	H.M.	1	1, 2, 3
104	3'-0"	7'-0"	1 ¾"	H.M.	H.M.	1	1, 2, 3
105	3'-0"	7'-0"	1 ¾"	H.M.	H.M.	1	1, 2, 3

SECTION 08 1113

HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Rolled steel doors and frames. Coordinate with Section 08 1000 and Drawings.

B. Hollow metal frames shall be coated with bitumastic and grout filled.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 08 7100 - Door Hardware

B. Section 09 9000 - Painting and Coating

1.4 REFERENCES

A. ASTM Standards and Test Procedures.

B. SDI-100 - Standard Steel Doors and Frames.

C. SDI-105 - Recommended Erection Instructions for Steel Frames.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Shop Drawings: Indicate frame configuration, anchor types and spacing, location of cutouts for hardware, reinforcement and finish. No fabrication of doors or frames shall be performed until the manufacturer has an approved copy of the Door Hardware Schedule. The Manufacturer shall coordinate fabrication of doors and frames with approved Hardware Schedule. Location of each door and frame shall be noted with the same reference as used on Drawings.

B. Indicate door elevations, fire rating if required, internal reinforcement, closure method and cut outs for glazing and louvers if required.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Deliver, store, and handle steel doors and frames in a manner to prevent damage and deterioration. Provide packaging such as cardboard or other containers, separators, banding, spreaders and paper wrappings for protection.

C. Follow storage and handling requirements of manufacturer.

1.7 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and layout of work. The Contractor shall review the Drawings and any discrepancies shall be reported for clarification prior to starting fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Ceco Corporation.

B. Steelcraft Manufacturing Company.

C. Curries Company.

2.2 DOORS AND FRAMES

A. Exterior Doors: Galvanized after fabrication, SDI-100 Grade III extra heavy duty, seamless. Tops of doors shall be manufactured flush with no recess. 16 gauge, 1,000,000 ANSI cycle tested. Provide proof of test with shop drawings.

B. Exterior and Interior Frames: 16 gauge galvanized. All exterior frames shall meet the wind load requirements as shown on the structural drawings.

C. All doors shall have 12 gauge reinforcing plates required for closer, exit devices, locks, etc. All exterior doors shall meet the wind load requirements as shown on the structural drawings.

D. The use of stock modified doors shall not be allowed.

2.3 DOOR CORE

A. Polyurethane, polystyrene insulation or as required for fire rating.

2.4 ACCESSORIES

A. Furnish manufacturer's standard anchors, fasteners, etc. Minimum three anchors per jamb, each side.

B. Louvers, if required, shall be roll form galvanized after fabrication, minimum 18 gauge slat blade with minimum 30% free area, factory installed. Install with all cuts made in door faces prior to galvanizing.

C. Silencers.

2.5 FABRICATION

A. Fabricate all frames of welded assembly, fire-rated as required.

B. Fabricate frames and doors with hardware reinforcement plates welded in place and then galvanized. Provide 12 gauge galvanized reinforcement plates at all door closer locations.

C. Prepare frame for silencers; provide three for single doors on strike side, and four on frame head at double doors without mullions. Delete where weather-stripping specified.

D. The hardware supplier shall furnish and forward accurate information to the manufacturer for proper location of door hinges and required overall type of doors that are to be installed in hollow metal frames for proper coordination and prepping of doors.

2.6 FINISH

A. After erection of doors and frames, areas where prime coat has been damaged shall be sanded smooth and touched up with same primer as applied at shop. Remove rust and treat with field applied galvanizing before above specified touch-up is applied. Touch-up shall not be obvious.

B. All exterior metal doors and frames shall be galvanized with G60 zinc coating after cutting openings and welding in accordance with ASTM A525, phosphate treated for paint adhesion and receive one coat of baked-on rust-inhibiting prime coating compatible with finish coating.

C. All interior metal doors and frames specified shall be as same as exterior, with the exception of zinc galvanizing.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install frames in accordance with SDI-105. Install doors in accordance with SDI 100.

B. Coordinate with masonry construction for anchor placement.

C. The use of self-drilling screws not be permitted.

3.2 ADJUSTING AND CLEANING

A. Adjust all hardware, including cylinders, for smooth and balanced door movement.

3.3 PROTECTION

A. Protect installed steel doors and frames and related work against damage from other construction work.

END OF SECTION

SECTION 08 3113

ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Access Panels.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 09 9000 – Painting and Coating

1.4 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Shop drawings:
   1. Prior to ordering or fabricating any doors, submit for review shop drawings and manufacturer's literature showing construction and installation details.
   2. Location of each door shall be noted with the same reference as used on Drawings.

B. Color Samples: Manufacturer's current color samples of factory finished coatings for selection.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Deliver, store and handle doors in a manner to prevent damage and deterioration.

1.7 FIELD MEASUREMENTS

A. The Contractor shall verify all dimensions, shall make any field measurements necessary and shall be fully responsible for accuracy and lay out of work. The Contractor shall review the drawings and any discrepancies shall be reported for clarification prior to starting fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 WALL ACCESS PANEL

A. Bar-Co, Milcor or equal, for masonry wall installation with anchor strips, frame, concealed spring hinges and key operated cylinder lock. Provide at all locations where required for access to valves and other items as required to have access. Provided minimum 18" x 18". Review the Mechanical/Electrical portions of the documents for locations requiring access panels.

2.3 CEILING ACCESS PANEL

A. Bar-Co, Milcor or equal, for gypsum board ceilings, complete with frame and key operated cylinder locks. Provide minimum 24" x 24". Provide and install at all locations required for access to valves, dampers, electrical equipment and other items as to have access. Review the Mechanical/Electrical portions of the documents for locations requiring access panels.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install as shown in accordance with the manufacturers' recommendations and instructions. Adjust doors for smooth operation. Installation shall be by an experienced factory authorized installer.

3.2 PRIME COAT TOUCH-UP

A. After installation any areas where prime coat has been damaged shall be sanded smooth and touched up with same primer as applied at the shop. Remove rust before above specified touch-up is applied. Touch-up shall not be obvious.

3.3 PROTECTION

A. The Contractor shall protect installed panel against damage from other construction work.

B. Panels which are damaged beyond repair shall be replaced at no expense to the owner.

3.4 WARRANTY

A. All panels shall be warranted against defects in workmanship and materials for a period of twelve months from date of substantial completion.

END OF SECTION

SECTION 08 3300

INSULATED ROLLING SERVICE DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Manual overhead insulated rolling doors.

B. Related Sections:
   1. 04 2016 – Reinforced Unit Masonry
   2. 06 1053 - Miscellaneous Rough Carpentry

C. Alternates:
   1. The Cookson Company, Inc.
   2. Amarr
   3. Clopay

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SYSTEM DESCRIPTION

A. Design Requirements:
   1. Air infiltration to comply with:
      a. ASHRAE® (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) Standard 90.1- 2010 & 2013 requirements of less than .40 CFM/FT2
   2. Wind Loading: Supply doors to withstand wind load requirements on shown on the drawings.
   3. Insulated Door Slat Material Requirements:
      a. Flame Spread Index of 0 and a Smoke Developed Index of 10 as tested per ASTM E84.
      b. Minimum Sound Transmission Class (STC) rating of 22 as tested per ASTM E90.
      c. Minimum R-value of 8.0 (U-value of 0.125) as calculated using the ASHRAE Handbook of Fundamentals.
      d. Insulation to be CFC Free with an Ozone Depletion Potential (ODP) rating of zero.

1.4 SUBMITTALS

A. Reference Section 01 3300; submit the following items:
   1. Product Data.
   2. Shop Drawings: Include special conditions not detailed in Product Data. Show interface with adjacent work.
   3. Quality Assurance/Control Submittals:
      a. Provide proof of manufacturer ISO 9001:2008 registration.
      b. Provide proof of manufacturer and installer qualifications - see 1.4 below.
      c. Provide manufacturer's installation instructions
      d. Provide independent testing lab results proving .40 CFM/FT2 or less air infiltration
   4. Closeout Submittals:

a. Operation and Maintenance Manual.
b. Certificate stating that installed materials comply with this specification.

1.5 QUALITY ASSURANCE

A. Qualifications:
1. Manufacturer Qualifications: ISO 9001:2008 registered and a minimum of five years experience in producing doors of the type specified.
2. Installer Qualifications: Manufacturer's approval.

1.6 DELIVERY STORAGE AND HANDLING

A. Reference Section 01 6000.

B. Follow manufacturer's instructions.

1.7 WARRANTY

A. Standard Warranty: Two years from date of shipment against defects in material and workmanship.

B. Maintenance: Submit for owner’s consideration and acceptance of a maintenance service agreement for installed products.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Manufacturer: Cornell Iron Works, Inc., Crestwood Industrial Park, Mountaintop, PA 18707. Telephone: (800) 233-8366, Fax: (800) 526-0841. Underwriters Laboratories, Inc. (UL), ISO 9001:2008 Registered.

B. Model: ESD20.

2.2 MATERIALS

A. Curtain:
1. Air infiltration rate of less than .40 CFM/FT2 validated by an independent testing agency. Test report required.
2. Slat Material: No. 6F, (Listed Exterior/Interior):
a. Galvanized Steel/Galvanized Steel: 20/24 gauge, Grade 40, ASTM A 653 galvanized steel zinc coating.
3. Bottom Bar: Reinforced extruded aluminum interior face with full depth insulation and exterior skin slat to match curtain material and gauge.
4. Fabricate interlocking sections with high strength cast iron endlocks on alternate slats each secured with two ¼” rivets. Provide windlocks as required to meet specified wind load.
5. Exterior Slat Finish:
a. GalvaNex™ Coating System to include an ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation of a chemical bonding, gray, tan or white as selected during construction submittals, baked-on polyester base coat and a gray, tan or white as selected during construction submittals, baked-on polyester finish coat. GalvaNex™ components shall include a limited two year finish warranty.

6. Interior Slat Finish:
    a. GalvaNex™ Coating System to include an ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation of a chemical bonding, gray baked-on polyester base coat and a gray baked-on polyester finish coat.GalvaNex™ components shall include a limited two year finish warranty.
7. Curtain Configuration
    a. Standard Curtain configuration.
8. Bottom Bar Finish:
    a. Exterior Face: Match slats.
    b. Interior Face: Powder coat to match slats.
    c. Bottom bar to include air infiltration certification label.
9. Bottom Bar Configuration:
    a. Standard Bottom Bar Configuration

B. Guides: Thermal break required. Fabricate with minimum 3/16 inch structural steel angles. Provide windlock bars of same material when windlocks are required to meet specified wind load. Top of inner and outer guide angles to be flared outwards to form bellmouth for smooth entry of curtain into guides. Provide removable guide stoppers to prevent over travel of curtain and bottom bar. Top 16 ½" of coil side guide angles to be removable for ease of curtain installation and as needed for future curtain service.
    1. Finish:
        a. Steel: Phosphate treatment followed by a gray, tan or white as selected during construction submittals, baked-on polyester powder coat; minimum 2.5 mils cured film thickness.

C. Counterbalance Shaft Assembly:
    1. Barrel: Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot of width.
    2. Spring Balance: Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs. Provide wheel for applying and adjusting spring torque.

D. Brackets: Fabricate from minimum 3/16 inch steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and form end closures.
    1. Finish:
        a. Steel: Phosphate treatment followed by a gray, tan or white as selected during construction submittals, baked-on polyester powder coat; minimum 2.5 mils cured film thickness.

E. Hood: 24 gauge galvanized steel with reinforced top and bottom edges. Provide minimum 1/4 inch steel intermediate support brackets as required to prevent excessive sag.
    1. Finish:
        a. GalvaNex™ Coating System to include an ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation of a chemical bonding, gray, tan or white as selected during construction submittals, baked-on polyester base coat and a gray, tan or white as selected during construction submittals baked-on polyester finish coat. GalvaNex™ components shall include a limited two year finish warranty.

F. Weatherstripping:
    1. Bottom Bar: Replaceable, bulb-style, compressible EDPM gasket extending into guides.

2. Hood: Neoprene/rayon baffle to impede air flow above coil.

2.3 ACCESSORIES

A. Locking:
1. Crank Hoist: Padlockable slide bolt on coil side of bottom bar at each jamb extending into slots in guides.

B. Operator and Bracket Mechanism Cover: Provide 24 gauge galvanized steel sheet metal cover to enclose exposed moving operating components at coil area of unit. Finish to match door hood.

2.4 OPERATION

A. Manual Chain Hoist: Provide chain hoist operator with endless steel chain, chain pocket wheel and guard, geared reduction unit, and chain keeper secured to guide.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings.

B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

C. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION

A. General: Install door and operating equipment with necessary hardware, anchors, inserts, hangers and supports.

B. Follow manufacturer's installation instructions.

3.3 ADJUSTING

A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion.

3.4 CLEANING

A. Clean surfaces soiled by work as recommended by manufacturer.

B. Remove surplus materials and debris from the site.

3.5 DEMONSTRATION

A. Demonstrate proper operation to Owner's Representative.

B. Instruct Owner's Representative in maintenance procedures.

END OF SECTION

SECTION 08 7100

DOOR HARDWARE

PART 1 - GENERAL

1.1 WORK INCLUDED

A. The work in this section includes furnishing all items of finish hardware as hereinafter specified or obviously necessary for all swinging doors.

B. Provide temporary cylinders as required for securing the building until the permanent cylinders are installed.

C. All exterior doors, frames and door hardware shall meet the Florida Building Code requirements per design criteria per the structural drawings.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 08 1000 – Door Schedule

B. Section 08 1113 - Hollow Metal Doors and Frames

1.4 REFERENCES

A. Standards
1. ANSI A156.1 – Butts and Hinges
2. ANSI A156.2 – Bored Locks and Latches
3. ANSI A156.4 – Door Controls – Door Closers
4. ANSI A156.5 – Auxiliary Locks and Associated Products
5. ANSI A156.6 – Architectural Door Trim
6. ANSI A156.7 – Template Hinge Dimensions
7. ANSI A156.13 – Mortise Locks and Latches
8. ANSI A156.16 – Auxiliary Hardware
9. ANSI A156.18 – Material and Finishes
10. UL10C – Positive Pressure Fire Tests of Door Assemblies

B. Codes
1. NFPA 101 – Life Safety Code
2. ANSI A117.1 – Accessible and Usable Buildings and Facilities
3. ADA – Americans with Disabilities Act
4. Florida Building Code 5th Edition (2014)

1.5 SUBMITTALS

A. General Requirements
1. Submit copies of Door Hardware Schedule in accordance with the requirements of Section 01 3300.

B. Schedules and Product Data

1. Schedules shall list each door opening and be organized into hardware sets indicating complete designations of every item required for each door opening to function as intended. Note any special mounting instructions or requirements with the hardware schedule. Schedules to include the following information:
    a. Location of each hardware set to be cross-referenced to indications on the Drawings and in Door Schedule.
    b. Handing and degree of swing of each door.
    c. Door and frame sizes and materials.
    d. Keying information.
    e. Type, style, function, size and finish of each hardware item.
    f. Name and manufacturer of each hardware item.
    g. Fastenings and other pertinent information.
    h. Explanation of all abbreviations, symbols and codes contained in schedule.
    i. Mounting locations for hardware when varies from standard.
2. Submit catalog cuts and/or product data sheets for all scheduled finish hardware.
3. Submit separate detailed keying schedule for approval indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
4. Submit certified independent lab test or NOA report on each type of exterior opening tested as an assembly.

C. Samples

1. Upon request, samples of each type of hardware in finish indicated shall be submitted. Samples are to remain undamaged and in working condition through submittal and review process. Items may be incorporated into the work within limitations of keying coordination requirements.

D. Templates

1. Furnish a complete list and suitable templates, together with finish hardware schedule to Contractor, for distribution to necessary trades supplying materials to be prepped for finish hardware.

E. Operation and Maintenance Manual

1. Upon completion of construction, furnish two complete maintenance manuals to the Owner. Manuals to include the following items:
    a. Approved hardware schedule, catalog cuts and keying schedule.
    b. Hardware installation and adjustment instructions.
    c. Manufacturer's written warranty information.

1.6 QUALITY ASSURANCE

A. Supplier Qualifications

1. A recognized Architectural door hardware supplier who has maintained an office and has been furnishing hardware in the project's vicinity for a period of at least two years.
2. Hardware supplier shall have facilities to accommodate this project.
3. Hardware supplier shall have in his employment at lease one Architectural Hardware Consultant who is available for consultation about the project's hardware and requirements for the Owner and Contractor.
4. Hardware supplier must be an authorized factory distributor of products.

1.7 DELIVERY, STORAGE AND HANDLING

A. Marking and Packaging

1. Properly package and mark items according to the approved hardware schedule, complete with necessary screws and accessories and instructions and installation templates for spotting mortising tools. Contractor shall check deliveries against accepted list and provide receipt for them, after which he is responsible for storage and care. Any shortage or damaged good shall be made without cost to the Owner.
2. Packaging of door hardware is the responsibility of the supplier. As hardware supplier receives material from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set and door numbers to match the approved Hardware Schedule.

B. Delivery
1. The supplier shall deliver all hardware to the project site. Hardware supplier shall coordinate delivery times and schedules with the Contractor. Inventory door hardware jointly with representatives of hardware supplier and hardware Installer/Contractor until each is satisfied that count is correct.
2. No keys, other than construction master keys and/or temporary keys are to be packed in boxes with the locks.
3. At time of hardware delivery, door openings supplier, in conjunction with the Contractor, shall check in all hardware and set up a secure, lockable hardware location.

C. Storage
1. Provide secure lock-up for door hardware delivered to the project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of work will not be delayed by hardware losses both before and after installation.

1.8 WARRANTY

A. All items, except as noted below, shall be warranted in writing by the manufacturer against failure due to defective materials and workmanship for a minimum period of one year commencing on the date of final completion and acceptance. In the event of product failure, promptly repair or replace item with no additional cost to the Owner.
1. Locksets: Five years
2. Door closers: Ten years

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers as listed below shall be acceptable. Obtain each type of finish hardware (hinges, latch and locksets, door closers, etc.) from a single manufacturer.

2.2 MATERIALS

A. Screws and Fasteners
1. All required screws shall be supplied as necessary for securing finish hardware in the appropriate manner. Thru-bolts shall be supplied for all door closers.

B. Hanging Devices
1. Hinges
a. Hinges shall conform to ANSI A156.1 and have the number of knuckles as specified, oil-impregnated bearings as specified with non-removable pin feature where specified. Unless otherwise scheduled, supply one hinge for every 30” of door height. Hinges shall be a minimum of 4 1/2” high and 4 1/2” wide; heavy weight hinges (.180) shall be supplied at all doors where specified. Specified Manufacturer: Ives.

C. Cylinders and Keying
   1. Keying
      a. Shall be provided with temporary cylinders and keying. All locks and cylinders to be master-keyed and grandmaster-keyed at the end of construction as directed by the Owner.
      b. Coordination with the Owner during the keying phase of the project shall be included in the bid, along with all necessary specific instructions required for a complete and operational locking system at the end of the project.

D. Locking Devices
   1. Locksets – Grade 1 Cylindrical - Interior
      a. All cylindrical locksets shall exceed ANSI/BHMA 156.2 Grade 1 Series. Levers shall be solid cast with 3-1/2" diameter rose.
   2. Locksets – Grade 1 Mortise – Exterior
      a. All cylindrical locksets shall exceed ANSI/BHMA 156.13 Grade 1 Series. Levers shall be solid cast with 3-1/2" diameter rose.

E. Door Closers
   1. Surface Mounted Closers
      a. All door closers shall be ANSI 156.4, Grade 1 Certified. Closers shall not have pressure relief valves. All closers shall have aluminum alloy bodies, forged steel arms and separate valves for adjusting back-check, closing and latching cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall not be installed on exterior side of doors; where possible install closers on door for optimum aesthetics. Specified Manufacturer: Dor-O-Matic.

F. Door Trim and Protective Plates
   1. Kick plates shall be .050 gauge and two inches less full width of door. Specified Manufacturer: Ives.

G. Silencers
   1. Furnish rubber door silencers all hollow metal frames; two per pair and three per single door frame. Specified Manufacturer: Ives.

2.3 FINISHES

A. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 or traditional U.S. finishes shown by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating, composition, hardness and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Contractor shall ensure that the building is secured and free from weather elements prior to installing interior door hardware. Examine hardware before installation to ensure it is free of defects.

3.2 INSTALLATION

A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with the governing regulations.

1. “Recommended Locations for Builders Hardware for Standard Steel Doors and Frames” by the Door and Hardware Institute (DHI.)

B. All hardware shall be applied and installed in accordance with best trade practice by an experienced hardware installer. Care shall be exercised not to mark or damage adjacent work.

C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protection with finishing work. Do not install surface-mounted items until finishes have been completed on the substrates involved.

D. Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.3 FIELD QUALITY CONTROL

A. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract Documents.

B. Prior to the installation of hardware, manufacturer's representatives for locksets, closers and any exit devices shall arrange and hold a jobsite meeting to instruct the installing Contractor's personnel on the proper installation of their respective products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Owner.

C. The hardware supplier shall do a final inspection prior to building completion to ensure that all hardware was correctly installed and is in proper working order.

D. The manufacturer’s representative shall do a final inspection prior to building completion to ensure that all hardware was correctly installed and is in proper working order.

3.4 ADJUSTING, CLEANING, AND DEMONSTRATING

A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.

B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and conduct a final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore to proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

C. Instruct Owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes.

3.5 PROTECTION

A. Contractor shall protect all hardware, as it is stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

3.6 HARDWARE SCHEDULE

A. The following schedule is furnished for whatever assistance it may afford the Contractor; do not consider it as entirely inclusive. Should any particular door or item be omitted in any scheduled hardware heading, provide door or item with hardware same as required for similar purposes. Hardware supplier is responsible for handing and sizing all products as listed in the hardware heading. Quantities listed are for each pair of doors, or for each single door.

B. All lock functions, finishes, applications and keying shall be reviewed with the Owner's Representative at a meeting before finish hardware schedules are submitted for final approval.

HARDWARE SET NO. 1
DOOR: 101/1, 101/2, 103, 104, 105

3 EA.	HINGES	5BB1 4.5 X 4.5 NRP	630	IVES
1 EA.	CLASSROOM LOCK	MATCH EXISTING SYSTEM	630	
1 EA.	MORTISE DEADBOLT	KEY OPERATED ONLY	630	
1 EA.	SURFACE CLOSER	SC80 SS	689	DOR
2 EA.	KICK PLATE	8400 10" X 2" LDW	630	IVES
1 SET	WEATHERSTRIP	PS-074 HEAD AND JAMBS	BLK	STE
1 EA.	DRIP CAP	16A	AL	NGP
1 EA.	DOOR SWEEP	202NA	AL	NGP
1 EA.	LOCK GUARD	LG12	630	IVES

HARDWARE SET NO. 2
DOOR: 102

3 EA.	HINGES	5BB1 4.5 X 4.5 NRP	626	IVES
1 EA.	STOREROOM LOCK	MATCH EXISTING SYSTEM	626	
2 EA.	KICK PLATE	8400 10" X 2" LDW	630	IVES
3 EA.	SILENCER	SR64	GRY	IVES

END OF SECTION

SECTION 09 1000

FINISH SCHEDULE

GENERAL NOTES

1. ALL COLOR SELECTIONS SHALL BE MADE (OR VERIFIED IF SPECIFICED) DURING CONSTRUCTION AFTER SHOP DRAWINGS AND SAMPLES ARE RECEIVED.

