

**INVITATION TO BID
COLUMBIA COUNTY BOARD OF COMMISSIONERS
ENGINEERING OFFICE ADDITION – PUBLIC WORKS
BID NO. 2018-H**

Please be advised that Columbia County desires to accept bids on the above referenced project. Bids will be accepted until 2:00 PM on May 3, 2018 in the office of the Board of County Commissioners located at 135 NE Hernando Ave. Room 203, Lake City, Florida 32055.

Specifications and bid forms may be downloaded at the County web site,
<http://www.columbiacountyfla.com/PurchasingBids.asp>

There will be a non-mandatory pre-bid meeting at the site April 25, 2018 at 2:00 P.M.
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 Public Works Engineering Office Addition Lake City, Florida

Construction Documents

Project Manual

Architect's Project No. 1756

April 2, 2018

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

Structural Engineer

Wayland Structural Engineering
2801 SW 81st Street
Gainesville, Florida 32608

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.

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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 120 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: COLUMBIA COUNTY PUBLIC WORKS
ENGINEERING OFFICE ADDITION
LAKE CITY, 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 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 a 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 from 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 Statutes, 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 Columbia County Public Works – Engineering Office Addition, Lake City, Florida, Architect's Project No. 1756, 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 Columbia County Public Works – Engineering Office Addition, Lake City, Florida, Architect's Project No. 1756, 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 120 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:

Donny Dupree, Maintenance Director
Columbia County Board of Commissioners
Lake City, Florida
(386) 758-2138 - 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 April 2, 2018. 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:

<u>Number</u>	<u>Date</u>	<u>Pages</u>
---------------	-------------	--------------

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.

**(NOTARIAL
SEAL)**

Notary Public, State of Florida

(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: COLUMBIA COUNTY PUBLIC WORKS
ENGINEERING OFFICE ADDITION
LAKE CITY, FLORIDA
ARCHITECT'S PROJECT NUMBER: 1756

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:

COLUMBIA COUNTY PUBLIC WORKS
ENGINEERING OFFICE ADDITION
LAKE CITY, FLORIDA
ARCHITECT'S PROJECT NO. 1756

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:

Columbia County Public Works
Engineering Office Addition

Dated: April 2, 2018

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 120 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)j 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
Injury	\$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 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 _____ to _____ on the site of the following property: _____
(insert name of your Contractor) (insert date)

**COLUMBIA COUNTY PUBLIC WORKS
ENGINEERING OFFICE ADDITION
LAKE CITY, 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)

**COLUMBIA COUNTY PUBLIC WORKS
ENGINEERING OFFICE ADDITION
LAKE CITY, FLORIDA**

DATED on _____, 20__.

BY: _____
(Lienor)

DATE: _____ NOTARY: _____

END OF SECTION

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: An Engineering Office Addition at the Columbia County Public Works Building as outlined in the documents. The work includes, but is not limited to, cutting and patching, selective structure demolition, metal fabrications, miscellaneous rough carpentry, shop-fabricated wood trusses, finish carpentry, thermal insulation, blanket insulation, weather barriers, vapor retarders, sheet metal roofing, sheet metal flashing and trim, joint protection, door schedule, hollow metal doors and frames, flush wood doors, access doors and frames, aluminum windows, door hardware, glazing, finish schedule, gypsum board assemblies, resilient flooring accessories, resilient tile flooring, painting and coating, specialties, site clearing, earth moving, rough grading and termite control. Drawings include General Project Cover Sheet, Demolition Plan, Demolition Exterior Elevations, Floor Plan, Exterior Elevations, Building Sections, Roof Plan and Reflected Ceiling Plan. Structural, Mechanical and Electrical Documents as provided.

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 6th Edition 2017 and the Florida Fire Prevention Code 6th 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) 6th Edition 2017.
 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.

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 02 4119
SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

- 1.1 **WORK INCLUDED:** This section covers the furnishing of all labor, equipment, materials and resources to accomplish the following:
- A. The Contractor shall carefully coordinate with the Owner during all the demolition work and shall adjust his schedule for this work in accordance with the Owner's requirements to minimize disruption of work in the adjacent spaces and buildings.
 - B. Complete wrecking of areas and the removal and disposal of demolished materials as shown on the Drawings.
 - C. Demolition and removal of existing walls and other items noted on the Architectural, Structural, Mechanical and Electrical Plans.
 - D. It is the responsibility of the Contractor to carefully review the Contract Documents and remove any items identified on the Contract Documents or required to accomplish the new construction. Any such interference with new construction encountered after the completion of demolition work shall be remedied by the Contractor at no expense to the Owner.
- 1.2 **RELATED REQUIREMENTS**
- A. Refer to Division 00 and 01 sections of these specifications.
 - B. All work of this Section shall be carried out in strict accordance with OSHA Regulations and other governing Codes.
- 1.3 **RELATED WORK**
- A. Section 01 0145 - Cutting and Patching.
- 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. **Demolition Schedule:** Submit proposed methods and operations of temporary shoring and demolition for review prior to the start of work. Include in the schedule the coordination for shut-off, capping and continuation of utility services as required.
- 1.5 **JOB CONDITIONS**
- A. **Occupancy:** Areas to be demolished will be vacated and discontinued in use prior to the start of the work.
 - B. **Condition of Structures:** The Owner assumes no responsibility for the actual condition of structures to be demolished. The Contractor shall field verify these areas and remove as required.
 - C. **Partial Removal:** Salvaged items must be transported from the site as they are removed.
 - D. **Protections:** Ensure the safe passage of persons around and in the area of demolition. Conduct operations to prevent injury to persons, adjacent buildings, structures and other facilities.
 - E. **Damages:** Promptly repair damages caused to adjacent facilities by demolition operations at no cost to 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 DEMOLITION

- A. Pollution Controls: Comply with governing regulations pertaining to environmental protection. Clean adjacent areas of the spaces and improvements of dust, dirt and debris caused by demolition operations, as directed by the Owner.

3.2 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove from the site debris, rubbish and other materials resulting from demolition operations and dispose of in an approved dump.
- B. Title to Materials: Title to all materials and equipment to be removed, except as specified and/or noted otherwise, is vested in the Contractor upon receipt of the Notice to Proceed. The Owner will not be responsible for the condition or loss of, or damage to, such property after Notice to Proceed. Materials and equipment shall not be viewed by prospective purchasers or sold on the site. Salvage items shall be transported from the site as they are removed.
- C. Salvaged Materials and Equipment: Carefully remove materials and equipment that are listed and indicated, as applicable, to be removed by the Contractor and that are to remain the property of the Owner and deliver to a storage site on the grounds as directed by Owner. Remove items in a manner that will prevent damage.

3.3 CLEANUP

- A. Debris and Rubbish: Remove and transport debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean up spillage from streets and adjacent areas.
- B. Regulations: Comply with applicable Federal, State and Local hauling and disposal regulations.

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. Equipment Hangers and Supports as required.
 - D. 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 GENERAL
- 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.
 - 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 (1) 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 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.

2.7 MISCELLANIOUS STEEL FRAMING

- A. Provide steel framing for wall openings as shown on drawings.

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' printed 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. Rough carpentry hardware, including, but not limited to, nails, screws, toggle bolts and other anchorage devices.
 - C. Treated wood products shall be used where in contact with concrete or CMU.
 - D. 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
 - B. Section 06 1753 – Shop-Fabricated Wood Trusses
- 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.
 - 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
 - C. Refer to Division 00 and 01 sections of these specifications.
- 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. 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. Wind load design criteria is located on the drawings.
 2. Provide Shop Drawings which have been signed and sealed by a Structural Engineer licensed to practice in the State of Florida.
- B. 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. Fire retardant treated lumber.
 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 2100
THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Two-component closed-cell spray polyurethane foam insulation with an approved blowing agent designed for use as a construction insulation air barrier system.

B. Related Sections:

1. Section 06 1753 – Shop-Fabricated Wood Trusses

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

1.4 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

1.5 QUALITY ASSURANCE

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 SPRAY POLYURETHANE FOAM INSULATION

A. Closed-Cell Polyurethane Foam Insulation: ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E 84.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following
 - a. BASF Corporation.
 - b. Dow Chemical Company (The).
 - c. ERSystems, Inc.
2. Minimum density of 1.5 lb/cu. ft. thermal resistivity of 6.2 deg F x h x sq. ft./Btu x in. at 75 deg F.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Ensure the interior face of the decking is unfaced with any plastic, foil, other film before application.
- B. Remove projections that interfere with placement.

3.2 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications indicated.
- B. All personnel entering the work area must wear appropriate personal protective equipment.
- C. Safety signage must be posted at all entrances.
- D. A daily work sheet is required for each project.
- E. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- F. Extend insulation to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation.

3.3 INSULATION APPLICATION

- A. Ensure full adhesion of insulation and take whatever steps necessary to achieve full adhesion.
- B. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and windows, electrical boxes, and other items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs by using method recommended by insulation manufacturer.
- C. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation.
- D. Sprayed insulation sets almost immediately. Ensure framing and decking is square and true prior to spray application.
- E. The insulation is applied in passes having a minimum thickness of ½ inch and a maximum thickness of 2 inches per pass, up to the total thickness for R-30.

3.4 PROTECTION

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

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 and any fire safing 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 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: Furnish and install 3'-1/2" fiberglass or mineral wool batts conforming to Federal specification HH-I-521, Type 1 with no vapor barrier, and ANSI/NFPA NO. 101, "Life Safety Code" noncombustible classification, with minimum "R" value of 11. Fasteners shall be as recommended by insulation manufacturer for each condition. Insulation shall have a flame spread rating of not more than 75 and a smoke development rating of not more than 450.

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 and fire safing: Install in accordance with the manufacturer's instructions. At any fire rated walls or ceilings, install to achieve fire rating required.

3.3 CLEANUP

- A. Remove all containers, wrappings and scrap insulation material from site weekly at a minimum. Leave floors broom clean.

END OF SECTION

SECTION 07 2500
WEATHER BARRIERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Water-Resistive Barrier: Under exterior metal siding, over sheathing; air tight and vapor retardant; with sealed seams.

1.2 RELATED REQUIREMENTS

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

1.3 DEFINITIONS

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.

1.4 REFERENCE STANDARDS

- A. AATCC Test Method 127 - Water Resistance: Hydrostatic Pressure Test.
- B. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
- C. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials.

1.5 SUBMITTALS

- A. See Section 01 3300.
- B. Product Data: Provide data on material characteristics.

1.6 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 - PRODUCTS

2.1 WEATHER BARRIER ASSEMBLIES

- A. A. Exterior Water-Resistive Barrier and Vapor Retarder: Provide on exterior walls under metal siding over exterior grade gypsum board.

2.2 VAPOR RETARDER MATERIALS (AIR BARRIER AND WATER-RESISTIVE)

- A. A. Vapor Retarder Sheet : ASTM D1970/D1970M.
 - 1. Type: SBS rubberized asphalt compound, self-adhesive.
 - 2. Thickness: 40 mil (0.040 inch).
 - 3. Water Vapor Permeance: 0.03 perm, maximum, when tested in accordance with ASTM E96/E96M desiccant method, 0.86 perm, maximum with water method.
 - 4. Seam and Perimeter Tape: As recommended by sheet manufacturer.
 - 5. Products:
 - a. Carlisle Coatings and Waterproofing, Inc.; CCW-705 Air and Vapor Barrier Sheet: www.carlisle-ccw.com.

- b. Henry Company; Blueskin SA: www.henry.com.
- c. W.R. Meadows, Inc.; Air-Shield: www.wrmeadows.com.

2.3 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
- B. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement is waived if not installed on a roof.
 - 1. Composition: Any material that meets physical requirements of ASTM D1970/D1970M and as recommended by weather barrier manufacturer.
- C. Liquid Flashing: One part, fast curing, non-sag, silicone, gun grade, trowelable liquid flashing.
- D. Thinners and Cleaners: As recommended by material manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces and conditions are ready to accept the work of this section.

3.2 PREPARATION

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- B. Clean and prime substrate surfaces to receive adhesives in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions.
- B. Vapor Retarders: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Apply sealants and adhesives within recommended application temperature ranges. Consult manufacturer if temperature is out of this range.
- D. Self-Adhesive Sheets:
 - 1. Prepare substrate in manner recommended by sheet manufacturer; fill and tape joints in substrate and between dissimilar materials.
 - 2. Lap sheets shingle-fashion to shed water and seal laps air tight.
 - 3. Once sheets are in place, press firmly into substrate with resilient hand roller; ensure that all laps are firmly adhered with no gaps or fishmouths.
 - 4. Use same material, or other material approved by sheet manufacturer for the purpose, to seal to adjacent construction and as flashing.
 - 5. At wide joints, provide extra flexible membrane allowing joint movement.
- E. Openings and Penetrations in Exterior Weather Barriers:
 - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
 - 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with at least 4 inches wide; do not seal sill flange.

3. At openings to be filled with non-flanged frames, seal weather barrier to all sides of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

3.4 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.

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.

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 roofing panels and all related components over roof deck.
 - B. Self-adhered underlayment over roof 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 aluminum 5-V Crimp awning, 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 and fascia, shall be 24 gauge galvalume as per ASTM A446 and ASTM A792.
- 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: Any 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. Closure Strips: Panel manufacturer's standard matching panel profile.

- L. 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 6th Edition (2017).
 - 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

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. Metal Wall Panels.
 - 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 METAL FINISH

- A. .040 aluminum with all exposed surfaces given factory applied oven cured fluoropon 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.

2.4 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.

2.5 METAL WALL PANELS

- A. Metal wall panels shall be 24 gauge pre-engineered metal building wall panel siding in profile to match the existing adjacent building with color selected during construction submittal phase.

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. Sealer Tape: Polyisobutylene sealer tape.
- C. 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 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.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 legal sections of these specifications.
- 1.3 RELATED WORK
- A. Section 09 2116 - Gypsum Board Assemblies
- 1.4 REFERENCES
- A. Federal Specifications as referenced herein.
- 1.5 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.
- 1.6 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.
- 1.7 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.
- 1.8 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.
- 1.9 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 Vulkan 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.
- D. Miscellaneous Applications: Dow Corning Contractors Weatherproofing Sealant or approved equal. Color to be selected during construction submittals.

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

- A. As recommended by sealant manufacturer.

2.5 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.
- B. Fill sealant joint completely from back to top, without voids.
- C. 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 HAVE AN APPROXIMATELY 10" WIDE X 30" HIGH NARROW GLAZING LITE. FRAME SHALL BE 3'-4" WIDE WITH 2" JAMBS AND 7'-4" HIGH WITH 4" HEAD. HOLLOW METAL DOOR AND FRAME SHALL BE PAINTED. EXTERIOR DOOR ASSEMBLY SHALL COMPLY WITH THE FLORIDA BUILDING CODE FOR AN EXTERIOR APPLICATION. COORDINATE WITH THE STRUCTURAL DOCUMENTS FOR DESIGN CRITERIA.
2. DOOR SHALL HAVE AN APPROXIMATELY 10" WIDE X 30" HIGH NARROW GLAZING LITE. FRAME SHALL BE 3'-4" WIDE WITH 2" JAMBS AND 7'-2" HIGH WITH 2" HEAD. HOLLOW METAL FRAME SHALL BE PAINTED.
3. DOOR SHALL BE FLUSH WITH NO GLAZING. FRAME SHALL BE 3'-4" WIDE WITH 2" JAMBS AND 7'-2" HIGH WITH 2" HEAD. HOLLOW METAL FRAME 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 3/4"	H.M.	H.M.	1	1
101/2	3'-0"	7'-0"	1 3/4"	SCWD.	H.M.	2	2
102	3'-0"	7'-0"	1 3/4"	SCWD.	H.M.	3	3
102A	3'-0"	7'-0"	1 3/4"	SCWD.	H.M.	4	3
103	3'-0"	7'-0"	1 3/4"	SCWD.	H.M.	3	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 1416
FLUSH WOOD DOORS

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Prefinished wood doors.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 sections of these specifications.
- 1.3 RELATED WORK
- A. Section 08 1113 – Hollow Metal Doors and Frames
 - B. Section 08 7100 - Door Hardware
- 1.4 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".
- 1.5 SUBMITTALS
- A. Shop Drawings: Indicate door elevations, fire rating if required for each door, stile and rail reinforcement, internal blocking for hardware and cutouts for glazing if required. Location of each door shall be noted with the same reference as used on drawings.
- 1.6 DELIVERY, STORAGE, AND PROTECTION
- A. Deliver doors to project site after moisture-producing construction operations are complete and building has reached average prevailing relative humidity of locality. Do not drag doors across one another.
 - B. Stack flat on 2 x 4 lumber, laid 12-inches from ends and across center. Under bottom door and over top of stack provide plywood or corrugated cardboard to protect door surface and store doors in well ventilated enclosed area.
- 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.
- 1.8 WARRANTY
- A. Warranty: Provide written guarantee from door manufacturer stating that doors will not delaminate or warp from a true plane of more than 1/4-inch for a period of one year from the date of Substantial Completion. Doors failing these requirements will be replaced with matching finish at the Contractor's sole expense.

PART 2 - PRODUCTS

2.1 DOOR TYPES

- A. Flush Interior Doors: 1-3/4 inches thick; solid core construction; prefinished wood veneer faces. Fire-rated and/or bullet-resistant as required per Drawings and Door Schedule 08 1000.

2.2 DOOR CONSTRUCTION (AWI QUALITY STANDARD)

- A. Solid, fire-rated or non-rated Core as required: AWI Section 1300, PC5 hot pressed, with 1-1/2 inch minimum width top and bottom hardwood rails. Styles shall match face veneer, 5 ply hot pressed.

2.3 FLUSH DOOR FACING

- A. Facing Quality: AWI premium grade. All wood doors shall be prefinished from the factory.
- B. Flush Interior Door Veneer: Yellow birch "natural" species wood, rotary sliced with random matched grain, for transparent factory finish, pre-finished.

2.4 ACCESSORIES

- A. Adhesives: Door manufacturer's standard for interior doors.

2.5 FABRICATION

- A. Fabricate doors in accordance with AWI Quality Standards requirements.
- B. Factory pre-machine doors for finish hardware.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that door frames are of type required for door and are installed as required for proper installation of doors. Do not install doors in frames which would hinder the operation of the doors.

3.2 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions. Installed door and frame assembly shall conform to A.W.I. specifications.
- B. Trim door height by cutting equally on top and bottom edges to a maximum of 3/4 inch at non-fire separated areas. No trimming allowed where doors are fire-rated.
- C. Finish all job site cut surfaces with specified door finish material provided by door supplier before final hanging of doors.

3.3 ADJUSTING AND CLEANING

- A. Adjust for smooth and balanced door movement.
- B. Replace or rehang doors which are hinge bound and do not swing or operate freely.
- C. Replace doors damaged during installation at Contractor's sole expense.

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 **CEILING ACCESS PANEL**
- A. Bar-Co, Milcor or equal, for gypsum board ceilings, complete with frame and key operated cylinder locks. Provide 24" x 48". Provide and install at all locations required for above ceiling access.

Review the Reflected Ceiling Plan and 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 5200
ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Furnish and install aluminum architectural windows complete with hardware and all related components as shown on drawings and specified in this section.
- B. All windows shall be Winco 4410 Series Single Hung or approved equal.
- C. Glass and Glazing
 - 1. All units shall be factory glazed.

1.2 RELATED WORK

- A. Section 07 9000 – Joint Protection

1.3 TESTING AND PERFORMANCE REQUIREMENTS

A. Test Units

- 1. Air, water, and structural test unit shall conform to requirements set forth in ANSI/AAMA/NWWDA 101/I.S.2-97.

B. Test Procedures and Performances

- 1. All windows shall conform to ANSI/AAMA/NWWDA 101/I.S.2-97 requirements for referenced window type. In addition, the following specific performance requirements shall be met.
- 2. Air Infiltration Test
 - a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 283, at static air pressure of 6.24 psf.
 - b. Air infiltration shall not exceed .3 cfm per square foot.
- 3. Water Resistance Test
 - a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 331.
 - b. There shall be no uncontrolled water leakage.
- 4. Uniform Load Deflection Test
 - a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 330.
 - b. During the course of the test, no member shall deflect more than 1/175 of its span.
- 5. Uniform Load Structural Test
 - a. With window sash and ventilators closed and locked, test unit in accordance with ASTM E 330.
 - b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, nor any other damage, which would cause the window to be inoperable.
- 6. Condensation Resistance Test (CRF)
 - a. With window sash closed and locked, test unit in accordance with AAMA 1503.1.
- 7. Thermal Transmittance Test (Conductive U-Value)
 - a. With window sash closed and locked, test unit in accordance with AAMA 1503.1.

8. Life Cycle Test

- a. Tested in accordance with AAMA 910, there shall be no damage to fasteners, parts, support arms, activating mechanisms, or any other damage, which would make the window inoperable. Subsequent air infiltration and water resistance tests shall not exceed specified requirements.

1.4 QUALITY ASSURANCE

- A. Provide test reports from AAMA accredited laboratory certifying the performance.
- B. Test reports shall be accompanied by the window manufacturer's letter of certification stating that the tested window meets or exceeds the aforementioned criteria for the appropriate ANSI/AAMA/NWDA 101/I.S.2-97.

1.5 SUBMITTALS

- A. Contractor or window manufacturer shall submit shop drawings, finish samples, test reports, and warranties, per requirements of architect.
 - 1. Shop Drawings: Include typical unit elevations, full or half-scaled detail sections and typical installation details. Include type of glazing, screening, and window finish.
 - 2. Product Data: Manufacturer's specifications, recommendations and standard details for window units.
 - 3. Samples of materials may be requested without cost to owner, i.e. frame sections, corner samples, mullions, extrusions, anchors, and glass.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store and handle windows and other components in strict compliance with manufacturer's instructions.
- B. Protect units against damage from the elements, construction activities and other hazards before, during, and after installation.

1.7 WARRANTIES

- A. Total Window System
 - 1. The responsible contractor shall assume full responsibility and warrant for one year the satisfactory performance of the total window installation which includes that of the windows, hardware, glass, glazing, anchorage and setting system, sealing, flashing, etc. as it relates to air, water and structural adequacy as called for in the specifications and approved shop drawings.
 - 2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at his expense during the warranty period.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum
 - 1. Extruded aluminum shall be 6063-T6 alloy and temper, with a tensile strength of 24,000 PSI.
- B. Hardware
 - 1. Extruded aluminum auto-spring catch shall be provided at the sill of the window to hold the sash in the closed position.

C. Balances

1. Balances shall be tested in accordance with AAMA 902, "Voluntary Specification for Sash Balances"
2. Balances shall meet all minimum Class 1 requirements with a minimum .70 Manually Applied Force ratio (M AF)
3. Balances shall comply to 902 Class 1 and Manually Applied Force Ratio.

D. Weatherstrip

1. Each vent shall have one row of heavy fin seal wool pile weather stripping and one row of ridged vinyl installed in specially designed weather strip pocket in the extrusion.

E. Thermal Barrier:

1. Poured-in-place structural thermal barrier shall transfer shear during bending and provide composite action between frame components.
2. Thermal barrier pocket on aluminum extrusions shall be Azo-Braded to create a mechanical lock to improve the adhesion properties between the polyurethane polymer and the surface of the thermal barrier pocket.
3. Window manufacturer must provide a warranty from the manufacturer of the polyurethane thermal barrier that warrants against product failure as a result of thermal shrinkage beyond 1/8 inch from each end and fracturing of the polyurethane for a period not to exceed ten years from the date of window manufacture.
4. Thermal barrier's made of crimped in place polyamide (insulbar®) strips are not acceptable unless all strips are covered and sealed with Dow 795 silicone caulking to eliminate water migration.

F. Glass

1. Monolithic glass shall be 9/16".

2.2 FABRICATION

A. General

1. Mechanical fasteners and hardware items shall not bridge thermal barriers. Thermal barriers shall align at all frame and vent corners.

B. Frame

1. All aluminum frame extrusions shall have a minimum wall thickness of .063.
2. Main frame sill members shall have a minimum wall thickness of .090.
3. The main frame depth shall not be less than 4"
4. Frame components shall be assembled by means of mechanical fastening with screws. Joinery to be sealed with small joint sealant.

C. Ventilator

1. All sash frame extrusions shall have a minimum wall thickness of .080.
2. Each corner shall be assembled by means of mechanical fastening with screws. Joinery is sealed with small joint sealant.
3. Each vent shall have one row of heavy fin seal wool pile weather-stripping and one row of ridged vinyl installed in specially designed weather strip pocket in the extrusion.

D. Screens

1. Extruded screen frames shall be fabricated from aluminum 6063-T6.
 - a. Screen mounting holes shall be pre-drilled at the factory.
 - b. Screen mesh shall be aluminum.
 - c. Screen mesh shall be so installed that the cloth may be easily replaceable.