2. ALL HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED.

3. ST./SL. CONC. = STAINED AND SEALED FINISH ON CONCRETE FLOOR.

FINISH SCHEDULE

SPACE #	SPACE NAME	FLOOR	WALL FINISHES				CL'G.	CL'G. HT.
			NORTH	SOUTH	EAST	WEST		
101	CONCESSIONS	ST./SL. CONC.	PAINT	PAINT	PAINT	PAINT	A.T.	9'-0"
102	STORAGE	ST./SL. CONC.	PAINT	PAINT	PAINT	PAINT	A.T.	9'-0"
103	MALE	ST./SL. CONC.	PAINT	PAINT	PAINT	PAINT	A.T.	9'-0"
104	MECH./ELEC.	ST./SL. CONC.	PAINT	PAINT	PAINT	PAINT	PAINT	VARIES
105	FEMALE	ST./SL. CONC.	PAINT	PAINT	PAINT	PAINT	A.T.	9'-0"

END OF SECTION

SECTION 09 5113

ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Suspended acoustical ceiling system consisting of acoustical ceiling panels and associated suspension system.

B. Coordinate all work with the Reflected Ceiling Plan.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 07 2116 – Blanket Insulation

1.4 REFERENCES

A. ASTM Standards and Test Procedures as referenced herein.

B. Federal Specifications as referenced herein.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Maintain humidity of 65 percent to 75 percent in areas where acoustical ceiling materials are to be installed for 24 hours before, during and after installation. Maintain a uniform temperature of 55 degrees F. to 80 degrees F. prior to and during installation of materials.

1.6 QUALITY ASSURANCE

A. Installer: Shall be regularly engaged in the installation of suspended acoustical ceilings and shall have previous experience within the last five years on projects similar in scope. Upon request, submit evidence of qualification compliance with complete references.

1.7 SUBMITTALS: Submittals shall be made during construction. In addition, the following specific information shall be provided:

A. Samples: Submit one 12-inch square sample of each acoustical ceiling panel type specified. Submit one full-size sample of suspension system main runners and edge molding. Samples shall be marked with the name of the manufacturer and specific design and technical data as called for herein.

B. Submit the grid manufacturer printed installation instructions.

C. Product Data: Submit manufacturer product data for acoustical ceiling panels and suspension system components specified herein.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment per manufacturer’s recommendations.

B. Deliver material to project site in manufacturer's original unopened containers with manufacturer's labels indicating brand name, pattern, sizes and thickness; legible and intact.

C. Store all materials inside in their original protective packaging to prevent soiling, physical damage or wetting.

1.9 WARRANTY

A. Provide a written guarantee against defects in materials and workmanship for a period of one year from the date of Substantial Completion of the project. Any defects that occur during this warranty period shall be repaired or replaced; with no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is to establish a standard of quality and general configuration desired. Equal products of other manufacturers, that meet the requirements specified, shall be considered.

B. Like items of material or equipment specified herein shall be products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

C. All products shall have a Class A finish and have a .55 NRC rating.

2.2 ACOUSTICAL CEILING PANEL TYPES

A. Ceiling panels shall be USG Sheetrock Brand Lay-In Ceiling ClimaPlus, viney with square edge, 2x2x1/2", Item No. 3260. Equal products are acceptable.

2.3 SUSPENSION SYSTEMS

A. Ceiling System shall conform to ASTM C 635, light duty at ClimaPlus type panel, with all components manufactured by Donn Exposed Tee System or equal.
   1. Main and Cross Members: Double web design, intermediate duty cold rolled steel with minimum thickness of .02", coated and factory painted low sheen satin finish. Color shall be white. Main tees shall be 1 ½", cross tees shall be 1" and flange width shall be 15/16".
   2. Edge Molding: Minimum .02" steel, angle-shaped with minimum flange width of 15/16". Finish shall match main members.
   3. Hanger Wire: Minimum 12-gauge, galvanized, soft-annealed, mild steel wire. Provide hanger wires attached to structure for final connection to light fixtures by the Electrical Subcontractor and A/C registers and diffusers by the Mechanical Subcontractor.
   4. Wire Ties: Eighteen-gauge, galvanized, annealed steel wire.

PART 3 - EXECUTION

3.1 GENERAL

A. It is the intent that the suspension system and acoustical ceiling panels be installed to line and level with a maximum deflection of 1/300 of the span, symmetrical to rooms and spaces, and with due regard to appearance and structural stability. Refer to Reflected Ceiling Plan for layout. Adjust layout, soffits and heights as required to accommodate unforeseen conditions at ducts, piping and structural members at no additional cost to the Owner.

3.2 SEQUENCING

A. Do not install suspended acoustical ceilings until; sufficient heat provided, dust-generating activities have terminated and overhead work is complete, tested and approved.

B. Lay out grid as shown on Reflected Ceiling Plan. Coordinate with Mechanical and Electrical equipment in framing and cutting material around all ceiling penetrations, whether shown or not. Adjust Mechanical and Electrical layouts as required at no cost to the Owner.

3.3 CONDITION OF SURFACES

A. Examine surfaces scheduled to receive suspended acoustical ceilings for unevenness, irregularities and dampness that would affect quality and execution of work. The Contractor shall report any adverse conditions that will effect the installation.

3.4 INSTALLATION

A. Suspension System: Hang level directly from structure only in accordance with the manufacturer's instructions. Space hanger wires a maximum of 4 feet on center each direction. Install additional hangers at ends of each suspension member. Install additional hangers to structure for electrical and mechanical trades to connect at diagonal corners of all light fixtures and mechanical registers/diffusers. Do not splay wires more than 5-inches in 4-foot vertical drop or a maximum of 30° angle from support to grid or fixture. Final attachment to light fixtures and mechanical registers/diffusers shall be by those respective trades.

B. Attach supporting wires only to structural members. Provide additional supports as required. Wrap wire a minimum of three times horizontally within 3", turning ends upward.

C. Connect runners according to manufacturer's directions. Install edge molding at intersection of suspended ceiling and vertical surfaces. Miter corners where moldings intersect or install corner caps. Attach to vertical surface with mechanical fasteners. Provide additional channels and hangers as required for support of mechanical and electrical work.

D. Consult the Mechanical and Electrical Drawings for the type and extent of work and coordinate closely with other trades. Adjust as required at no additional cost, to accommodate ductwork, piping and other interferences as required.

E. Acoustical Ceiling Panels: Upon completion of the suspended system, other concealed work and after the Above-Ceiling Review has been satisfactorily completed, then install the acoustical ceiling panels in the grid. Place material to bear all around on suspension members. Provide clips at all vertical installations.

3.5 CLEANING

A. Clean soiled or discolored panel surfaces after installation. Touch up scratches, abrasions, voids, and other defects in finished surfaces. Remove and replace damaged or improperly installed units.

END OF SECTION

SECTION 09 9000

PAINTING AND COATING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install:

A. All Field Painting. It is the intent that the Painting Contractor shall be responsible for painting or finishing of new exposed CMU, coordination with the Finish Schedule and above ceiling piping that will be exposed to view, whether specifically mentioned or not, except where scheduled and/or specifically noted otherwise on the Drawings.

B. Any painting of mechanical piping and equipment shall be the responsibility of the Painting Contractor.

C. Shop painting of fabricated items shall be as specified in other Sections. However, the painting of any exposed steel fabrications and shop primed metal surfaces after erection is included in this Section.

D. Certain items are manufactured prefinished and except for spot touch up of damaged areas, shall not be again painted. The damaged areas which cannot be touched up without noticeable differences between the manufacturer's finish and field finished areas, and items which have been prefinished in colors other than that specified shall be brought to attention for determination of treatment to be used, if any, to correct the situation.

E. Refer to Section 09 0000 Finish Schedule. All color selections shall be submitted for selection during submittal phase of construction.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SURFACES NOT REQUIRING PAINTING: Unless otherwise specifically scheduled and/or indicated in the Specifications or on the Drawings, the following areas or items will not require painting:

A. Nonferrous and corrosion-resistant ferrous alloys such as copper, bronze, aluminum, chromium plate and stainless steel, except where: required for insulation between dissimilar metals and aluminum is in contact with concrete or masonry.

1.4 QUALITY ASSURANCE

A. Painting Contractor: Shall be regularly engaged in the application of paints and coatings specified and shall have previous experience within the last three years on projects similar in scope. Upon request, submit evidence of qualification compliance with complete references.

1.5 SUBMITTALS

A. Product Data: For each paint system used, obtain from paint manufacturer for submittal, paint or coating manufacturers' technical product data sheets, including application instructions and paint colors available for each product used. The required information shall be submitted on a system-by-system basis; indiscriminate submittal of paint or coating manufacturer's literature will not be accepted.

1.6 ENVIRONMENTAL CONDITIONS

A. Paints and coatings shall not be applied in extreme heat, ambient temperatures below 40 degrees F., or relative humidity in excess of 90 percent, unless otherwise recommended by the paint or coating materials manufacturer, nor in dust, smoke-laden atmosphere or damp weather.

1.7 DELIVERY, STORAGE AND HANDLING

A. All materials shall be delivered to the project site in unopened containers that plainly show at the time of use the designated name, date of manufacture, color, and name of manufacturer. Paint and coating materials shall be stored in a suitable protected area that is heated or cooled as required to maintain temperatures within the range recommended by the paint or coating manufacturer.

B. Paint and coating material shall be kept sealed when not in use.

C. Store paint materials at minimum ambient temperature of 45 degrees F. and a maximum of 90 degrees F, in well ventilated area, unless required otherwise by manufacturers' instructions.

D. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.8 SAFETY

A. Painting shall be performed in strict accordance with the safety recommendations of the applicable paint or coating materials manufacturer; with the safety recommendations of the National Association of Corrosion Engineers contained in the publication "Manual for Painter Safety"; and with applicable Federal, State and local agencies having jurisdiction.

1.9 GUARANTEE

A. The Contractor shall provide a written guarantee against defects in materials and workmanship for a period of two years from the date of Substantial Completion of the project. Any defects occurring during this warranty period shall be repaired at no cost to the Owner. This guarantee shall include, but shall not be limited to, blistering, peeling, cracking, sagging, flaking, chalking or alligatoring.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products of Sherwin-Williams are approved. Equal products will be considered.

2.2 FILM THICKNESS

A. Coverage is listed as either total minimum dry film thickness in mils (MDFT); or the spreading rate in square feet per gallon (SFPG). Per coat determinations are listed as MDFTPC or SFPGPC. The number of coats is the minimum required irrespective of the coating thickness. Additional coats may be required to obtain the minimum required paint thickness, depending on method of application, differences in manufacturers' products, and atmospheric conditions. Maximum film build per coat shall not exceed the coating manufacturer's recommendations.

2.3 PAINT AND COATING MATERIALS

A. Accessory Materials: Shellac, turpentine, linseed oil, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, shall be commercial quality and as recommended by the manufacturer of the applicable paint or coating materials.

B. Masonry / CMU – Latex System, Eg-Shel Finish. 1st Coat: S-W PrepRite Block Filler, B25W25 (75-125 sq.ft./gal.). 2nd Coat: S-W ProMar 200 Zero VOC Latex Eg-Shel, B20-2600 Series. 3rd Coat: S-W ProMar 200 Zero VOC Latex Eg-Shel, B20-2600 Series (4 mils wet, 1.7 mils dry per coat).

C. Hollow Metal Door Frames and Doors – Metal Ferrous, Urethane System, Semi-Gloss Finish. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series (5 – 10 mils wet, 2 -4 mils dry). 2nd Coat: S-W HydroGloss Single Component Waterbased Urethane, B65W181 Series. 3rd Coat: S-W HydroGloss Single Component Waterbased Urethane, B65W181 Series (6 -12 mils wet, 2 -4 mils dry per coat).

D. Conduit and Piping that will be exposed to view – Metal Ferrous or Galvanized, Acrylic System, Eg-Shel Finish. 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series (5 – 10 mils wet, 2 – 4 mils dry). 2nd Coat: S-W Pro Industrial Eg-Shel Acrylic B66-660 Series. 3rd Coat: S-W Pro Industrial Eg-Shel Acrylic B66-660 Series (2.5 – 4.0 mils dry per coat).

E. PVC or Plastic – (Conduit and Piping) Acrylic System, Eg-Shel Finish. 1st Coat: S-W Multi-Purpose Interior/Exterior Latex Primer/Sealer, B51-450 Series (4 mils wet, 1.4 mils dry). 2nd Coat: S-W Pro Industrial Eg-Shel Acrylic B66-660 Series. 3rd Coat: S-W Pro Industrial Eg-Shel Acrylic B66-660 Series (2.5 – 4.0 mils dry per coat).

2.4 COLORS

A. Color selections will be made during construction submittals.

B. Where more than one coat of paint or coating material is applied within a given system, color shall be tinted slightly differently, but in the same hue as top coat to provide a visual reference that the required coats have been applied.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

C. Beginning of paint and coating application means acceptance of surfaces.

3.2 PREPARATION

A. Remove electrical plates, hardware, light fixture trim and fittings prior to preparing surfaces or finishing.

B. Correct minor defects and clean surfaces which affect work.

C. Shellac and seal marks which may bleed through surface finishes.

D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

E. Galvanized, Copper and Other Non-Ferrous Metal Surfaces: Remove surface contamination and oils and wash with solvent. No painting required of copper.

F. Uncoated Steel Surfaces: Remove grease, scale, dirt and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting and clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned.

G. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

3.3 PROTECTION

A. Protect elements surrounding the work from damage or disfiguration. Repair damage to other surfaces caused by work.

B. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces. Remove empty paint containers from site.

3.4 APPLICATION

A. General: Paint and coating manufacturers' printed instructions for applying each type of paint or coating shall be furnished prior to application. Apply all paints and coatings in strict accordance with the paint manufacturers' recommendations. Sufficient time shall be allowed between coats to assure thorough drying and/or curing of previously applied paint or coatings.

B. Damaged Coatings: Damaged coatings, pinholes or holidays shall have the edges feathered and repaired in accordance with the recommendations of the paint manufacturer.

C. Unsatisfactory Application: If the item has an improper finish color or insufficient film thickness, the surface shall be cleaned and top coated with the specified paint material to obtain the specified color and coverage. Specific surface preparation information to be secured from the paint or coating manufacturer. Work shall be free of runs, bridges, shiners, laps or other imperfections. Evidence of these conditions shall be cause for rejection.

3.5 CLEANING

A. All cloths and waste that might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each day.

B. Upon completion of the work, all staging, scaffolding and containers shall be removed from the project site. Paint spots, oil or stains upon adjacent surfaces and floors shall be completely removed and the entire job left clean.

END OF SECTION

SECTION 10 0000

SPECIALTIES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the Work necessary to furnish and install, complete, the following:

A. All fire extinguishers and mounting brackets shall be furnished and installed by the Contractor.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 REFERENCES

A. Manufacturer's recommendations, specifications and installation instructions.

B. Florida Fire Prevention Code 5th Edition.

C. Underwriters' Laboratories (UL): "Fire Protection Equipment List".

1.4 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Manufacturer's Literature: Catalog data for each item.

B. Shop Drawings: Shop Drawings as required for backing and preparation for built-in items.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

1.6 WARRANTY

A. Provide a written guarantee against defects in materials and workmanship for a period of one year from the date of Substantial Completion of the Project. Any defects occurring during this warranty period shall be repaired at no cost to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements specified herein, will be considered in accordance with Section 01 6000.

B. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 GENERAL

A. Provide and install portable fire extinguishers where specifically scheduled and/or indicated on the Drawings. All fire extinguishers shall be tagged in the month of Substantial Completion.

2.3 PORTABLE FIRE EXTINGUISHERS

A. All fire extinguisher units and brackets for extinguishers shall be provided and installed by the Contractor.

B. Fire Extinguisher shall be 1A10BC (5 lbs.) bracket mounted. Refer to the Life Safety Plan drawing.

2.4 ACCEPTABLE MANUFACTURERS: The following manufacturers are acceptable subject to providing products equal to that specified:

A. J.L. Industries.

B. Potter-Roemer, Inc.

C. Larsen's Fire Protection and Safety Equipment.

2.5 FASTENERS

A. Provide blocking for anchorage as required. Provide necessary stainless steel screws, bolts and other fasteners of suitable type and size to secure items of fire and safety equipment in position.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturers' printed instructions applicable references at locations shown on Drawings. Install plumb and level.

END OF SECTION

SECTION 10 1400

SIGNAGE

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Interior Signage.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Shop Drawings, Product Data and Samples: Prior to ordering, submit for review, manufacturers' descriptions, installation data, color charts, applicable shop drawings, and other data pertinent to manufacture or fabrication as required for all items specified herein.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.

B. Deliver and store materials in manufacturers' original, unopened, undamaged containers. Handle materials in such a manner as to prevent damage to products or finishes.

1.5 WARRANTY

A. The Contractor shall provide a written guarantee of all items installed under this section against defects in materials and workmanship for a period of one year from the date of substantial completion. Any defects occurring during this warranty period shall be repaired or replaced at no cost to the Owner.

B. In addition, provide the specific manufacturer's warranty on each item of equipment specified in this Section.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. The use of a manufacturer's name and specification number is for the purpose of establishing the standard of quality and general configuration desired. Products of other manufacturers, meeting the requirements of each item specified herein, will be considered.

1. Like items of material or equipment specified herein shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 SIGNAGE

A. Interior Restroom Signage: Signage for restroom doors shall be 7” x 9” single-sided, ¼” PVC backing with clear acrylic overlay. ADA standard raised copy and Braille in white with a 2” clear slide in slot. Color shall be standard ADA Blue. Theft resistant screws and adhesive.

B. Submit shop drawings for review prior to ordering any signs. Colors of signs and lettering to be verified during construction.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install signage in accordance with the manufacturers' recommendations and instructions. Prior to the installation, consult with the Owner so that minor adjustments in the locations can be decided, as required.

B. Install signage level and attach securely to the adjacent materials with suitable fasteners and adhesives. Prevent scratching or damaging adjacent materials during the installation.

END OF SECTION

SECTION 10 2116

TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Solid plastic toilet compartments and urinal screens.

1.2 REFERENCES

A. ASTM International (ASTM)
   1. A167 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
   2. B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
   3. E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. National Fire Protection Association (NFPA) 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.

1.3 SYSTEM DESCRIPTION

A. Compartment Configurations:
   1. Toilet partitions and privacy screens: Floor mounted, overhead braced.
   2. Urinal screens: Floor mounted.

1.4 SUBMITTALS

A. Submittals for Review:
   1. Shop Drawings: Include dimensioned layout, elevations, trim, closures, and accessories.
   2. Product Data: Manufacturer's descriptive data for panels, hardware, and accessories.
   3. Samples: 2 x 3 inch samples showing available colors.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 years experience in manufacture of solid plastic toilet compartments with products in satisfactory use under similar service conditions.

B. Installer Qualifications: Minimum 5 years experience in work of this Section.

1.6 WARRANTIES

A. Provide manufacturer’s 25 year warranty against breakage, corrosion, and delamination under normal conditions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Contract Documents are based on products by Scranton Products.

B. Substitutions: Permitted.

2.2 MATERIALS

A. Doors, Panels and Pilasters:
   1. High density polyethylene (HDPE), fabricated from polymer resins compounded under high pressure, forming single thickness panel.
   2. Waterproof and nonabsorbent, with self-lubricating surface, resistant to marks by pens, pencils, markers, and other writing instruments.
   3. 1 inch thick with edges rounded to 1/4 inch radius.
   4. Fire hazard classification: Class A flame spread/smoke developed rating, tested to ASTM E84.
   5. Color: To be selected from manufacturer's full color range.

B. Aluminum Extrusions: ASTM B221, 6463-T5 alloy and temper.

C. Stainless Steel: ASTM A167, Type 304.

2.3 HARDWARE

A. Hinges:
   1. 8 inches long, fabricated from heavy-duty extruded aluminum with bright dip anodized finish, wrap-around flanges, adjustable on 30-degree increments, through bolted to doors and pilasters with stainless steel, Torx head sex bolts.
   2. Hinges operate on field-adjustable nylon cams, field adjustable in 30 degree increments.

B. Door Strike and Keeper:
   1. 6 inches long, fabricate from heavy-duty extruded aluminum with bright dip anodized finish, with wrap-around flanges secured to pilasters with stainless steel tamper resistant Torx head sex bolts.
   2. Bumper: Extruded black vinyl.

C. Latch and Housing:
   1. Heavy-duty extruded aluminum.
   2. Latch housing: Bright dip anodized finish.
   3. Slide bolt and button: Black anodized finish.

D. Coat Hook/Bumper:
   1. Combination type, chrome plated Zamak.
   2. Equip outswing handicapped doors with second door pull and door stop.

E. Door Pulls: Chrome plated Zamak.

2.4 COMPONENTS

A. Doors and Dividing Panels: 55 inches high, mounted 14 inches above finished floor, with aluminum heat-sinc fastened to bottom edges.

B. Pilasters: 82 inches high, fastened to pilaster sleeves with stainless steel tamper resistant Torx head sex bolt.

C. Pilaster Sleeves: 3 inches high, 20 gage stainless steel, secured to pilaster with stainless steel tamper resistant Torx head sex bolt.

D. Wall Brackets: 54 inches long, heavy-duty aluminum, bright dip anodized finish, fastened to pilasters and panels with stainless steel tamper resistant Torx head sex bolts.

E. Headrail: Heavy-duty extruded aluminum, anti-grip design, clear anodized finish, fastened to headrail bracket with stainless steel tamper resistant Torx head sex bolt and at top of pilaster with stainless steel tamper resistant Torx head screws.

F. Headrail Brackets: 20 gage stainless steel, satin finish, secured to wall with stainless steel tamper resistant Torx head screws.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install compartments in accordance with manufacturer's instructions and approved Shop Drawings.

B. Install rigid, straight, plumb, and level.

C. Locate bottom edge of doors and panels 14 inches above finished floor.

D. Provide uniform, maximum 3/8 inch vertical clearance at doors.

E. Not Acceptable: Evidence of cutting, drilling, or patching.

3.2 ADJUSTING

A. Adjust doors and latches to operate correctly.

END OF SECTION

SECTION 10 2800

TOILET, BATH AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Toilet accessories as specified herein, and/or as shown on the drawings. Should there be a conflict between specifications and drawings, provide all accessories shown in either, to carry out the intent of the documents.

B. Wall blocking for accessories as required.

C. Attachment hardware.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 REFERENCES

A. Accessibility requirements of the Florida Building Code 5th Edition (2014).

B. Americans with Disabilities Act (A.D.A.) - Specifications for making buildings and facilities accessible to and usable by physically handicapped people.

1.4 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Provide product data on accessories describing size, finish, details of function and attachment methods.