- E. Glazing
 - 1. All windows shall be factory pre-glazed using monolithic 9/16".
 - 2. All units shall be glazed with hot melt silicone seal and with aluminum glazing bead interior.
- F. Finish
 - 1. Anodic
 - a. Finish all exposed areas of aluminum windows and components with electrolytically deposited color in accordance with Aluminum Association Designation AA-M10-C22-(*).
 - b. Color is to be selected during construction phase submittals.

Available colors are clear, light bronze, medium bronze, dark bronze, and black.

AA Designation	Description	Mills	AAMA Guide Spec.
* A41	Class I Clear Anodized	0.7 or Greater	611-98
* A31	Class II Clear Anodized	0.4 or Greater	611-98
* A44	Class I Color Anodized	0.7 or Greater	611-98
* A34	Class II Color Anodized	0.4 or Greater	611-98

PART 3 - EXECUTION

3.1 INSPECTION

- A. Job Conditions
 - 1. Verify that openings are dimensionally correct and within allowable tolerances. Openings must be plumb, level, and clean. Provide a solid anchoring surface that is in accordance with approved shop drawings.

3.2 INSTALLATION

- A. Use only skilled craftsmen for work to be done in accordance with approved shop drawings and specifications.
- B. Set square and level aligning window faces in a single plane for each opening. Windows and materials must be set both square and level. Adequately anchor window so when subjected to normal thermal movement, specified building movement, and specified wind loads, so windows will maintain a permanent position.
- C. Adjust windows for proper ease of operation after installation has been completed.
- D. Contractor shall furnish and apply sealant, per manufacturers recommendations, to provide a weather tight installation at all opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.

3.3 PROTECTION AND CLEANING

- A. After completion of window installation, windows shall be inspected, adjusted, and left in working order. Windows shall be left clean, free of labels, dirt, etc. Protection from this point shall be the responsibility of the building occupant.

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
- C. Section 08 1416 – Flush Wood Doors

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
- 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 6th Edition (2017)

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.

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.

F. Door Trim and Protective Plates

1. Kick plates shall be .050 gauge and two inches less full width of door.

G. Silencers

1. Furnish rubber door silencers all hollow metal frames; two per pair and three per single door frame.

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.
- C. Finishes shall match existing. Contractor to field verify prior to bidding and submitting shop drawings.

HARDWARE SET NO. 1

DOOR: 101/1

3 EA.	HINGES	5BB1 4.5 X 4.5 NRP	IVES
1 EA.	ENTRY LOCK	MATCH EXISTING SYSTEM	
1 EA.	SURFACE CLOSER	SC80 SS	DOR
2 EA.	KICK PLATE	8400 10" X 2" LDW	IVES
1 SET	WEATHERSTRIP	PS-074 HEAD AND JAMBS	STE
1 EA.	DRIP CAP	16A	NGP
1 EA.	DOOR SWEEP	202NA	NGP
1 EA.	LOCK GUARD	LG12	IVES
1 EA.	THRESHOLD	2005AP 36"	PEM

HARDWARE SET NO. 2

DOOR: 101/2

3 EA.	HINGES	5BB1 4.5 X 4.5 NRP	IVES
1 EA.	PASSAGE LOCK	MATCH EXISTING SYSTEM	
3 EA.	SILENCER	SR64	IVES
1 EA.	DOOR STOP	466-RKW	ROC

HARDWARE SET NO. 3

DOOR: 102 AND 103

3 EA.	HINGES	5BB1 4.5 X 4.5 NRP	IVES
1 EA.	OFFICE LOCK	MATCH EXISTING SYSTEM	
3 EA.	SILENCER	SR64	IVES
1 EA.	DOOR STOP	466-RKW	ROC

HARDWARE SET NO. 4

DOOR: 102A

3 EA.	HINGES	5BB1 4.5 X 4.5 NRP	IVES
1 EA.	STOREROOM LOCK	MATCH EXISTING SYSTEM	
3 EA.	SILENCER	SR64	IVES
1 EA.	DOOR STOP	466-RKW	ROC

END OF SECTION

SECTION 08 8000

GLAZING

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Glass and glazing.
 - B. Refer to Section 08 5200 for window glazing.
- 1.2 RELATED REQUIREMENTS
- A. Refer to Division 00 and 01 sections of these specifications
- 1.3 RELATED WORK
- A. Section 07 9000 - Joint Protection
 - B. Section 08 1000 – Door Schedule
 - C. Section 08 3113 – Hollow Metal Doors and Frames
 - D. Section 08 1416 – Flush Wood Doors
- 1.4 REFERENCES
- A. ANSI Z97.1, "Performance Specifications and Methods of Tests for Safety Glazing Material used in Buildings".
 - B. Flat Glass Marketing Association: "Glazing Manual".
 - C. ASTM Standards and Test Procedures as referenced herein.
 - D. Sealed Insulating Glass Manufacturer's Association Standards and Specifications.
 - E. Manufacturer's recommendations and specifications.
 - F. Safety Standard for Architectural Glazing Materials (16 CFR 1201) issued by the Consumer Product Safety Commission.
- 1.5 QUALITY ASSURANCE
- A. Glazier shall be regularly engaged in the installation of glass and glazing, and shall have previous experience within the last two years on project similar in scope. Upon request, submit evidence of qualifications compliance with complete references.
- 1.6 SUBMITTALS: Submittals shall be made during construction. In addition, the following specific information shall be provided:
- A. Shop Drawings: Prior to delivery or fabrication, submit shop drawings of the following for review:
 - 1. Complete schedule of glass and glazing material to be used for each purpose.
 - 2. Shop drawings showing in detail method of glazing for each type of glazing condition.
 - 3. Catalog cuts of each glass type with inclusion of glass edge cutting procedures.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials or equipment.

1.8 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.

1.9 MANUFACTURERS' WARRANTY

- A. Furnish manufacturers' warranty as called for herein.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Glass Manufacturers: Guardian Industries, Corp., Libbey-Owens-Ford Glass Co. and PPG Industries, Inc.
- B. Products of other manufacturers, meeting the requirements specified herein, will be considered.

2.2 GLASS

- A. Factory labeled and labels to remain until final cleaning. Keep glass free from contamination by materials capable of staining glass.
- B. Glass Types: Exterior: See Section 08 5200 for windows. Exterior and Interior in Doors: ¼" clear tempered.

2.3 ANCILLARY ITEMS

- A. Setting Blocks: Neoprene 70-90 Shore A durometer hardness, chemically compatible with sealant used.
- B. Glazing Tape: Polyisobutylene, color as selected.
- C. Glazing Channels: As provided with frames to be glazed.

PART 3 - 3 EXECUTION

3.1 PREPARATION

- A. No glazing work permitted in damp, foggy or rainy weather, or when temperatures are not within range recommended by glass manufacturer.
- B. Installation of materials will be considered as evidence of glazier's acceptance of frames and surfaces as proper for glazing.
- C. Surfaces shall be smooth, even, sound, dry and clean.
- D. Measure size of frames to receive glass and compute actual glass size allowing for edge clearances in accordance with glass manufacturers' specifications.

3.2 INSTALLATION OF GLASS

- A. Installation shall be in accordance with applicable glass reference and glass manufacturers' instruction.
- B. Provide hose test by flooding glazing from top to bottom. Any leaks disclosed shall be corrected by reglazing and retesting until leaks are eliminated.

3.3 CLEANING

- A. Leave glass and glazing in undamaged condition and ready for final cleaning. On completion, there shall be no shifting or rattling of glass. Remove excess glazing compound from installed glass. Remove labels from glass surface as soon as installed. Wash and polish both faces of glass. Remove debris from project immediately upon completion.

3.4 PROTECTION OF COMPLETED WORK

- A. Protection: Install tape across lights secured to frames or structure.
- B. Replacements and Repairs: Replace broken, defective or scratched glass until final acceptance of the project by the Owner.

END OF SECTION

SECTION 09 1000
FINISH SCHEDULE

REMARKS

1. ALL COLOR SELECTIONS SHALL BE MADE (OR VERIFIED IF SPECIFIED) DURING CONSTRUCTION AFTER SHOP DRAWINGS AND SAMPLES ARE RECEIVED.
2. HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED.
3. CEILING SHALL BE PAINTED GYPSUM BOARD.

FINISH SCHEDULE

SPACE #	SPACE NAME	FLOOR	WALL FINISHES				BASE	CL'G.	CL'G. HT.	REMARKS
			NORTH	SOUTH	EAST	WEST				
X-2	EXISTING OFFICE	LVT	EXIST.	EXIST.	EXIST.	EXIST.	VINYL	EX.	EX.	1
X-5	EXISTING OFFICE	LVT	EXIST.	EXIST.	EXIST.	EXIST.	VINYL	EX.	EX.	1
101	OFFICE	LVT	PAINT	PAINT	PAINT	PAINT	VINYL	G.B.	8'-0"	1, 2, 3
102	OFFICE	LVT	PAINT	PAINT	PAINT	PAINT	VINYL	G.B.	8'-0"	1, 2, 3
102A	MECH.	LVT	PAINT	PAINT	PAINT	PAINT	VINYL	G.B.	8'-0"	1, 2, 3
103	OFFICE	LVT	PAINT	PAINT	PAINT	PAINT	VINYL	G.B.	8'-0"	1, 2, 3

END OF SECTION

SECTION 09 2116
GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Gypsum board wall panels.
- B. Accessories and Trim.

1.2 RELATED REQUIREMENTS

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

1.3 RELATED SECTIONS

- A. Section 07 9000 - Joint Protection

1.4 REFERENCES

- A. ASTM C473 - Standard Test Methods for Physical Testing of Gypsum Panel Products.
- B. ASTM C 475 - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- C. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board.
- D. ASTM C 1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
- E. ASTM C 1396 - Standard Specification for Gypsum Board.
- F. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- G. GA-214 - Recommended Levels of Gypsum Board Finish.
- H. GA-216 - Application and Finishing of Gypsum Board.
- I. GA-231 - Assessing Water damage to Gypsum Board.
- J. GA-238 - Guidelines for the Prevention of Mold Growth on Gypsum Board.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 3300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Design data test reports.
 - 4. Installation methods.
- C. Verification Samples: For each finish product specified, two samples representing actual product, color and patterns.
 - 1. Board: Submit sample of each panel product specified, 6 inches square.

2. Trim: Submit sample of each type of trim specified, 12 inches long.
3. Texture: Submit sample 12 inches square of coated gypsum board.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- B. Installer Qualifications: Company specializing in performing work of this section with minimum three years documented experience.
- C. Mock-Up: Provide a mock-up using approved gypsum products, including fasteners and related accessories per manufacturer's current printed instructions and recommendations.
 4. Locate in area designated by Owner.
 5. Mock-up size 6 feet by partition height.
 6. Mock-up Substrate: Match wall assembly construction.
 7. Mockup for each designated level of exposed gypsum board finish and each designated texture finish indicated.
 8. Do not proceed with remaining work until workmanship and finishes are approved by Owner.
 9. Refinish mock-up area as required to produce acceptable work.
 10. Mock-up may remain as part of the work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging indicating manufacturer and product name and protect until ready for installation.
- B. Store gypsum in accordance with GA-238 and manufacturer recommendations.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) in accordance with ASTM C 840 and within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Georgia-Pacific, American Gypsum Co., National Gypsum Company or equal.
- B. Single Source Responsibility: Obtain gypsum board products, joint treatment and accessories from a single manufacturer or from manufacturers recommended by prime manufacturer of gypsum board products.

2.2 GYPSUM BOARD WALL PANELS

- A. Interior Gypsum Board, regular type: Basis of Design Product: G-P Gypsum ToughRock Mold-Guard Type X Gypsum Board, 5/8" thick, with long edges tapered.
- B. Interior Trim: Complying with ASTM C 1047, plastic LC-bead J-shaped exposed flange receives joint compound.
- C. Fasteners: Laminating adhesive recommended by manufacturer for directly adhering gypsum board to continuous substrate.

- D. Joint Treatment: Joint tape, joint compound and coats as recommended by the manufacturer for a Level 4 finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until supports and substrates have been properly prepared.
- B. Verify that framing and supports are ready to receive work.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Examine gypsum board panels for damage and existence of mold. Install undamaged panels
- C. Examine gypsum board in accordance with GA 231 for water damage.
- D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's written instructions and ASTM C 840 and GA 216.
- B. Erect single layer gypsum board in most economical direction with ends and edges occurring over firm bearing.
- C. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

3.4 FINISHING

- A. General: Comply with ASTM C 840, GA 214 and GA 216. Level 4.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products.

END OF SECTION

SECTION 09 6500
RESILIENT FLOORING ACCESSORIES

PART 1 - GENERAL

- 1.1 WORK INCLUDED: This section covers the work necessary to furnish and install, complete, the following:
- A. Vinyl base, 4" high, 1/8".
 - B. Transition strips as required at new flooring and existing flooring to remain.
- 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 REQUIREMENTS
- A. Store materials for three days prior to installation in area of installation to achieve temperature stability.
 - B. Maintain ambient temperature required by adhesive manufacturer three days prior to, during and 24 hours after installation of materials.
- 1.5 QUALITY ASSURANCE
- A. Flooring Contractor: Shall be regularly engaged in the installation of vinyl wall base 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.
- 1.6 SUBMITTALS: Submittals shall be made in accordance with Section 01 3300. In addition, the following specific information shall be provided:
- A. Product Data: Provide product data on specified products, describing physical and performance characteristics, sizes, patterns and full color range available.
 - B. Samples: Submit 2-1/2-inch wide strips of wall base material specified illustrating full color ranges for selection.
- 1.7 MAINTENANCE DATA
- A. Furnish flooring manufacturer's recommended maintenance products and recommended maintenance schedule for cleaning.
- 1.8 DELIVERY, STORAGE AND HANDLING
- A. Deliver, store and handle materials or equipment under provisions of Section 01 6000.
 - B. Deliver materials to project site in manufacturer's original, unopened containers with labels indicating brand names legible and intact.
 - C. Store and protect materials in accordance with manufacturers' directions and recommendations.

1.9 GUARANTEE

- 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 BASE MATERIALS

- A. Acceptable Manufacturers: Johnsonite, Burke or approved equal.
- B. General: Provide uniform in thickness and in as long lengths as practicable to suit conditions of installation, rolled goods, not individual strips. Color shall be as selected during submittals from provided samples.
- C. Vinyl Base: Conforming to Federal Specification SS-W-40, Type II; all areas 4-inch-high; 1/8-inch thick.

2.2 TRANSITION STRIPS

- A. Provide accessory transition strips between new resilient flooring and existing flooring to remain. Equal to "VT" Series as manufactured by Armstrong Commercial Flooring. Color shall be selected during construction submittals.

2.3 APPLICATION MATERIALS

- A. Primers and Adhesives: Provide type and brands as recommended by applicable materials manufacturer for the conditions of the installation.

PART 3 - EXECUTION

3.1 WORKING CONDITIONS

- A. The building shall be dry and closed in. Installation shall not begin until all work which would cause damage, dirt, dust or interruption of normal installation pace in completed. Adequate ventilation shall be provided; and safety precautions shall be observed.

3.2 APPLICATION OF ADHESIVES

- A. Mix and apply adhesives in accordance with manufacturer's instructions. Apply uniformly over surfaces. Remove any adhesive which dries or films over. Do not soil walls, bases or adjacent areas with adhesives. Promptly remove any spillage.

3.3 INSTALLATION OF BASE

- A. General: Remove all defects in wall that would prevent level and true installation of the base material. Ensure wall material provides a sound backing for base all the way to floor. Install base around perimeter of room or space where scheduled, and at toe spaces of any millwork base units. Unroll base material and cut into accurate lengths as required for minimum number of joints. Match edges at all seams or double cut adjoining lengths to give continuous appearance. Install with tight butt joints with no joint widths greater than 1/64-inch.
- B. Top-Set Base: Apply adhesive and firmly adhere to wall surfaces. Press down so that bottom edge follows floor profile. Top and bottom edges of base shall be in firm contact with walls and floors. Scribe base accurately to abutting materials.

END OF SECTION

SECTION 09 6519
RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Solid vinyl floor tile.
- B. Related Sections:
 - 1. Concrete – Refer to the Structural Documents
 - 2. 07 2600 – Vapor Retarders
 - 3. 09 6500 – Resilient Flooring Accessories

1.2 RELATED REQUIREMENTS

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

1.3 REFERENCES

- A. American Concrete Institute (ACI):
 - 1. ACI 302.1 Guide for Concrete Floor and Slab Construction.
 - 2. ACI SP-15 Field Reference Manual - Standard Specifications for Structural Concrete.
- B. ASTM International:
 - 1. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - 2. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
 - 3. ASTM E1643 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.
 - 4. ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
 - 5. ASTM F137 Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus.
 - 6. ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
 - 7. ASTM F536 Test Method for Size of Resilient Floor Coverings.
 - 8. ASTM F540 Test Method for Squareness of Resilient Floor Tile by Dial Gage Method.
 - 9. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
 - 10. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring.
 - 11. ASTM F970 Standard Test Method for Static Load Limit.
 - 12. ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Vinyl Flooring by Color Change.
 - 13. ASTM F1515 Standard Test Method for Measuring Light Stability of Resilient Vinyl Flooring by Color Change.
 - 14. ASTM F1700 Standard Specification for Solid Vinyl Floor Tile.
 - 15. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

16. ASTM F1914 Standard Test Method for Short-Term Indentation and Residual Indentation of Resilient Floor Covering.
17. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.

C. Federal Specifications (FS):

1. Federal Standard Number 501a (Notice 1) Federal Test Method Standard for Floor Covering, Resilient, Non-Textile, Sampling and Testing Method 6211 Dimensional Stability.

D. National Fire Protection Association (NFPA):

1. NFPA 253 Standard Method of Test for Critical Radiant Flux for Floor Covering Systems Using a Radiant Heat Energy Source.
2. NFPA 258 Recommended Practice for Determining Smoke Generation of Solid Materials.

1.4 SYSTEM DESCRIPTION

A. Performance Requirements:

1. Provide resilient tile flooring which has been manufactured and can be installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.5 SUBMITTALS

A. General: Submit listed submittals in accordance with section 01 3300.

B. Product Data: Submit product data, including manufacturer's technical specifications, for each type of specified products.

C. Shop Drawings: Submit shop drawings showing layout, pattern and colors.

D. Samples: Submit selection and verification samples for finish and colors.

E. Quality Assurance/Control Submittals: Submit the following:

1. Test Reports: Upon request, submit test reports of physical performance and characteristics from recognized test laboratories.
2. Technical Specifications: Submit manufacturer's technical specification document that certifies products meet or exceed specified requirements.
3. Manufacturer's Instructions: Submit manufacturer's installation instructions for resilient flooring.

F. Closeout Submittals: Submit the following:

1. Maintenance Data: Maintenance data for installed products. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
2. Warranty: Submit warranty documents specified herein.

1.6 QUALITY ASSURANCE

A. Flooring Contractor Qualifications:

1. The awarded contractor shall be an established firm with experience in the installation of the specified product and have access to all manufacturers' required technical, maintenance, specifications and related documents.
2. The flooring contractor shall have completed at least 3 projects of similar scope, material and complexity, and shall provide project reference details including contact names and telephone numbers if requested.

- B. Installer Qualifications: An experienced installer, as determined by contractor, who has specialized in the installation of work similar to that required for this project is to perform the work of this section.
- C. Test Floors: Install test floor at project site using acceptable products and manufacturer approved installation methods.
 - 1. Incorporation: Test floor may be incorporated into final construction upon Owner's approval.
- D. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements.

1.7 DELIVERY, STORAGE & HANDLING

- A. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials flat, protected from exposure to harmful weather conditions, between 50 degrees F - 81 degrees F and 50% (\pm 10%) relative humidity.

1.8 PROJECT CONDITIONS

- A. Substrate Conditions: Use the current test methods described below to determine the dryness as required to ensure initial and long-term success:
 - 1. Comply with ASTM F1869 testing procedures.
 - 2. Comply with ASTM F2170 testing procedures.
 - 3. The General Contractor shall be responsible for conducting in situ relative humidity testing (ASTM F2170) or calcium chloride testing (ASTM F1869). Perform minimum of 3 tests for the first 1,000 square feet, and at least one test for each additional 1000 square feet, to ensure concrete internal relative humidity does not exceed 80% or moisture vapor emissions do not exceed 5.0 lb. per 1,000 square feet within a 24 hour period.
- B. The Flooring Contractor shall verify in writing to the Owner, a minimum of thirty (30) days prior to scheduled resilient flooring installation, the following substrate conditions:
 - 1. Moisture: Maximum of 80% internal relative humidity tested in accordance with the current ASTM F2170 or maximum of 5.0 lb. Moisture Vapor Emission Rate tested in accordance with the current ASTM F1869.
 - 2. Alkalinity (ASTM F710): Between 7.0 - 10.0 pH.
 - 3. Suitability of Substrate Surface: Ensure that substrate surface is sound, smooth and flat to 1/8 inch in 10 feet.
 - 4. For substrate conditions that require additional preparation, Flooring Contractor shall furnish Owner and General Contractor with written documentation detailing noncompliance, proposed remediation and timing.
- C. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations. Areas to receive flooring shall be clean, fully enclosed, weathertight with stable environmental conditions between 64 degrees F - 81 degrees F and 50% (\pm 10%) relative humidity. The flooring material shall be conditioned in the same manner.
- D. Temperature Requirements: Maintain air temperature and relative humidity levels in spaces where products will be installed for time period before, during and after installation as recommended by manufacturer.
 - 1. Temperature Conditions: Maintain 64 degrees F - 81 degrees F for 48 hours before, during

- and continuously after installation.
- 2. Relative Humidity Conditions: Maintain 50% (\pm 10%) relative humidity for 48 hours before, during and continuously after installation.
- E. Close spaces to traffic during resilient flooring installation and for time period after installation recommended in writing by the manufacturer.
 - 1. No foot traffic for 24 hours after installation.
 - 2. No point loads for 48 hours after installation.
 - 3. Wait 48 hours after installation before any wet maintenance is performed.
- F. Install resilient flooring material and accessories after all other finishing operations, including painting, have been completed.

1.9 WARRANTY

- A. Manufacturer's Warranty: Submit manufacturer's Commercial Limited Wear Warranty for Owner's acceptance.
- B. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under the Contract Documents.
 - 1. Warranty Period: Twenty years commencing on Date of Substantial Completion.
 - 2. Warranty Acceptance: Owner is sole authority who will determine acceptability of manufacturer's warranty documents.

1.10 MAINTENANCE

- A. Extra Materials: Deliver extra materials from same production run as products installed to Owner. Package products with protective covering and identify with descriptive labels.
 - 1. Quantity: Furnish quantity of full-size units equal to 5% of amount installed.
 - 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PART 2 - PRODUCTS

2.1 RESILIENT TILE FLOORING

- A. Manufacturer:
 - Mannington Commercial
 - 1844 US Hwy 41 SE Calhoun GA 30701
 - www.manningtoncommercial.com
 - 800 241 2262
 - sean_devore@mannington.com
 - 352 630 9884
 - 1. Proprietary Product: Mannington Nature's Path Plank
- B. Mannington Nature's Path Plank Luxury Solid Vinyl Tile:
 - 1. Product Testing (Minimum): Provide manufacturer's products which have been tested to meet the following minimum test standards:
 - a. Comply with ASTM F1700, including the following:
 - 1). Classification (ASTM F1700): Class III (Printed Film) Types A & B.
 - 2). Flexibility (ASTM F137): 1 inch mandrel, no crack or break; pass.
 - 3). Total Thickness (ASTM F386): 0.100 inch +/- 0.005 inch, satisfies requirement.
 - 4). Chemical Resistance (ASTM F925): Excellent resistance.
 - 5). Heat Resistance (ASTM F1514): $\Delta E < 8$ average; satisfies requirement.

- 6). Light Stability (ASTM F1515): $\Delta E < 8$ average; satisfies requirement.
- 7). Short-Term Residual Indentation (ASTM F1914): $< 8\%$, satisfies requirement.
- 8). Tile Size (ASTM F536): ± 0.016 inch/lineal foot; satisfies requirement.
- 9). Tile Squareness (ASTM F540): Maximum 0.010 inch; satisfies requirement.
- 10). Dimensional Stability (Fed. Std. No. 501a Method 6211): Maximum 0.020 inch/lineal foot; satisfies requirement.
- b. Wearlayer Thickness (EN 429): 20 mils.
- c. Weight (EN 430): 29 lb/45 sq. ft (0.7 lb/sq. ft).
- d. Static Load Limit 750psi
- e. Fire Performance:
 - 1). Critical Radiant Flux (ASTM E648 and NFPA 253): > 0.45 W/cm, Class 1.
 - 2). Optical Smoke Density (ASTM E662 and NFPA 258) Non-Flaming DM Corrected: < 450 ; pass.
- f. Slip Resistance (Dry Static Coefficient of Friction) (ASTM D2047 James Test): 0.6, ADA compliant.
- g. Abrasion Resistance:
 - 1). Taber Test (H22 wheels, 1 kg load, 1000 cycles): 0.14 g.
 - 2). Thickness Loss (EN 660 Group T): 0.077 mm.
- h. Caster Chair Test (EN 425): Pass.
- i. Thermal Conductivity (DIN 52612): 3.0 to 4.5 Btu/in/ft²/degree F (0.4 - 0.65 W/mK); suitable for radiant heating.
- 2. Collection: Mannington Nature's Path Plank Collection
 - a. Mannington Commercial/ Nature's Path Plank 20mil LVT Collection
 - b. Color: Northern Maple Natural. Color to be verified during construction phase submittals.
 - c. Size: 3x36
 - d. Thickness: 0.100 inch
 - e. Edge: Micro Bevel
 - f. Surface Texture: Standard Tick
 - g. Surface Wear Layer Quantum Guard Elite with Aluminum Oxide

C. Installation Adhesive: Mannington V-88 Pressure Sensitive Adhesive

2.2 RELATED MATERIALS

A. Leveling and Patching Compounds as recommended by the manufacturer.

2.3 SOURCE QUALITY CONTROL

A. Source Quality Control: Obtain resilient tile flooring proprietary products, including vinyl tile, from a single manufacturer.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data for substrate condition, preparation and installation, including product technical bulletins, product catalog installation instructions and product packaging instructions for installation. Flooring contractor must examine areas and conditions under which resilient flooring and accessories are to be installed and must notify General Contractor in writing of conditions detrimental to proper and timely completion of work.

Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Owner and Architect.

3.2 EXAMINATION

- A. Substrates: Examine and verify that all substrates, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
- B. To ensure a good quality appearance and good adhesion, the subfloor must be hard, smooth, clean, dry and free from defects. Slab on-grade must incorporate an approved vapor retarder (ASTM E1745) properly installed (ASTM E1643) to ensure they are sufficiently dry and to reduce ground moisture vapor transmission from entering the slab after construction. This can be checked by using a suitable moisture test method.
- C. Concrete Substrate Testing: Prior to flooring installation, test concrete substrates for internal relative humidity (maximum 80% per ASTM F2170) or water vapor emission (maximum 5.0 lb. per ASTM F1869) and alkalinity (7.0 - 10.0 pH per ASTM F710) harmful to resilient flooring installation performance. Consult resilient flooring manufacturer for requirements pertaining to proprietary resilient flooring products. Include testing costs in contract sum.

3.3 PREPARATION

A. Surface Preparation:

- 1. Concrete subfloors shall be constructed in accordance with ACI 302.1 and ACI SP-15, utilizing a water-to-cement ratio of 0.45 or less containing no admixtures or surface treatments that are adverse to the installation of resilient flooring.
- 2. Concrete subfloors must be finished and cured without additives or surface treatments that will adversely affect the flooring materials according to ACI and ASTM F710 with a minimum compressive strength of 3500 psi (24,115 kPa).
- 3. Floors must be clean, dry and smooth.
- 4. Incompatible Compounds: Remove compounds and other substances harmful or incompatible with installation adhesives and flooring products. This includes any surface materials, such as paint, wax, grease, oil, adhesive residues, etc. Chemical adhesive removers must be completely removed. Floors must be free of any sealers, curing, hardening or parting compounds that would adversely affect the adhesive used with the flooring. Refer to ACI and ASTM F710.
- 5. A vapor retarder shall be installed prior to pouring of on grade or below grade slabs. Moisture vapor transmission shall not exceed 80% internal Relative Humidity per ASTM F2170 In-Situ Relative Humidity Test and/or 5.0 lb/1000 sq. ft./24hours per ASTM F1869 Calcium Chloride Test.
- 6. Maintain room temperature, adhesive and flooring material at 64 degrees F - 81 degrees F and 50% ($\pm 10\%$) relative humidity for 48 hours before, during and continuously after installation.
- 7. Broom clean or vacuum surfaces to be covered and inspect substrate. Start of flooring installation indicates acceptance of subfloor conditions and full responsibility for completed work.
- 8. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
- 9. Substrate Cleaning and Preparation: Comply with manufacturer's requirements for substrate cleaning and preparation for resilient flooring products.
- 10. Leveling and Patching: Use only Portland cement based leveling and patching compounds, in accordance with compound manufacturer's requirements, to fill depressions, holes and cracks and to smooth substrate surface to 1/8 inch in a 10 foot radius to receive resilient flooring.

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3.4 INSTALLATION

- A. Resilient Tile Installation: Install tiles from established center marks so that tiles at opposite room edge are of equal tile width. Follow installation procedures in accordance with Mannington published Technical Manual, and do not begin until the work of all other trades has been completed.
 - 1. Rolling: Roll floor using 100 lb. roller in both directions within 1 hour.
- B. Adhesive: Apply adhesive to substrate in accordance with manufacturer's instructions, including trowel notching, adhesive mixing and adhesive open and working times.

3.5 CLEANING & PROTECTION

- A. Initial Cleaning: Remove temporary coverings and protection of adjacent work areas. When installation has been finished for 24 hours, inspect workmanship and repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.
 - 1. Pick up litter and sweep floor to remove debris using a non-treated dust mop or vacuum cleaner with hard surface attachment.
- B. Initial Wet Cleaning: Wait at least 48 hours after installation is complete before performing the initial wet cleaning process. This will allow the adhesive to cure.
 - 1. Clean new floor thoroughly using a proprietary cleaner/maintainer solution of neutral pH detergent diluted in accordance with manufacturer's instructions. Machine scrub the wet floor using a 3M Red scrubbing pad or equivalent.
 - 2. When finished, remove remaining cleaning solution using a mop or wet vacuum. Rinse floor with clean water and allow to dry thoroughly.
 - 3. In conditions of heavy soiling, pre-wash the floor using a proprietary cleaner solution of neutral pH detergent mixed in accordance with manufacturer's instructions. Allow the solution to stand for 5 - 10 minutes before machine scrubbing or in accordance with the manufacturer's instructions.
 - 4. For floors requiring the application of a floor finish, initial cleaning should be carried out using a suitable floor stripper.
 - 5. When floor finishes are used, Mannington Commercial / recommends at least 2 coats of a satin or low gloss floor finish be applied in accordance with the manufacturer's instructions. Products used should be suitable for the intended usage.
- C. Routine Maintenance: Frequency of mop or machine cleaning should be determined based upon daily usage and soiling conditions. Perform routine maintenance in accordance with the Mannington Maintenance Procedures.
- D. Protection: Protect installed product's finish surfaces from damage during construction. After the floor has been installed, it should be maintained in a manner that provides a clean and slip resistant surface for occupant safety.

3.6 SCHEDULES

- A. Schedules: Refer to Finish Schedule for location of resilient tile flooring.

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 gypsum board surfaces and hollow metal doors and frames.
 - 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.
- 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.

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. Drywall - Walls: Latex System. Coat 1: B28W02600 – ProMar 200 Zero VOC Interior Latex Primer White. Coat 2: B20W02651 – ProMar 200 Zero VOC Interior Latex Eg-Shel Extra White. Coat 3: B20W02651 – ProMar 200 Zero VOC Interior Latex Eg-Shel Extra White.
- C. Hollow Metal Doors and Frames: Urethane System. Coat 1: B66W00310 - Pro Industrial Pro-Cryl Universal Primer Off White. Coat 2: B65W00181 Hydrogloss Single Component Waterbased Urethane Extra White. Coat 3: B65W00181 Hydrogloss Single Component Waterbased Urethane Extra White.

2.4 COLORS

- A. Color selections will be made/verified under provisions of Section 01 3300.
- 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. Plaster Surfaces: Fill hairline cracks, small holes and imperfections with patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- G. 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.
- H. 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.
- I. Interior Wood Surfaces: Wipe off dust and grit prior to priming. Seal knots, pitch streaks and sappy sections with shellac or other knot sealer. Fill nail holes and cracks after primer has dried with wood putty approved by the paint material manufacturer; sand between coats.

3.3 PROTECTION

- A. Protect elements surrounding the work from damage or disfiguration.
- B. Repair damage to other surfaces caused by work.
- C. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces.
- D. 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 6th Edition (2017).
 - 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 Renovation Plan for locations.

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 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 inches in 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 termites. 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) sulfinyl-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.

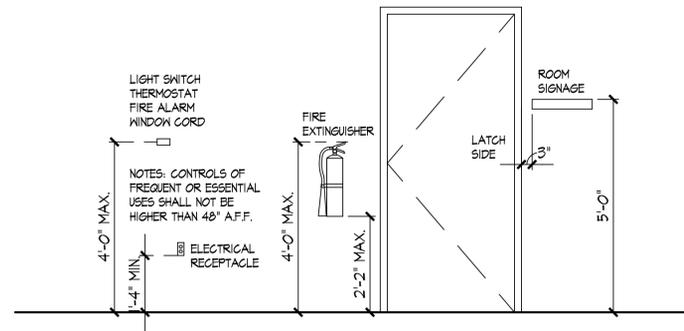
3.4 RETREATMENT

- A. If inspection identifies the presence of termites, retreat soil and retest.
- B. Use same chemicals as for original treatment.

END OF SECTION

COLUMBIA COUNTY PUBLIC WORKS ENGINEERING OFFICE ADDITION COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS - LAKE CITY, FLORIDA

STANDARD MOUNTING PER A.D.A. REQUIREMENTS



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.

SHEET INDEX

- G-1 GENERAL PROJECT COVER SHEET
- D-1 DEMOLITION PLAN
- D-2 DEMOLITION EXTERIOR ELEVATIONS
- A-1 FLOOR PLAN
- A-2 EXTERIOR ELEVATIONS
- A-3 BUILDING SECTIONS
- A-4 ROOF PLAN AND REFLECTED CEILING PLAN
- S1.01 STRUCTURAL NOTES AND SCHEDULES
- S2.01 FOUNDATION AND ROOF FRAMING PLANS AND DETAILS
- M1.0 HVAC PLAN
- M2.0 MECHANICAL DETAILS
- M3.0 MECHANICAL SPECIFICATIONS
- E1.0 ELECTRICAL LIGHTING PLAN
- E2.0 ELECTRICAL POWER PLAN
- E3.0 ELECTRICAL SPECIFICATIONS

DESIGN CRITERIA

1. FLORIDA BUILDING CODE 6TH EDITION (2017)
2. FLORIDA FIRE PREVENTION CODE 6TH EDITION
3. BUILDING ADDITION AREA = 571 SF
4. BUILDING ADDITION HEIGHT = ONE STORY
5. OCCUPANCY CLASSIFICATION = BUSINESS GROUP B
6. BUILDING CONSTRUCTION IS TYPE IIB
7. TOTAL NEW EXITS REQUIRED = 1 WITH 1 NEW EXIT PROVIDED
8. STRUCTURAL FIRE-RESISTANT RATING REQUIREMENTS = 0 HOURS
9. FIRE SPRINKLER SYSTEM IS NOT REQUIRED OR PROVIDED
10. EGRESS CALCULATIONS = 8 OCCUPANTS X 0.2' = 1.6' EGRESS WIDTH REQUIRED WITH 34" EGRESS WIDTH PROVIDED
11. MAXIMUM TRAVEL DISTANCE = 200'-0" AND MAXIMUM DISTANCE PROVIDED = 95'-0"
12. REFER TO THE STRUCTURAL DRAWINGS FOR THE STRUCTURAL DESIGN CRITERIA

OCCUPANT LOAD CALCULATIONS

1. SPACES CALCULATED AT 100 SF PER OCCUPANT = 7 OCCUPANTS
2. SPACES CALCULATED AT 300 SF PER OCCUPANT = 1 OCCUPANT
3. TOTAL MAXIMUM OCCUPANT LOAD OF ADDITION = 8 OCCUPANTS
4. REFER TO THE RENOVATION PLAN FOR ADDITIONAL INFORMATION



COLUMBIA COUNTY PUBLIC WORKS
607 NW QUINTEN ST.
LAKE CITY, FLORIDA 32055

GENERAL NOTES

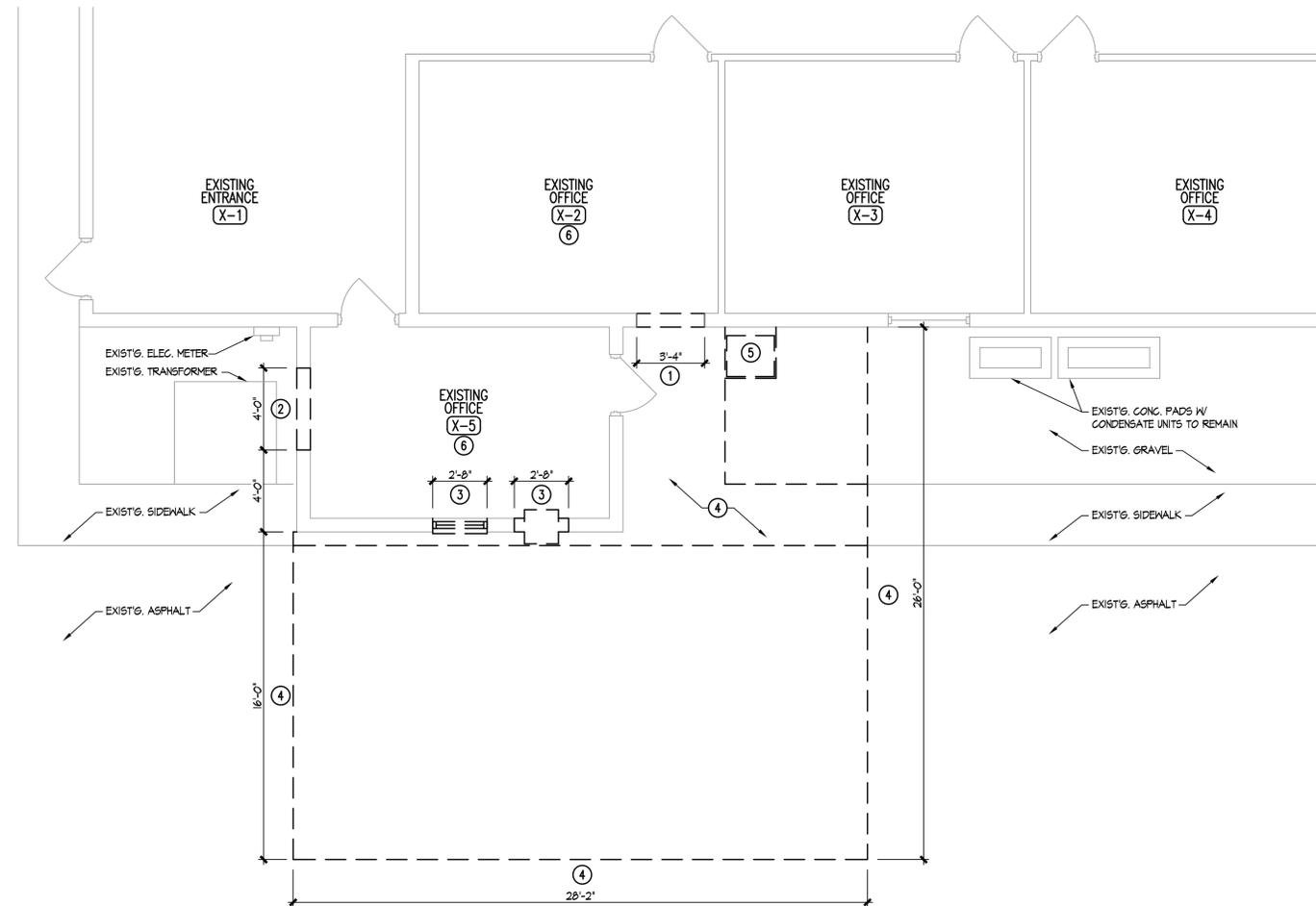
1. CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO PERFORMING DEMOLITION - CONTRACTOR SHALL PERFORM DEMOLITION REQUIRED TO ACCOMPLISH THE RENOVATIONS - DISCREPANCIES SHALL BE REPORTED PRIOR TO DEMOLITION
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF MATERIALS

WALL LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL TO REMOVE ①

DEMOLITION NOTES

- ① REMOVE EXIST'G. WALL FOR NEW DOOR OPNG. - SEE STRUCT.
- ② REMOVE EXIST'G. MAS. WALL FOR NEW WINDOW - SEE STRUCT.
- ③ REMOVE EXIST'G. WINDOW, A/C UNIT AND ASSOCIATED FRAMG. W/ OPNG. - SEE MECH.
- ④ REMOVE EXIST'G. CONC. SLAB ON GRADE AND ASPHALT AS REQ'D. FOR THE ADDITION - SEE STRUCT.
- ⑤ RELOCATE EXIST'G. CONDENSING UNIT AND PAD PER THE FLOOR PLAN - SEE MECH.
- ⑥ REMOVE EXIST'G. FLOOR'G. AND WALL BASE
- ⑦ PATCH AND PREPARE ALL EXIST'G. SURFACES AS REQ'D. FOR NEW WORK - TYPICAL NOTE THROUGHOUT
- ⑧ REFER TO STRUCT. AND MEP DOCUMENTS FOR ADDITIONAL SCOPE OF WORK - TYPICAL NOTE THROUGHOUT



DEMOLITION PLAN

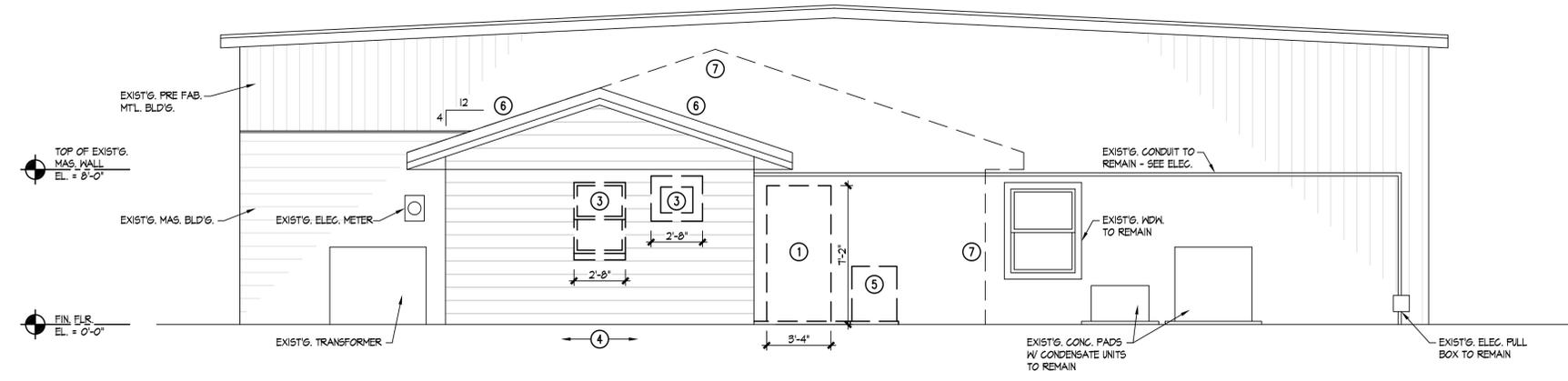
1/4" = 1'-0"
 NOTE:
 ALL DIMENSIONS ARE +/- AND SHALL
 BE FIELD VERIFIED BY BIDDERS
 DURING THE BIDDING PHASE

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO PERFORMING DEMOLITION - CONTRACTOR SHALL PERFORM DEMOLITION REQUIRED TO ACCOMPLISH THE RENOVATIONS - DISCREPANCIES SHALL BE REPORTED PRIOR TO DEMOLITION
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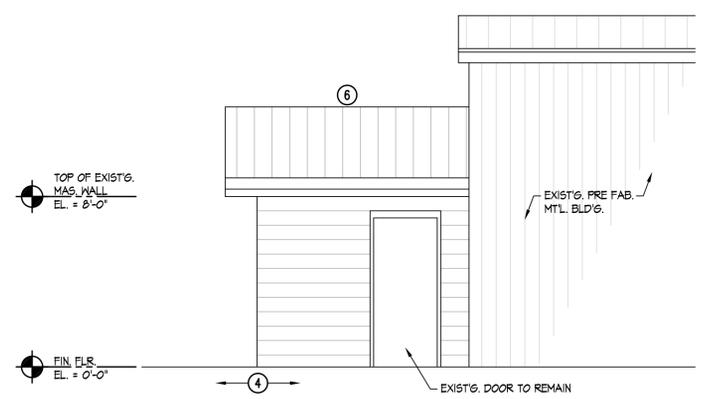
DEMOLITION NOTES

- ① REMOVE EXIST'G. WALL FOR NEW DOOR OPNG. - SEE STRUCT.
- ② REMOVE EXIST'G. MAS. WALL FOR NEW WINDOW - SEE STRUCT.
- ③ REMOVE EXIST'G. WINDOW, A/C UNIT AND ASSOCIATED FRAMG. W/ OPNG. - SEE MECH.
- ④ REMOVE EXIST'G. CONC. SLAB ON GRADE AND ASPHALT AS REQ'D. FOR THE ADDITION - SEE STRUCT.
- ⑤ RELOCATE EXIST'G. CONDENSING UNIT AND PAD PER THE FLOOR PLAN - SEE MECH.
- ⑥ REMOVE EXIST'G. MTL. ROOF AND SH. MTL. FASCIA TRIM TO EXIST'G. FLYWD. ROOF DECK AND WD. FASCIAS TO REMAIN
- ⑦ REMOVE EXIST'G. MTL. SIDING AS REQ'D. WITHIN OUTLINE OF NEW ADDITION
- ⑧ PATCH AND PREPARE ALL EXIST'G. SURFACES AS REQ'D. FOR NEW WORK - TYPICAL NOTE THROUGHOUT
- ⑨ REFER TO STRUCT. AND MEP DOCUMENTS FOR ADDITIONAL SCOPE OF WORK - TYPICAL NOTE THROUGHOUT



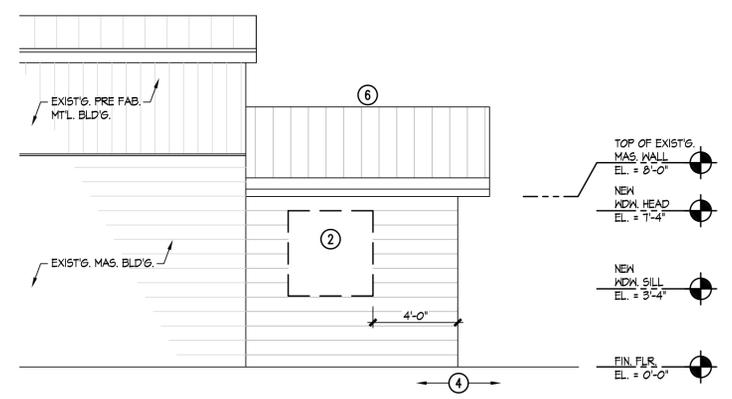
DEMOLITION SOUTH ELEVATION
 1/4" = 1'-0"

NOTE:
 ALL DIMENSIONS ARE +/- AND SHALL BE FIELD VERIFIED BY BIDDERS DURING THE BIDDING PHASE



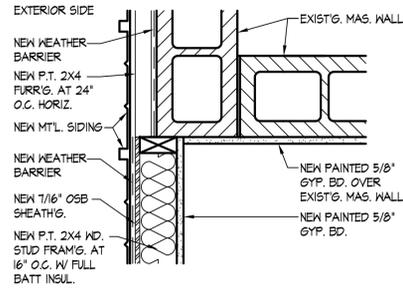
DEMOLITION EAST ELEVATION
 1/4" = 1'-0"

NOTE:
 ALL DIMENSIONS ARE +/- AND SHALL BE FIELD VERIFIED BY BIDDERS DURING THE BIDDING PHASE

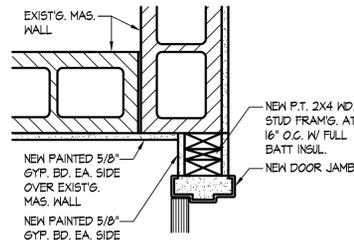


DEMOLITION WEST ELEVATION
 1/4" = 1'-0"

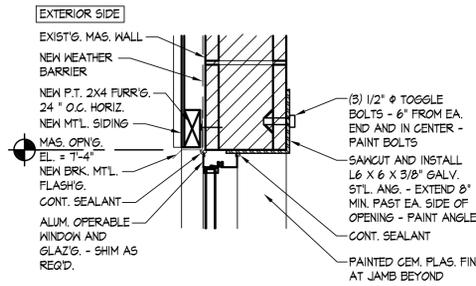
NOTE:
 ALL DIMENSIONS ARE +/- AND SHALL BE FIELD VERIFIED BY BIDDERS DURING THE BIDDING PHASE