B. Submit manufacturer's installation instructions for accessories.

1.5 KEYING

A. Supply two keys for each lockable accessory to Owner.

1.6 SEQUENCING AND SCHEDULING

A. Contractor shall coordinate the work with the placement of other items and finish materials.

1.7 DELIVERY, STORAGE AND HANDLING

A. Contractor to store and handle materials or equipment under provisions of Section 01 6000.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Accessories shall, for the purpose of establishing the standard of quality and general configuration desired, be as manufactured or supplied by Bobrick. Products of other manufacturers, meeting the requirements specified, will be considered. Like items of material or equipment specified shall be the end products of one manufacturer in order to achieve standardization for appearance, operation, maintenance, spare parts and manufacturer's service.

2.2 MATERIALS

A. Stainless Steel Sheet: ASTM A167, Type 304, No. 4 satin luster.

B. Fasteners, Screws, and Bolts: Stainless steel, ASTM A 193, Type 304.

C. Anchors as recommended by the manufacturer for masonry application.

PART 3 - PREPARATION

3.1 EXAMINATION

A. Contractor shall verify that site conditions are ready to receive work and dimensions are as instructed by the manufacturer.

B. Beginning of installation means acceptance of substrate.

3.2 PREPARATION

A. Deliver inserts and rough-in frames, where applicable, to site at appropriate time for building-in.

B. Provide templates and rough-in measurements as required to accomplish the installation of the items. Verify exact location of accessories for installation with the Owner and Architect prior to installing and adjust locations as necessary.

3.3 INSTALLATION

A. Contractor shall provide and install fixtures, accessories and items in accordance with manufacturers' instructions. Install plumb and level, securely and rigidly anchored to blocking or substrate.

3.4 SCHEDULE OF CONTRACTOR FURNISHED AND INSTALLED ITEMS: Provide items listed in each location, as applicable, whether or not shown on the drawings.

A. B-5806.99 x 36 Horizontal Grab Bar with Peened Grip. One in each ADA stall.

B. B-5806.99 x 42 Horizontal Grab Bar with Peened Grip. One in each ADA stall.

C. B-270 Surface-Mounted Sanitary Napkin Disposal. One in each Female stall.

D. B-4288 Surface-Mounted Multi Roll Toilet Tissue Dispenser. One in each stall.

E. B-4221 Surface-Mounted Toilet Seat Cover Dispenser. One in each stall.

F. B-2111 Surface-Mounted Soap Dispenser. One in each ADA stall and one between lavatories.

G. B-165 Series Mirror, 18” W x 36” H. One at each lavatory.

H. B-262 Paper Towel Dispenser. One in each ADA stall and two at each other lavatories.

I. B-239 Shelf and Mop Holder, 34” long, stainless steel shelf, 3 mop holders and four rag holders. One in Storage Room.

END OF SECTION

SECTION 31 1000

SITE CLEARING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Removing all interfering or objectionable material from the designated area of work.

B. The preservation from injury or defacement of all existing items or equipment designated to remain.

C. Removing topsoil and stockpiling for later reuse.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 31 2000 – Earth Moving

B. Section 31 2213 – Rough Grading

1.4 QUALITY

A. Review with the Owner and Architect the location, limits and methods to be used prior to commencing the work under this section.

1.5 PROTECTION

A. Protect existing piping, conduits, buried items trees, shrubs, lawns and other features of landscaping not scheduled to be removed.

B. Protect bench marks, fences, roads and existing items to remain.

C. Protect above or below grade utilities which are to remain.

D. Repair any damage to satisfaction of the Owner.

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide all materials, suitable and in adequate quantity, required to accomplish the work as specified herein.

PART 3 - EXECUTION

3.1 CLEARING

A. Clearing shall consist of cutting, removing and disposing of vegetative growth and shall be performed in such a manner as to remove all evidence of their presence from the surface. Clearing shall also include the removal of fencing if indicated.

3.2 GRUBBING

A. Grubbing shall consist of the removal and disposal of wood or root matter below the ground surface remaining after clearing, and shall include root systems greater than 2 inches in diameter or thickness to a depth of 6 inches below the ground surface.

3.3 CLEARING AND GRUBBING LIMITS

A. Areas requiring clearing and grubbing shall be all areas scheduled to receive sod/seed.

3.4 DISPOSAL OF CLEARING AND GRUBBING DEBRIS

A. Material shall be promptly removed from the site and disposed of in accordance with all applicable local laws, codes and ordinances. The Contractor shall bear full responsibility for lawful and safe disposal of all cleared and grubbed material.

3.5 STRIPPING

A. Stripping shall include the removal and disposal of all organic sod, topsoil, grass and grass roots, and other objectionable material remaining after clearing and grubbing from the areas designated to be stripped. The depth of stripping shall be a minimum of 6 inches or to a greater depth sufficient to remove all organic material down to clean earth.

B. Areas to be Stripped: Areas to be stripped are the same as clearing and grubbing limits.

C. Disposal: Organic sod, grass and grass roots, and the like, will become the property of the contractor and will be removed from the site.

D. Stockpile topsoil to depth not exceeding 8 feet. Cover to protect from erosion.

END OF SECTION

SECTION 31 2000

EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.2 SUMMARY

A. This Section includes the following:
   1. Preparing subgrades for slabs-on-grade, walks, lawns, and plantings.
   2. Excavating and backfilling for buildings and structures.
   3. Drainage course for slabs-on-grade.
   4. Subbase course for concrete walks.
   5. Subsurface drainage backfill for walls and trenches.
   6. Excavating and backfilling trenches for buried utilities and pits for buried utility structures.

B. Related Sections include the following:
   1. Section 31 1000 – Site Clearing
   2. Section 31 2213 – Rough Grading
   3. Section 32 9223 – Seeding and Sodding

1.3 DEFINITIONS

A. Backfill: Soil materials used to fill an excavation.
   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Bedding Course: Layer placed over the excavated subgrade in a trench before laying pipe.

C. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.

D. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.

E. Excavation: Removal of material encountered above subgrade elevations.
   1. Additional Excavation: Excavation below subgrade elevations as directed by Geotechnical Engineer.
   2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated dimensions without direction by Geotechnical Engineer. Unauthorized excavation, as well as remedial work directed by Geotechnical Engineer, shall be without additional compensation.

F. Fill: Soil materials used to raise existing grades.

G. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material 3/4 cu. yd. or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D 1586, exceeds a standard penetration resistance of 100 blows/2 inches.

H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

I. Subbase Course: Layer placed between the subgrade and a concrete pavement or walk.

J. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

K. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
   1. Classification according to ASTM D 2487 of each on-site or borrow soil material proposed for fill and backfill.
   2. Laboratory compaction curve according to ASTM D 1557 for each on-site or borrow soil material proposed for fill and backfill.

1.5 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and qualified by FDOT.

B. Preexcavation Conference: Conduct conference at Project site.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Owner and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Owner not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Owner's written permission.
   3. Contact utility-locator service for area where Project is located before excavating.

B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: AASHTO M 145 Soil Classification Groups A-1, A-2-4, A-2-5, and A-3; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

C. Unsatisfactory Soils: AASHTO M 145 Soil Classification Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7.
   1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Backfill and Fill: Satisfactory soil materials.

E. Subbase: Materials meeting requirements of FDOT Standard Specifications for Road and Bridge Construction.

F. Base: Materials meeting requirements of FDOT Standard Specifications for Road and Bridge Construction.

G. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

H. Bedding: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.

I. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 ACCESSORIES

A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, minimum 6 inches wide and 4 mils thick, continuously inscribed with a description of utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
   1. Red: Electric.
   2. Yellow: Gas, oil, steam, and dangerous materials.
   3. Orange: Telephone and other communications.
   4. Blue: Water systems.
   5. Green: Sewer systems.

B. Location Wire: Sheathed solid copper wire, minimum 14-AWG THHN.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding project site and surrounding area.

B. Protect subgrades from softening, undermining, washout and damage by rain or water accumulation.
   1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
   2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials and obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
2. Earth excavation includes excavating obstructions visible on surface; underground structures, utilities and other items indicated to be removed; together with soil, boulders and other materials not classified as rock or unauthorized excavation.

3.4 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction and for inspections.
   1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
   2. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended for bearing surface.

3.5 EXCAVATION FOR WALKS

A. Excavate surfaces under walks to indicated cross sections, elevations and grades.

3.6 EXCAVATION FOR UTILITY TRENCHES

A. Excavate trenches to indicated gradients, lines, depths and elevations.

B. Excavate trenches to uniform widths to provide a working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit, unless otherwise indicated.
   1. Clearance: 12 inches on each side of pipe or conduit.

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints and barrels of pipes and for joints, fittings and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
   1. For pipes and conduit less than 6 inches in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
   2. For pipes and conduit 6 inches or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
   3. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.7 APPROVAL OF SUBGRADE

A. Notify Geotechnical Engineer when excavations have reached required subgrade.

B. If Geotechnical Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof roll subgrade with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated subgrades.

D. Reconstruct subgrades damaged by rain, accumulated water or construction activities, as directed by Geotechnical Engineer.

3.8 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations by extending bottom elevation of foundation to excavation bottom, without altering top elevation. Lean concrete fill may be used when approved by Geotechnical Engineer.
   1. Fill unauthorized excavations under other construction or utility pipe as directed by Geotechnical Engineer.

3.9 STORAGE OF SOIL MATERIALS

A. Stockpile borrow materials and satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:
   1. Construction below finish grade including, where applicable, dampproofing, waterproofing and perimeter insulation.
   2. Surveying locations of underground utilities for record documents.
   3. Inspecting and testing underground utilities.
   4. Removing concrete formwork.
   5. Removing trash and debris.
   6. Removing temporary shoring and bracing, and sheeting.
   7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

3.11 UTILITY TRENCH BACKFILL

A. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings and bodies of conduits.

B. Place and compact initial backfill of subbase material, free of particles larger than 1 inch, to a height of 12 inches over the utility pipe or conduit.
   1. Carefully compact material under pipe haunches and bring backfill evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of utility system.

C. Coordinate backfilling with utilities testing.

D. Fill voids with approved backfill materials while shoring and bracing, and as sheeting is removed.

E. Place and compact final backfill of satisfactory soil material to final subgrade.

F. Install continuous location wire directly on all non-ferrous water lines. Secure wire to pipe at intervals not to exceed 8 feet and loop wire at all valves.

G. Install warning tape directly above utilities, 12 inches below finished grade, except 6 inches below subgrade under pavements and slabs.

3.12 FILL

A. Plow, scarify, bench or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material.
   2. Under walks and pavements, use satisfactory soil material.

3.13 MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill material on surfaces that are muddy.
   2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified density.

3.14 COMPACTION OF BACKFILLS AND FILLS

A. Place backfill and fill materials in layers not more than 8 inchesin loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Compact soil to the requirements of the FDOT Standard Specifications for Road and Bridge Construction.

3.15 GRADING

A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
   1. Provide a smooth transition between adjacent existing grades and new grades.
   2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Finish subgrades to required elevations within the following tolerances:
   1. Lawn or Unpaved Areas: Plus or minus 1 inch.
   2. Walks: Plus or minus 1 inch.
   3. Pavements: Plus or minus 1/2 inch.

3.16 SUBBASE AND BASE COURSES

A. Under pavements and walks, place subbase course on prepared subgrade and as follows:
   1. Place base course material over subbase.
   2. Compact subbase and base courses according to FDOT Standard Specifications for Road and Bridge Construction.
   3. Shape subbase and base to required crown elevations and cross-slope grades.
   4. When thickness of compacted subbase or base course is 6 inches or less, place materials in a single layer.
   5. When thickness of compacted subbase or base course exceeds 6 inches, place materials in equal layers, with no layer more than 6 inches thick or less than 3 inches thick when compacted.

B. Pavement Shoulders: Place shoulders along edges of subbase and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each subbase and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

3.17 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified independent geotechnical engineering testing agency to perform field quality control testing.

B. Have testing agency inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.

C. Testing agency will test compaction of soils in place according to Florida Sampling and Testing Methods and FDOT Standard Specifications for Road and Bridge Construction, as applicable. Tests will be performed at the following locations and frequencies:
   1. Paved Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. or less of paved area, but in no case fewer than three tests.
   2. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 150 feet or less of trench length, but no fewer than two tests.

D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.18 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
   1. Scarify or remove and replace soil material to depth as directed by Geotechnical Engineer; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact and reconstruct surfacing.
   1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

3.19 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Owner.
   1. Remove waste material, including unsatisfactory soil, trash and debris, and legally dispose of it off Owner's property.

END OF SECTION

SECTION 31 2213

ROUGH GRADING

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. Excavate subsoil and stockpile for later reuse.

B. Grade and rough contour areas.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 31 1000 – Site Clearing

PART 2 - PRODUCTS

2.1 MATERIALS

A. Subsoil: Excavated material, free from all roots, organic matter, trash, debris, rocks larger than 1 inch in diameter and other deleterious materials.

PART 3 - EXECUTION

3.1 PREPARATION

A. Identify required lines, levels, contours and datum. Hand rake and pick up all debris from the construction process.

B. Identify and flag known below and above grade utilities. Stake and flag all locations.

C. Maintain and protect existing utilities remaining which pass through work area.

D. Notify utility company to remove and relocate utilities, as applicable.

E. Upon discovery of unknown utility or concealed conditions, discontinue affected work and notify owner.

F. Rough grade all areas in new construction, including any existing areas disturbed by access trucks, etc., whether or not in the actual construction area. Bring rough grade up to within two tenths (.2') of a foot of final levels and contours. Adjust rough grade as required by site conditions to achieve proper drainage.

END OF SECTION

SECTION 31 3116

TERMITE CONTROL

PART 1 - GENERAL

1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:

A. The soil treatment for subterranean termite control.

1.2 RELATED REQUIREMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.3 RELATED WORK

A. Section 07 2600 – Vapor Retarders

1.4 QUALITY ASSURANCE

A. Termite control shall comply with the requirements set forth in the Florida Building Code, Termite Protection Standards.

B. Soil treatment shall be performed by a pest control firm licensed and/or otherwise approved by the appropriate Federal, State or local health agency.

C. Pest control firm shall be a member of the Florida Pest Control Associates, Inc. Provide a copy of the membership prior to beginning application work.

1.5 SUBMITTALS: Submittals during construction shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:

A. Applicator's compliance affidavit.

B. Applicator's written guarantee.

C. Manufacturer's literature of chemicals proposed for use, indicating composition by percentage, dilution schedule and intended applicable rate.

1.6 WARRANTY

A. Provide warranty for material and application for one year from date of final completion.

B. Cover against invasion or propagation of subterranean termites, damage to buildings or contents of buildings caused by terminates. Provide repairs to building or contents of building so caused at no additional cost to Owner.

C. Inspect work annually and report in writing to Owner. Owner reserves right to renew warranty on an annual basis for an additional five years.

PART 2 - PRODUCTS

2.1 CHEMICALS

A. Use working solutions containing any one of the following chemicals at the listed minimum concentrations:

1. TERMIDOR 80 WG as manufactured and/or supplied by the BASF Chemical Company. Active ingredients:
    a. Fipronil: 5-amino-1-(2, 6-dichloro-4-(trifluoromethyl)
    b. Phenyl-4-(1, R, S) – (trifluoromethyl) sulfiny-1-H-pyrazole-3-carbonitrile.

B. Other Chemicals may be used provided:
1. They have legal approval by the appropriate Federal, State or local health agency.
2. That no toxic effects to humans, beneficial plant or animal life will result from the chemical used.

PART 3 - EXECUTION

3.1 GENERAL

A. Duplicate treatment certificates shall be provided, one posted at site, one submitted with permit application.

B. Do not begin soil treatment work until all preparations for slab placement have been completed. Soil poisoning shall be completed prior to placement of underslab vapor barrier.

C. Do not apply soil treatment when surface water is present.

D. Unless the treated areas are to be immediately covered, precautions shall be taken to prevent disturbance of the treatment by human or animal contact with the treated soil.

3.2 LOCATION

A. Apply soil treatment to all areas beneath concrete floor slabs and along the interior sides of all foundation walls.

3.3 RATE OF APPLICATION

A. Building Areas: Apply soil poison at the minimum rate of one gallon of working solution per 10 square feet of area under new floor slabs.

B. Miscellaneous: Apply soil treatment at the rate of gallons of working solution per lineal feet as recommended by the manufacturer immediately below expansion and control joints, and all areas where floor slabs will be penetrated by construction features, such as plumbing pipes, electrical conduit, etc.

3.4 RETREATMENT

A. If inspection identifies the presence of termites, retreat soil and retest.

B. Use same chemicals as for original treatment.

END OF SECTION

SECTION 32 9223

SEEDING AND SODDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Refer to Division 00 and 01 sections of these specifications.

1.2 SUMMARY

A. This Section includes the following:
   1. Seeding.
   2. Sodding.

B. Related Sections include the following:
   1. Section 31 1000 – Site Clearing
   2. Section 31 2000 – Earth Moving
   3. Section 31 2213 – Rough Grading

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
   1. Certification of each seed mixture for turfgrass sod, identifying source, including name and telephone number of supplier.

C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.

D. Qualification Data: For landscape installer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn establishment.

B. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Seed: Deliver seed in original sealed, labeled and undamaged containers.

B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding."

1.7 SCHEDULING

A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.8 LAWN MAINTENANCE

A. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
   1. Seeded Lawns: 90 days from date of Substantial Completion.
      a. When full maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.
   2. Sodded Lawns: 90 days from date of Substantial Completion.

B. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting and other operations. Roll, regrade and replant bare or eroded areas to produce a uniformly smooth lawn.

C. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches.
   1. Schedule watering to prevent wilting, puddling, erosion and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
   2. Water lawn at a minimum rate of 1 inch per week.

D. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
   1. Mow grass 1 to 2 inches high.

E. Lawn Post-fertilization: Apply fertilizer after initial mowing and when grass is dry.
   1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. to lawn area.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.

B. Seed Species: Seed of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:
   1. Bermudagrass (Cynodon dactylon) or to match existing, field verify.

2.2 TURFGRASS SOD

A. Turfgrass Sod: Certified, complying with TPI's "Specifications for Turfgrass Sod Materials" in its "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.

B. Turfgrass Species: Bermudagrass (Cynodon dactylon) or to match existing, field verify.

2.3 TOPSOIL

A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inchor larger in any dimension and other extraneous materials harmful to plant growth.

1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps and other extraneous materials harmful to plant growth.

a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from bogs or marshes.

2.4 FERTILIZER

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.

B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

2.5 EROSION-CONTROL MATERIALS

A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches long.

B. Erosion-Control Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, a minimum of 0.92 lb/sq. yd., with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches long.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

1. Protect adjacent and adjoining areas from hydroseeding overspray.

B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 LAWN PREPARATION

A. Limit lawn subgrade preparation to areas to be planted.

B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
   1. Apply fertilizer directly to subgrade before loosening.
   2. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
      a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
      b. Mix lime with dry soil before mixing fertilizer.
   3. Spread planting soil mix to a depth of 4 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
      a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.
      b. Reduce elevation of planting soil to allow for soil thickness of sod.

C. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
   1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
   2. Loosen surface soil to a depth of at least of 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
      a. Apply fertilizer directly to surface soil before loosening.
   3. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, trash and other extraneous matter.
   4. Legally dispose of waste material, including grass, vegetation and turf, off Owner's property.

D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.

E. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

F. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

3.4 SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
   1. Do not use wet seed or seed that is moldy or otherwise damaged.

B. Sow seed at the rate of 2 lb/1000 sq. ft.

C. Rake seed lightly into top 1/8 inch of topsoil, roll lightly, and water with fine spray.

D. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
   1. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.
   2. Bond straw mulch by spraying with asphalt emulsion at the rate of 10 to 13 gal./1000 sq. ft. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

3.5 HYDROSEEDING

A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
   1. Mix slurry with non-asphaltic tackifier.
   2. Apply slurry uniformly to all areas to be seeded in a one-step process. Apply mulch at a minimum rate of 1500-lb/acre dry weight but not less than the rate required to obtain specified seed-sowing rate.

3.6 SODDING

A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
   1. Lay sod across angle of slopes exceeding 1:3.

C. Saturate sod with fine water spray within two hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.7 SATISFACTORY LAWNS

A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.

B. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas and surface irregularities.

C. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.8 CLEANUP AND PROTECTION

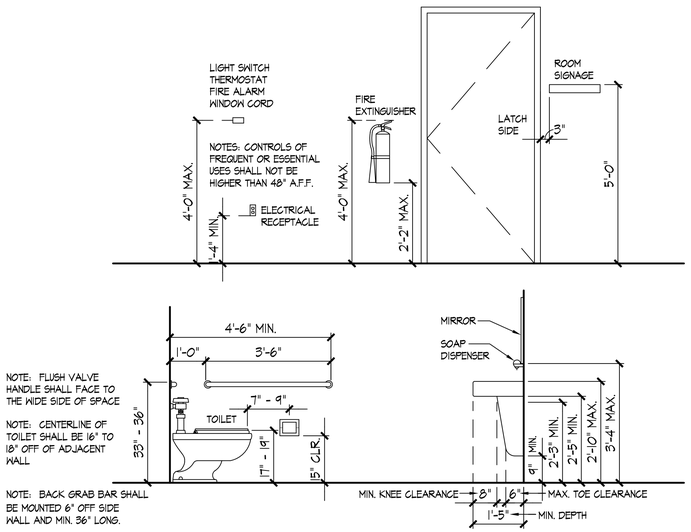
A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks or other paved areas.

B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established. Remove erosion-control measures after grass establishment period.

END OF SECTION

FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS - LAKE CITY, FLORIDA

STANDARD MOUNTING PER A.D.A. REQUIREMENTS



SHEET INDEX

GENERAL SITE NOTES

1. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO THEIR ORIGINAL CONDITION INCLUDING SOD, FENCING, PAVING, CURBS, CONC. WALKS, ETC.
2. A SAFETY PLAN SHALL BE PROVIDED BY THE CONTRACTOR WHICH CLEARLY DELINEATES AREAS FOR CONSTRUCTION, SAFETY BARRIERS AND CONSTRUCTION TRAFFIC DURING ALL PHASES AND CONDITIONS OF CONSTRUCTION.
3. WHERE HEAVY MACHINERY, AS IS USED FOR EARTH MOVING OR SCRAPING, IS REQUIRED THE WORK SHALL BE SEPARATED FROM OCCUPANTS BY SECURE BARRIERS.
4. ANY CUTTING AND PATCHING OF EXISTING CONCRETE WALKS FOR INSTALLATION OF NEW UTILITIES SHALL BE DONE IN SECTIONS FROM JOINT TO JOINT.
5. PROVIDE MIN. 18" X 18" X 4" THICK CONC. PAD AROUND ALL CLEAN OUTS.
6. CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING DEMOLITION. ANY DISCREPANCIES SHALL BE DISCUSSED WITH ARCHITECT PRIOR TO ANY DEMOLITION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF ALL MATERIALS AS CALLED FOR IN THE CONTRACT DOCUMENTS.
8. CONTRACTOR TO PROVIDE EARTH FILL DIRT TO FILL IN COMPACTED TO 95% DENSITY AND GRADE LEVEL AT ALL AREAS WHERE EXISTING UNDERGROUND ITEMS ARE REMOVED. PROVIDE SOD AT ALL DISTURBED AREAS.
9. REFER TO MEP SHEETS FOR ADDITIONAL SITE INFORMATION.
10. THE CONTRACTORS SITE ACCESS, PARKING AREAS, STAGING AND STORAGE AREAS, ETC. SHALL BE DISCUSSED AT THE PRE-BID MEETING.