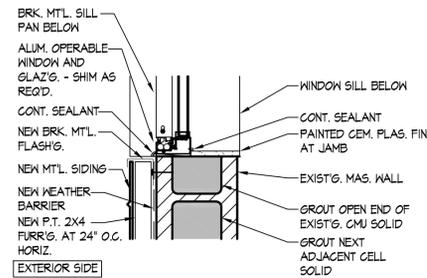
WALL DETAIL A
1 1/2" = 1'-0"



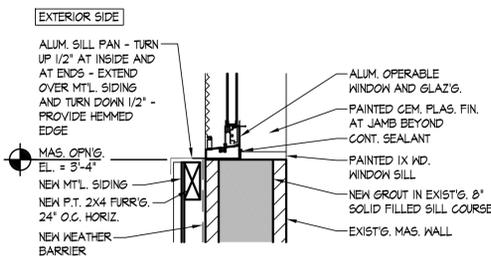
WALL DETAIL B
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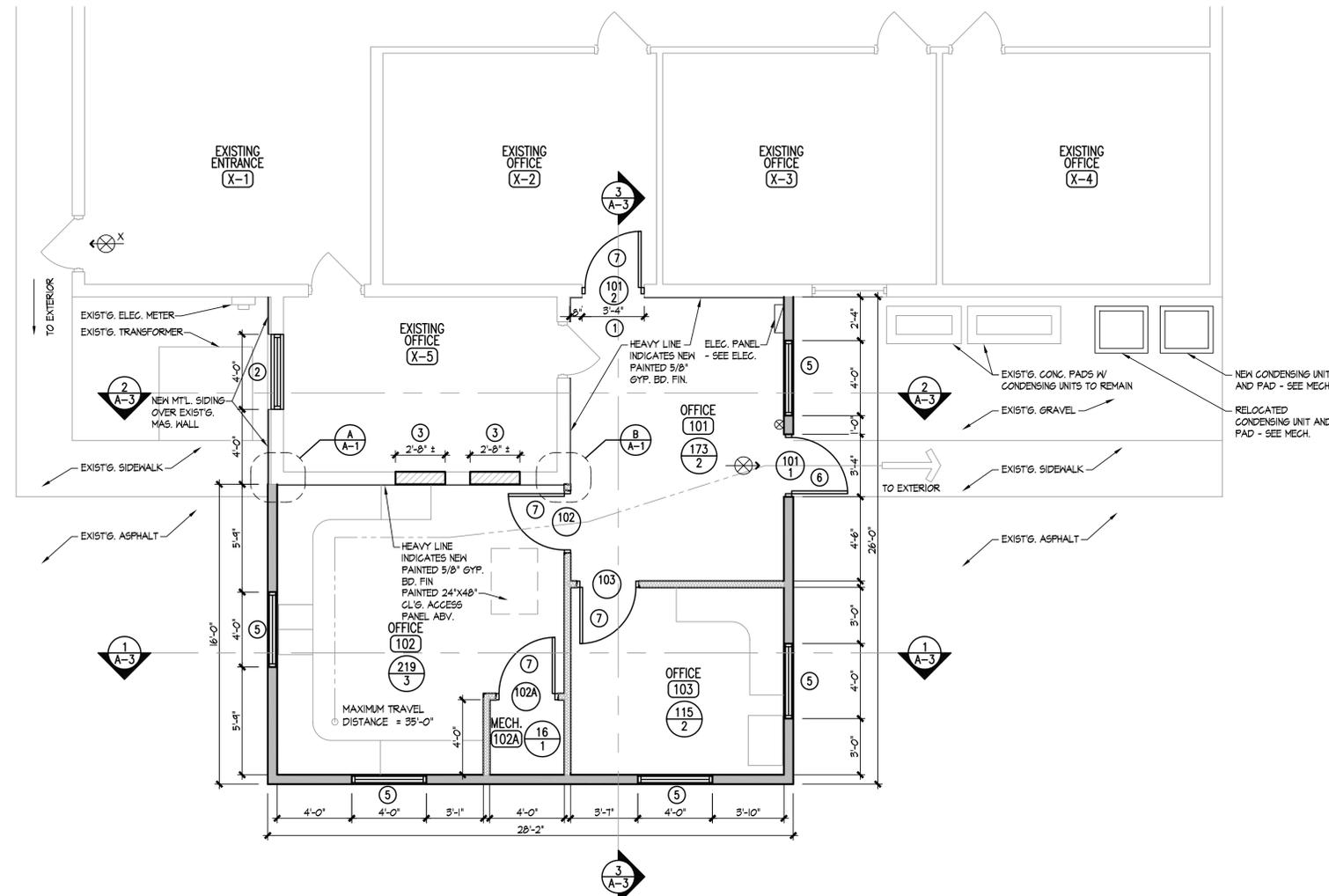
WINDOW HEAD DETAIL C
1 1/2" = 1'-0"



WINDOW JAMB DETAIL D
1 1/2" = 1'-0"



WINDOW SILL DETAIL E
1 1/2" = 1'-0"



FLOOR PLAN

1/4" = 1'-0"

NOTE:
ALL DIMENSIONS ARE +/- AND SHALL
BE FIELD VERIFIED BY BIDDERS
DURING THE BIDDING PHASE

LIFE SAFETY LEGEND

PROVIDE AND POST GRAPHIC DIAGRAM OF EMERGENCY EVACUATION ROUTES ADJACENT TO THE PRIMARY AND SECONDARY EXIT DOORS AS REQUIRED BY AHJ

- EXISTING EXIT LIGHT TO REMAIN
- NEW EXIT LIGHT
- NEW WALL HUNG FIRE EXTINGUISHER
- ROOM SQUARE FOOTAGE
- ROOM OCCUPANT LOAD

WALL LEGEND

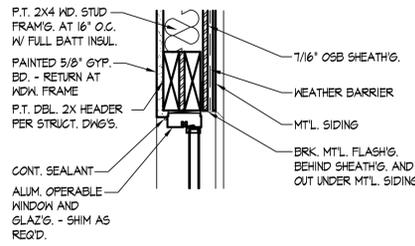
- EXISTING WALL TO REMAIN
- NEW EXTERIOR WALL ④
- NEW INTERIOR WALL ④
- NEW INFILL AT EXISTING WALL ③

DOOR LEGEND

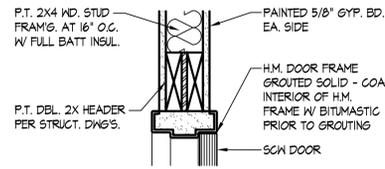
- EXISTING DOOR TO REMAIN
- NEW DOOR, FRAME AND DOOR HARDWARE AS SCHED. ⑥⑦

CONSTRUCTION NOTES

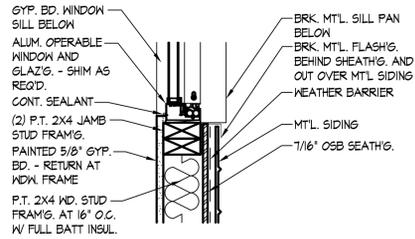
- ① NEW DOOR OPNG. IN EXIST'G. WALL - SEE STRUCT. (5M) (5M)
- ② NEW OPERABLE ALUM. WINDOW IN EXIST'G. WALL - SEE STRUCT. (F) (G) (A-2) (A-2)
- ③ INFILL EXIST'G. MAS. OPNG. WHERE WINDOW AND A/C UNIT REMOVED W/ PT. 2X6 WD. STUD FRMG. AT 16" O.C. W. FULL BATT INSUL. AND PAINTED 5/8" GYP. BD. (C) (D) (E) (A-1) (A-1) (A-1)
- ④ EXT. WALL: P.T. 2X4 WD. STUD FRMG. AT 16" O.C. W. FULL BATT INSUL. AND PAINTED 5/8" GYP. BD. ON INT. SIDE AND 1/16" OSB SHEATH'G., WEATHER BARRIER AND MTL. SIDING ON EXT. SIDE. INT. WALL: P.T. 2X4 WD. STUD FRMG. AT 16" O.C. W. FULL BATT INSUL. AND PAINTED 5/8" GYP. BD. EA. SIDE (A) (B) (C) (A-2) (A-2) (A-2)
- ⑤ OPERABLE ALUM. WINDOW IN NEW WALL - SEE STRUCT. (D) (E) (A-2) (A-2)
- ⑥ EXT. DOOR: DOOR, FRAME AND DOOR HARDWARE AS SCHED. (F) (G) (A-2) (A-2)
- ⑦ INT. DOOR: DOOR, FRAME AND DOOR HARDWARE AS SCHED. (F) (G) (A-2) (A-2)
- ⑧ FURNITURE AND FURNISHINGS PROVIDED AND INSTALLED BY OWNER - TYPICAL NOTE THROUGHOUT
- ⑨ REFER TO STRUCT. AND MEP DOCUMENTS FOR ADDITIONAL SCOPE OF WORK - TYPICAL NOTE THROUGHOUT
- ⑩ REFER TO THE FINISH SCHEDULE IN THE PROJECT MANUAL FOR NEW FINISHES - TYPICAL NOTE THROUGHOUT



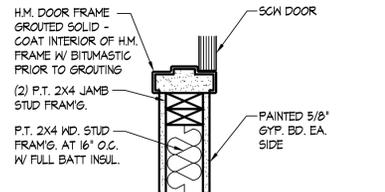
WINDOW HEAD DETAIL
1/2" = 1'-0" (A-A-2)



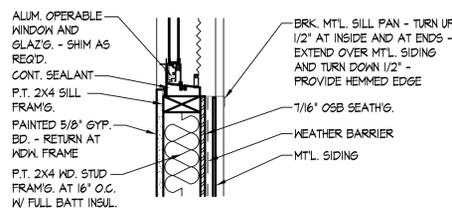
DOOR HEAD DETAIL
1/2" = 1'-0" (F-A-2)



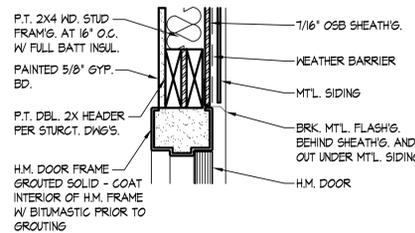
WINDOW JAMB DETAIL
1/2" = 1'-0" (B-A-2)



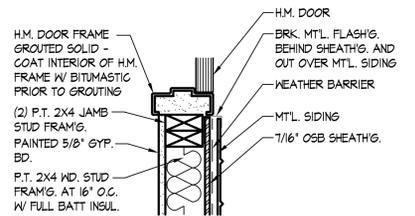
DOOR JAMB DETAIL
1/2" = 1'-0" (G-A-2)



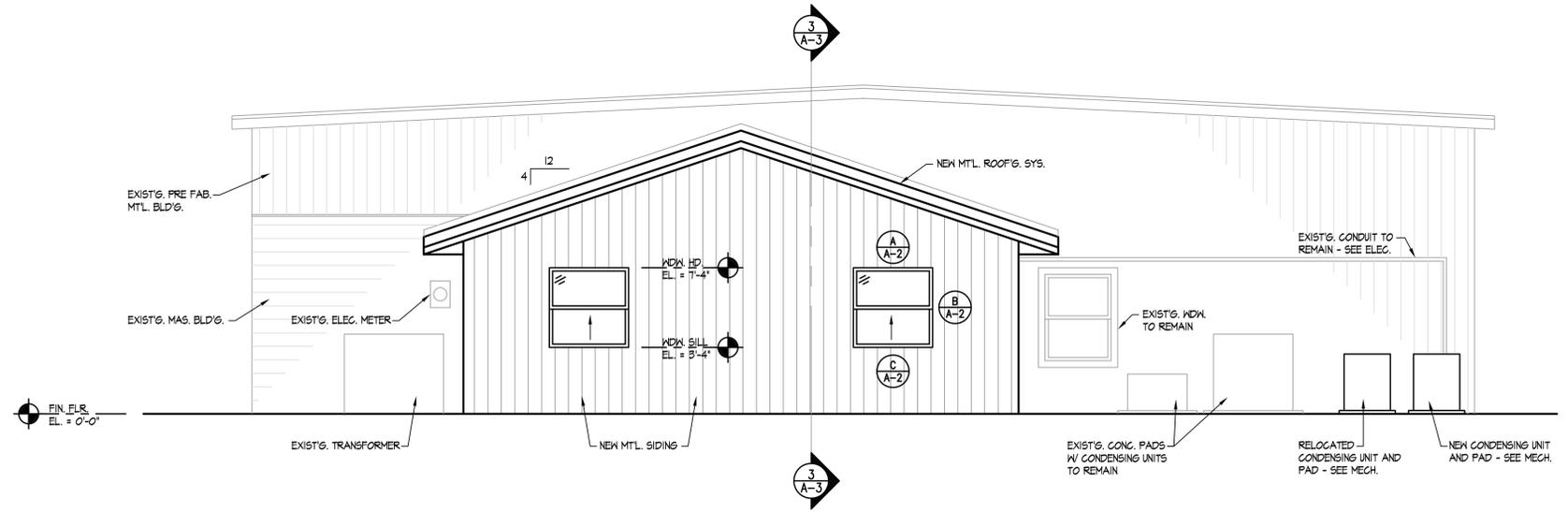
WINDOW SILL DETAIL
1/2" = 1'-0" (C-A-2)



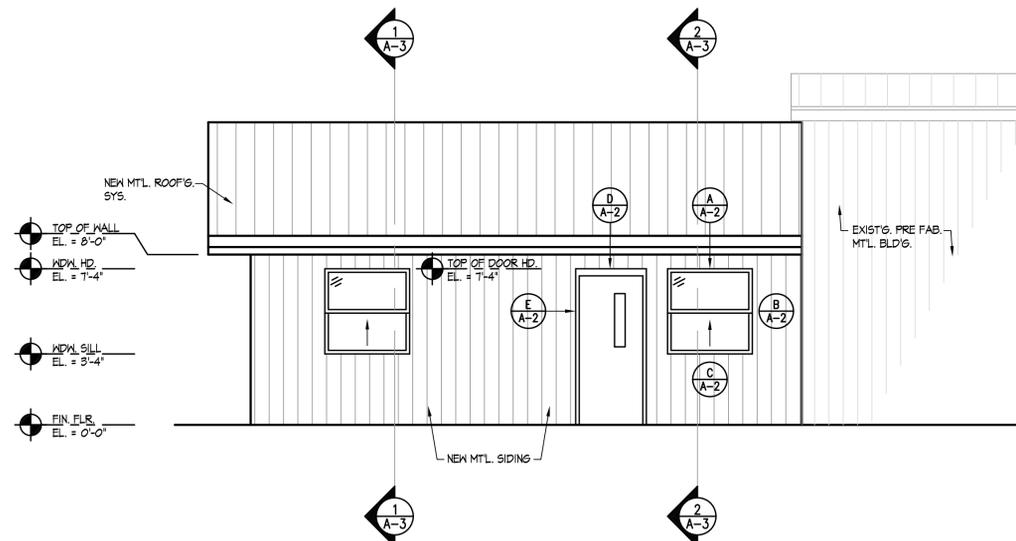
DOOR HEAD DETAIL
1/2" = 1'-0" (D-A-2)



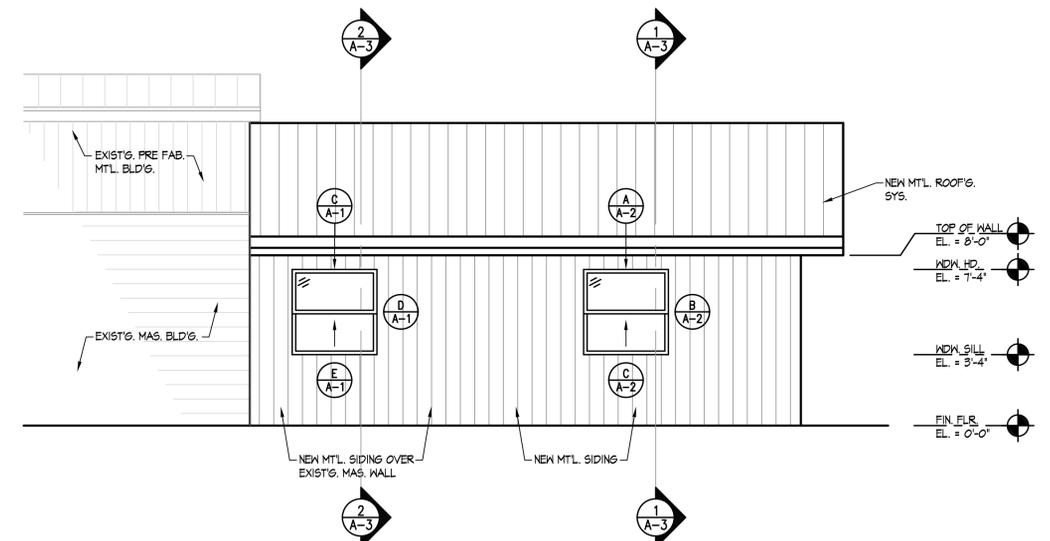
DOOR JAMB DETAIL
1/2" = 1'-0" (E-A-2)



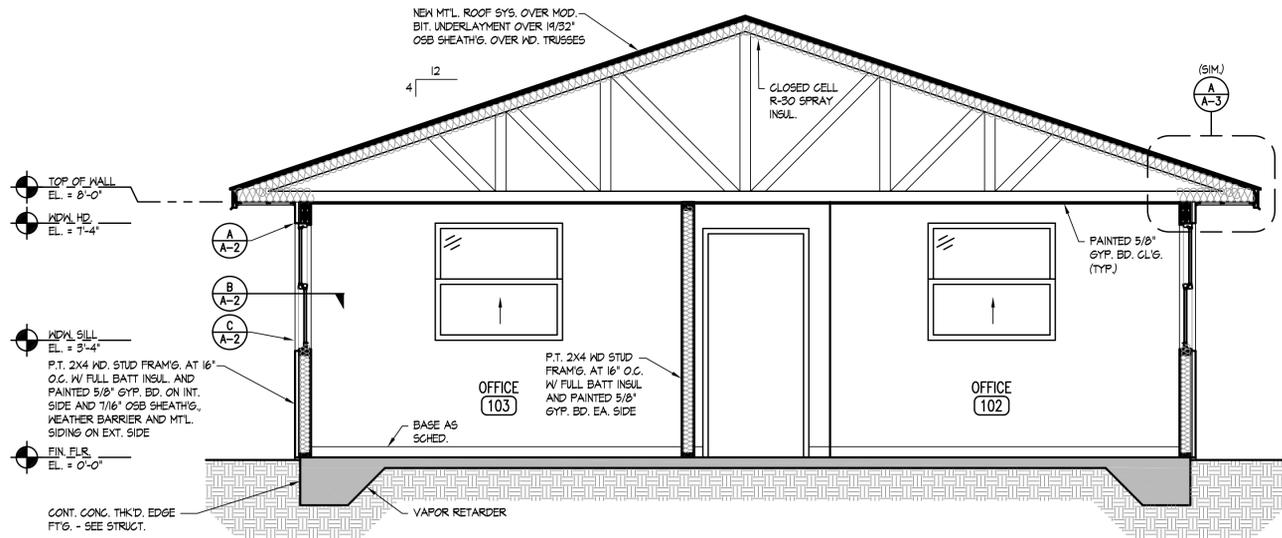
SOUTH ELEVATION
1/4" = 1'-0"



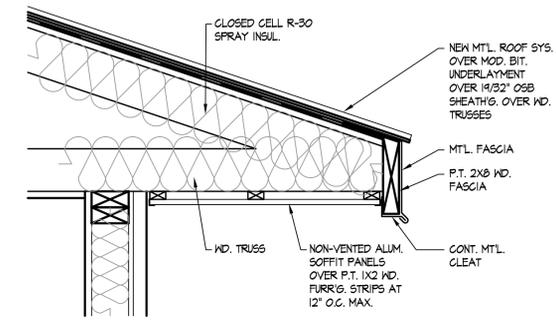
EAST ELEVATION
1/4" = 1'-0"



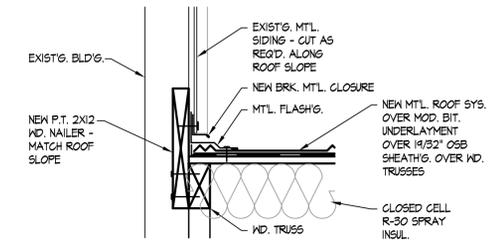
WEST ELEVATION
1/4" = 1'-0"



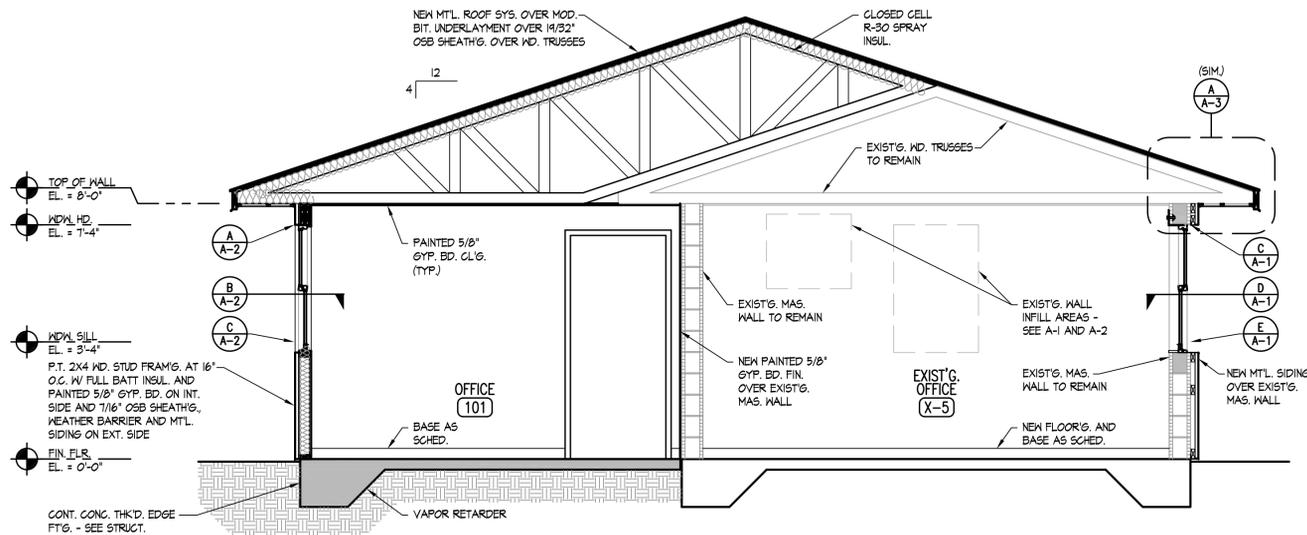
BUILDING SECTION 1
 3/8" = 1'-0"



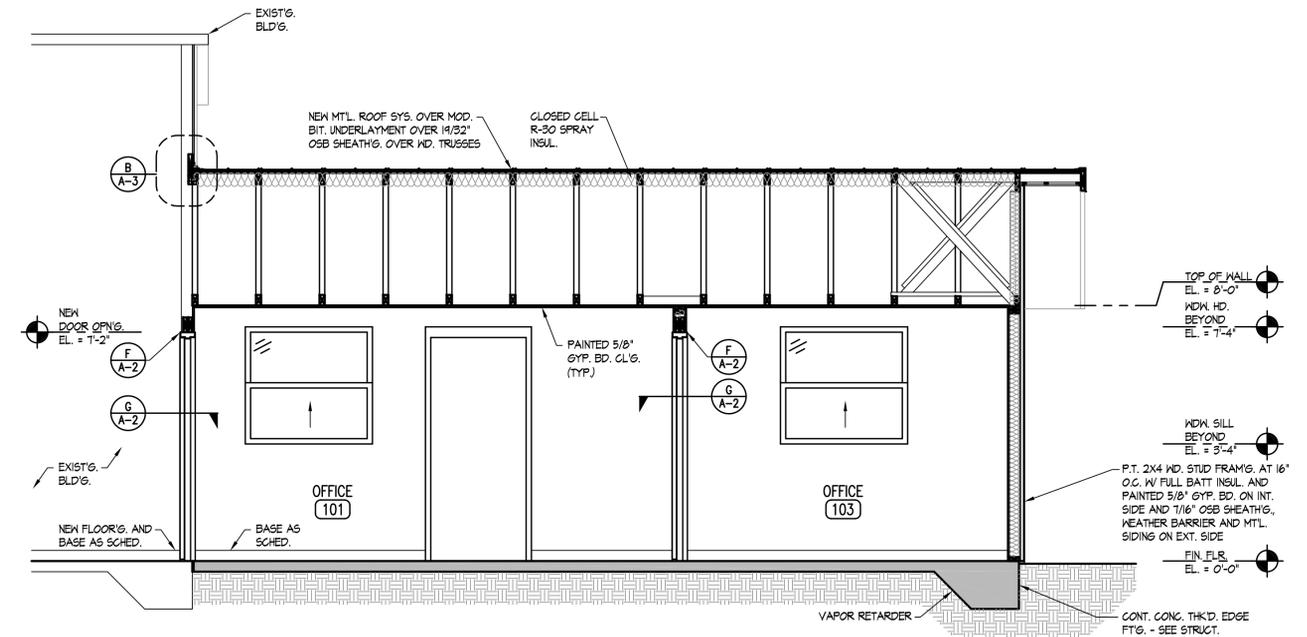
FASCIA DETAIL A
 1 1/2" = 1'-0"



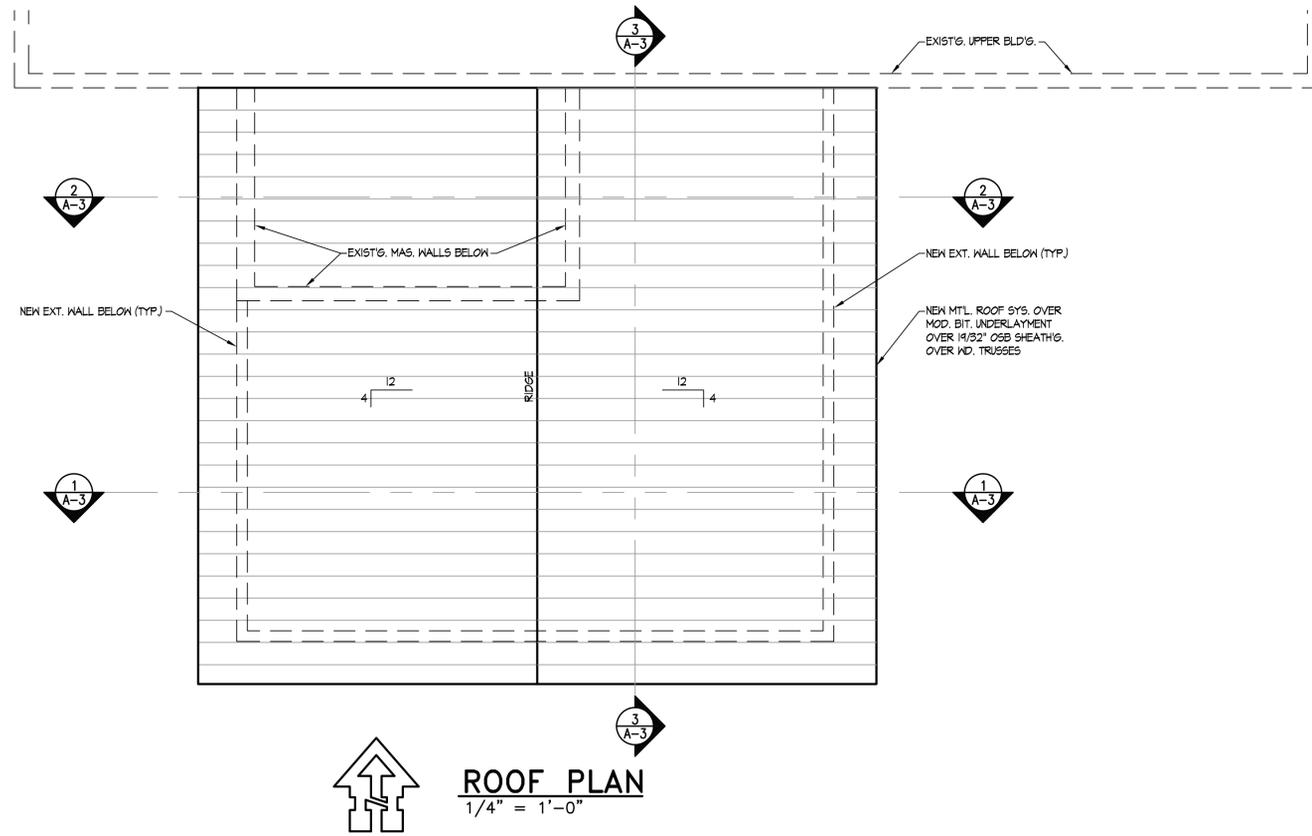
ROOF FLASHING DETAIL B
 1 1/2" = 1'-0"



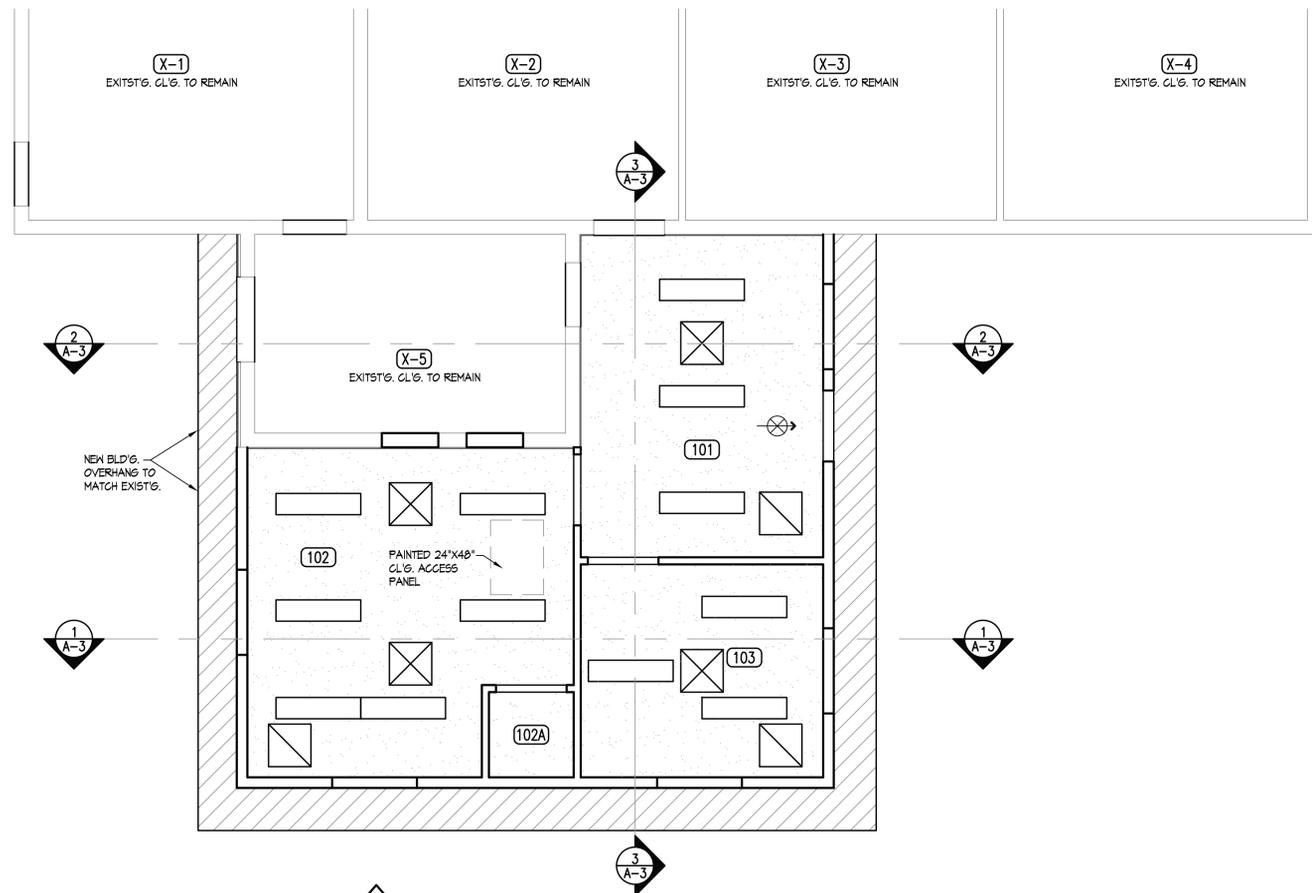
BUILDING SECTION 2
 3/8" = 1'-0"



BUILDING SECTION 3
 3/8" = 1'-0"



ROOF PLAN
 1/4" = 1'-0"



REFLECTED CEILING PLAN
 1/4" = 1'-0"

CEILING LEGEND

-  PAINTED 5/8" GYP. BD. CL'G.
-  NON-VENTED ALUM. SOFFIT PANELS OVER P.T. 1X2 HD. FURR. STRIPS AT 12" O.C. MAX.
-  SUPPLY DIFFUSER - COORD. W/ MECH.
-  RETURN/EXHAUST GRILLE - COORD. W/ MECH.
-  LIGHT FIXTURE - COORD. W/ ELEC.
-  EXIT LIGHT - COORD. W/ ELEC.

GENERAL NOTES

1. COORDINATE CLOSELY WITH MECHANICAL AND ELECTRICAL PLANS. REPORT ANY CONFLICTS PRIOR TO ANY INSTALLATION.
2. REFER TO THE PROJECT MANUAL FINISH SCHEDULE AND BUILDING SECTIONS FOR CEILING HEIGHTS.
3. REFER TO THE ELECTRICAL DRAWINGS FOR ALL EXTERIOR LIGHT FIXTURES.

ROY DANIEL KAIL, JR.
 ARCHITECT
 KAIL PARTNERS
 AA2600250B

DATE
 4/2/18

1756

A-4

GENERAL REQUIREMENTS

- 1. CODE COMPLIANCE:** ALL CONSTRUCTION SHALL COMPLY WITH FLORIDA BUILDING CODE, CHAPTER 19, AND ANY APPLICABLE LOCAL ORDINANCES AND REGULATIONS.
- 2. STRUCTURE:** SIGNING AND SEALING DRAWINGS BY WSE CERTIFIES ONLY THE STRUCTURAL SYSTEMS FOR THIS STRUCTURE AND IS NOT A CERTIFICATION OF ANY CIVIL/SITE WORK, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING OR OTHER SYSTEMS.
- 3. CONSTRUCTION DOCUMENTS:** STRUCTURAL DRAWINGS ARE PROPERTY OF WSE AND SHALL NOT BE REPRODUCED, REUSED OR ALTERED UNLESS SPECIFICALLY ALLOWED BY WSE.
- 4. CONSTRUCTION RESPONSIBILITIES:** WSE HAS NO CONSTRUCTION PHASE SUPERVISORY RESPONSIBILITIES. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, PROCEDURES, TECHNIQUES, SEQUENCES AND FOR JOB SITE SAFETY.
- 5. EXISTING CONDITIONS:** EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS ARE TO BE CONSIDERED APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR THROUGH FIELD SURVEYS AND MEASUREMENTS PRIOR TO BEGINNING CONSTRUCTION OR FABRICATION.

EXTERIOR DOORS, WINDOWS, SKYLIGHTS

- 1. CODE COMPLIANCE:** COMPLY WITH FLORIDA BUILDING CODE, CHAPTER 17, 17 AND 24.
- 2. DESIGN RESPONSIBILITY:** WSE IS NOT RESPONSIBLE FOR DESIGN, CONSTRUCTION OR PERFORMANCE OF WINDOW, DOOR OR SKYLIGHT UNITS. THIS SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER.
- 3. DESIGN WIND PRESSURE:** THE BUILDING IS DESIGNED AS A FULLY ENCLOSED STRUCTURE; THEREFORE, WINDOWS, DOORS AND SKYLIGHTS SHALL BE DESIGNED TO RESIST COMPONENT AND CLADDING WIND PRESSURES SHOWN IN STRUCTURAL LOADS.
- 4. CERTIFICATION:** CONTRACTOR SHALL OBTAIN CERTIFICATION FROM WINDOW, DOOR OR SKYLIGHT MANUFACTURER INDICATING THAT EACH UNIT IS CAPABLE OF RESISTING SPECIFIED DESIGN WIND PRESSURES.
- 5. FASTENING:** CONTRACTOR SHALL OBTAIN FASTENING INFORMATION OR DIAGRAMS FROM MANUFACTURER INDICATING FASTENER TYPE, SIZE AND SPACING FOR EACH TYPE OF WINDOW, DOOR AND SKYLIGHT UNIT.
- 4. IMPACT PROTECTION OF GLAZING:**
 ____X. THIS BUILDING IS NOT LOCATED IN A WIND-BORNE DEBRIS REGION.
 ____ THIS BUILDING IS LOCATED IN A WIND-BORNE DEBRIS REGION.

STRUCTURAL LOADS

- 1. CODE COMPLIANCE:** STRUCTURAL SYSTEMS FOR THIS PROJECT HAVE BEEN DESIGNED TO SUPPORT VERTICAL AND LATERAL LOADS AS SPECIFIED IN FLORIDA BUILDING CODE, 2017, CHAPTER 16 AND ASCE 7-10 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES."
- 2. DEAD LOADS**
 A. ROOF - TOP CHORD 15 PSF
 BOTTOM CHORD 5 PSF
- 3. ROOF LIVE LOADS (FBC 1607.12)**
 A. ROOF SLOPE: FLAT TO LESS THAN 4:12 20 PSF
 B. ROOF SLOPE: 4:12 TO LESS THAN 12:12 16 PSF
 C. ROOF SLOPE: GREATER THAN 12:12 12 PSF
- 4. ROOF SNOW LOADS (FBC 1608)** SNOW LOADS ARE NOT CONSIDERED
 A. GROUND SNOW LOAD, P_g = 0 PSF
- 5. FLOOD LOADS (FBC 1612)**
 THIS PROJECT IS NOT LOCATED IN A FLOOD HAZARD AREA
- 6. WIND LOADS (FBC 1609)**
 WIND LOADS HAVE BEEN DETERMINED BASED ON ASCE 7-10,
 D. ULTIMATE DESIGN WIND SPEED: 130 MPH
 E. NOMINAL WIND SPEED: 101 MPH
 F. BUILDING RISK CATEGORY: II
 G. WIND EXPOSURE CATEGORY: B
 H. INTERNAL PRESSURE COEFFICIENTS: +0.18/-0.18
 I. ENCLOSURE CLASSIFICATION: FULLY ENCLOSED
 J. COMPONENT & CLADDING DESIGN WIND PRESSURES:

WIND SPEED (MPH)	COMPONENT PRESSURE (PSF)	INWARD PRESSURE (PSF)	OUTWARD PRESSURE (PSF)
10	+18.2	-24.4	
20	+17.5	-22.9	
50	+16.2	-20.5	
100	+15.4	-19.0	
200	+14.8	-17.5	
>500	+13.6	-15.1	

02300 EARTHWORK

- 1. GEOTECHNICAL REPORT:** SOIL BORINGS AND A GEOTECHNICAL REPORT HAVE NOT BEEN PREPARED FOR THIS SITE. IT IS RECOMMENDED THAT THE OWNER OR CONTRACTOR EMPLOY THE SERVICES OF A GEOTECHNICAL ENGINEER TO PERFORM SOIL BORINGS AND PROVIDE RECOMMENDATIONS FOR PREPARATION OF THE SOILS SPECIFIC TO THIS BUILDING SITE, AND CONFIRM THE SOIL TYPE ASSUMED IN THIS SPECIFICATION. WSE HAS NO KNOWLEDGE OF THE ON-SITE SOILS AND THEREFORE ACCEPTS NO RESPONSIBILITY FOR THEIR BEARING CAPACITY OR PERFORMANCE.
- 2. BEARING SOIL:** SOILS ARE ASSUMED TO BE SANDY SOILS WITH NO ORGANICS, PEAT, CLAY, EXPANSIVE CLAYS, OR BOULDERS. SEASONAL HIGH WATER TABLE IS ASSUMED TO BE AT LEAST TWO FEET BELOW BOTTOM OF FOOTING ELEVATION. ALLOWABLE DESIGN BEARING CAPACITY IS ASSUMED TO BE 2,000 PSF.
- 3. SITE PREPARATION:** STRIP AND GRUB ALL TREES, ROOTS, GRASSES, TOPSOIL, MUCK, ORGANICS, DEBRIS, PAVEMENTS AND OTHER DELETERIOUS MATERIALS TO 5 FEET BEYOND BUILDING LIMITS.
- 4. PROOF-ROLLING:** FOLLOWING SITE PREPARATION, PRIOR TO FILL PLACEMENT, PROOF-ROLL BUILDING FOOTPRINT TO DENSIFY BEARING SOILS AND IDENTIFY AREAS OF LOOSE AND/OR SOFT SOILS. IF LOOSE OR SOFT SOILS ARE ENCOUNTERED, OVERCUT UNSUITABLE MATERIAL AND REPLACE WITH COMPACTED STRUCTURAL FILL. USE FULLY LOADED RUBBER Tired EQUIPMENT.
- 5. EXCAVATION:** EXCAVATIONS ARE TO BE PERFORMED IN COMPLIANCE WITH CURRENT OSHA REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR EXCAVATION SAFETY. COMPACT ALL EXCAVATION BOTTOMS UNTIL FIRM AND UNYIELDING TO 95% OF MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D 1557) TO A DEPTH OF 12 INCHES.
- 6. FOOTING BEARINGS:** FOOTINGS ARE TO BEAR ON SUITABLE EXISTING SOILS OR PREPARED STRUCTURAL FILL. FOOTINGS SHALL BEAR A MINIMUM OF 12 INCHES BELOW ADJACENT GRADE.
- 7. GROUND/SURFACE WATER CONTROL:** EXCAVATION AND BACKFILL OPERATIONS ARE TO BE MAINTAINED IN A DRY CONDITION. SLOPE OR CROWN EXPOSED BUILDING SUBGRADES TO PROMOTE RUN-OFF AND PREVENT PONDING. SURFACE AND INFILTRATING WATER ARE TO BE REMOVED BY GRADING AND PUMPING FROM SUMPS AS REQUIRED. GROUNDWATER ELEVATION IS TO BE MAINTAINED AT LEAST 2 FEET BELOW GRADE DURING COMPACTION OPERATIONS.
- 8. BACKFILL & COMPACTION:** USE ONLY STRUCTURAL FILL FOR GENERAL FILL WITHIN BUILDING FOOTPRINT AND FOR ALL SLAB SUBGRADES. USE ONLY WELL GRADED SAND WITH MAXIMUM 10 PERCENT PASSING #200 SIEVE. DO NOT USE ON-SITE SOILS FOR BACKFILL UNLESS THEY ARE TESTED AND MEET GRADATION DESCRIBED ABOVE. PLACE BACKFILL IN MAXIMUM 12 INCH LOOSE LIFTS. USE 4 INCH LOOSE LIFTS WHEN FILL IS COMPACTED WITH WALK-BEHIND PLATE TAMPER. COMPACT TO 95% OF MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D 1557) FOR EACH LIFT.
- 9. SLAB SUBGRADE TOLERANCE:** TOP SURFACE OF SLAB SUBGRADE IS TO BE GRADED TO A TOLERANCE OF +0" TO -1/2".
- 10. PEST CONTROL:** TREAT ALL SLAB SUBGRADES FOR TERMITES PRIOR TO SLAB INSTALLATION. OBTAIN CERTIFICATE OF TREATMENT FOR BUILDING INSPECTOR.
- 11. EXTERIOR GRADING:** EXTERIOR GRADE IS TO BE KEPT MINIMUM 6 INCHES BELOW WOOD SIDING AND/OR FOAM INSULATION. SLOPE EXTERIOR GRADE AWAY FROM BUILDING TO PROMOTE DRAINAGE.

03300 STRUCTURAL CONCRETE

- 1. GENERAL:** ALL CONCRETE CONSTRUCTION SHALL COMPLY WITH FLORIDA BUILDING CODE, CHAPTER 19, AND THE CURRENTLY ADOPTED EDITION OF THE FOLLOWING ACI STANDARDS:
 ACI 211.1 "SELECTING MIX PROPORTIONS"
 ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE"
 ACI 308 "MEASURING, MIXING, TRANSPORTING, PLACING"
 ACI 305 "HOT WEATHER CONCRETING"
 ACI 306 "COLD WEATHER CONCRETING"
 ACI 315 "REINFORCING DETAILING AND PLACEMENT"
 ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- 2. CONCRETE MIXES:** ALL CONCRETE MIXES SHALL BE NORMAL WEIGHT (145 PCF) UNLESS OTHERWISE NOTED. PROVIDE MIXES DESIGNED TO MEET THE FOLLOWING CRITERIA FOR VARIOUS ELEMENTS IN THE STRUCTURE:

ELEMENT	28 DAY COMPRESSIVE STRENGTH	MAXIMUM AGGREGATE SIZE	SLUMP RANGE
FOOTINGS	3,000	1"	3"-6"
SLAB-ON GRADE	3,000	3/4"	2"-4"

 - WATER/CEMENT RATIO: 0.50 MAX.
 - AIR ENTRAINMENT: 3-6 PERCENT FOR MILD EXPOSURE.
 - PORTLAND CEMENT: ASTM C 150, TYPE 1.
 - FLY ASH: (OPTIONAL) ASTM C 618, CLASS C OR F, 20 % MAX.
 - AGGREGATES: ASTM C33.
 - WATER: ASTM C94, CLEAN & POTABLE.
 - ADMIXTURES: WATER REDUCING AND AIR ENTRAINING AGENTS SHALL BE USED. HIGH RANGE WATER REDUCING AGENTS (SUPERPLASTICIZERS) MAY BE USED AT CONTRACTOR OPTION. DO NOT USE ADMIXTURES CONTAINING CHLORIDES.
- 3. REINFORCING STEEL:** ASTM A 615, GRADE 60, DEFORMED BARS.
 A. SEE LAP & BEND SCHEDULE FOR LAP & BEND LENGTHS.
 B. BAR COVER:
 IN CONTACT WITH GROUND 3"
 EXPOSED TO WEATHER 2"
 BEAM & COLUMN STIRRUPS 1 1/2"
 SLABS 1/4"
 C. PROVIDE CORNER BARS OR 90 DEGREE BEND AT ALL CORNERS.
 E. ALL STEEL SHALL BE SUPPORTED ON CHAIRS OR BOLSTERS.
- 4. WELDED WIRE REINFORCING (W.W.R.):** ASTM A 185.
 B. USE FLAT SHEETS ONLY.
 C. LAP W.W.R. MINIMUM 10 INCHES.
 D. SUPPORT W.W.R. ON CHAIRS SPACED 3'-0" O.C. EACH WAY.
- 5. CURING:** USE SPRAYED-ON MEMBRANE CURING COMPOUND ON SLABS, ASTM C 309, TYPE 1, SOLVENT FREE, OR PROVIDE CONTINUOUS WATER SPRINKLING FOR MINIMUM 7 DAYS.
 A. CURING COMPOUND: ASTM C 309, TYPE 1, SOLVENT FREE.
 B. ENSURE COMPATIBILITY WITH FLOORING ADHESIVES.
- 6. SLAB CONTRACTION JOINT FILLER:** "SIKADUR 51 SL" EPOXY RESIN JOINT FILLER BY SIKA CORP. OR EQUIVALENT. USE ON SLABS-ON-GRADE WHERE JOINTS ARE EXPOSED TO VIEW ONLY.
- 7. SLAB JOINTS:** SAW-CUT SLABS ON GRADE IN ROUGHLY 10 FOOT SQUARES WITHIN 4 TO 12 HOURS OF FINISHING SLAB.
 B. SLAB CRACKING: AS CONCRETE SLABS-ON-GRADE CURE AND DRY OUT THEY WILL SHRINK CAUSING CRACKS TO FORM ON THE SURFACE OF THE SLAB. W.W.R. OR FIBROUS REINFORCING IS INSTALLED TO HELP LIMIT THE WIDTH OF CRACKS THAT FORM. REPAIR CRACKS OVER 1/8" WIDE THAT DO FORM BY ROUTING AND PLACEMENT OF "SIKADUR 35, HI-MOD LV" EPOXY RESIN ADHESIVE BY SIKA CORP. OR EQUIVALENT.
- 9. CONCRETE FORMWORK:**
 A. DESIGN, ERECT, SUPPORT, BRACE AND MAINTAIN ALL FORMWORK AS RECOMMENDED BY ACI 347 "RECOMMENDED STANDARD PRACTICE FOR CONCRETE FORMWORK."
 B. CONTRACTOR IS RESPONSIBLE FOR DESIGN, CONSTRUCTION AND SAFETY OF ALL FORMWORK. ALL FORMS, SHORES, AND BRACING SHALL BE ENGINEERED TO SUPPORT ALL LOADS IMPOSED INCLUDING WET CONCRETE, EQUIPMENT, LIVE LOADS, LATERAL LOADS DUE TO WIND AND CONCRETE IMBALANCE.
 C. PROVIDE SMOOTH FORM FINISH FOR ALL CONCRETE EXPOSED TO PUBLIC VIEW.
- 10. TOLERANCES:** TOLERANCES FOR SLAB LEVELNESS AND FLATNESS SHALL BE "CONVENTIONAL STRAIGHTEDGE" IN ACCORDANCE WITH ACI 117. CONTRACTOR SHALL MAKE EVERY EFFORT TO REDUCE SHRINKAGE AND CURLING OF SLABS BY SELECTING APPROPRIATE MIX DESIGN AND ADOPTING APPROPRIATE PLACEMENT, FINISHING AND CURING METHODS. CONTRACTOR SHALL CORRECT SLABS THAT DO NOT MEET REQUIRED TOLERANCES BY FLASH PATCHING OR GRINDING AS APPROPRIATE.
- 11. HOT & COLD WEATHER PROTECTION:** INSTITUTE HOT WEATHER PROTECTION PROCEDURES WHEN TEMPERATURE EXCEEDS 90° F. INSTITUTE COLD WEATHER PROTECTION PROCEDURES WHEN TEMPERATURES ARE BELOW 40° F.
- 12. TESTING & INSPECTION:** INSPECT ALL REINFORCING FOR SIZE AND PLACEMENT PRIOR TO CONCRETE PLACEMENT.