DESIGN CRITERIA

1. FLORIDA BUILDING CODE 5TH EDITION (2014)
2. FLORIDA FIRE PREVENTION CODE 5TH EDITION
3. BUILDING AREA = 1,000 GSF
4. BUILDING HEIGHT = ONE STORY
5. OCCUPANCY CLASSIFICATION = BUSINESS GROUP B
6. BUILDING CONSTRUCTION IS TYPE VB
7. TOTAL EXITS REQUIRED = 1 WITH 2 EXITS PROVIDED
8. STRUCTURAL FIRE-RESISTANT RATING REQUIREMENTS = 0 HOURS
9. FIRE SPRINKLER SYSTEM IS NOT REQUIRED OR PROVIDED
10. EGRESS CALCULATIONS = 6 OCCUPANTS X 0.2" = 1.2" EGRESS WIDTH REQUIRED WITH 34" EGRESS WIDTH PROVIDED PER EACH DOOR
11. MAXIMUM TRAVEL DISTANCE = 200'-0" AND MAXIMUM DISTANCE PROVIDED = 36'-3"
12. REFER TO THE LIFE SAFETY PLAN FOR ADDITIONAL INFORMATION

STRUCTURAL DESIGN CRITERIA

1. FLORIDA BUILDING CODE 5TH EDITION 2014
2. ASCE 7-10
3. DESIGN LOAD FOR WOOD TRUSSES = 40 PSF
4. RISK CATEGORY = II
5. ULTIMATE DESIGN WIND SPEED (3-SECOND GUST) = 130 MPH
6. NOMINAL DESIGN WIND SPEED = 101 MPH
7. WIND IMPORTANCE FACTOR = 1.15
8. APPLICABLE ENCLOSURE CLASSIFICATION = PARTIALLY ENCLOSED
9. WIND EXPOSURE CATEGORY = C
10. INTERNAL PRESSURE COEFFICIENT = +0.18 / -0.18
11. REFER TO THE ROOF PLAN FOR THE WIND DIAGRAM AND COMPONENTS AND CLADDING DESIGN WIND PRESSURE INFO
12. ASSUMED ALLOWABLE SOIL BEARING PRESSURE AFTER COMPACTION = 2,000 PSF

OCCUPANT LOAD CALCULATIONS

1. SPACES CALCULATED AT 100 SF PER OCCUPANT = ROOM 101
2. SPACES CALCULATED AT 300 SF PER OCCUPANT = ROOMS 102 AND 104
3. TOTAL OCCUPANT LOAD = 6 OCCUPANTS
4. REFER TO THE LIFE SAFETY PLAN FOR ADDITIONAL INFORMATION

PLUMBING FIXTURE CALCULATIONS

1. TOTAL OCCUPANT LOAD = 6 OCCUPANTS = 3 MALE AND 3 FEMALE
2. BUSINESS GROUP B OCCUPANCY TOTAL WC = 1 PER 25 FOR THE FIRST 50 FOR MALE AND FEMALE = 1 WC REQUIRED FOR EACH WITH 4 PROVIDED FOR EACH
3. BUSINESS GROUP B OCCUPANCY TOTAL LAV = 1 PER 40 FOR THE FIRST 80 FOR MALE AND FEMALE = 1 LAV REQUIRED FOR EACH WITH 3 PROVIDED FOR EACH
4. NO SHOWERS REQUIRED WITH NONE PROVIDED
5. SERVICE SINK IS NOT REQUIRED PER FPC TABLE 403.1 G WITH NONE PROVIDED
6. DRINKING FOUNTAINS ARE NOT REQUIRED PER FPC TABLE 403.1 WITH TWO PROVIDED

CONSTRUCTION DOCUMENTS

FORT WHITE COMMUNITY CENTER
CONCESSIONS BUILDING
COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS - LAKE CITY, FLORIDA

kail partners
ARCHITECTURE & INTERIORS
AA26002508
GAINESVILLE, FLORIDA
352-871-4825

ROY DANIEL KAIL, JR.
ARCHITECT
AR0017091
KAIL PARTNERS
AA26002508

DATE
2/6/17

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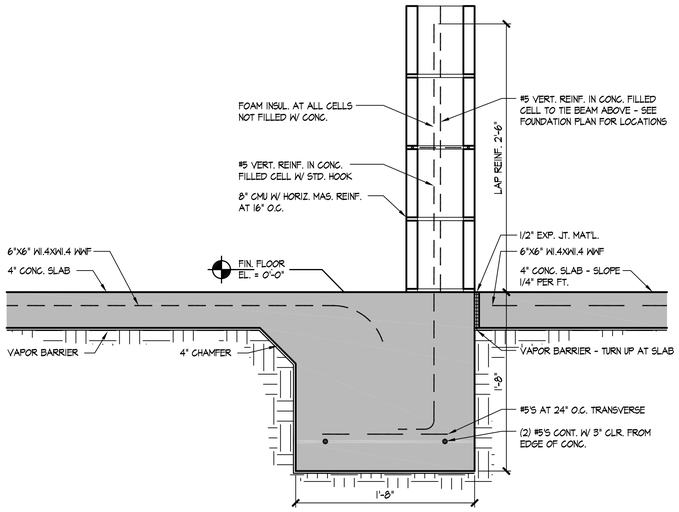
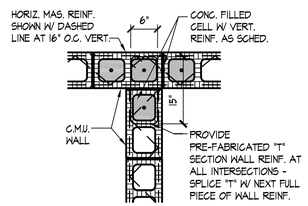
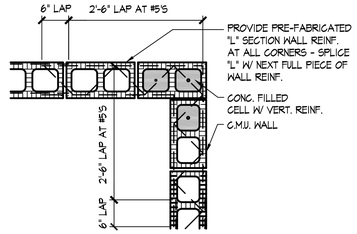
G-1



FOOTING DETAIL (A/A-1)
1 1/2" = 1'-0"



REINF. DETAIL AT CMU INTERSECTIONS (D/A-1)
3/4" = 1'-0"



REINF. DETAIL AT CMU CORNERS (E/A-1)
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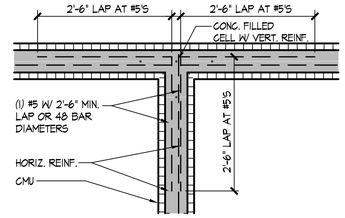
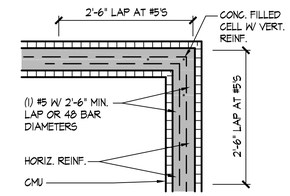
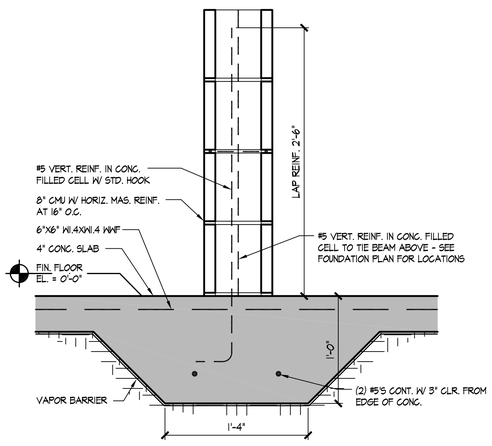


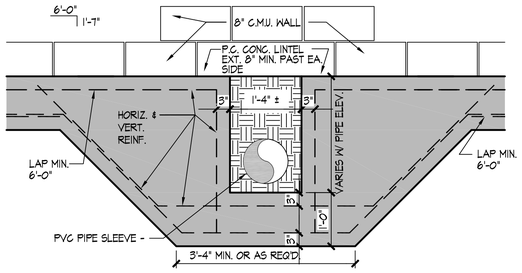
REINF. DETAIL AT CMU BOND BM. INTERSECTIONS (F/A-1)
3/4" = 1'-0"



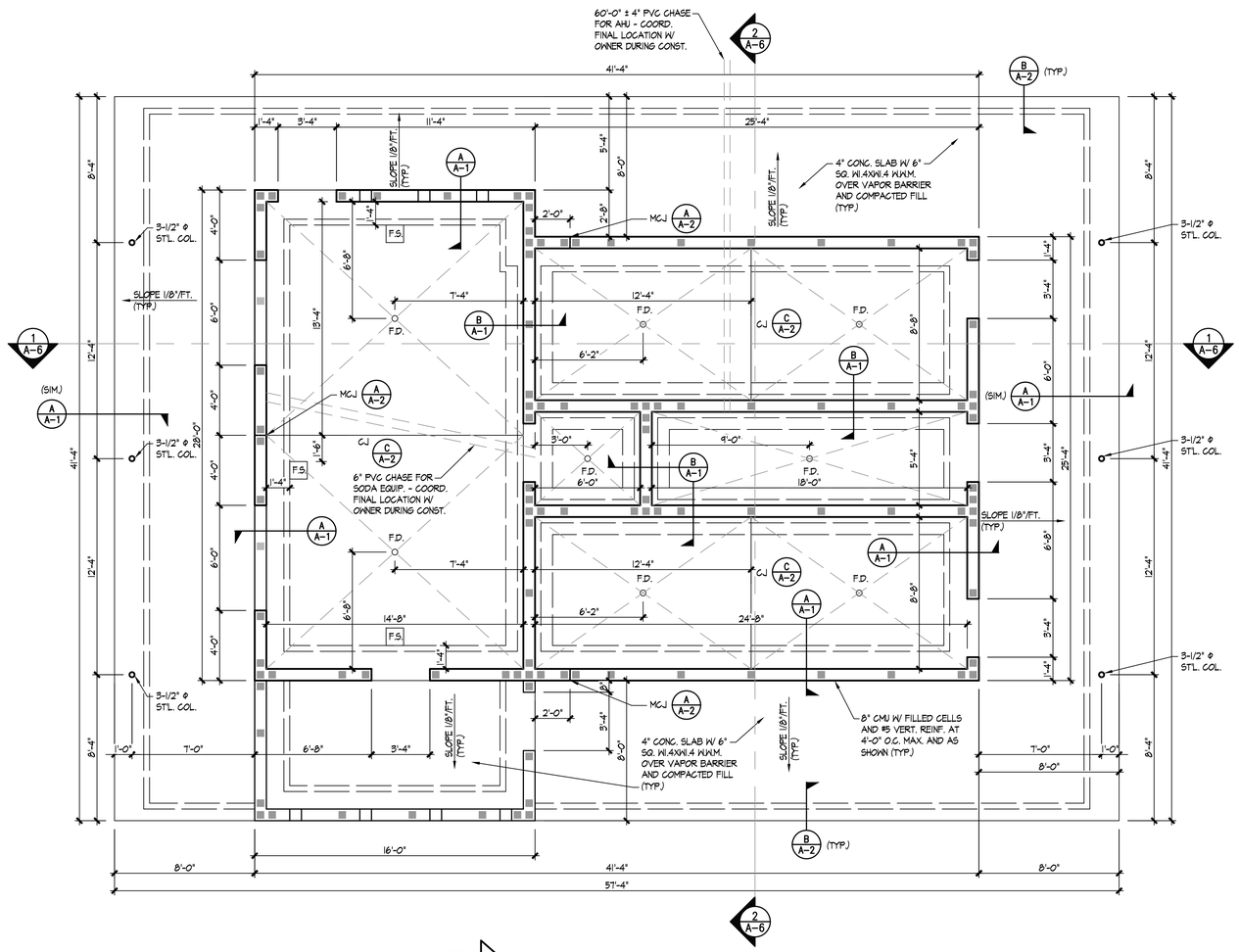
REINF. DETAIL AT CMU BOND BM. CORNERS (G/A-1)
3/4" = 1'-0"



FOOTING DETAIL (B/A-1)
1 1/2" = 1'-0"



STEPPED FT'G. AT PIPE DETAIL (C/A-1)
3/4" = 1'-0"



FOUNDATION PLAN (2/A-6)
1/4" = 1'-0"

NOTES

1. SLOPE SLAB AT ONE PERCENT TO FLOOR DRAINS AS INDICATED
2. INTERIOR SLAB ON GRADE SHALL BE 4" THK. W/ 6" SQ. WI.4XWI.4 WWM OVER VAPOR BARRIER ON TREATED AND COMPACTED FILL - TYPICAL

GENERAL NOTES

1. REFER TO DETAILS D/A-1, E/A-1, F/A-1 AND G/A-1 FOR HORIZONTAL JOINT REINFORCING AT CMU AND CMU BOND/TIE BEAM INTERSECTIONS AND CORNERS
2. REFER TO DETAIL C/A-3 FOR CMU DETAILS FOR REINFORCING LAPS AT MASONRY OPENINGS
3. REFER TO DETAIL C/A-1 FOR STEPPED FOOTING AT PIPING - USE THIS DETAIL AS/IF REQUIRED

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A-1

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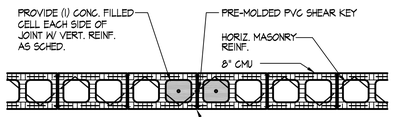
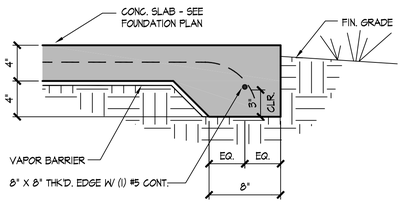
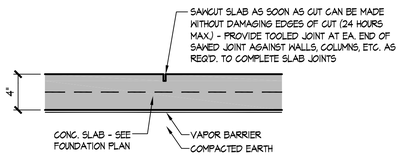


NOTES:
1. BREAK HORIZONTAL JOINT REINFORCING AT ALL CONTROL JOINTS.
2. DO NOT BREAK BOND BEAM AT FOUNDATION REINFORCEMENT AT CONTROL JOINTS.
3. SEE FOUNDATION PLAN FOR LOCATIONS OF JOINTS.

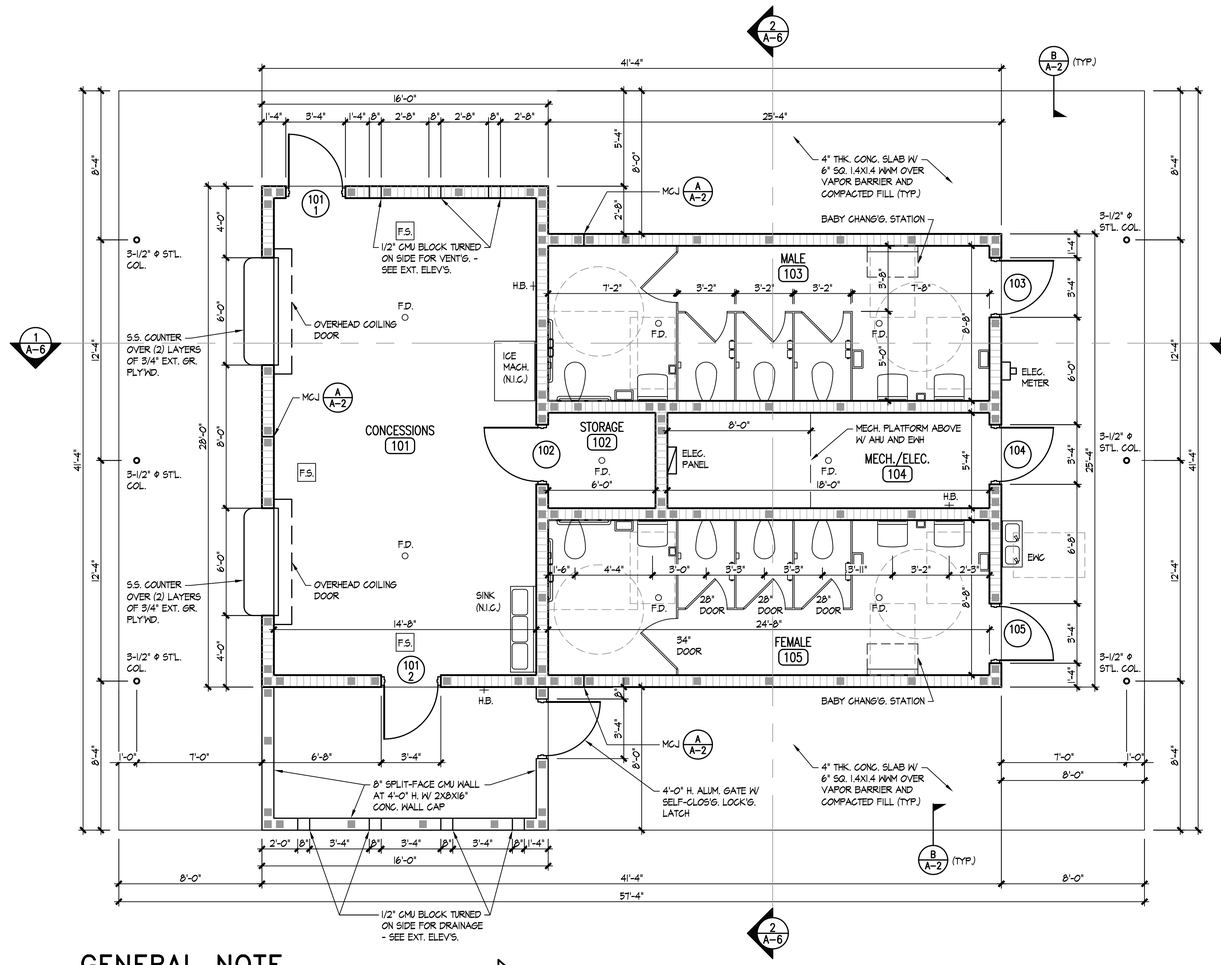
CONTROL JOINT (A/A-2)
3/4" = 1'-0"



SIDEWALK EDGE (B/A-2)
1 1/2" = 1'-0"



SAWED SLAB C.J. (C/A-2)
1 1/2" = 1'-0"



GENERAL NOTE

PROVIDE AND INSTALL ADA ACCESSIBLE GRAB BARS, MIRRORS, TOILET PAPER DISPENSERS, SOAP DISPENSERS, PAPER TOWEL DISPENSERS AND SANITARY NAPKIN RECEPTACLES

FLOOR PLAN
1/4" = 1'-0"

WALL LEGEND

8" SPLIT-FACE CMU W/ HORIZ. MAS. REINF. AT 16" O.C. - CONC. FILLED CELLS W/ #5 VERT. REINF. AS SHOWN AND AT 4'-0" O.C. MAX. - FOAM INSUL. AT ALL CELLS NOT FILLED W/ CONC. AT EXTERIOR WALLS

8" SPLIT-FACE CMU SCREEN WALL (4'-0" HIGH) W/ HORIZ. MAS. REINF. AT 16" O.C. - CONC. FILLED CELLS W/ #5 VERT. REINF. AS SHOWN AND AT 4'-0" O.C. MAX.

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A-2

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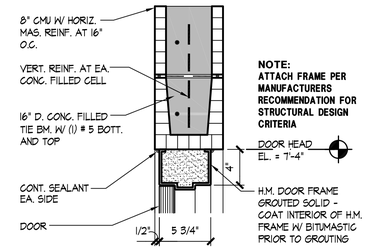
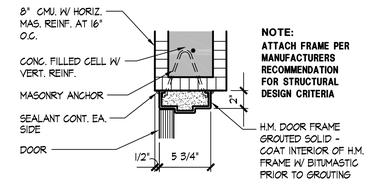
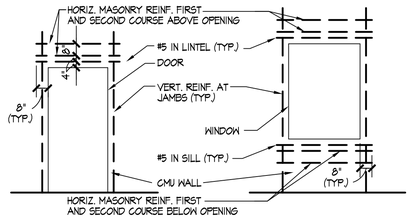


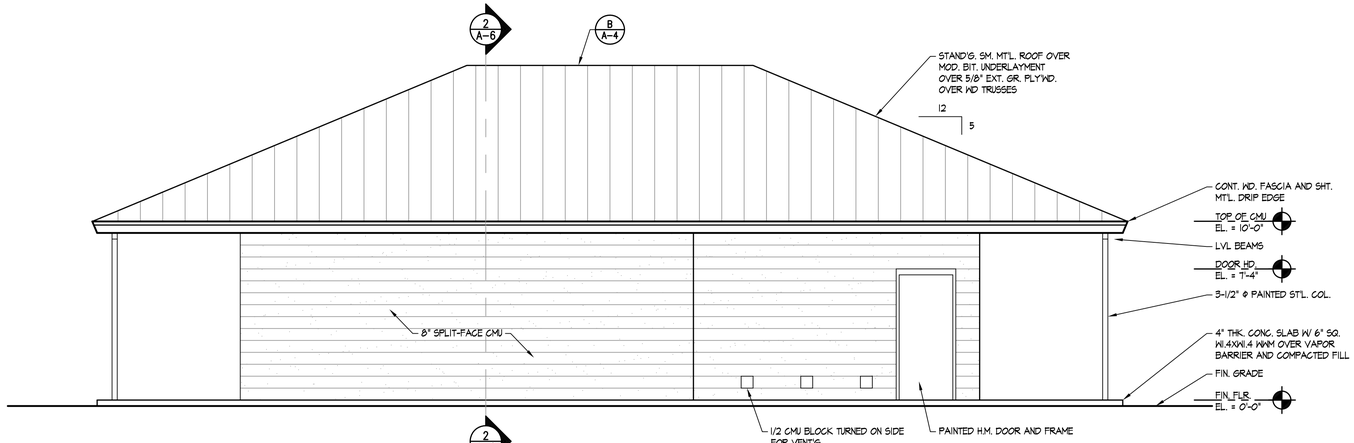
DOOR HEAD DETAIL (A/A-3)
1 1/2" = 1'-0"



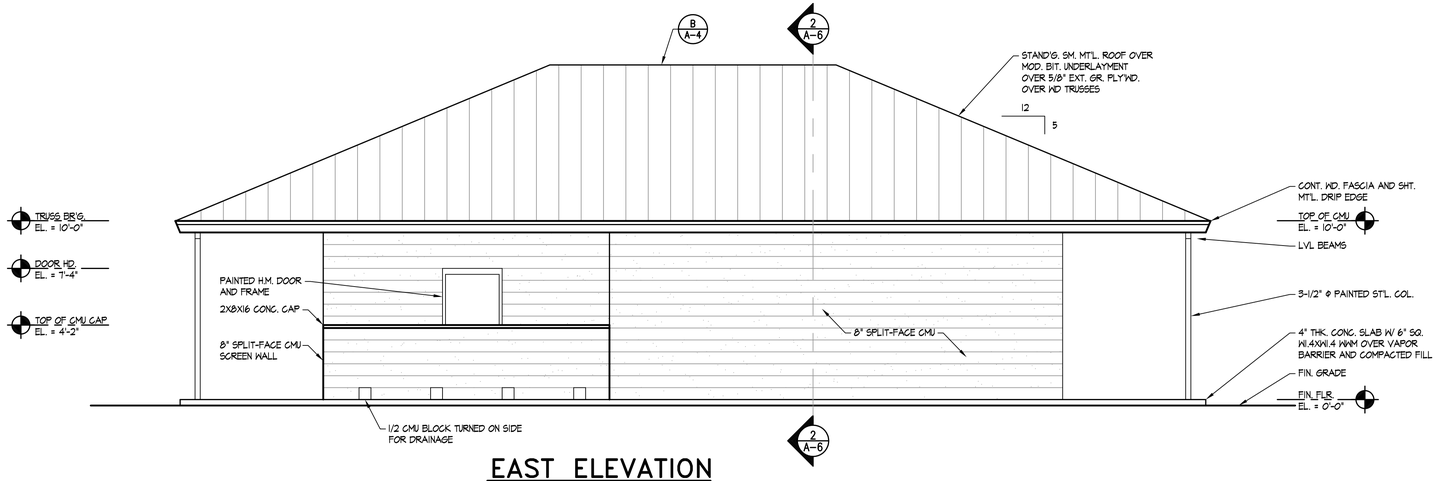
DOOR JAMB DETAIL (B/A-3)
1 1/2" = 1'-0"



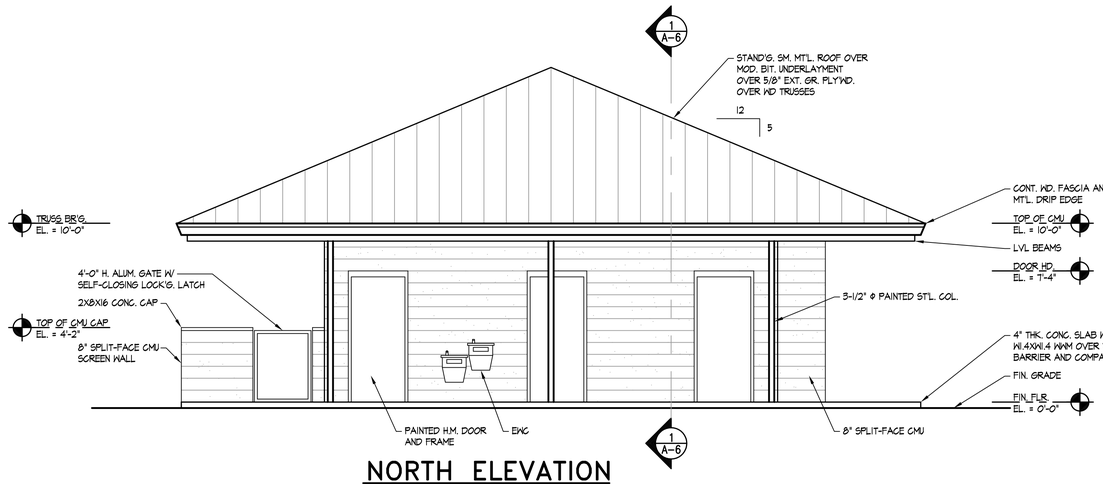
CMU REINF. DETAIL (C/A-3)
1/4" = 1'-0"



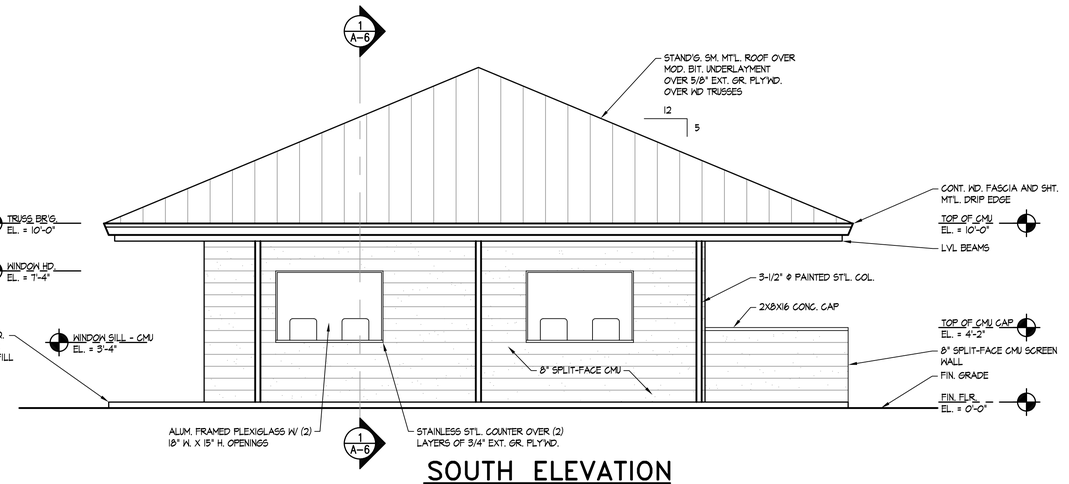
WEST ELEVATION
1/4" = 1'-0"



EAST ELEVATION
1/4" = 1'-0"



NORTH ELEVATION
1/4" = 1'-0"



SOUTH ELEVATION
1/4" = 1'-0"

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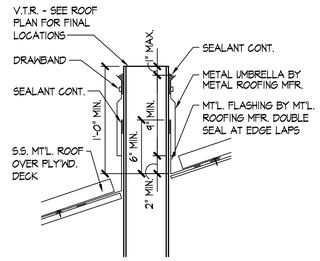
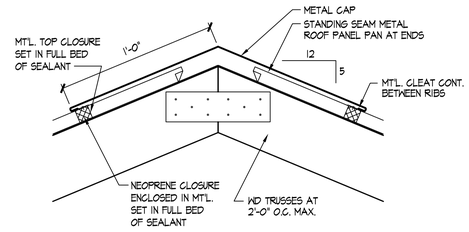
A-3



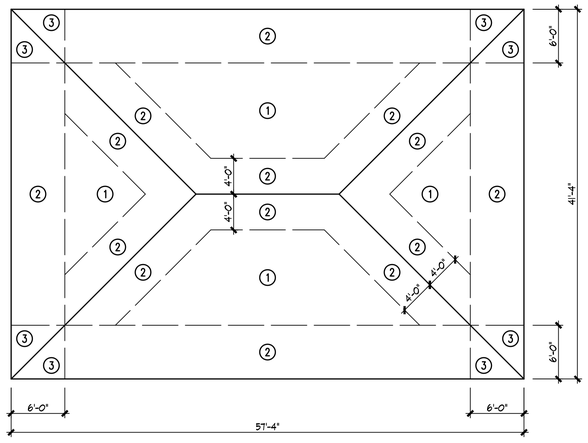
VTR DETAIL (A / A-4)
1 1/2" = 1'-0"



RIDGE CAP DETAIL (B / A-4)
1 1/2" = 1'-0"

WALLS COMPONENT AND CLADDING (P.S.F)				
	END ZONE		INTERIOR ZONE	
SIZE (S.F.)	POS. +	NEG. -	POS. +	NEG. -
0-20	25.9	34.7	25.9	28.1
20-50	24.7	32.4	24.7	26.9
50-100	23.2	29.3	23.2	25.4
> 100	22	26.9	22	24.2

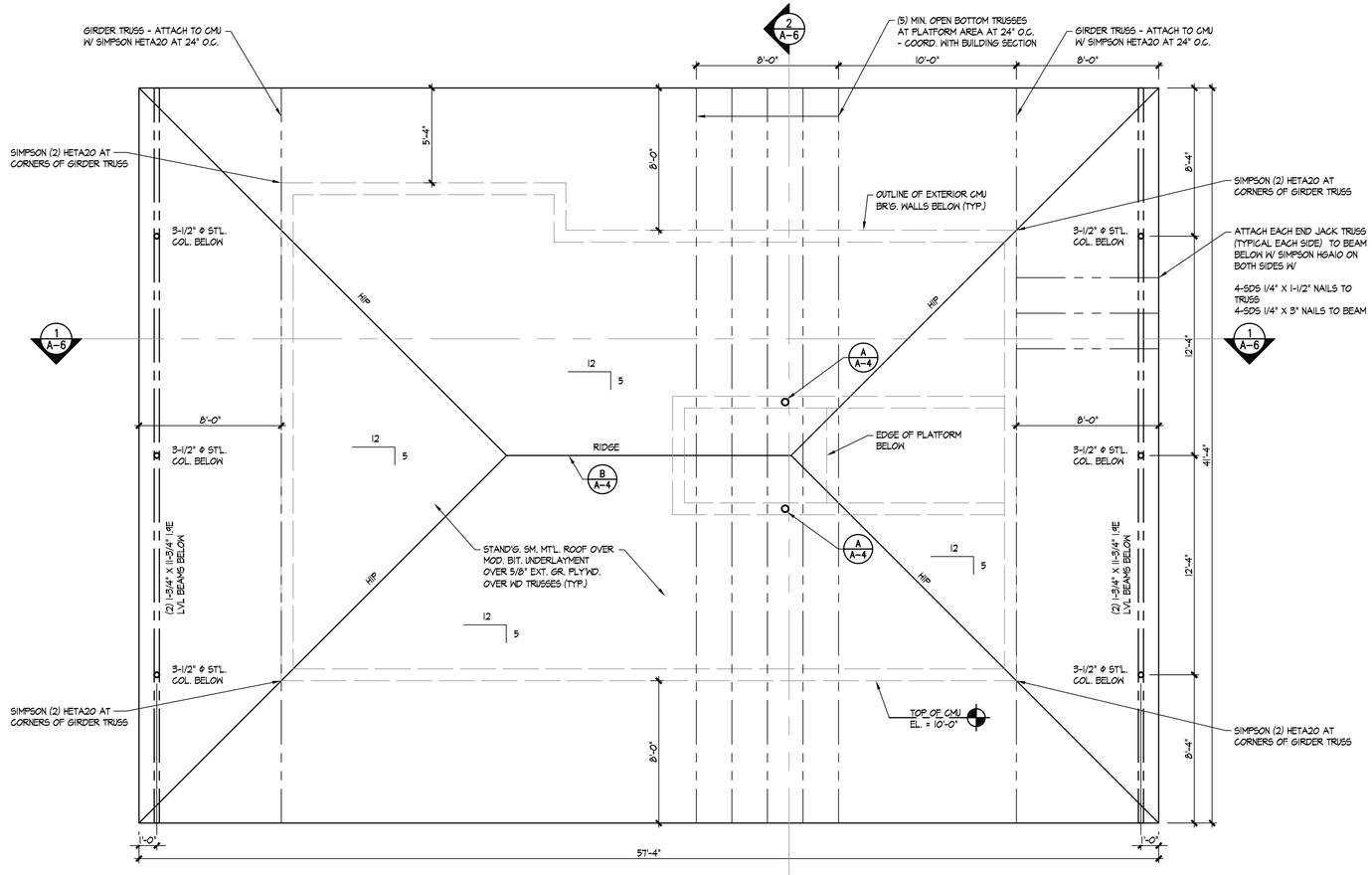
NET UPLIFT
(1) - 26.4 PSF
(2) - 35.2 PSF
(3) - 76.2 PSF



WIND DIAGRAM
1/8" = 1'-0"

NOTE
ATTACH 5/8" EXTERIOR GRADE PLYWOOD ROOF DECK WITH #10 1/4" GAUGE 2" LONG MINIMUM POWER NAILS WITH A DIAMETER OF 0.131" MINIMUM

ATTACH AT 6" O.C. EDGE AND 12" O.C. FIELD IN ZONE 1
ATTACH AT 6" O.C. EDGE AND 6" O.C. FIELD IN ZONES 2 AND 3



ROOF PLAN
1/4" = 1'-0"

NOTE
PREFABRICATED AND PRE-ENGINEERED WOOD TRUSSES AT 2'-0" O.C. - PROVIDE ENGINEERED SHOP DRAWINGS SUBMITTALS SIGNED AND SEALED BY A STATE OF FLORIDA REGISTERED STRUCTURAL ENGINEER - PROVIDE ALL MISCELLANEOUS BLOCKING, STRAPS, BRIDGING, BRACING ETC. AS REQUIRED FOR A COMPLETE INSTALLATION

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A-4

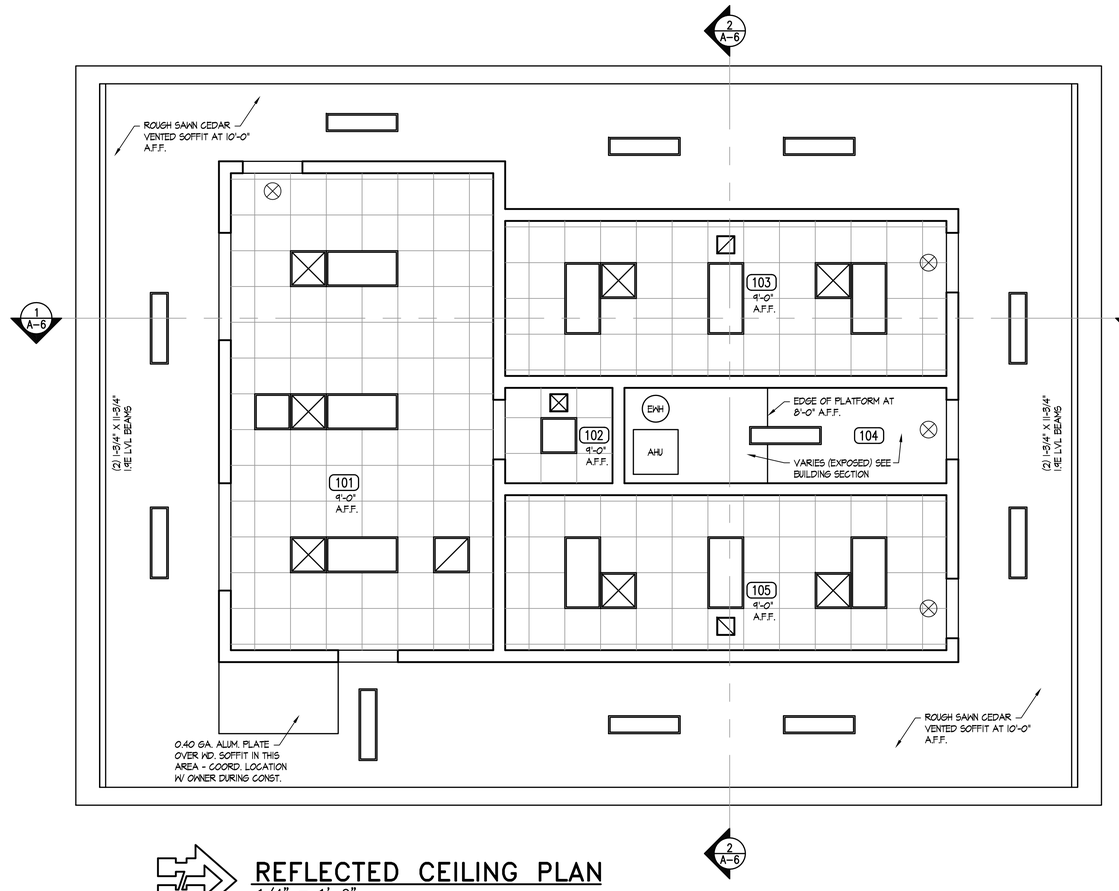
CONSTRUCTION DOCUMENTS

GENERAL NOTES

1. AT NEW SUSPENDED CEILINGS, SUSPENSION SYSTEMS, INCLUDING LIGHT FIXTURES, SHALL BE SUSPENDED FROM STRUCTURE ABOVE - LIGHT FIXTURES TO BE SUSPENDED SEPARATELY FROM GRID ON DIAGONAL CORNERS
2. SUPPLY DIFFUSERS AND RETURN GRILLES SHALL BE SUPPORTED BY THE SUSPENDED GRID WHICH SHALL BE SUPPORTED BY TIE WIRE AT DIAGONAL CORNERS AT EACH LOCATION
3. THE CEILING SUBCONTRACTOR SHALL PROVIDE AND INSTALL THE TIE WIRE FOR THE CEILING GRID, MECHANICAL ITEMS AND LIGHT FIXTURES - THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS SHALL MAKE THE FINAL CONNECTIONS OF THEIR RESPECTIVE ITEMS TO THE TIE WIRE AND CEILING GRID
4. REPORT ANY CONFLICTS PRIOR TO ANY INSTALLATION

RCP LEGEND

- EXIT LIGHT
- 2X2 SUSP. MOISTURE RESISTANT GRID AND TILE CL'G. SYSTEM
- 2X4 LIGHT FIXTURE
- 2X2 LIGHT FIXTURE
- IX4 LIGHT FIXTURE
- 2X2 SUPPLY
- 2X2 RETURN
- IXI SUPPLY
- EXHAUST FAN



REFLECTED CEILING PLAN

1/4" = 1'-0"

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A-5

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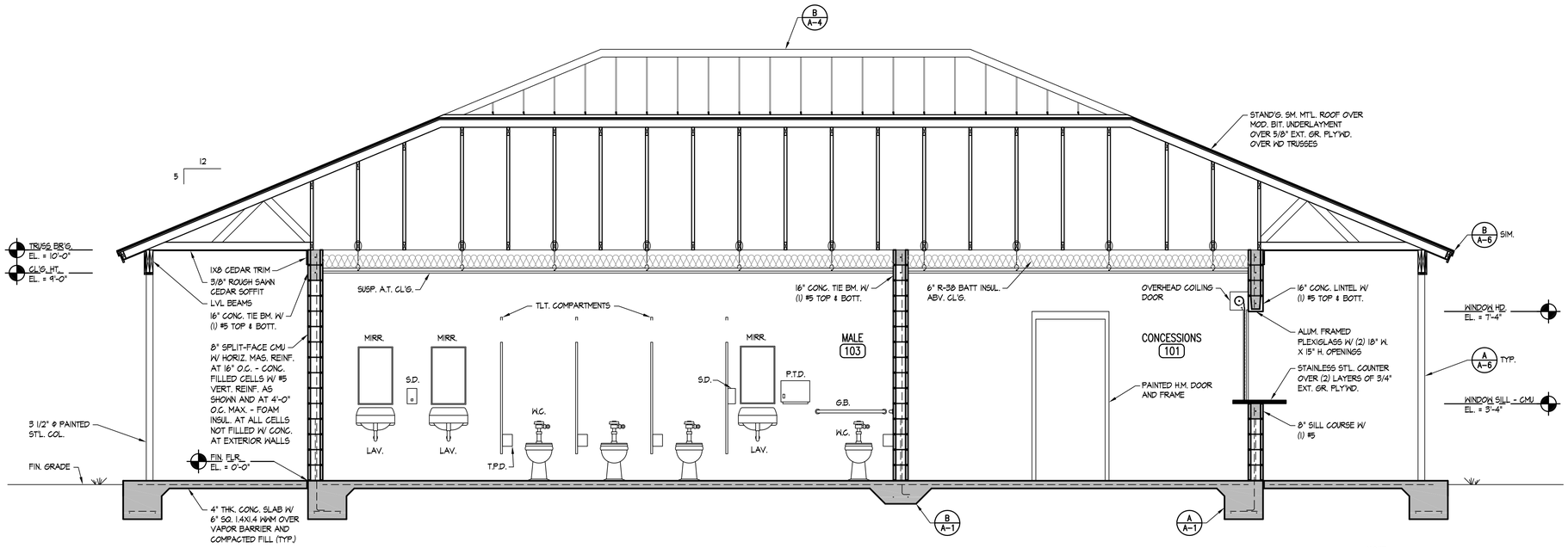
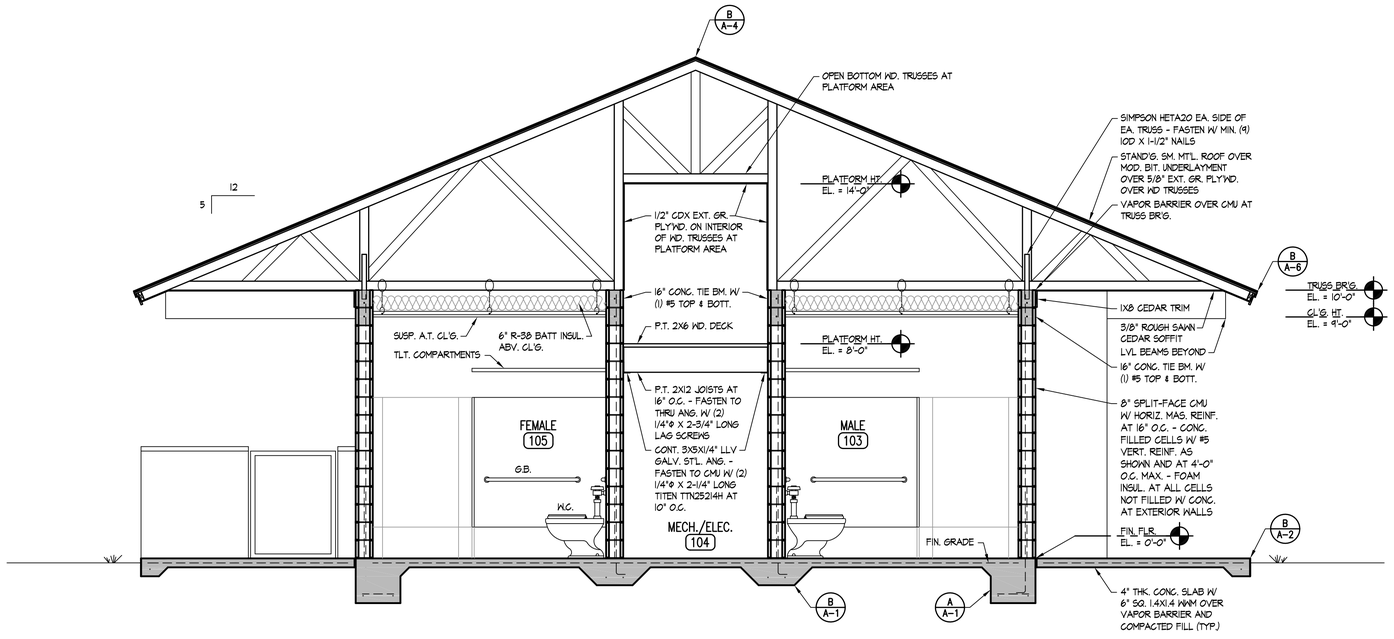
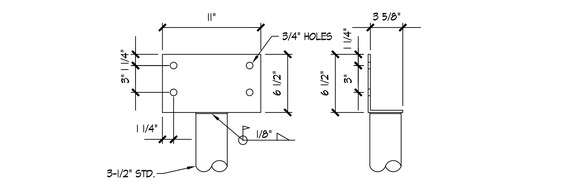


BUILDING SECTION
3/8" = 1'-0" (1 A-6)

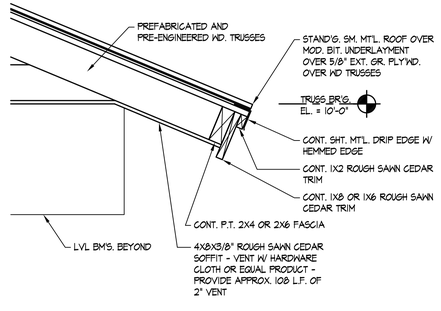


BUILDING SECTION
3/8" = 1'-0" (2 A-6)