05400 COLD FORMED STEEL (CFS) FRAMING

- 1. CODE COMPLIANCE:** COMPLY WITH FLORIDA BUILDING CODE, CHAPTER 22.
- 2. CEMF MEMBERS:**
 A. 12, 14, 16 GAUGE: ASTM A 653, GRADE D, MIN 50 KSI YIELD.
 B. 18, 20 GAUGE: ASTM A 653, GRADE A, MIN. 33 KSI YIELD.
- 3. ACCESSORIES:** PROVIDE ACCESSORIES IN SAME MATERIAL AND FINISH AS DECK.
- 4. FINISH:** ASTM C 995, HOT-DIP GALVANIZED, G60 COATING.
- 5. FASTENING:**
 A. WELDS: AWS D1.3, E60.
 B. USE SELF-DRILLING, CORROSION RESISTANT FASTENERS.
 C. REFER TO TYPICAL CEMF ATTACHMENT DETAIL FOR FASTENER SIZE, TYPE AND SPACING.
- 6. ERECTION:**
 A. CEMF INSTALLER IS RESPONSIBLE FOR ERECTION SAFETY.
 B. PROVIDE TEMPORARY BRACING OF WALLS UNTIL PERMANENT ROOF AND/OR FLOOR STRUCTURE IS IN PLACE.
- 7. INSPECTION:** INSPECT ALL CEMF MEMBERS FOR SIZE, THICKNESS AND FINISH AND FOR DAMAGED MATERIAL. INSPECT FASTENINGS FOR SIZE AND SPACING.

06100 WOOD

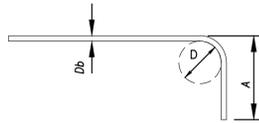
- 1. CODE COMPLIANCE:** COMPLY WITH FLORIDA BUILDING CODE, CHAPTER 23.
- 2. WOOD FRAMING:** PS20 GRADING, NOMINAL SIZES, MAXIMUM 19 PERCENT MOISTURE CONTENT. PROVIDE SPECIES & GRADES AS FOLLOWS, UNLESS NOTED OTHERWISE:
 A. STUDS: CONSTRUCTION GRADE SPRUCE-PINE-FIR (SPF) AS SPECIFIED IN FRAMING DETAILS.
 B. JOISTS, HEADERS, BEAMS, BRACING: NO. 2 SOUTHERN PINE (SP).
 C. MISCELLANEOUS: SPRUCE-PINE-FIR (SPF).
- 4. STRUCTURAL WOOD PANELS:** MARK ALL PANELS WITH APA CERTIFICATION. PROVIDE THE FOLLOWING PANEL TYPE, THICKNESS, AND NAILING, UNLESS OTHERWISE NOTED.
 A. ROOF SHEATHING: 7/16" THICK, ORIENTED STRAND BOARD (OSB), SHEATHING GRADE, OR APA RATED CDX PLYWOOD SHEATHING. FASTEN PER TYPICAL ROOF SHEATHING DETAIL.
 B. WALL SHEATHING: 7/16" THICK, ORIENTED STRAND BOARD (OSB), SHEATHING GRADE, OR APA RATED CDX PLYWOOD SHEATHING. FASTEN PER TYPICAL EXTERIOR BEARING WALL DETAIL AND SHEAR WALL SCHEDULE.
- 5. WOOD TRUSSES:** ROOF AND FLOOR TRUSS MANUFACTURER TO ENGINEER TRUSSES TO SUPPORT DEAD, LIVE, AND WIND LOADS PER FLORIDA BUILDING CODE AND ASCE 7. TRUSS ENGINEERING TO BE SIGNED AND SEALED BY PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.
 A. COMPLY WITH ANS/TFP 1 "NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED TRUSS CONSTRUCTION."
 B. COMPLY WITH BUILDING COMPONENT SAFETY INFORMATION, BCSI: GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED TRUSSES.
 C. COMPLY WITH TPI DSB "RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
 D. COMPLY WITH BUILDING COMPONENT SAFETY INFORMATION, BCSI-B3: PERMANENT RESTRAINT/BRACING OF CHORDS AND WEB MEMBERS AND/OR BCSI-B7: TEMPORARY AND PERMANENT RESTRAINT/BRACING OF PARALLEL CHORD TRUSSES.
- 6. WOOD FASTENERS, ANCHORS & CONNECTORS:**
 A. UNLESS OTHERWISE NOTED, USE FASTENERS AS SPECIFIED IN FBC TABLE 2304.9.1 "FASTENING SCHEDULE."
 B. ANCHOR BOLTS: ASTM A 307 OR A 36, 36 KSI YIELD STRENGTH.
 C. BOLTS: ASTM A 307.
 D. NAILS: COMMON, MIL GALVANIZED, UNLESS NOTED OTHERWISE.
 E. SCREWS: SELF-DRILLING WOOD SCREWS.
 F. CONNECTORS, ANCHORS, STRAPS & TIES: SIMPSON STRONG-TIE OR EQUIVALENT. REFER TO ANCHOR SCHEDULE.
 G. CORROSION PROTECTION: PROVIDE HOT-DIP GALVANIZED ANCHOR BOLTS, BOLTS, NUTS, WASHERS, NAILS, SCREWS, ANCHORS, CONNECTORS AND OTHER HARDWARE WHEN EXPOSED TO EXTERIOR WEATHER OR IN CONTACT WITH PRESERVATIVE TREATED LUMBER. COMPLY WITH ASTM A 153 FOR HOT-DIP FASTENER PRODUCTS, OR ASTM A 653, "G-185" COATING FOR HOT-DIP CONNECTOR AND SHEET PRODUCTS. USE SIMPSON "ZMAX" COATING OR EQUIVALENT.
- 7. WOOD TREATMENT:**
 PROVIDE PRESERVATIVE TREATED WOOD FOR ALL LOCATIONS WHERE WOOD IS IN CONTACT WITH SOIL, CONCRETE OR MASONRY, OR IS PERMANENTLY EXPOSED TO EXTERIOR WEATHER. DO NOT USE PRESERVATIVES CONTAINING CCA PRODUCTS.
- 8. TESTING & INSPECTION:** INSPECT SHEATHING FOR TYPE, GRADE, THICKNESS AND FASTENING. INSPECT FRAMING FOR SIZE, SPECIES, GRADE, SPACING AND CONNECTORS.

STRUCTURAL ABBREVIATIONS

#	NUMBER	Fv	ALLOWABLE SHEAR STRENGTH	PERP	PERPENDICULAR
&	AND	Fy	STEEL YIELD STRENGTH	PL	PLATE
@	AT	Fd	FLOOR DRAIN	PNL	PANEL
A/C	AIR CONDITIONING	FDN	FOUNDATION	PREFAB	PREFABRICATED
A/E	ARCHITECT/ENGINEER	FFE	FINISH FLOOR ELEVATION	PSF	POUNDS PER SQUARE FOOT
A/ESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	FLR	FLOOR FINISH	PSI	POUNDS PER SQUARE INCH
AFF	ABOVE FINISH FLOOR	FRT	FIRE RETARDANT TREATED	PSL	PARALLEL STRAND LUMBER
AHU	AIR HANDLING UNIT	FT	FEET, FOOT	PT	PRESERVATIVE TREATED
ALT	ALTERNATE	FTG	FOOTING	QTY	QUANTITY
ALUM	ALUMINUM	FS	FAR SIDE	RAD	RADIUS
AMT	AMOUNT	GA	GAUGE	RO	ROOF DRAIN
APPROX	APPROXIMATELY	GALV	GALVANIZED	REF	REFERENCE
ARCH	ARCHITECTURAL	GEN	GENERAL	REINF	REINFORCEMENT
ASSY	ASSEMBLY	GT	GIRDER TRUSS	REQD	REQUIRED
AVG	AVERAGE	GT2	GIRDER TRUSS (2 PLY)	RET	RETAINING
BM	BEAM	HDR	HOT DIP GALVANIZED	REV	REVISION
BOT	BOTTOM	HOR	HANGER	RTU	ROOF TOP UNIT
B/O	BOTTOM OF	HORIZ	HORIZONTAL	SCHED	SCHEDULE
BLDG	BUILDING	HT	HEIGHT	SECT	SECTION
BLKG	BLOCKING	ID	INSIDE DIAMETER	SF	SQUARE FEET
BPL	BASE/BEARING PLATE	IF	INSIDE FACE	SIM	SIMILAR
BRDG	BRIDGING	IN	INCHES	SOG	SLAB ON GRADE
BRG	BEARING	IN	INCHES	SQ	SOUTHERN PINE
BS	BOTH SIDES	INT	INTERIOR	SPA	SPACE
BSP	CENTER TO CENTER	INT	INTERIOR	SPEC	SPECIFICATION
CC	CUBIC FEET	INT	INTERIOR	SPF	SPRUCE-PINE-FIR
CFMF	COLD FORMED STEEL FRAMING	KSI	KIPS PER SQUARE INCH	SS	STAINLESS STEEL
CIP	CAST IN PLACE	KD	KILN DRIED	SSL	SHORT SLOTTED
CJ	CONSTRUCTION JOINT	KO	KNOCK OUT	STD	STANDARD
CL	CENTERLINE	KSF	KIPS PER SQUARE FOOT	ST	STEEL
CLR	CLEAR	KSI	KIPS PER SQUARE INCH	STRCT	STRUCTURAL
CMU	CONCRETE MASONRY UNIT	L	STEEL ANGLE, LENGTH	SW	SHORT WAY
COL	COLUMN	LBS	POUNDS	SYM	SYMMETRICAL
CONC	CONCRETE	LF	LINEAR FEET	T&G	TOP & BOTTOM
CONX	CONNECTION	LG	LONG	T&G	TONGUE & GROOVE
CONT	CONTINUOUS	LLH	LONG LEG HORIZONTAL	T/O	TOP OF
CTR	CENTER	LLV	LONG LEG VERTICAL	T/O	TOP OF
CY	CUBIC YARD	LSL	LONG SLOTTED	TOC	TOP OF CONCRETE
DBL	DOUBLE	LONG	LONGITUDINAL	TOJ	TOP OF JOIST
DEG	DEGREE	LVL	LAMINATED VENEER LUMBER	TOS	TOP OF STEEL
DET	DETAIL	LW	LONG WAY, LIGHTWEIGHT	TOW	TOP OF WALL
DIA	DIAMETER	MFR	MANUFACTURER	TEMP	TEMPORARY, TEMPERATURE
DIM	DIMENSION	MAS	MASONRY	THK	THICK
DN	DOWN	MATL	MATERIAL	THRD	THREADED
DO	DITTO	MAX	MAXIMUM	TPL	TRIPLE
DWG	DRAWING	MECH	MECHANICAL	TRANS	TRANSVERSE
DWL	DOWEL	MIN	MINIMUM	TRYS	TYPICAL
E	MODULUS OF ELASTICITY	MISC	MISCELLANEOUS	UNO	UNLESS NOTED OTHERWISE
EA	EACH	MO	MASONRY OPENING	VERT	VERTICAL
EF	EACH FACE	MTL	METAL	VOL	VOLUME
EJ	EXPANSION JOINT	NIC	NOT IN CONTRACT	W/O	WITHOUT
EL	ELEVATION	NO	NUMBER	W	WIDE FLANGE SHAPE
ENGR	ENGINEER	NOM	NOMINAL	WS	WATERSTOP
EOD	EDGE OF DECK	NTS	NOT TO SCALE	WWF	WELDED WIRE FABRIC
EOS	EDGE OF SLAB	NS	NEAR SIDE	XXS	EXTRA STRONG
EO	EQUAL	OC	ON CENTER	XXS	DOUBLE EXTRA STRONG
EQUIP	EQUIPMENT	OD	OUTSIDE DIAMETER	YD	YARD
EXST	EXISTING	OPNG	OF OPENING		
EXP	EXPANSION	OPP	OPPOSITE		
EW	EACH WAY	OSB	ORIENTED STRAND BOARD		
EXT	EXTERIOR	OVS	OVERSIZED		
Fc	CONCRETE COMPRESSIVE STRENGTH	PAF	POWDER ACTUATED FASTENER		
Fm	MASONRY COMPRESSIVE STRENGTH	PC	PRECAST		
Fd	ALLOWABLE WOOD BENDING STRENGTH	PCF	POUNDS PER CUBIC FOOT		

REINFORCING LAP & BEND SCHEDULE

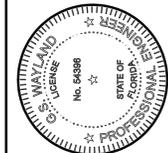
BAR SIZE	STANDARD LAP LENGTH		STANDARD HOOKS	
	CONCRETE	MASONRY	DIAMETER D	LENGTH A
#2	12"	12"	1 1/2"	4"
#3	15"	18"	2 1/4"	6"
#4	20"	24"	3"	8"
#5	25"	30"	3 3/4"	10"
#6	30"	36"	4 1/2"	12"
#7	35"	42"	5 1/4"	14"
#8	40"	48"	6"	16"



Drawing Status: For Permit & Construction

Rev. No.: _____ Date: _____

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 STRUCTURAL ENGINEERING
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 Phone: 352-375-8888
 Florida COE #: #6236



Client: Columbia County Board of County Commissioners
 Lake City, FL

Project Name: Columbia County Public Works Engineering Office Addition

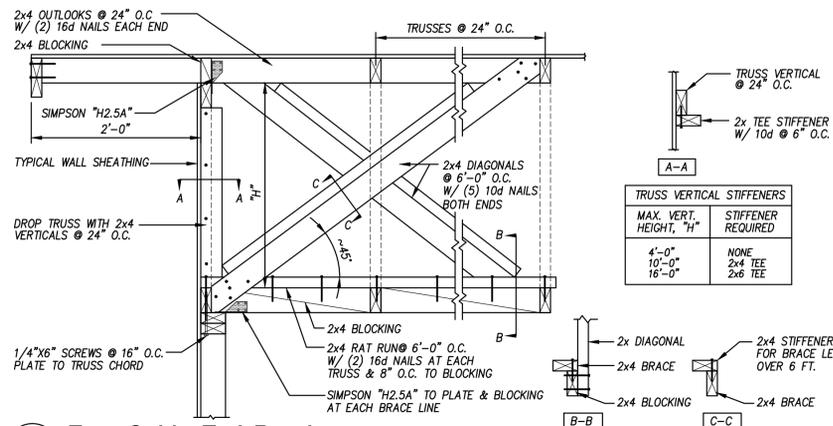
Drawing Name: Structural Notes & Schedules

Drawn by: GS WAYLAND

Date: MARCH 25, 2018

WSE Project No.: 18038

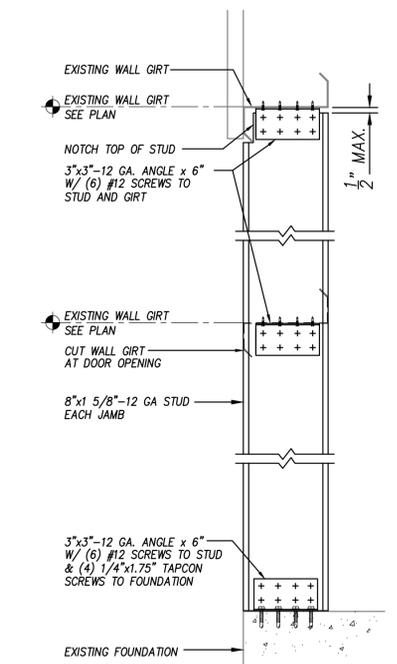
Drawing No. **S1.01**



TRUSS VERTICAL STIFFENERS

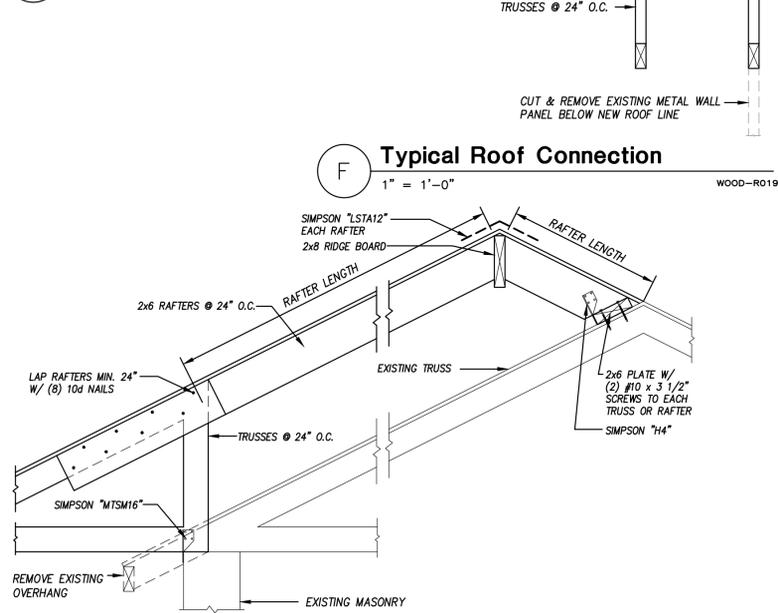
MAX. VERT. HEIGHT, "H"	STIFFENER REQUIRED
4'-0"	NONE
10'-0"	2x4 TEE
16'-0"	2x6 TEE

E Typ. Gable End Bracing
1" = 1'-0"

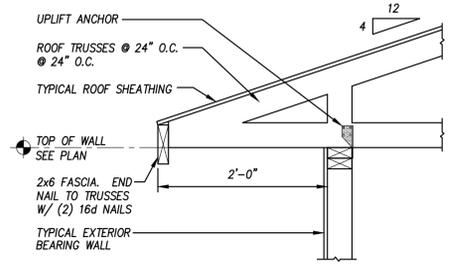


H Typical Door Framing
1 1/2" = 1'-0"

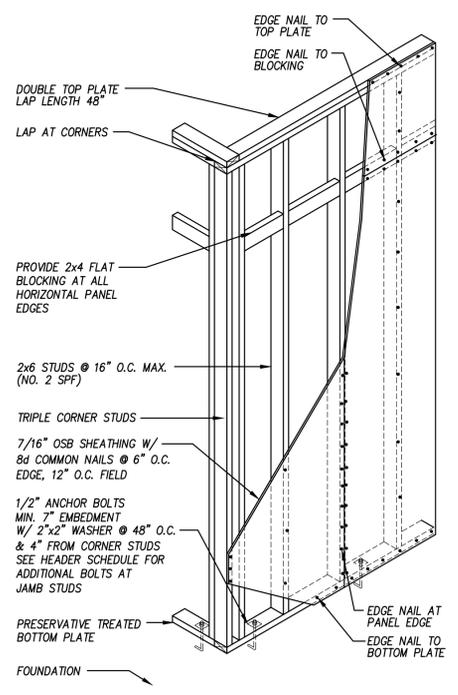
F Typical Roof Connection
1" = 1'-0"



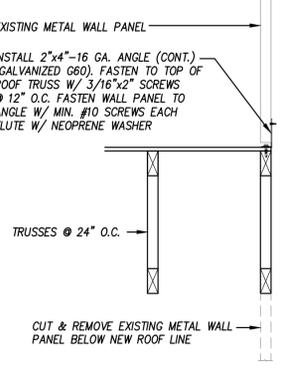
G Typical Roof Overbuild
1" = 1'-0"



D Typical Truss Bearing
1" = 1'-0"



B Typical Exterior Bearing Wall
1/2" = 1'-0"



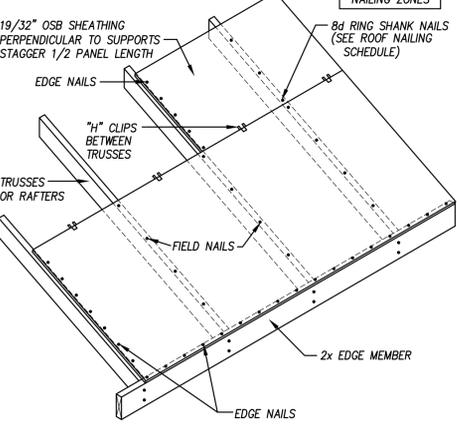
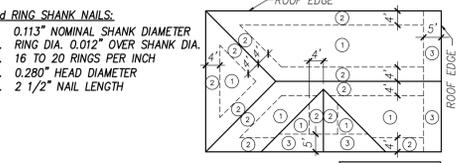
HEADER SPAN (FT)	HEADER	QTY JACK STUDS	QTY FULL STUDS	STRAP (A) SPACING	STRAP (B) QTY	STRAP (C) QTY	STRAP (D) QTY
4'-0"	(2) 2x8	1	1	32" O.C.	1	1	*
6'-0"	(2) 2x10	2	1	32" O.C.	1	1	*

* PROVIDE BOLTS AT SPACING SPECIFIED FOR TYPICAL WALL CONSTRUCTION.

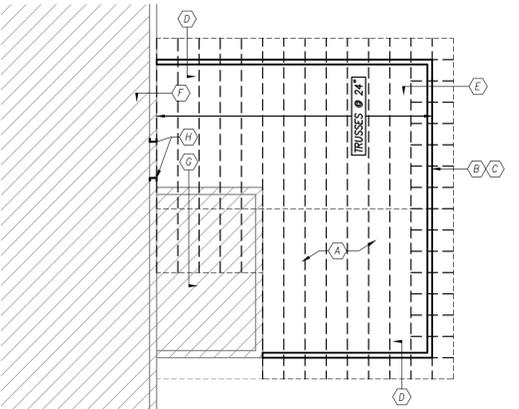
- ALL CONNECTORS ARE BY SIMPSON STRONG-TIE OR EQUIVALENT.
- PROVIDE 1/2" OSB SPACER BETWEEN PLYS FOR DIMENSIONAL LUMBER.
- FASTEN HEADER PLYS TOGETHER WITH 16d NAILS @ 12" O.C. STAGGERED.
- FASTEN JAMB STUDS TOGETHER WITH 10d NAILS @ 12" O.C.
- DIMENSIONAL LUMBER HEADERS - NO. 2 SOUTHERN PINE (SP).