NOTE:
FASTEN TO BEAM WITH 4-1/2" GALVANIZED LAG SCREWS OR LAG BOLTS



ST'L. COL. DETAIL
1 1/2" = 1'-0" (A A-6)



FASCIA DETAIL
1 1/2" = 1'-0" (B A-6)

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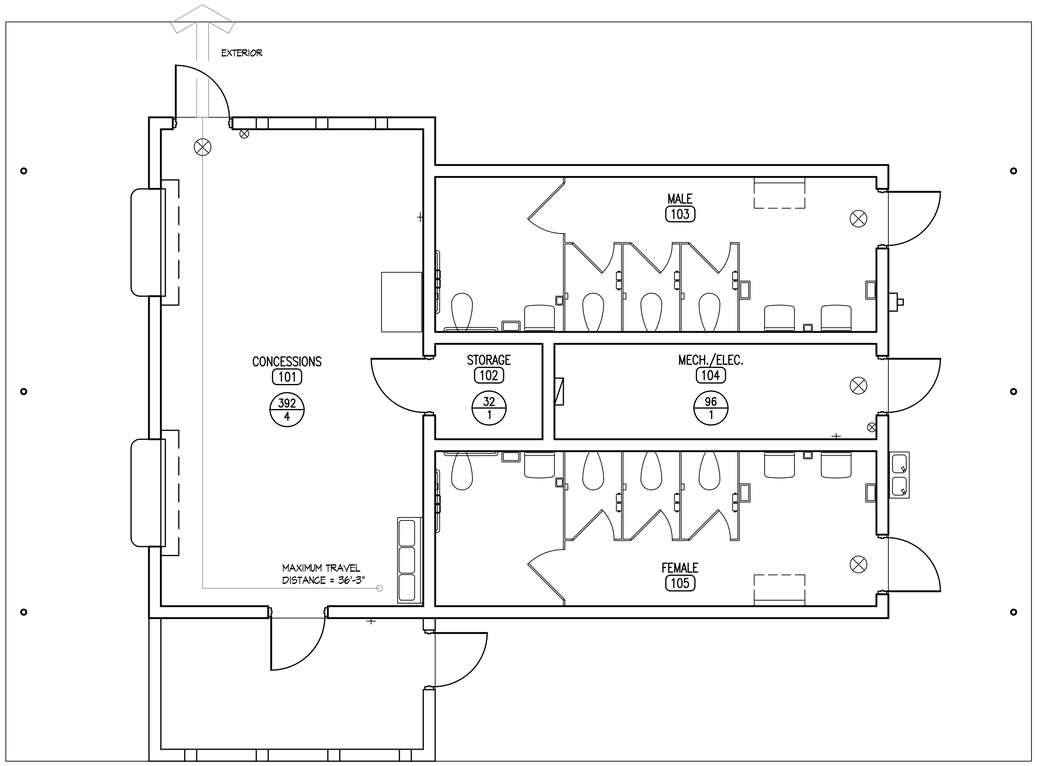
A-6



GENERAL NOTES

1. PROVIDE AND POST GRAPHIC DIAGRAM OF EMERGENCY EVACUATION ROUTES ADJACENT TO THE PRIMARY AND SECONDARY EXIT DOORS AS REQUIRED BY AHJ

LIFE SAFETY LEGEND

- EXIT LIGHT
- WALL HUNG FIRE EXTINGUISHER
- ROOM SQUARE FOOTAGE / ROOM OCCUPANT LOAD

LIFE SAFETY PLAN

1/4" = 1'-0"

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LS-1

CONSTRUCTION DOCUMENTS

SPLIT SYSTEM AIR CONDITIONING SCHEDULE

				NOM TON	COOLING CAPACITY			RATING CONDITIONS		HEATING CAP/HSPF	AHU TYPE		FAN						AUXILLIARY HEATER				AH W/HEAT		CONDENSING	COMP	FAN	ELECTRICAL			DIMENSIONS	WT.	
MARK	SYSTEM TYPE	AHU MODEL	L/W/H/WT		TOTAL	SENS.	SEER/	AMB	EAT-DB/WB	TOTAL	HSPF/COP	CONFIG	AIR FLOW	CFM	EXT.	DRIVE	RPM	HP	VOLTS/Ø/FLA	KW	STAGE	VOLTS	PH	MCA	BKR	UNIT	AMPS	AMPS	MCA	BKR	V/PH	H/W/D	LBS	
AH-1/HP-1	HEAT PUMP	4TEC3F60A1000A	60/26/24/155	5.0	58800	42,200	13.0	95	80/67	56,000	7.7/3.5	CONV	VERT.	2000	.5	D	1000	1/2	208/1/2.7	7.2	1	208	1	47	50	4TWB3060A1	26.34	.94	34	60	208/1	41.125/34.25/37.25	375	

NOTE: STATIC PRESSURE IN INCHES OF WATER EXTERNAL TO UNIT AND ALL ACCESSORIES.

D- DIRECT DRIVE W/ MULTI-SPEED MOTOR
B- BELT DRIVE

ACCESSORIES: (PROVIDE FOR ALL UNITS)

1. 2" THROWAWAY FILTERS
2. INTERGRAL FUSE DISCONNECT & CONTACTORS

GRILLE & DIFFUSER SCHEDULE

MARK	TYPE	NECK	FACE SIZE	DESCRIPTION
(A)	000-60 61-110 111-240 241-420 421-620 621-750	6Ø 8Ø 10Ø 12Ø 14Ø	12x12 24x24 24x24 24x24 24x24 24x24	SUPPLY DIFFUSER BASIS OF DESIGN: TITUS TMS COLOR: WHITE MATERIAL: ALUMINUM MOUNTING: 24x24 LAY-IN OPPOSED BLADE DAMPERS: NO
(B)	000-90 91-110 111-220 221-350 351-530 531-730 731-970 971-1300	6Ø 8Ø 8Ø 10Ø 12Ø 14Ø 16Ø 18Ø	12x12 24x24 24x24 24x24 24x24 24x24 24x24 24x24	RETURN/EXHAUST GRILLE BASIS OF DESIGN: TITUS 50F COLOR: WHITE MATERIAL: ALUMINUM MOUNTING: 24x24 LAY-IN OPPOSED BLADE DAMPERS: NO
(C)	000-70	6Ø	12x12	SUPPLY DIFFUSER BASIS OF DESIGN: TITUS TDC COLOR: WHITE MATERIAL: ALUMINUM MOUNTING: DUCT MOUNTED OPPOSED BLADE DAMPERS: NO

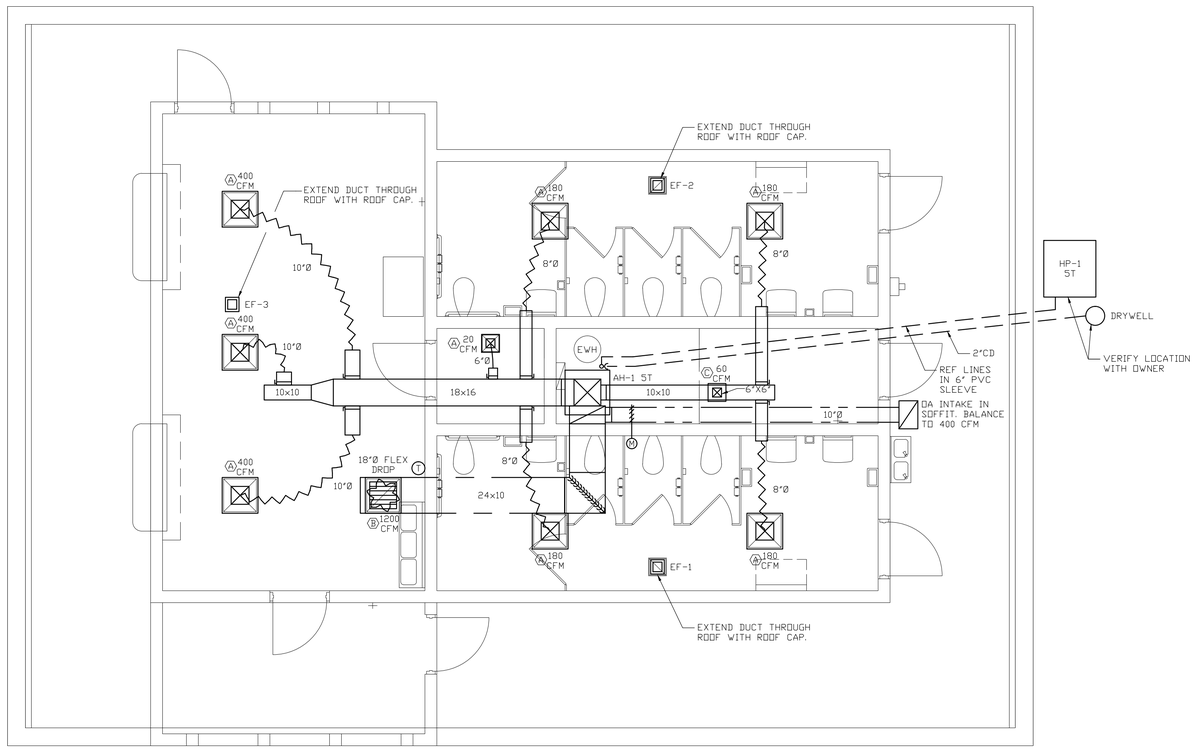
FURNISH ALL FANS WITH INTEGRAL DISCONNECT, THERMALLY PROTECTED MOTOR, BACKDRAFT DAMPER AND ROOF CURB

EXHAUST FAN SCHEDULE

MARK	MFGR.	MODEL	TYPE	WATTS	HP	RPM	CFM.	EXT. SP.	VOLT/Ø	COMMENTS
EF1	GREENHECK	SPA-200	CEIL	48		900	220	.125	120	WITH ROOF CAP
EF2	GREENHECK	SPA-200	CEIL	48		900	220	.125	120	WITH ROOF CAP
EF2	GREENHECK	SPA-200	CEIL	48		900	220	.125	120	WITH ROOF CAP

MECHANICAL LEGEND

- SUPPLY DUCT
- RETURN DUCT
- EXHAUST DUCT
- FRESH AIR DUCT
- FLEXIBLE DUCT
- SUPPLY DIFFUSER, SEE DESINATION FOR TYPE
- RETURN GRILLE, SEE DESINATION FOR TYPE
- EXHAUST GRILLE, SEE DESINATION FOR TYPE
- DUCT SCOOP TAKEOFF WITH BALANCING DAMPER
- (A) DIFFER/GRILLE TYPE SEE SCHEDULE
- TURNING VANES
- VD MANUAL VOLUME DAMPER
- (M) MOTORIZED VOLUME DAMPER
- CONDENSATE DRAIN LINES
- REFRIGERANT LINES
- (D.W) CONDENSATE DRYWELL, SEE DETAIL
- ROOF MTD EXHAUST FAN WITH CURB, SEE SECHEDULE
- ROOF MTD GRAVITY RELIEF OR INTAKE SEE SCHEDULE'
- EF CEILING MOUNTED EXHAUST FAN
- EF INLINE FAN WITH VIBRATION ISOLATION
- WALL LOUVER/ INTAKE OR EXHAUST BY ARROW DIRECTION
- (T) THERMOSTAT — (T) TEMP SENSOR DUCT MTD
- (H) HUMIDISTAT — (H) HUMIDITY SENSOR DUCT MTD
- (DSD) DUCT MTD SMOKE DETECTOR
- FD AP



HVAC PLAN

1/4" = 1'-0"

CONSTRUCTION DOCUMENTS

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CERTIFICATE OF AUTHORIZATION 3687

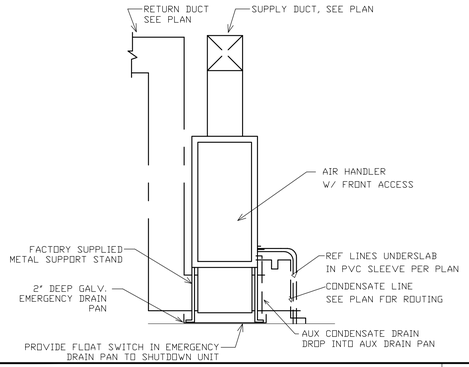
FORT WHITE COMMUNITY CENTER
CONCESSION BUILDING
COLUMBIA COUNTY BOARD OF COMMISSIONERS

COBURN & ASSOCIATES
ENGINEERS LB 0003687
FORMERLY KNOWN AS
HIGH SPRINGS, FLORIDA
P.O. BOX 577
32655-0577
PH 386-454-3748
RICHARD E. COBURN PE
E-12820
CA JOB NO 1705

DATE 2/6/17
DRAWN CAS
APPROVED REC

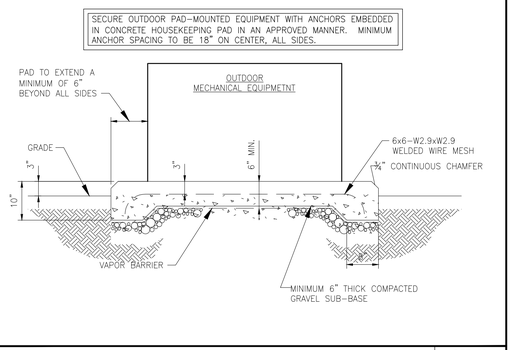
M1

OF SHEETS



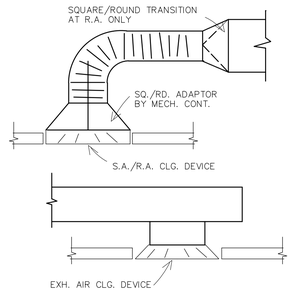
TYPICAL AIR HANDLER DETAIL

NTS | DET #1 | M2



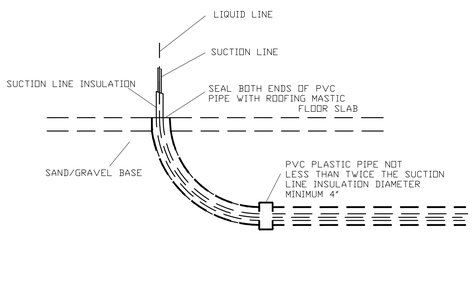
EQUIPMENT PAD DETAIL

NTS | DET #2 | M2



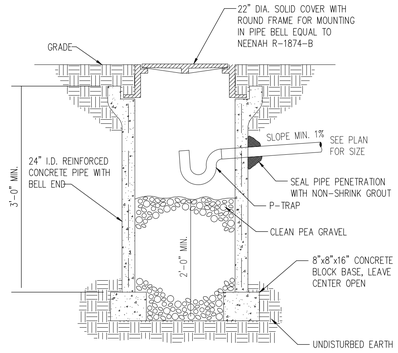
DIFFUSER CONNECTIONS

NTS | DET #3 | M2



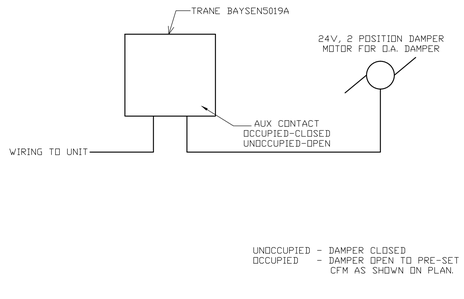
REFRIGERANT LINE SLEEVE DETAIL

NTS | DET #4 | M2



DRYWELL DETAIL

NTS | DET #5 | M2



THERMOSTAT DETAIL

NTS | DET #6 | M2

MECHANICAL NOTES

1 ALL WORK SHALL COMPLY WITH THE FLORIDA BUILDING CODE 2014 - MECHANICAL FLORIDA ENERGY CODE, NFPA 101, NFPA 90 AND ALL LOCAL CODES AND ORDINANCES.

2 UNLESS NOTED OTHERWISE ALL SUPPLY GRILLES AND DIFFUSERS SHALL BE ALUMINUM, OFF-WHITE WITH OPPOSED BLADE DAMPERS. DIFFUSERS IN GRID CEILINGS SHALL BE LAYIN TYPE. DIFFUSERS IN GYPSUM BOARD CEILINGS SHALL BE FLANGED TYPE.

3 UNLESS NOTED OTHERWISE ALL RETURN GRILLES SHALL BE ALUMINUM, OFF-WHITE WITH 1" FILTERBACK WHERE NOTED.

4 GRILLES AND DIFFUSERS SHALL BE IN ACCORDANCE WITH THE GRILLE AND DIFFUSER SCHEDULE. SCHEDULE IS BASED ON TITUS MANUFACTURER WITH METALAIRE AND AIR GUIDE AS EQUALS.

5 SUPPLY AND RETURN DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH EXTERNAL INSULATION OF DUCTWRAP (MIN R6) OR RIGID FIBERGLAS (R6). CLOSURE SYSTEM SHALL BE GLASS FABRIC AND MASTIC INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

5 SUPPLY AND RETURN DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH EXTERNAL DUCTWRAP INSULATION. DUCT INSULATION SHALL BE MINIMUM R6 INSTALLED.

6 EXHAUST DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH NO INSULATION.

7 FRESH AIR DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH EXTERNAL INSULATION ONLY WHERE DUCTWORK PASSES THRU CONDITIONED SPACE OTHERWISE NO INSULATION IS REQUIRED.

8 FLEXIBLE DUCTWORK IS ALLOWED ONLY WHERE SHOWN AND SHALL NOT EXCEED 12' FEET IN LENGTH. FLEXIBLE DUCT SHALL MEET UL 181 CLASS 1.

9 FLEXIBLE DUCTWORK WHERE INSTALLED SHALL BE ATTACHED USING SPIN-IN TAKE-OFFS WITH LOCKING QUADRANT DAMPERS.

10 ALL DUCTWORK INSTALLATIONS SHALL BE DONE IN ACCORDANCE WITH SMACNA DETAILS.

11 CONDENSATE LINES SHALL BE SCHEDULE 40 PVC EXCEPT IN PLENUMS. CONDENSATE LINES IN PLENUMS SHALL BE RIGID COPPER TUBING. CONDENSATE LINES SHALL BE INSULATED WHEN INSTALLED IN ATTICS OR ABOVE INSULATED DROP CEILINGS.

12 PROVIDE 2" TRAP ON CONDENSATE LINES AT EACH UNIT.

13 PROVIDE A FLOAT SWITCH IN THE EMERGENCY DRAIN PAN TO SHUT DOWN THE AIR HANDLER/UNIT IN THE EVENT OF WATER IN THE EM DRAIN PAN.

14 REFRIGERANT LINES SHALL BE TYPE ACR COPPER WITH BRAZED JOINTS. INSULATE ALL SUCTION LINES WITH 3/4" CLOSED CELL RUBBER INSULATION. (RUBATEX)

15 CEILING TYPE EXHAUST FANS SHALL BE SUPPLIED WITH A TIME DELAY SWITCH WHICH SHALL PROVIDE INSTANT OFF FOR LIGHTS AND TIME DELAY FOR THE FAN. (PENN AM-12 OR EQUAL)

16 PROVIDE ALL TOILET EXHAUST FANS WITH PROPERLY FLASHED ROOF JACK OR WALL CAP AS NOTED ON THE DRAWINGS.

17 PROVIDE EACH SYSTEM WITH AN ELECTRONIC PROGRAMMABLE THERMOSTAT WITH HEAT-COOL-OFF and FAN-AUTO-ON SUBBASE. UNIT SHALL BE PROGRAMMABLE FOR MINIMUM OF FOUR (4) SEPARATE SET POINTS PER DAY AND EACH DAY SHALL BE CAPABLE OF INDEPENDENT SET POINTS. THERMOSTAT SHALL HAVE EASILY ACCESSIBLE OVERRIDE CONTROL FOR MANUALLY CHANGING THE THERMOSTAT SETTING . THERMOSTAT SHALL AUTOMATICALLY REVERT BACK TO PROGRAM AT THE NEXT TIME SCHEDULE CHANGE. THERMOSTAT MUST HAVE AN OCCUPIED/UNOCCUPIED PROGRAMMABLE SETTING IN EACH SET POINT/TIME OF DAY SETTING AND HAVEAN AUXILLIARY RELAY CONTACTS TO CLOSE IN THE OCCUPIED MODE.

18 CONTRACTOR SHALL PROVIDE AND INSTALL A DUCT SMOKE DETECTOR IN THE SUPPLY AND RETURN DUCTWORK OF EACH SYSTEM IN EXCESS OF 2000 CFM. DUCT DETECTOR SHALL BE INTERLOCKED TO PROVIDE SHUTDOWN OF THE AIR HANDLING UNIT UPON SENSING SMOKE. UNIT SHALL BE PROVIDED WITH LOCAL TEST PANEL, ALARM AND TEST SWITCHES WHEN INSTALLED ABOVE A DROP CEILING OR INACESSIBLE LOCATION.

19 CONTRACTOR SHALL FURNISH AND INSTALL A FRENCH DRAIN PER FBCM-2014. FOR CONDENSATE DISPOSAL UNLESS FLOOR DRAINS ARE PROVIDED FOR THIS PURPOSE.

20 CONTRACTOR SHALL FURNISH AND INSTALL AN AUXILIARY DRAIN PAN BELOW EACH HORIZONTAL UNIT ABOVE A DROP CEILING AND ALL UNITS ABOVE THE GROUND FLOOR. DRAIN PAN SHALL BE MINIMUM 2" DEEP WITH AUXILIARY DRAIN CONNECTION.