C Typical Header Schedule
1/2" = 1'-0"

ROOF SHEATHING NAILING ZONE	NAIL SPACING			
	120 MPH	130 MPH	140 MPH	150 MPH
(1) EDGE	6"	6"	6"	6"
(2) FIELD	12"	12"	12"	12"
(3) EDGE	6"	6"	6"	6"

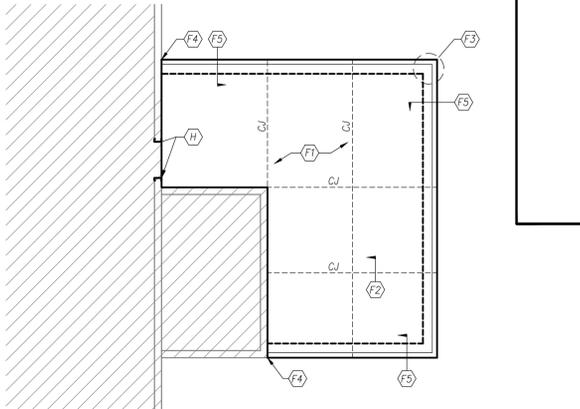


A Typical Roof Sheathing Detail
1/2" = 1'-0"



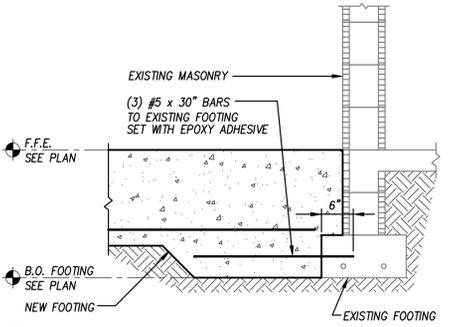
- SYMBOL KEY**
- (B) DETAIL
 - (C) ANCHOR
 - (D) EXISTING WALL
 - (E) EXTERIOR BEARING/SHEAR WALL
 - (F) TRUSS
 - (G) BEAM
 - (H) GRID TRUSS
- ANCHORS (SIMPSON STRONG-TIE)**
PROVIDE "ZMAX" COATING FOR ALL CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD.
- (C) "H2.5A" + (3) 10d TOE-NAILS UNLESS OTHERWISE NOTED

2 Roof Framing Plan
1/8" = 1'-0"

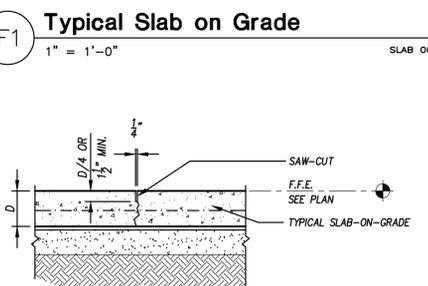


- ANCHORS (SIMPSON STRONG-TIE)**
PROVIDE "ZMAX" COATING FOR ALL CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED WOOD.
- (C) "H2.5A" + (3) 10d TOE-NAILS UNLESS OTHERWISE NOTED

1 Foundation Plan
1/8" = 1'-0"

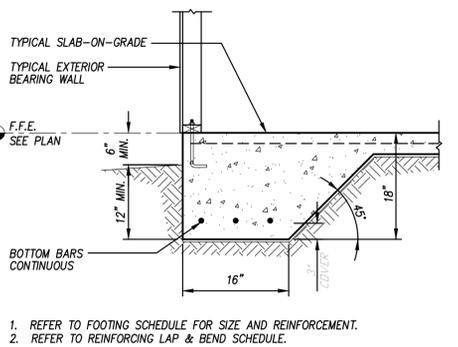


F4 Typical Tie To Existing Wall
3/4" = 1'-0"

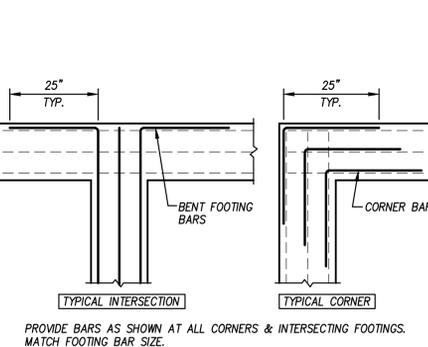


F1 Typical Slab on Grade
1" = 1'-0"

F2 Typical Saw-cut Contraction Joint
1" = 1'-0"



F5 Typical Monolithic Wall Footing
3/4" = 1'-0"



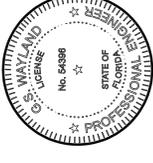
F3 Typical Intersecting Footings
1/2" = 1'-0"

Drawing Status: For Permit & Construction

Rev. No.: 1 Date:

Description:

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Client: Columbia County Board of County Commissioners
Lake City, FL

Project Name: Columbia County Public Works Engineering Office Addition

Drawing Name: Foundation & rRoof Framing Plans, Details

Drawn by: **GS WAYLAND**

Date: MARCH 25, 2018

WSE Project No.: 18038

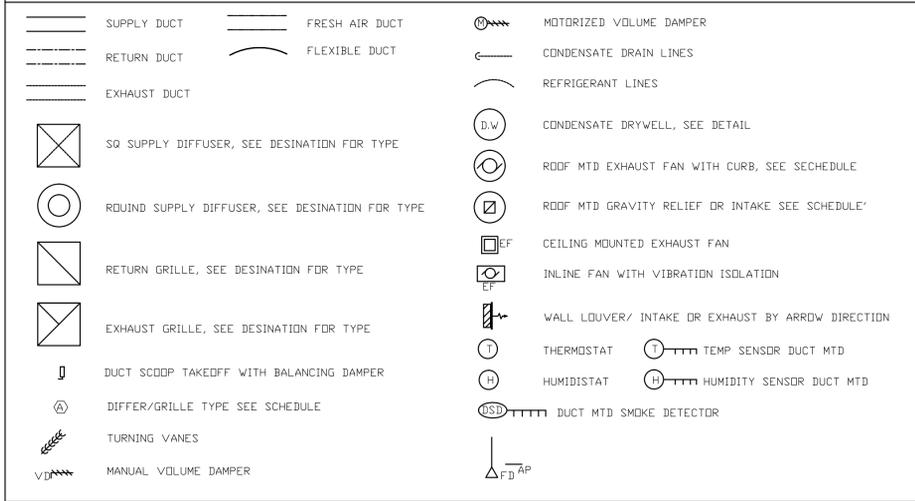
Drawing No. **S2.01**

SPLIT SYSTEM AIR CONDITIONING SCHEDULE

MARK	SYSTEM TYPE	AHU MODEL	L/W/H/WT	NDM TON	COOLING CAPACITY			RATING CONDITIONS		HEATING CAP/HSFP		AHU TYPE		FAN				AUXILIARY HEATER		AH W/HEAT		CONDENSING		COMP		FAN		ELECTRICAL		DIMENSIONS		WT.	
					SENS.	TOTAL	SEER/IEER	AMB	EAT-DB/WB	TOTAL	HSPF/CDP	CDNFIG	AIR FLOW	CFM	EXT. SP.	DRIVE	RPM	HP	VOLTS/Ø/FLA	KW	STAGE	VOLTS	PH	MCA	BKR	UNIT	AMPS	AMPS	MCA	BRKR	V/PH	H/W/D	LBS
HP-1/AH-1	HEAT PUMP	GAF2A036M31	44x24x24/111	2.0	22400	16800	13.0	95	80/67	21200	7.7/3.5	CDNV	VERT.	800	.5	D	1075	1/2	208/1/4.1	7.68	1	240	1	45	45	4TWR50241000A	10.9	.64	14	25	240/1	38/33/30	174

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. INTEGRAL FUSE DISCONNECT & CONTACTORS

MECHANICAL LEGEND



LOUVER SCHEDULE

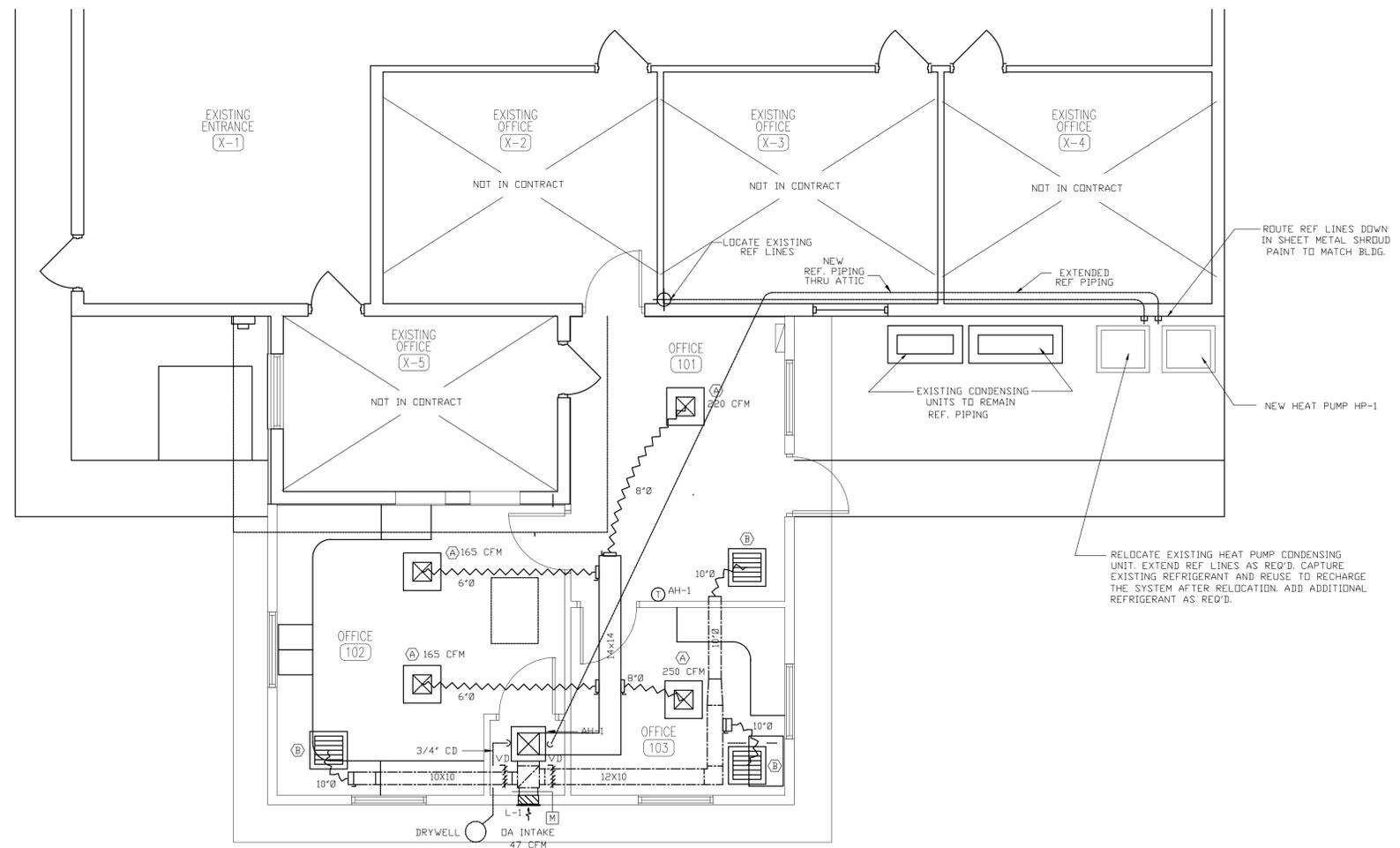
MARK	MFR.	MODEL	AREA SERVED	FINISH	WXH(IN.)	MIN. FREE AREA (SQ)	CFM	MAX. FACE VELOCITY	NOTES
L-1	RUSKIN	ELF 3750	AH-1	CLEAR ANODIZED	12 x 12	0.3	75	500 FPM	1,2,3

NOTES:
 1. INSECT SCREEN
 2. COORDINATE FRAME TYPE WITH WALL CONSTRUCTION
 3. COUNTERBALANCED BACKDRAFT DAMPER

AIR HANDLER NUMBER - AH-1								
ROOM NAME	AREA (SQ. FT.)	SPACE REQUIREMENTS	OCCUPANCY REQUIREMENTS				TOTAL O/A CFM	
		CFM/SQFT	CFM	PEOPLE/SQFT	PEOPLE	CFM/PERSON	CFM	
101 OFFICE	173	.06	10	5/1000	1	5	5	15
102 OFFICE	220	.06	13	5/1000	1	5	5	18
103 OFFICE	153	.06	9	5/1000	1	5	5	14
TOTAL								47

GRILLE & DIFFUSER SCHEDULE

MARK	TYPE	NECK	FACE SIZE	DESCRIPTION
(A)	000-60	60	12x12	SUPPLY DIFFUSER
	61-110	60	24x24	BASIS OF DESIGN: TITUS TMS
	111-240	80	24x24	COLOR: WHITE
	241-420	100	24x24	MATERIAL: ALUMINUM
	421-620	120	24x24	MOUNTING: SEE PLANS
621-750	140	24x24	OPPOSED BLADE DAMPERS: NO	
(B)	000-100	60	12x12	RETURN/EXHAUST GRILLE
	101-110	60	24x24	BASIS OF DESIGN: TITUS 50F
	111-220	80	24x24	COLOR: WHITE
	221-350	100	24x24	MATERIAL: ALUMINUM
	351-530	120	24x24	MOUNTING: SEE PLANS
	531-730	140	24x24	MOUNTING: SEE PLANS
	731-970	160	24x24	OPPOSED BLADE DAMPERS: NO
	971-1300	180	24x24	OPPOSED BLADE DAMPERS: NO



HVAC PLAN
 1/4" = 1'-0"

COBURN AND ASSOCIATES, INC.
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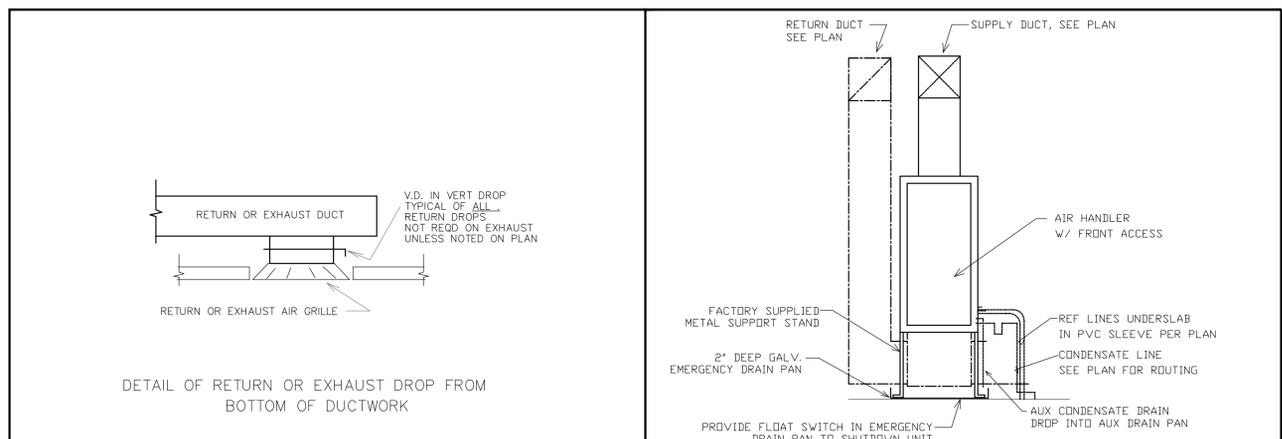
COLUMBIA COUNTY PUBLIC WORKS
 ENGINEERING OFFICE ADDITION
 COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS LAKE CITY, FLORIDA

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 RICHARD E. COBURN PE
 CA JOB NO. 1747

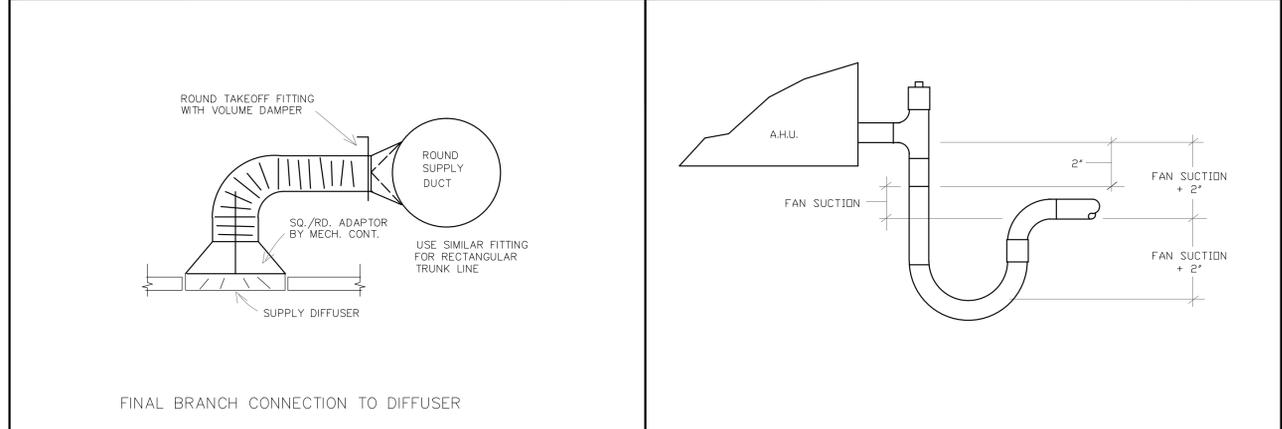
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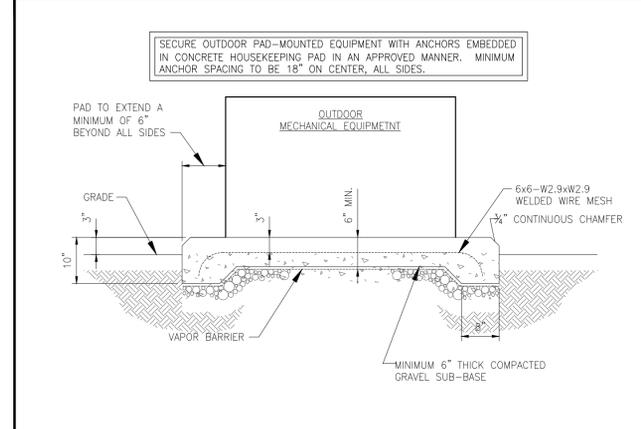
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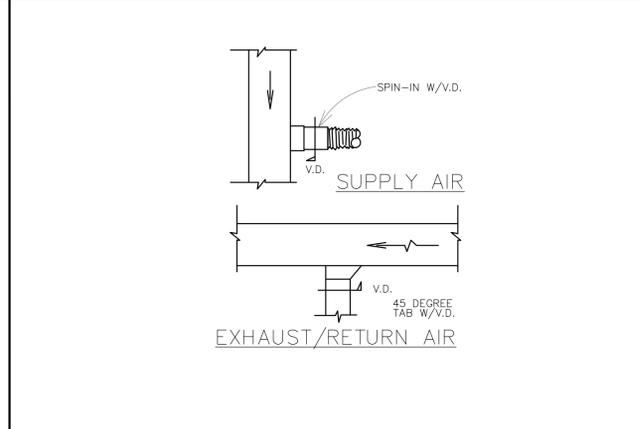
RET./ EXH. DROP DETAIL NTS 4 M2.0 TYPICAL AIR HANDLER DETAIL NTS 1 M2.0



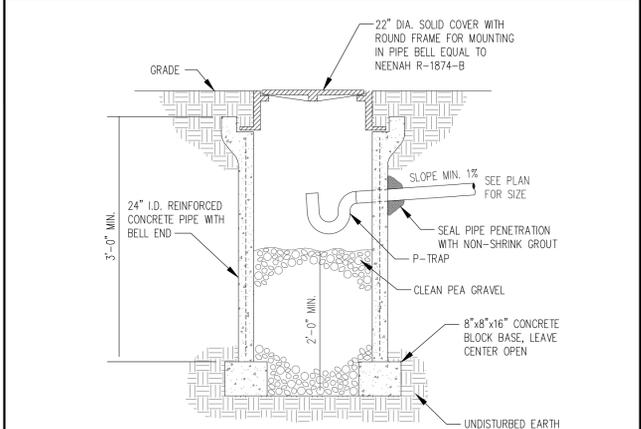
CONNECTION TO DIFFUSER NTS 5 M2.0 AHU CONDENSATE DRAIN DETAIL NTS 2 M2.0



EQUIPMENT PAD DETAIL NTS 7 M2.0



AIR DUCT DETAILS NTS 6 M2.0



DRYWELL DETAIL NTS 3 M2.0

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COLUMBIA COUNTY PUBLIC WORKS
 ENGINEERING OFFICE ADDITION
 COLUMBIA COUNTY BOARD OF COUNTY COMMISSIONERS LAKE CITY, FLORIDA

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M2.0
 OF
 SHEETS

HVAC SPECIFICATIONS

A. It is the intent of these specifications to define the work and materials typically installed by a Mechanical Contractor. However, it is not intended to define a subcontract between the Mechanical Contractor and the General Contractor. The General Contractor is responsible for the entire project and any questions regarding scope of work shall be directed to the General Contractor.
B. Work shall include all labor, materials, fixtures, equipment, tools and service necessary for installation, testing and adjusting of all mechanical systems shall be furnished and installed in compliance with the Drawings, Specifications, and any Addenda thereto.
C. Drawings and Specifications shall be understood to cover, according to their intent and meaning, complete mechanical systems. Work shown and not specified, or work specified and not shown shall be performed as though mentioned in both.
D. Minor items and accessories reasonably inferred as necessary for the complete and proper operation of any system shall be provided by contractor or subcontractor for such system whether or not they are specifically called for.
E. Before submitting a bid, the Mechanical Contractor is to coordinate with the General Contractor to ascertain, in detail, the division of work, and the extent of performance other subs and the General Contractor.
F. All work shall be performed or installed in strict accordance with Florida Building Code 2017 Mechanical, NFPA 101, NFPA 90A and local ordinances.

G. Fees for permits, inspections, patent use, royalties, etc. shall be paid by the contractor. H. All systems shall be tested for proper operation, rotation air supply, water supply, pressures, flows, balance, vibration, and appropriate interlocks as required by these specifications or manufacturers' recommendations.

I. All work shall be installed in accordance with the appropriate codes and satisfy the local inspector having jurisdiction.

J. Upon completion of each part of the mechanical system, the contractor shall demonstrate to the Engineer that each item on that system is installed with proper covers, safeties, controls, etc., and that all are in proper working order.

K. A set of "red-lined" mechanical drawings shall be carefully maintained at the job site. Actual conditions are to be put on the drawings in red on a daily basis so the drawings will continuously show locations and routings of piping, ducts, grilles, equipment, valves, and any equipment specified on the drawings or in these specifications.

L. Equipment and materials shall be new and meet or exceed specification requirements.

1. All products shall be current model for which replacement parts are available.
M. Acceptable manufacturers are listed, additional manufacturers may request approval for their products up to 10 days in advance of bid. Engineer may require supplemental information prior to accepting or rejecting the alternate.

N. All work shall be performed in compliance with OSHA regulations.

O. Shop drawings and product data shall be submitted on all equipment, fixtures, etc.

1. Submittals shall include all equipment to be installed by the subcontractor and all submittals must be made at same time.

2. Each package must have the General Contractors review stamp prior to submittal.

3. The Engineer will review one submittal and one resubmittal; subsequent resubmittals may require a review charge to be paid by subcontractor.

4. Shop drawings shall be labeled in the same designation as the drawings.

P. Job conditions shall be determined prior to bidding in the following manner:

1. Site visit to determine:
a. Existing conditions.
b. How and where materials will be delivered and stored.
c. Special problems encountered during construction.

2. Examine all Contract Drawings and Specifications to determine:
a. Type of construction to be used.
b. How construction or work will affect the work of this Section.
c. Nature and extent of work of other trades.

3. Failure to determine existing conditions or nature of construction will not be considered as a basis for granting additional compensation.

R. Installation:
1. Contract Drawings show the arrangements and sizes of principal apparatus and devices to be provided under this Contract and connection thereto. These shall be followed as closely as actual building construction will permit.

2. Dimensions of work as indicated on Plans are not guaranteed to be as-built dimensions.

3. No measurements shall be scaled from Drawings and used as definite dimensions for layout or fitting work in place.

4. Layout of equipment, as shown on the plans, shall be checked and exact location determined by dimension if equipment approved by the Architect.

5. Consult the Drawings for all dimensions, locations of partitions, sizes of structural member, foundations, etc.

6. Do not make final layouts until shop or equipment drawings are approved and job conditions verified.

7. Mechanical reference symbols are given on the mechanical legend on the drawings.

S. Rough-in:
1. Work included:
a. Contractor shall rough-in for all equipment, fixtures, etc., in building whether or not such equipment is furnished by this Contractor or by Owner.

2. Method:
a. Determine in advance the location and size of all openings and chases necessary for proper installation of all work and have openings and chases provided during construction.

b. Install all inserts for hangers and supports of mechanical work and equipment work as general construction progresses.

c. Rough-in openings in masonry or stud walls shall be cut, not broken or chiseled.

d. Sleeves shall be required at all points where piping passes through concrete walls, slabs or masonry walls; sleeves installed below grade or where subject to high water conditions shall be installed watertight.

T. Coordination:
1. Work shall be coordinated between all Contractors, Subcontractors, Installers, Suppliers, Trades, etc., to:
a. Insure a neatly fitted installation.
b. Determine the nature and extent of the work of others.
c. Eliminate interferences.
d. Maintain maximum headroom and clearances.

2. Any interference which develops or is foreseen and cannot be resolved by the affected trades, etc. shall be handled as follows:
a. Cease installation of that portion of the work which is in conflict as no additional compensation will be allowed for any relocation, etc.
b. Continue work only on other portions of the work which are not in conflict.
c. Notify the Architect immediately.
d. Architect's decision shall be final as to any relocation, rerouting, removal, etc.
e. No additional compensation will be allowed for removal, relocation, repairs or changes required by interferences.

U. Clear away all debris, surplus materials, etc., resulting from work on operations, leaving job and equipment in clean first-class condition.

V. Clean all rotating equipment, ducts, piping, etc., and leave them in a ready-to-use condition.

W. Where factory finish is provided on equipment, all marred or damaged surfaces shall be touched-up or refinished hereunder as approved.

X. Thoroughly clean all items of equipment, leaving them in first-class condition.

Y. Wipe clean or wash if necessary air surfaces of all coils, fan housings, fan wheels, fan motors, air unit plenums, and all air filters.

Z. All pumps, motors, fans and other rotating equipment shall be stored at Site with openings, bearing, etc., covered to exclude dust and moisture; all stockpiled conduit shall be placed on dunnage, and protected from weather, from entry of foreign materials.