21 OUTDOOR AIR INTAKE LOUVERS SHALL BE EQUAL TO RUSKIN MODEL ELF811DD SIZED PER DWGS.

22 CONTRACTOR SHALL PROVIDE AN OUTSIDE AIR DAMPER AND MOTOR IN EACH SEPARATE UNIT DAMPER SHALL MEET THE LEAKAGE REQUIREMENTS OF THE FLORIDA BUILDING CODE. THE OUTSIDE AIR DAMPER SHALL BE CONTROLLED BY THE AUXILIARY CONTACT IN THE THERMOSTAT AND BY THE CO2 SENSOR IF ONE IS SHOWN ON THE DRAWINGS, SEE THE CONTROL SCHEMATIC DETAIL

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CA .068 140 1705

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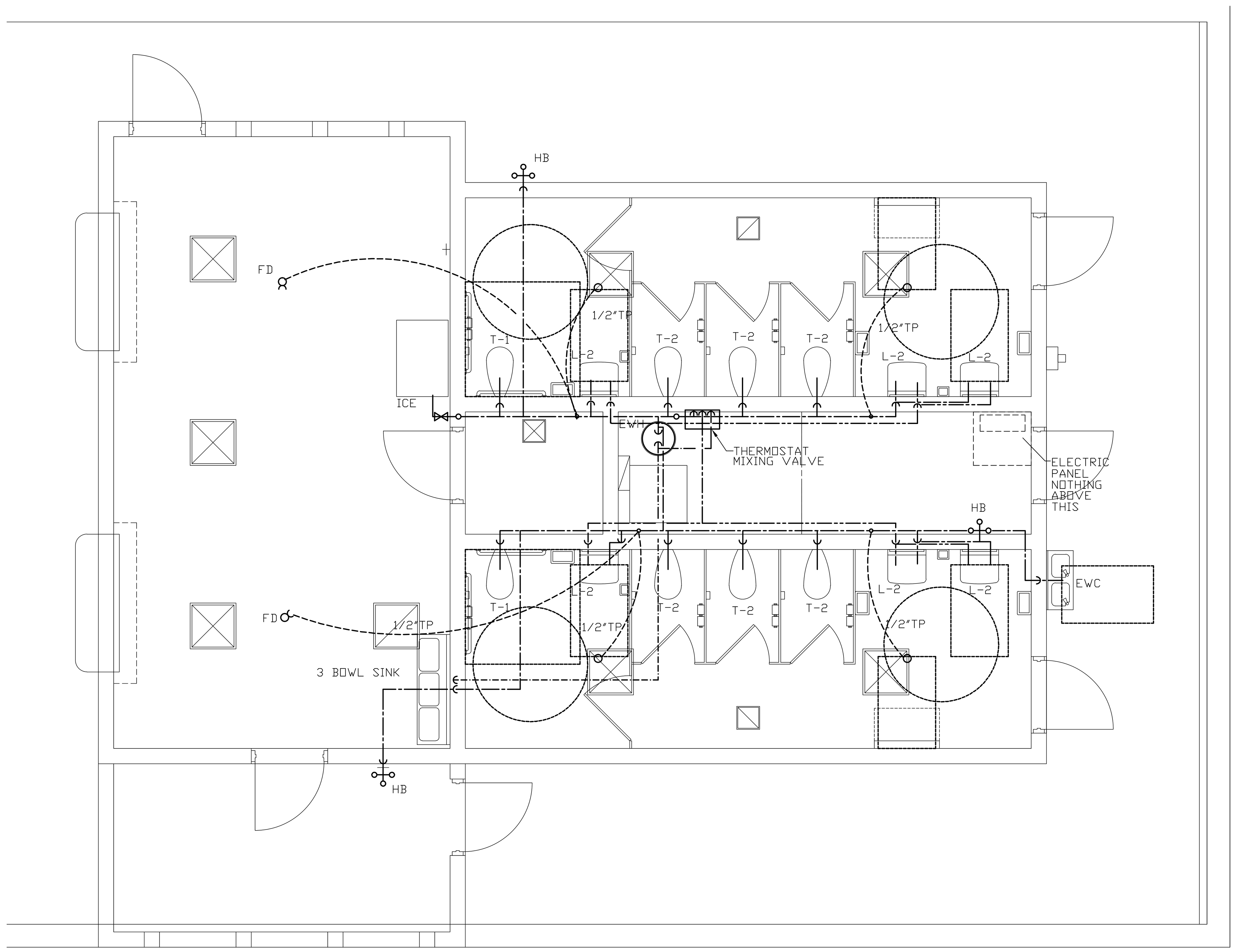
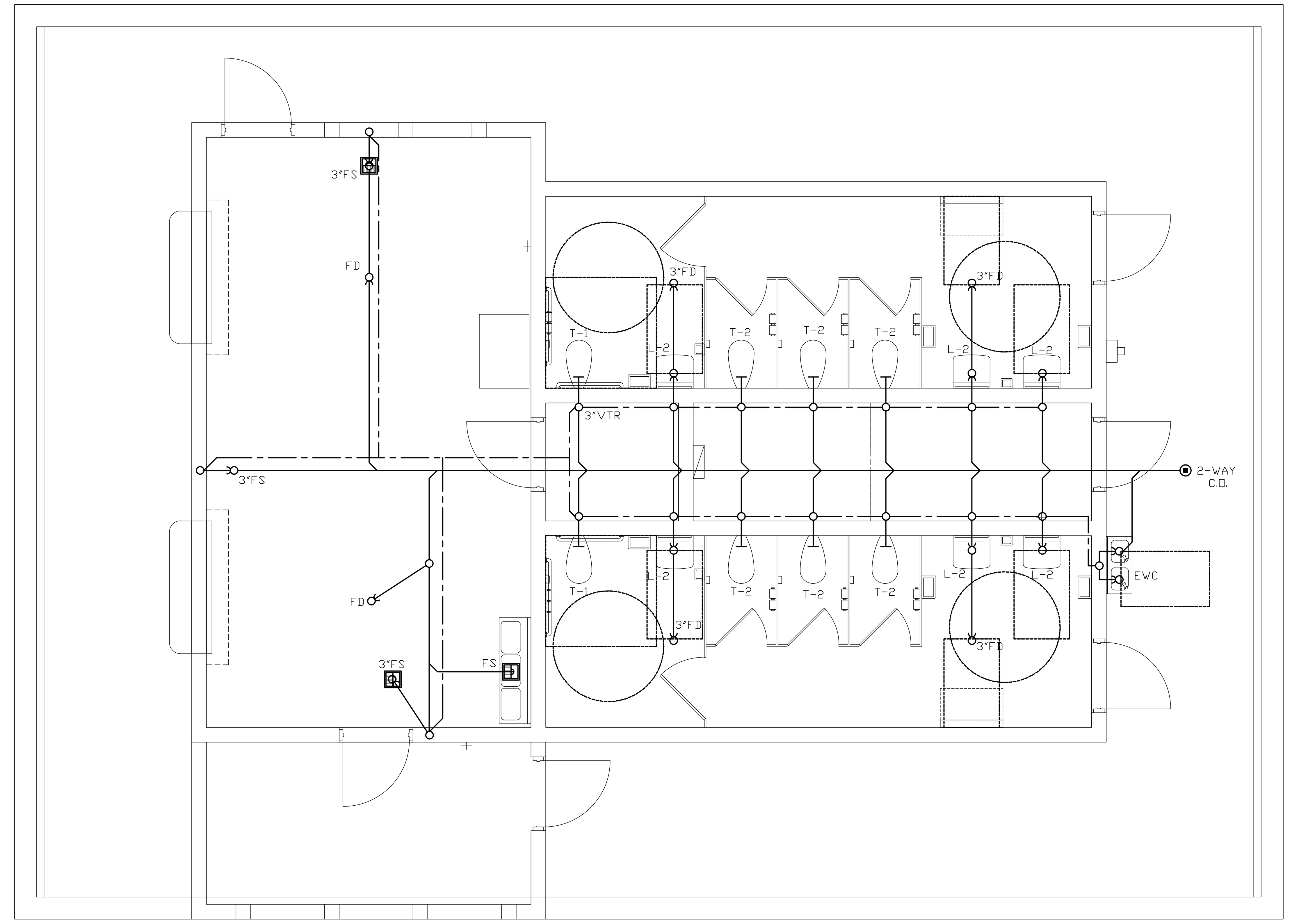
M2

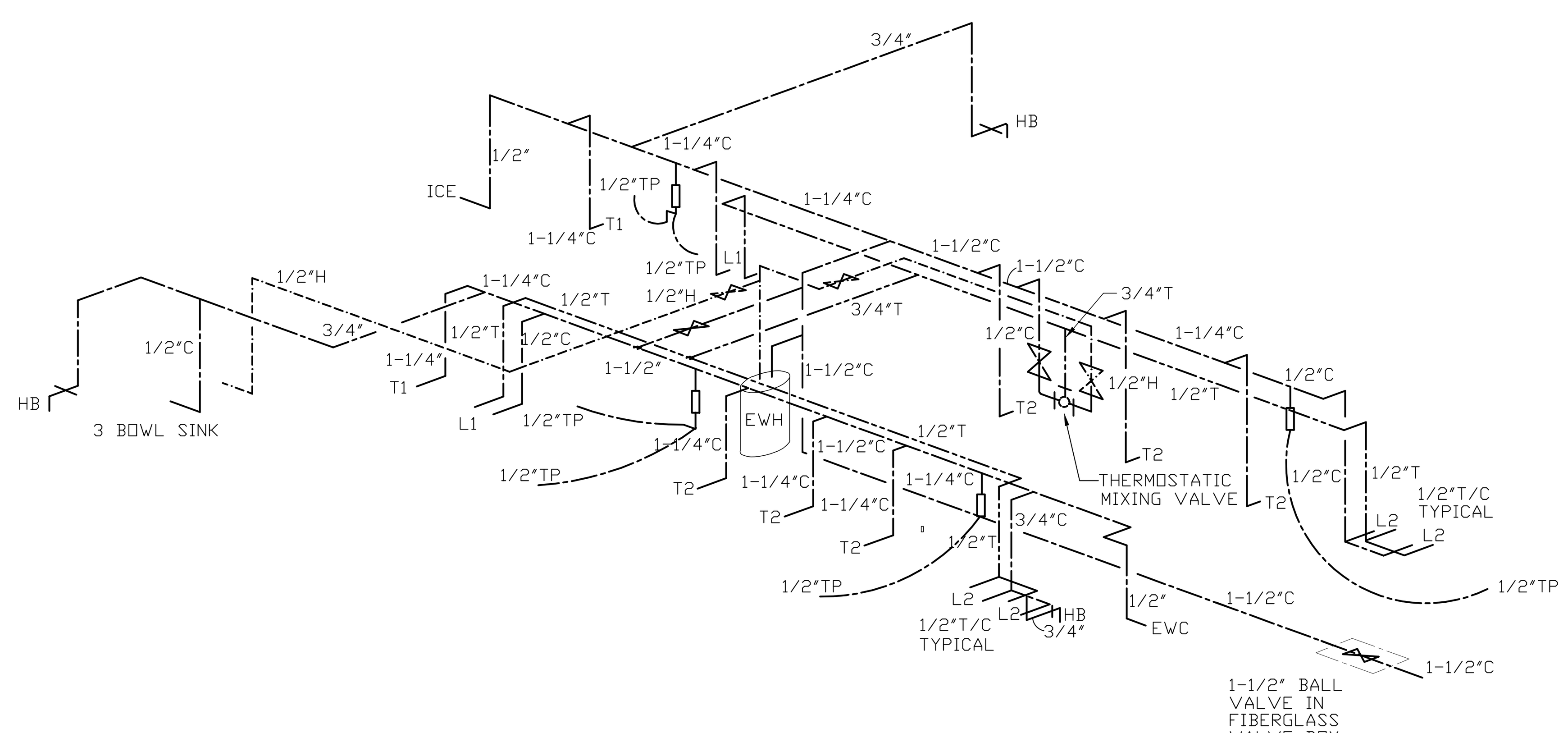
OF SHEETS



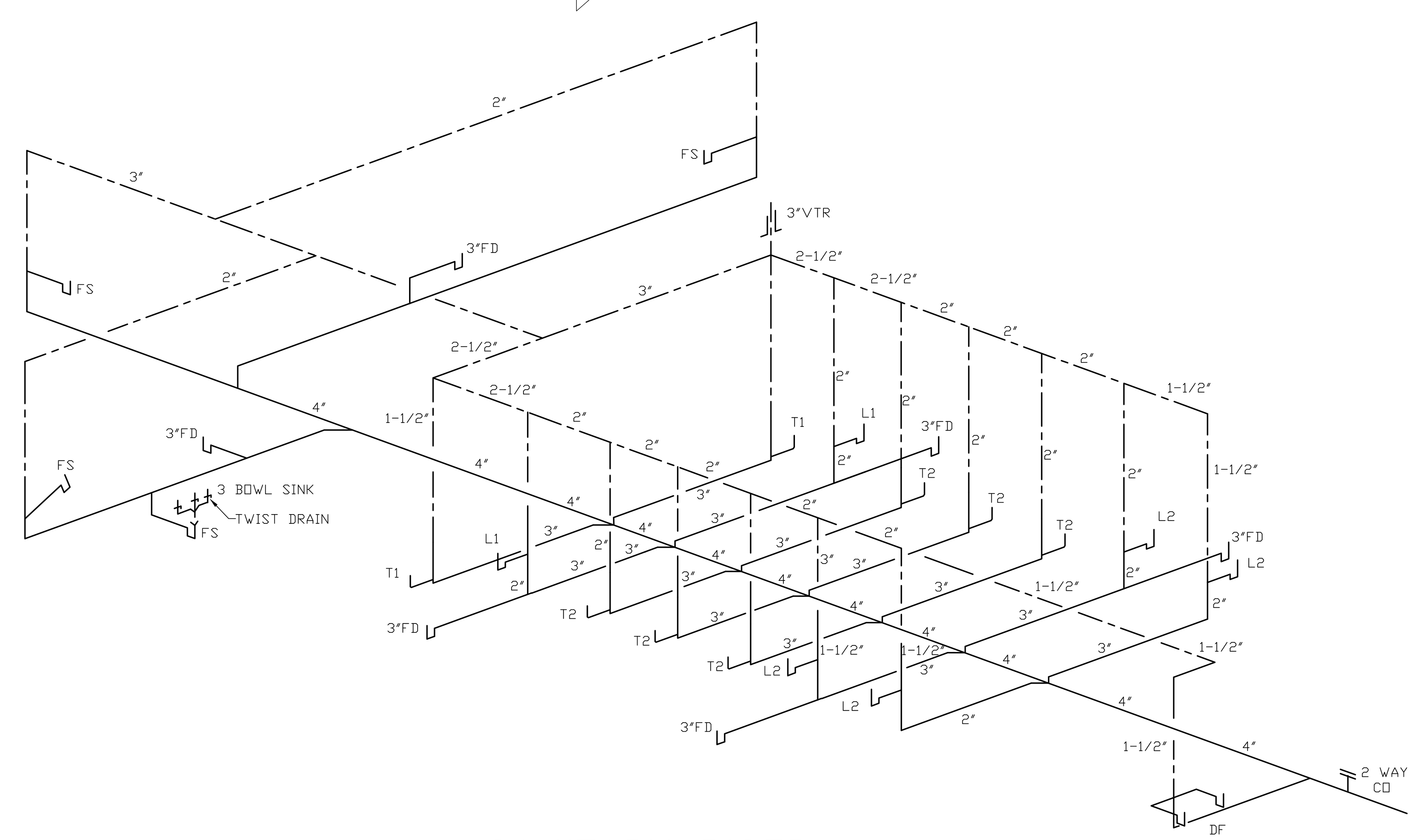
WATER SUPPLY PLAN
1/4" = 1'-0"



SANITARY PLAN
1/4" = 1'-0"



WATER SUPPLY RISER
NTS



SANITARY RISER
NTS

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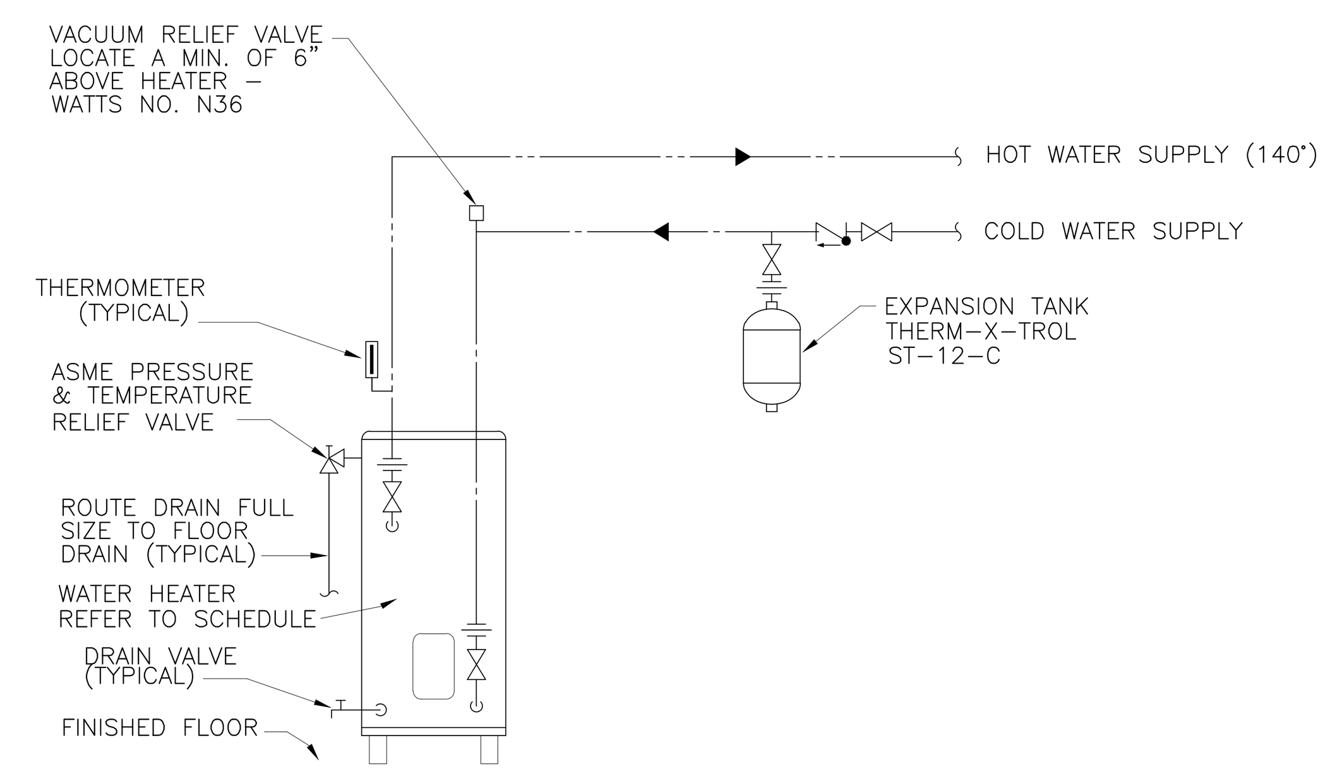
DATE 2/6/17
DRAWN CAS
APPROVED REC

P1

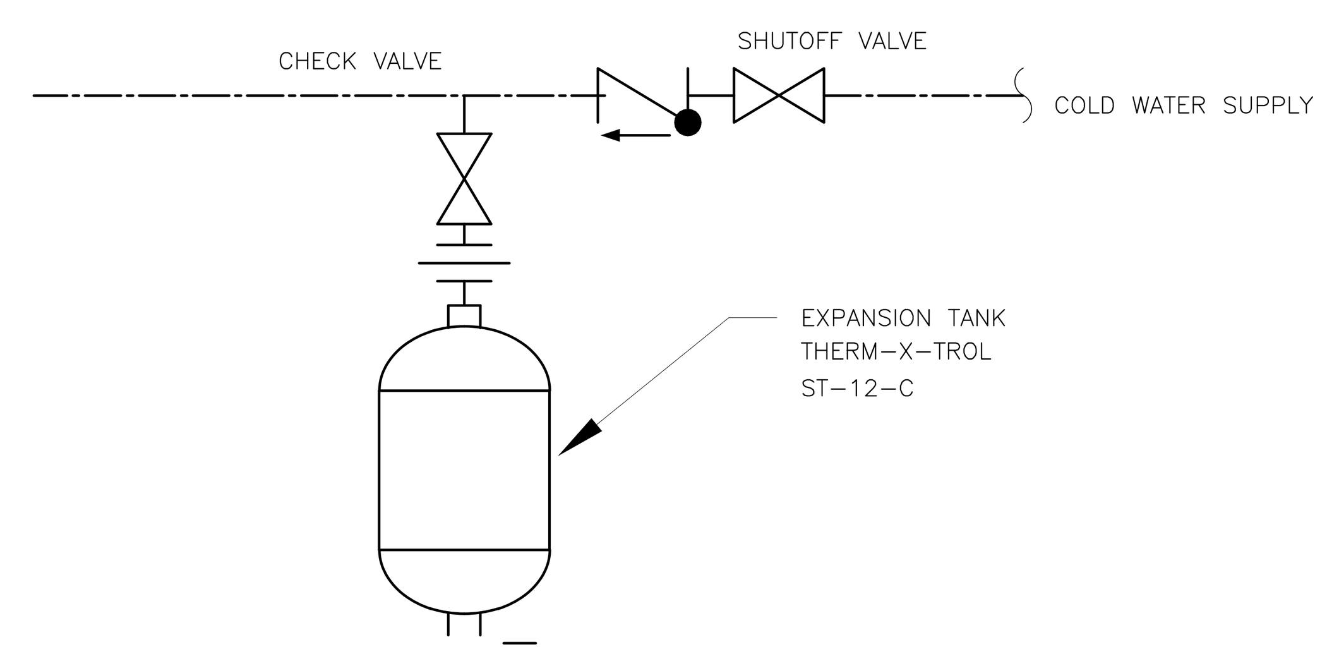
OF
SHEETS

PLUMBING NOTES:

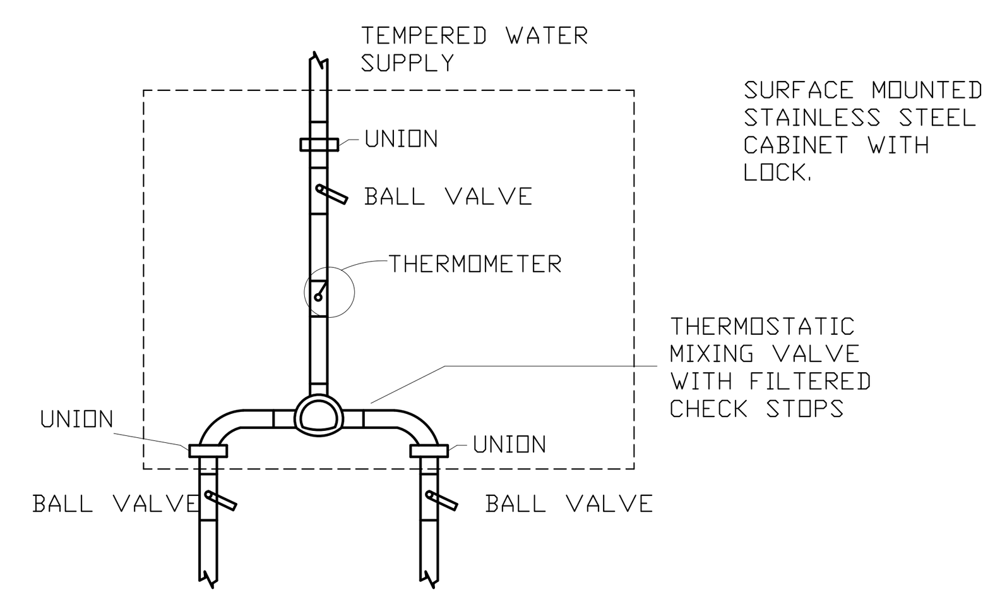
1) ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH 2014 FLORIDA BUILDING CODE PLUMBING AND SHALL COMPLY WITH THE 2014 FLORIDA BUILDING CODE—ENERGY CONSERVATION AND 2014 FLORIDA BUILDING CODE BUILDING.
2) PLUMBING CONTRACTOR SHALL VERIFY LOCATION, SIZE AND AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
3) DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE DRAWINGS. EXACT DIMENSION LAYOUTS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE PLUMBING SUB.
4) CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
5) ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
6) ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
7) ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE PART OF THIS CONTRACT.
8) ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTANCE BY OWNER MUST BE A CONDITION OF THE CONTRACT.
9) ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
10) ANY SLAB CUTS AND REPAIR SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR TO DETERMINE IF IT SHOULD BE INCLUDED IN THE PLUMBING CONTRACTORS BID.
11) ALL MATERIALS SHALL BE NEW. ALL WATER SUPPLIES,. VENT, WASTE, AND CONDENSATE LINES SHALL BE CONCEALED IN CEILING, WALLS OR UNDER FLOOR SLAB. UNLESS SPECIFICALLY NOTED OTHERWISE. SOME LINES MAY BE GRAPHICALLY DEPICTED OUTSIDE THE WALLS FOR CLARITY ONLY. THESE LINES ARE INTENDED TO BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE.
12) DOMESTIC WATER PIPING SHALL BE COPPER WITH WROUGHT COPPER FITTINGS. CLOSE WITH A NON—LEAD BEARING SOLDER. INSULATE HOT WATER PIPING WITH A MINIMUM OF 1" FIBERGLASS INSULATION. CPVC IS ACCEPTABLE IN IN LIEU OF COPPER IFACCEPTABLE TO THE OWNER. CPVC SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS FOR ASSEMBLY AND SUPPORT.
13) ALL SHUTOFF VALVES SHALL BE 1/4 TURN BALL VALVES.
14) ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS. STOPS SHALL BE CHROMED BRASS WITH CHROMED BRASS TUBING AND COMPRESSION FITTINGS. PVC SUPPLIES ARE NOT ACCEPTABLE.
15) PROVIDE 1/2" COLD WATER SUPPLY TO ALL LAVATORIES IN MEN'S AND WOMEN'S TOILETS. PROVIDE 3/8" WATER SUPPLY TO TOILETS.
16) ALL PLUMBING FIXTURES SHALL HAVE AIR CHAMBERS UNLESS SYTEM WATER HAMMER ARRESTORS ARE SHOWN. AND FLOOR DRAINS SHALL HAVE TRAP PRIMERS.
17) ALL WASTE, DRAIN AND VENT PIPING SHALL BE SCHEDULE 40 PVC TYPE DWV, PROPERLY INSTALLED PER MANUFACTURES INSTRUCTIONS.
18) PROVIDE CLEANOUTS FLUCH WITH GRADE OR SLAB WITH APPROPRIATE COVERS. COVERS SHALL BE BRONZE TOP WITH SCORED SURFACES AND LABLELLED "C.O,"
19) PROVIDE FLOOR DRAINS WITH TRAP PRIMER FITTINGS. FLOOR DRAIN BODIES SHALL BE PVC UNLESS NOTED. FLOOR DRAIN COVERS SHALL BE BRONZE. (IF SHOWN)
20) ALL PLUMBING FIXTURES AND TRIM SHALL BE PER THE FIXTURE SCHEDULE. SUPPLY OWNER WITH SUBMITTALS FOR HIS/HER REVIEW. IF THE THERE ARE SUBSTITUTIONS OR THE OWNER WISHES TO MAKE A CHANGE ANY COST ADJUSTMENTS WILL BE BASED ON THE FIXTURE SCHEDULE.
21) IF DISSIMILAR METALS ARE TO BE JOINED, APPROVED INSULATION UNIONS SHALL BE USED.
22) PROVIDE WATER HEATER(S) AS SHOWN ON THE DRAWINGS AND SHEDULE. WATER HEATER INSTALLATION SHALL BE INSTALLED WITH HEAT TRAPS, THERMASTATIC RELIEF VALVE, PROPERLY PIPED TO THE OUTSIDE OR TO EMERGENCY OVERFLOW PAN. PLUMBING CONTRACTOR SHALL PROVIDE COMPLETE CONDENSATE SYSTEM INCLUDING 2" DEEP EMERGENCY DRAIN PAN AS SHOWN ON THE DRAWINGS.
23) WALL PENETRATIONS OF SUPPLY PIPING SHALL BE MADE WITH COPPER PIPING.
24) PENETRATIONS OF FIRE RATED WALLS SHALL BE MADE PER THE UL OR GYP RATING SYSTEM AS SPECIFIED BY THE ARCHITECT.



WATER HEATER PIPING DETAIL NTS DET # 1 P2



EXPANSION TANK DETAIL NTS DET # 2 P2



THERMOSTATIC MIXING VALVE DET. NTS DET # 3 P2

PLUMBING LEGEND

SANITARY LINE
COLD WATER LINE
HOT WATER LINE
VENT LINE

	PLAN	ISOMETRIC
WATERCLOSET WC		WC
TRAP (LAV OR SINK)		LAV
FLOOR DRAIN (FD)		FD
CLEAN OUT (CO)		CO
FLOOR SINK (FS)		FS
WALL CLEANOUT		WCO
HOSE BIBB (HB)		HB
WALL HYDRANT (WH)		WH
VENT THRU ROOF (VTR)		VTR
GATE VALVE		
GLOBE VALVE		
CHECK VALVE		
ELEC WATER HTR (EWH)		
SHUT OFF VALVE IN FIBERGLASS VALVE BOX		
WATER SUPPLY OUTLET		
SHOCK STOPS (PER SPEC)		
AIR CHAMBERS (PER SPEC)		

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINAL GRADE
B/S	BELOW SLAB
HC	ADA ACCESSIBLE
JAN	JANITOR SINK SEE SPEC
LAV	LAVATORY
SOV	SHUTOFF VALVE
T	FLUSH VALVE TOILET
T.P.	TRAP PRIMER
U/G	UNDERGROUND
WC	TANK TYPE WATER CLOSET

ELECTRIC WATER HEATER SCHEDULE

MARK	MAKE & MODEL NO.	TANK CAP./ GAL.	KW	VOLTS/PH	RECOVERY GPH @ 50°F	REMARKS
EWH-1	RHEEM PRO+E30M2RH95EC1	30 GAL	4.5	208/1	7	1 2

PIPING SCHEDULE - SEE NOTES

USE	SIZE	TYPE		CONNECTION	INSULATION	THICK.	COMMENTS
DOM. COLD	ALL	CPVC		GLUED	NONE		SCH 40 ASTM D2846
DOM. HOT	ALL	CPVC		GLUED	FIBERGLASS	1" MIN R4	SCH 40 ASTM D2846
SANITARY/VENT	ALL	DVW		GLUED	NONE		SCH. 40 ASTM D 1784 60T

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL	FITTINGS OR VALVES	SUPPLIES	TRAP	MOUNTING	ACCESSORIES	COLD	HOT	WASTE	VENT	REMARKS
T1	TOILET	PROFLOW	PF1721WH	FLUSH VALVE AND STOPS	———	INTEGRAL	FLOOR	PROFLO SEAT PFTSCPFA2000WH	1-1/2"	——	3"	2"	STANDARD HEIGHT FLUSH VALVE 1..28 GAL FLUSH
T2	TOILET	PROFLOW	PF1723WH	FLUSH VALVE AND STOPS	———	INTEGRAL	FLOOR	PROFLO SEAT PFTSCPFA2000WH	1-1/2"	——	3"	2"	HAN.CAP HEIGHT FLUSH VALVE 1.28 GAL/FLUSH
L1	HANDICAP LAVATORY	PROFLOW	PF5514WH	PFWS1012M	BRASS CRAFT OCR1912AZ	CHROME BRASS	WALLBRACKET		1/2"	1/2"	1 1/4"	1 1/4"	SUPPLY W/TRAP INSULATION KIT
L2	LAVATORY	PROFLOW	PF5514WH	PFWS1012M	BRASS CRAFT OCR1912AZ	CHROME BRASS	WALLBRACKET		1/2"	1/2"	1 1/4"	1 1/4"	
3 BOWL SINK	3 BOWL SINK	REGENCY	60" 3 COMPARTMENT	REGENCY WALL MOUNT FAUCET AND TWIST HANDLE WASTE VALVES	BRASS CRAFT OCR1912AZ	CHROME BRASS	FREE STANDING	BASKET STRAINER	1/2"	1/2"	1 1/2"	1 1/2"	STAINLESS STEEL 60" 3 COMPARTMENT 12" DEEP MAXIMUM, WITH TWIST HANDLE DRAINS
DF	DRINKING FOIUNTAIN	ELKAY	EDFP217FC	BRASS SUPPLY & STOPS	BRASS CRAFT OCR1912AZ	INTEGRAL	WALL MTD	———	1/2"		1 1/4"	1 1/4"	ADA COMPLIANT, SEE ARCH ELEV.

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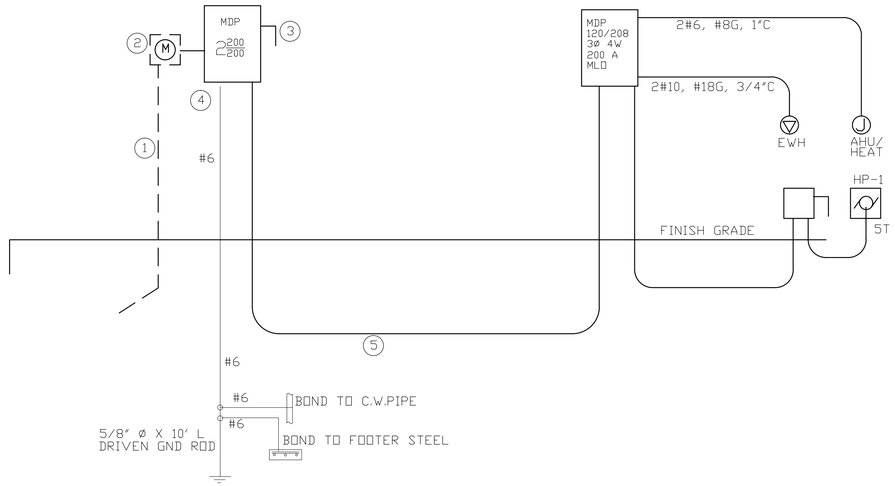
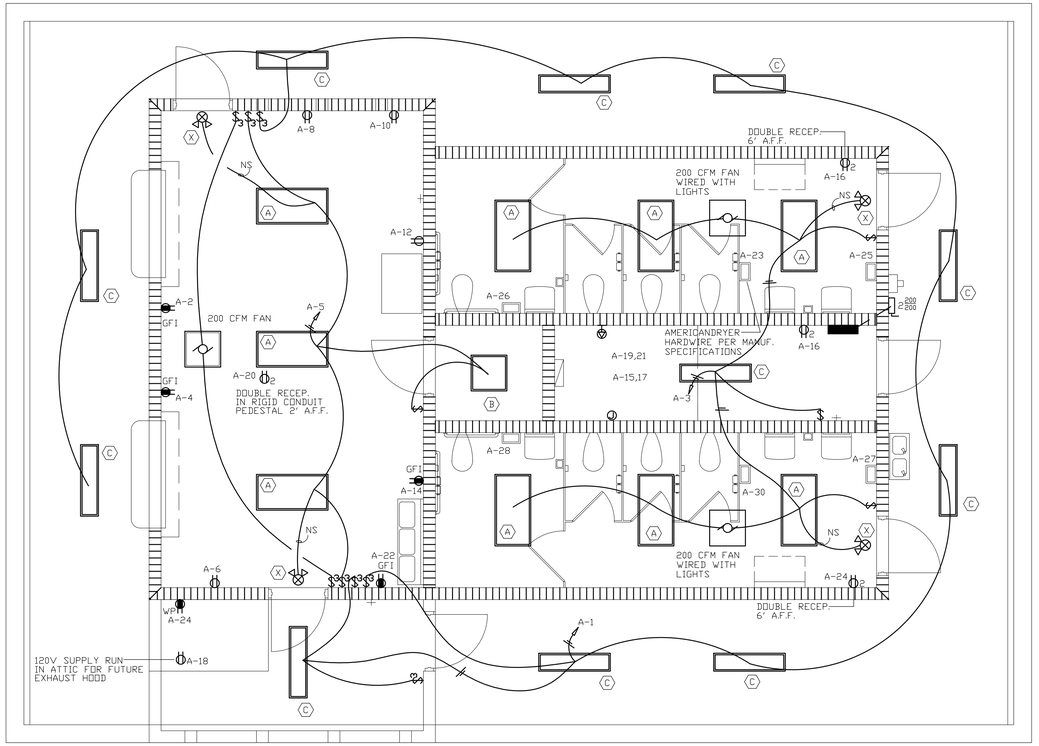


ELECTRICAL RISER DIAGRAM

NTS

ELECTRICAL RISER NOTES

1. SERVICE/FEEDER ENTRANCE CONDUCTORS; 2 1/2" RIGID CONDUIT, MIN 18" DEEP, W/ CONTINUOUS GROUND BONDING CONDUCTOR, SERVICE/ ENTRANCE CONDUCTORS SHALL NOT BE SPLICED EXCEPT THAT BOLTED CONNECTIONS AT THE METER, DISCONNECTION DEVICES AND PANEL SHALL BE ALLOWED
2. NEW METER ENCLOSURE, WATERPROOF, U.L. LISTED, PER UTILITY CO SPEC.
3. MAIN DISCONNECT SWITCH; FUSED KNIFE, WEATHERPROOF, U.L. LISTED.
4. SERVICE ENTRANCE GROUND: 5/8" DIAMETER IRON/STEEL. ROD X 8'-0" LONG AND OR CONCRETE ENCASED FOUNDATION STEEL REBAR X 20'-0" LONG. GROUNDING CONDUCTOR SHALL BE BONDED TO EACH PIECE OF SERVICE/ENTRANCE EQUIPMENT, AND SHALL BE SIZED PER ITEM #5 BELOW.
5. 200 AMPERE FEEDER: 3-3/0-THW-CU, 1-#6-CU-GND, 2" CONDUIT.
6. 200A ELEC PANEL.



ELECTRICAL PLAN

1/4" = 1'-0"

LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE			MANUFACTURER		MOUNTING			LAMPS	VOLTS	REMARKS
	FLOUR.	INCAN.	OTHER	TITLE	CATALOG NO.	REC.	SUR.	OTHER			
A	X			HE WILLIAMS	50GS24-432-S-A12125-EB4-UNV	X			4-F32 T8	120V	
B	X			HE WILLIAMS	50GS22-217-S-A12125-EB2-UNV	X			2-F17 T8	120V	
C	X			HE WILLIAMS	91-4-232-EB-2-120V				2-F32 T8		
X				BEGHELLI	APE LRU AT		X		LED	120V	W/ BATTERY & 2 EM HEADS

ELECTRICAL SPECIFICATIONS

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND ALL LOCAL CODES AND ORDINANCES.
2. CONTRACTOR SHALL COORDINATE AND PAY FOR ALL REQUIRED PERMITS, TEST, AND INSPECTIONS AND SHALL BE INCLUDED IN THE BID.
3. CONTRACTOR SHALL COORDINATE THE WORK WITH ALL OTHER TRADES TO AVOID ALL INTERFERENCES.
4. DRAWINGS ARE DIAGRAMMATIC IN NATURE, SHOWING THE WORK TO BE COMPLETED. THEY ARE INTENDED TO SHOW A COMPLETE WORKING SYSTEM. ITEM REASONABLY INFERRED AS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM SHALL BE PROVIDED WHETHER SPECIFICALLY SHOWN OR NOT.
5. A TYPE WRITTEN DIRECTORY SHALL BR MOUNTED ON THE INSIDE OF EACH PANEL DOOR SHOWING CIRCUIT NUMBERS AND COMPLETE DESCRIPTION OF EACH CIRCUIT.
6. ALL WIRING SHALL BE THW, THWN OR THHN COPPER.
7. ALL WIRING SHALL BE INSTALLED IN CONDUIT.
8. INTERIOR CONCEALED CONDUIT SHALL BE TYPE EMT WITH SET-SCREW OR COMPRESSION CONNECTION OR COMPRESSION CONNECTORS.
9. UNDER SLAB CONDUIT AND UNDERGROUND CONDUIT SHALL BE SCHEDULE 40PVC WITH GLUED FITTINGS.
10. EXPOSED EXTERIOR CONDUIT SHALL BE EMT WATER TIGHT COUPLINGS AND/OR HUBS.
11. EXPOSED CONDUIT SUBJECT TO VEHICLE TRAFFIC SHALL BE RIGID GALVANIZED WITH THREADED COUPLINGS.
12. PANEL BOARDS SHALL BE SQUARE D, NQO PANEL (10000 AIC) OR NQOB PANELS (ABOVE 10000 AIC). LOAD CENTERS SHALL NOT BE USED UNLESS SPECIFICALLY STATED ON SCHEDULE. SEE PANEL SCHEDULE FOR COMPLETE PANEL DESCRIPTION.
13. GENERAL DUTY RECEPTACLES SHALL BE 15 AMP, SPECIFICATION GRADE, 125 VOLT AC, NEMA 5-15 CONFIGURATION. IVORY,
14. SINGLE APPLIANCE TYPE RECEPTACLES SHALL BE IDENTICAL TO GENERAL DUTY EXCEPT RATED AT 20 AMPS.
15. SPECIAL PURPOSE OUTLETS SHALL BE EITHER 250 VOLT, 30 AMP, NEMA 6-30R OR 250 VOLT, 50 AMP, NEMA 6-50R AS REQUIRED.
16. SWITCHES SHALL BE SPECIFICATION GRADE 125-277 VOLTS, 20 AMPS IVORY.
17. COVER PLATES SHALL BE IVORY, PLASTIC AND SHALL BE PROVIDED FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND DATA OUTLETS AMD ANY OTHER OUTLETS.
18. ALL EMERGENCY LIGHTS AND EXIT LIGHTS SHALL HAVE BATTERY BACKUP.
19. PROVIDE JUNCTION BOXES AS REQUIRED AND FEED ALL LIGHTING CIRCUITS THROUGH APPROPRIATE JUNCTION BOX.
20. PROVIDE GROUND FAULT PROTECTION ON ALL CIRCUITS SHOWN ON THE PANEL SCHEDULE, USING GROUND FAULT INTERRUPTING BREAKERS OR DEVICES
21. UNLESS NOTED OTHERWISE EACH DATA OUTLET SHOWN SHALL CONSIST OF (2) CAT 5 CABLES AND 8 PIN CAT 5 JACKS WIRED ONE FOR DATA AND ONE FOR TELEPHONE. STUB 3/4" CONDUIT FROM WALL BOX TO ABOVE CEILING AND TURN OUT 90 DEGREE ELBOW. USE CONDUIT IN WALL THEN FREE PULL CAT 5 CABLE FROM JACK TO TELEPHONE TERMINAL BOARD AND TO COMPUTER TERMINAL BOARD LOCATION AS SHOWN ON DRAWINGS OR AS DIRECTED BY OWNER.
22. FURNISH AND INSTALL ALL LIGHT FIXTURES AS SHOWN ON THE DRAWINGS. BEFORE ORDERING PROVIDE SUBMITTALS TO THE OWNER AND ENGINEER. ALL LIGHT FIXTURES ARE TO BE SUPPLIED COMPLETE WITH HANGERS, HARDWARE, CLIPS, MOUNTING BRACKETS AND ACCESSORIES AS REQUIRED TO MOUNT FIXTURES. ALL LIGHT FIXTURES ARE TO BE FURNISHED WITH A NEW SET OF LAMPS PRIOR TO FINAL ACCEPTANCE BY THE OWNER.
23. ELECTRICAL CONTRACTOR SHALL FURNISH ALL DISCONNECTS AS SHOWN ON DRAWINGS AND ALL MOTOR STARTERS UNLESS SUPPLIED AS AN INTEGRAL PART OF THE HVAC EQUIPMENT. EXTERIOR EQUIPMENT SHALL BE NEMA 3R RAINTIGHT.
24. ALL CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC TYPE. ALL CIRCUIT BREAKERS SUPPLIED FOR HVAC EQUIPMENT SHALL BE HACR TYPE.

PANEL - A LOCATION- STORAGE MOUNTING- XX SURFACE FLUSH
SERVICE- 120 / 240 VOLTS, 1Ø / 3W 60 HZ BUSS SIZE- 200 A. 10000 AIC BKRS.
MAIN BKR. A P. XX MAIN LUGS ONLY

WATTS AØ	WATTS BØ	CIRCUIT	WIRE	POLE	AMP	NO.	NO.	AMP	POLE	WIRE	CIRCUIT	WATTS AØ	WATTS BØ
800		WALK LIGHTS	12	1	20	1	2	20	1	12	APPLIANCE	1500	
	840	BLDG LIGHTS	12	1	20	3	4	20	1	12	APPLIANCE		1500
340		CONCESSION LIGHTS	12	1	20	5	6	20	1	12	APPLIANCE	1500	
	1000	SPARE		1	20	7	8	20	1	12	APPLIANCE		1500
1000		SPARE		1	20	9	10	20	1	12	APPLIANCE	1500	
	3274	A/C	B	2	60	11	12	20	1	12	APPLIANCE		1500
3274		⊥	⊥	⊥	⊥	13	14	20	1	12	APPLIANCE	1500	
	3924	AH-HEAT	6	2	50	15	16	20	1	12	GEN RECEPT		900
3924		⊥	⊥	⊥	⊥	17	18	20	1	12	FUTURE HOOD	1200	
	2250	EWH	10	2	30	19	20	20	1	12	APPLIANCE		1500
2250		⊥	⊥	⊥	⊥	21	22	20	1	12	GEN RECEPT	1500	
	1200	HAND DRYER	12	1	20	23	24	20	1	12	GEN RECEPT		1500
1200		HAND DRYER	12	1	20	25	26	20	1	12	HAND DRYER		
	1200	HAND DRYER	12	1	20	27	28	20	1	12	HAND DRYER		
						29	30	20	1	12	HAND DRYER		
						31	32						
						33	34						
						35	36						
						37	38						
						39	40						
						41	42						
12788	13688											11140	9600

TOTAL CONN. WATTS= N/A TOTAL CALC LOAD= 36971 W= (240)VOLTS= 154 AMPS
FEEDER SIZE 3/0 CONDUIT SIZE 2" C FEEDS FROM MAIN SERVICE
CONNECTED WATTS ADJUSTED WITH APPROPRIATE MULTIPLIERS AND DIVERSITIES

LOAD CALCS

LIGHTS	1980 X 1.25 =	2475
RECEPTACLES		900
APPLIANCES		12000
HAND DRYERS		7200
AC COMP		6322
FANS		874
HEAT STRIP		7200
		36971 VA
AMPS @ 240V 1Ø =		154 AMPS
SERVICE PROVIDED =		200A

CONSTRUCTION DOCUMENTS

COBURN AND ASSOCIATES, INC
MECHANICAL • ELECTRICAL • CONSULTING ENGINEERS
P.O. BOX 577 • HIGH SPRINGS, FLORIDA • PH 386-454-3748 • FAX 386-454-2652
CERTIFICATE OF AUTHORIZATION 3687

COBURN & ASSOCIATES
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RICHARD E. COBURN PE
FL #38820
CA. LIC# NO 17105

FORT WHITE COMMUNITY CENTER
CONCESSION BUILDING
COLUMBIA COUNTY BOARD OF COMMISSIONERS

DATE 2/6/17
DRAWN CAS
APPROVED REC

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OF SHEETS