BALANCING OF AIR SYSTEMS
A. Balance and adjust each air distribution system shown on the Drawings.
B. Perform work in accordance with procedures and standards described in SMACNA Balancing and Adjustment Manual.
C. Balancing shall be done by a certified balancing firm independent of the Mechanical Contractor.
D. Reports shall be made on SMACNA forms.
E. Submit five (5) copies for approval and record.
F. Examine HVAC units to see that they are free from obstructions.
G. Open all dampers and grilles.
H. Check lubrication of all moving equipment.
I. Check for proper installation of filters.
J. Perform other inspection and maintenance activities necessary for proper operation of systems.

K. Fuse sizes and thermal overload heaters shall be checked against each motor nameplate.
L. The amperage shall be read at each electrical motor to determine the load imposed on it.

M. Adjustment and Balance:
1. Adjust variable type pulleys, volume dampers, control dampers, etc. to provide correct volumes to main trunk lines.
2. Check and adjust outside air quantities as required.
3. Adjust air extractors and manual balancing dampers to supply correct air volume to each main branch duct from main trunk lines.
4. Adjust manual balancing dampers to supply correct volume to each individual branch duct.
5. Use terminal registers only for minimal adjustment of air flows, i.e. less than 5% of air volume.
6. Adjust grilles and diffusers for proper air flow patterns.
7. Air conditioning units shall be placed in operation and both wet and dry bulb temperature taken at one-hour intervals to determine the amount of cooling being accomplished and to indicate adjustments needed.
8. After spaces have been brought down to design temperatures and equipment is functioning properly, air shall be rebalanced if necessary by means of calibrated thermometers placed in each room and in open spaces, not over 20' apart. There shall be no deviation in temperature of more than 3 F. throughout the space cooled.
9. A thorough check shall be made, with an anemometer, of air motion in the occupied space. Any air motion exceeding 50 fpm shall be remedied.

SPLIT SYSTEM UNITS, HP-1/1A-1
A. Split System heating and cooling units with reverse cycle and heat strip where specified.
B. Acceptable Manufacturers
1. Trane
2. Carrier
3. Lennox
C. BLOWER COIL SECTION
1. Airflow as indicated on drawings.
2. Fan shall be direct - drive, forward-curved, double inlet, statically and dynamically balanced.
3. Fan motor shall be resiliently mounted and shall be easily removable for service.
4. Fan motor shall be permanent - split capacitor type with integral overload protection, high - efficiency, Florida Energy Code Minimum.
5. Cooling coil shall have aluminum fins mechanically bonded to copper tubing. Coil shall have factory installed refrigerant metering device.
D. CONDENSING SECTION
1. Outdoor unit shall be designed for use with Refrigerant 134a and contain sufficient charges (R134a) for complete system. Brass service valves with refrigerant line fittings and service ports shall be located on exterior of unit.
2. Outdoor coil shall be constructed with aluminum fins mechanically bonded to non-ferrous tubing. Factory installed coil refrigerant metering device shall be mounted on unit liquid service valve. Metering device internal components shall be removable for cleaning or replacement.
3. Outdoor unit fan shall be propeller type, direct driven, and arranged for vertical air discharge. Fan motor shall be factory lubricated, inherently protected and resiliently mounted.
4. Compressor shall be of the welded-hermetic type with internal vibration isolation and shall be covered with a shield to muffle operating sound. Compressor motor shall have both thermal and current - sensitive overload device. Compressor shall be equipped with a crank-case heater and have internal high-pressure protection.
5. Controls shall be factory wired and located in a readily accessible location. Controls and protective devices shall include a liquid line low pressure switch, suction line accumulator and pressure relief device. Control wiring terminal board shall be designed to match indoor unit terminal board and accessory thermostat terminals for standardized point-to-point connection.
E. Resistance Heater:
1. Heaters shall be wired for the number of stages of operation indicated on the Drawings.
2. Heaters shall be equipped with thermal and current overload devices as required by equipment listings and applicable codes.
F. Refer to Mechanical Equipment Schedule for Model Numbers.
G. MOTORIZED OUTSIDE AIR DAMPER
1. Provide a motorized low leakage outside air damper interlocked with the thermostat.

EXHAUST FANS -N/A
A. All exhaust fans mounted in the ceiling inside the building and ducted to the outside.
B. Meet the specification for air delivery at static pressure as specified on the Equipment Schedule.
C. Meet the noise criteria (if specified on Schedule).
D. Be of the manufacture and model number specified in the Equipment Schedule or equal.
E. Shall be UL listed.
F. Acceptable Manufacturers
1. Breidert
2. Carnes
3. Greenheck
G. General
1. Acoustically insulated steel housing
2. Baked enamel finish on housing
3. Adjustable mounting brackets
4. Automatic backdraft damper at the discharge duct
5. Lifetime lubricated motor
6. Terminal box on housing with cord, plug and receptacle inside the housing.
7. Fan motor and wheel shall be removable without removing entire fan housing.

DUCTWORK
A. RECTANGULAR SUPPLY DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH 2" R-6 INSULATION; EXPOSED ROUND DUCT SHALL BE GALVANIZED DOUBLE WALL WITH 1" INSULATION BETWEEN THE WALLS.
B. GENERAL EXHAUST DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH NO INSULATION.
C. RETURN DUCTWORK SHALL BE GALVANIZED SHEETMETAL WITH 2" INSULATION.
D. FLEXIBLE DUCTWORK IS ALLOWED ONLY WHERE SHOWN AND SHALL NOT EXCEED 12' FEET IN LENGTH. FLEXIBLE DUCT SHALL MEET UL 181 CLASS 1.
FLEXIBLE DUCTWORK WHERE INSTALLED SHALL BE ATTACHED USING SPIN-IN TAKE-OFFS WITH LOCKING QUADRANT DAMPERS.

E. LOW - PRESSURE SHEETMETAL DUCTWORK
1. Except as otherwise specified or detailed on the Drawings, all ductwork shall be constructed in accordance with the Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)
2. Duct systems shall be complete, including all duct fittings, turning vanes, transverse reinforcing hangers, supports, etc., as detailed on the Drawings or in the standards.
3. Provide and install balancing dampers or adjustable splitters at all branch ducts, and where required for balancing the system.
4. Each damper shall be adjustable with an approved quadrant or regulator. Dampers to be opposed blade type for ducts over 12" in any dimension, for ducts 12" single blade is acceptable except for outdoor air intakes which shall be low-leakage opposed blade.
5. Dimensions shown are net inside dimensions (including insulation).
6. Galvanized sheetmetal duct shall conform to the following thicknesses
a. Largest dimension Gauge
0-30 inches 24
30-54 inches 22
55-84 inches 20
over 84 inches 18

G. Plenums shall be constructed and tested in accordance with SMACNA STANDARDS.

H. FLEXIBLE CONNECTIONS
1. Provide between duct system and air moving equipment
2. Connection shall be made with not less than 4" wide flexible collar using "Ventglas" 30-ounce neoprene coated glass fabric.
I. Where construction methods for various items are not indicated on the Drawings or specified herein, all such work shall be fabricated and installed in strict accordance with the recommended methods, metal gauges, hanging procedures, access door and accessory installation, etc., as outlined, the latest edition of SMACNA'S Duct Manual and Sheet Metal Construction for Ventilating and Air Conditioning System.

pocket slip or Bar-s slip not more than 8 ft. apart up to 24 in. largest dimension and not more than 4 ft. apart above 24 in. largest dimension
J. Leakage:
1. Contractor shall make necessary repair and shall make duct system ready for a leakage test.
2. Test shall be performed by Test and Balance Contractor.
3. Leakage shall not exceed 1 % leakage for high pressure duct and 5 % for low pressure duct construction.

DUCT INSULATION
A. Acceptable Manufacturers
1. Johns-Manville
2. Certaineed
3. Knauf
B. Duct Wrap:
1. 2" thick fiberglass - R6 INSTALLED
2. Flamespread 25 per ASTM E-84
3. Smoke developed 50 per ASTM E-84
4. Factory applied vapor barrier - heavy duty
4 mil vinyl film, class 1, meeting NFPA 90A and 90B, UL rated
5. Product:
a. Johns-Manville "Microelite"
C. Accessories:
1. Insulation tape, mastic, adhesives, etc., shall have the same flamespread and smoke rating as the insulation to which they are applied and meet manufacturer's recommendations.
D. Ductwrap
1. Overlap seams of ductwrap, secure with 4" wide open weave glass fabric and two coats of vapor retarder mastic.
2. Underside of ductwork greater than 24" wide shall also be secured with mechanical fasteners with tape.
3. Pressure tape is not acceptable.

DUCT HANGERS AND SUPPORTS
A. All ductwork for air supply, return, fresh air or exhaust shall be supported by duct hangers, clamps, clips or supports.
B. Acceptable Manufacturers
1. Duct hangers may be a manufactured item or field fabricated as required.
C. Galvanized steel straps
1. Minimum 1/6 gauge and one inch wide
D. Trapeze hangers
1. Ducts 20 inches to 40 inches largest dimension.
a. Minimum 1 inch x 1 inch x 1/4 inch steel angles.
b. Minimum 1/4 inch threaded rod
2. Ducts above 40 inches largest dimension and plenums
a. Minimum 1-1/2 inch x 1-1/2 inch x 1/4 inch steel angles.
b. Minimum 3/8 inch threaded rod.
E. Supports
1. All ductwork shall be supported from structural building members, i.e. block, beams, columns, purlins, joists, etc.
2. Ductwork shall not be supported from ceiling tile or grids, conduit, mechanical equipment, piping or non-structural steel.
3. Ductwork hangers shall be attached to building steel by bolts, screws, clamps or welding.

F. Hanger Bands
1. Horizontal concealed ductwork up to 20 inches largest dimension shall be supported by one (1) inch x 16 gauge galvanized steel straps at a maximum spacing of 10 ft. and at each elbow or branch takeoff.
2. Bands and spacing shall be at a maximum spacing of 10 feet on horizontal runs and at each elbow or branch takeoff.
a. No nails shall be driven through any ductwork and into floor joists, trusses, etc.
3. Vertical ductwork, all sizes, shall be supported by bands bolted or screwed to walls, studs, etc.
4. Hanger bands shall be bent over one (1) inch from end and turned under corners of rectangular duct.
5. Duct hanger bands shall be fastened with sheet metal screws at six (6) inch intervals up sides and into bottom.
a. Sheet metal screws shall be 3/4 inch so as not to penetrate duct liner completely.
G. Trapeze Hangers
1. Horizontal ductwork larger than 20 inches largest dimension and all exposed ductwork shall be supported by trapeze type hangers.
2. Trapeze hangers shall be at a maximum spacing of 10 feet and at each elbow or branch takeoff.
3. Hanger rods shall be secured to bottom bracing angles with nuts and locknuts.

DUCT ACCESSORIES
A. Air distribution system shall be furnished complete with duct accessories necessary to allow complete air balancing and adjusting of flow and volume.
B. All square duct takeoffs and "T" connections shall be fitted with turning vanes.
C. All branch duct takeoffs shall be fitted with nonadjustable air turning vanes AND manual volume control dampers, OR adjustable volume extractors which are adjustable from outside the duct.
D. Each grille and diffuser shall be fitted with a manual volume control register at the face of the grille and adjustable from the face of the grille without requiring removal of the grille.
E. Acceptable Manufacturers
1. Barber Colman
2. Titus
3. Properly submitted approved equal
F. Air turning vanes:
1. Multiple radius vanes
2. Steel construction
3. Electrocoated white finish
4. Maximum pressure loss = 20 % of velocity head
5. Model number - equal to Barber Colman Models
AOCOA and AOCOF
G. Volume Extractors:
1. Gang operated parallel blade
2. Fully adjustable from wide open to full closed
3. Supply with supporting foot as required for branch takeoffs not in the same plane as trunk lines.

VOLUME DAMPERS

A. All return air and fresh air dampers shall be parallel blade pivot dampers with motorized control where noted.
B. All balancing dampers shall have manual control dampers with positive position locking.
C. Acceptable Manufacturers
1. Prefco Manufacturing Co.
2. Titus
3. Ruskin
D. Parallel Blade Pivot Dampers:
1. Low leakage non-degradable
2. Friction free metal to metal seals incorporated into the blade and frame shapes
3. Galvanized steel frame, 16 gauge
4. Galvanized steel blades, 22 gauge with double-wrapped center and edge forming
5. Maximum leakage - 11 CFM per sq. ft. @ 1 inch S.P.
6. The static pressure loss shall not exceed 0.7" W.G. @ 2000 FPM and 50 % modulation
7. Model Number
a. Equal to Prefco Model 5150
8. Classified 1-1/2 hour rating, UL Listed.
9. Fire dampers shall have thermal link.
10. Model:
a. Dampers shall be equal to a Prefco "Low Profile B" or approved equal.
D. Dampers - mounted horizontally in ceiling:
1. UL Listed ceiling damper
2. Round or square as required
3. 2 hour rated
4. Single or dual blade depending on duct size
5. Model Number
a. Prefco Model 5650, 5600, or 5660
E. Link:
1. Fusible link rated at 165 Degrees F. release temperature.

DUCT ACCESS PANELS AND TEST HOLES
A. Provide an access panel at each return air and/or fresh air damper which will allow for inspection and cleaning of dampers.
1. Where return and fresh air dampers are located adjacent, one access door is sufficient, providing each damper is accessible.
B. Provide an access panel at each fire damper for resetting and maintenance of each fire and smoke damper.
C. Provide test holes for measurement of air flow, on each branch duct and main trunk line or plenum.
D. Acceptable Manufacturers
1. Penn Ventilator Co.
2. Ruskin
E. Access Doors:
1. Insulated hinged duct access door
2. Standard gauge galvanized steel
3. Continuous piano hinge
4. Gasketed at door frame surface and at frame to duct surface
5. Positive acting cam latch handle
6. Doors shall be of sufficient size to allow access to both sides of dampers
7. If duct width is greater than 36 inches, provide access doors on each side of duct for access to entire dampers.
8. Exception:
a. Where access door must be installed in such a position that hinged opening is not possible, provide door that is completely removable.
b. Removable door shall have cam-locks on both sides
9. Model Numbers:
a. Hinged doors shall be equal to Penn Ventilator Model DAD
b. Non-hinged removable door shall be equal to Penn Ventilator Model DAD-RP
F. Test Holes
1. Provide a capped access hole in each trunk line or branch duct for insertion of air-flow pitot for flow measurement.

GRILLES & DIFFUSERS
A. Aluminum fixed blade with air pattern and neck sizes as shown on grille and diffuser schedule.
1. Provide all supply diffusers with opposed blade dampers.

DISPOSABLE FILTERS
A. Provide 1" pleated with perforated metal back for RTU-1 and RTU-2
B. MERV-7

CONTROL SYSTEM
PART 1 - GENERAL
A. Model Numbers:
1. Hinged doors shall be equal to Penn Ventilator Model DAD
2. Non-hinged removable door shall be equal to Penn Ventilator Model DAD-RP
F. Test Holes
1. Provide a capped access hole in each trunk line or branch duct for insertion of air-flow pitot for flow measurement.

DESCRIPTION
A. GENERAL
1. Furnish and install all electrical controls and components for all mechanical systems as listed below.
B. SPLIT SYSTEMS - HP/1A-1
1. Provide Heat - Cool - Off, Fan-On-Auto, thermostat, electronic, fully programmable with 4 functions per day, seven day/week programmable, t'stat shall have auxiliary contacts for O.A. damper control.

PART 3 - SEQUENCE OF OPERATION
A. HP/1A-1
1. Occupied Mode-
a. Air Handler shall run continuously
b. Compressor shall cycle to maintain space temperature (heating or cooling)
c. Outside air damper shall open to min position as noted on dwgs.
d. Outside air damper shall open to set point cfm upon CO2 sensor above set point.
2. Unoccupied Mode-
a. Air Handler shall cycle with compressor
b. Compressor shall cycle to maintain space temperature (heating or cooling)
c. O.A. Damper shall close.

FIRE STAYS
A. Provide fire stays on each unit as required by code.
1. Firestat shall shut down all unit components including fans, compressors, .
DUCT SMOKE DETECTOR/N/A
A. Contractor shall install duct smoke detectors in each unit to shut down units if smoke detector is in alarm.

COBURN AND ASSOCIATES, INC.
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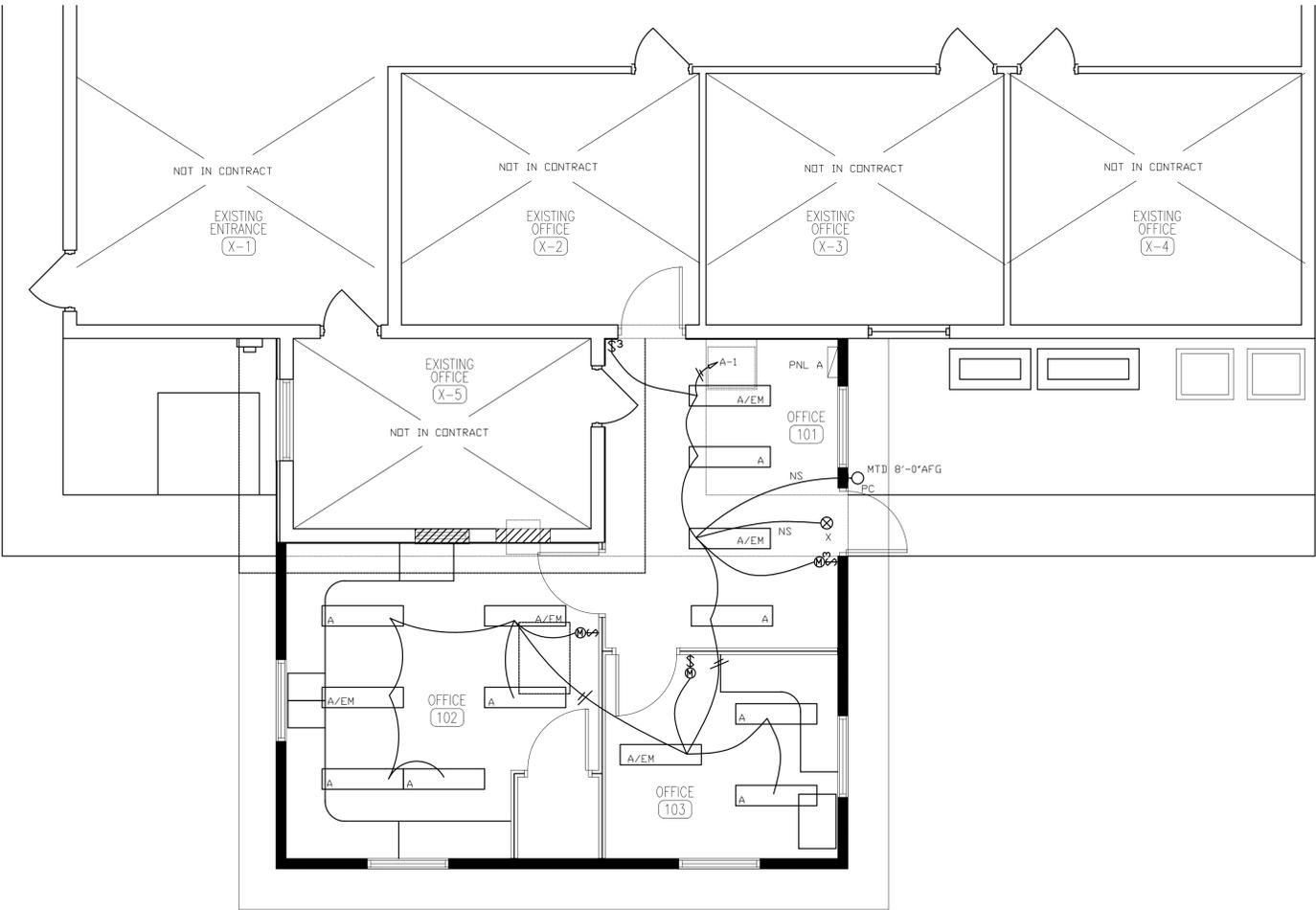
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ELECTRICAL LEGEND

	FLUORESCENT FIXTURE MULTITUBE-RECESSED OR SURFACE MTD. 24X48 *a*= FIXTURE TYPE DESIGNATION, SEE SCHEDULE -TYPICAL ALL LIGHT SYMBOLS
	FLUORESCENT FIXTURE MULTITUBE-RECESSED OR SURFACE MTD. 24X24
	FLUORESCENT FIXTURE MULTITUBE-WALL OR CEILING MTD.
	FLUORESCENT FIXTURE MULTITUBE-WALL MTD.
	FLUORESCENT FIXTURE SINGLE TUBE-SURFACE MTD.
	FLUORESCENT FIXTURE SINGLE TUBE-WALL MTD.
	SURFACE MOUNTED FIXTURE PER SCHEDULE, *a* = FIXTURE TYPE
	RECESSED FIXTURE PER SCHEDULE, *a* = FIXTURE TYPE
	WALL MOUNTED FIXTURE PER SCHEDULE, *a* = FIXTURE TYPE
	EXIT LIGHT-DIRECTION ARROW(S) AS INDICATED-SURFACE OR WALL MTD.
	EXIT LIGHT W/EM HEADS- ARROW(S) AS INDICATED-SURFACE OR WALL MTD.
	EMERGENCY BATTERY OPERATED LIGHT, SEE SCHEDULE = FIXTURE TYPE
	REMOTE POWERED TWIN HEAD EMERGENCY LIGHTS WEATHERPROOF
	TOGGLE SWITCH UP 42" UNLESS NOTED OTHERWISE
	TOGGLE SWITCH UP 42" UNLESS NOTED, 3 WAY, 4 WAY
	TOGGLE SWITCH UP 42", P= PILOT/ K= KEY OPERATED
	TOGGLE SWITCH, MOTOR RATED WITH THERMAL PROTECTION
	FAN-LIGHT SWITCH LIGHT FAN-ON-TIME DELAY OFF
	ON-OFF SWITCH WITH LOW VOLTAGE DIMMER
	MOTION SENSOR ON/OFF W/ ON OVERRIDE
	LINE VOLTAGE DIMMER
	FIXTURE WITH BATTERY PACK AND INVERTER
	NIGHT LIGHT
	DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE GFI
	QUADRUPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE AS NOTED
	FLOOR OUTLET
	JUNCTION BOX
	THERMOSTAT OUTLET HUMIDISTAT OUTLET
	DATA OUTLET UP 12" UNLESS NOTED- EACH SYMBOL = 2 CAT5E CABLES AND TWO RJ45 JACKS IN SINGLE GANG BOX >>> = (4) CABLES AND 4 JACKS DOUBLE GANG BOX, >>>> = (6) EACH ETC.
	TELEPHONE OUTLET (VOICE ONLY) UP 12" UNLESS NOTED/ FLOOR OUTLET
	DISCONNECT, 3=NO. OF POLES, 30=FRAME SIZE, 15=FUSE, X=NO FUSE
	MAGNETIC MOTOR STARTER OR CONTACTOR, 2= NEMA SIZE
	COMBINATION STARTER AND DISCONNECT
	ELECTRIC MOTOR-VOLTAGE, PHASE & SIZE AS SHOWN
	ELECTRICAL LIGHTING OR APPLIANCE PANEL BOARD
	ELECTRICAL DISTRIBUTION OR POWER PANEL BOARD
	CURRENT TRANSFORMER CABINET PER UTILITY SPECS
	UTILITY METER (PER UTILITY CO SPECS)
	TELEPHONE TERMINAL CABINET OR BOARD-SIZE AS NOTED
	SIGNAL OR SOUND CABINET OR BOARD-SIZE AS NOTED
	4'X8'/3/4" TELEPHONE TERMINAL BOARD W/ GROUND AND RECEPTACLE
	CONDUIT RUN CONCEALED IN WALL OR CEILING
	CONDUIT RUN UNDERFLOOR OR UNDERGROUND
	HOME RUN TO PANEL, LONG LINE=NEUTRAL OR GND, SHORT LINE(S)=CIRCUIT(S)
	ELECTRIC HEATER
	PHOTOCELL
	DUCT MOUNTED SMOKE DETECTOR
	REMOTE TEST STATION WITH TEST SWITCH, LED AND LOCAL HORN
	WEATHERPROOF
	GROUND FAULT INTERRUPTER
	MTD. UP 48" OR ABOVE COUNTERTOP BACKSPASH
	INDICATED A NON-SWITCHED CIRCUIT
	T.V. OUTLET

SYMBOL	TYPE			MANUFACTURER		MOUNTING			LAMPS	VOLTS	REMARKS
	FLOOR	INCAN.	OTHER	TITLE	CATALOG NO.	REC.	SUR.	OTHER			
A			LED	HE WILLIAMS	50FR14L45840-AF12125	X			4500 LUMEN LED-47W	120	OPTION EM/10W WHERE EM IS NOTED.
B			LED	HE WILLIAMS	WPI-L44/850-P85-WG-PC		X		4400 LUMEN LED-45W	120	PHOTO CELL, WIRE GUARD
X			LED	BEGHELLI	PXRSA-AT		X		LED	120	EXIT W/BATTERY PACK



ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"

CONSTRUCTION DOCUMENTS

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