

#### FLORENCE COUNTY SOUTH CAROLINA

#### INVITATION-TO-BID NO. 32-16/17

#### JOHNSONVILLE BALL FIELD CANTEEN BUILDING

#### BID OPENING: <u>Thursday, June 29, 2017 at 3:05 p.m. (EST).</u>

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## **DESCRIPTION PAGE NUMBER**

Florence County, South Carolina (Owner) is accepting bids from licensed and qualified Contractors to construct a Prefabricated Metal Building to be located at the Johnsonville Commerce Center at the Intersection of Holder Boulevard and J. Tanner Court in Johnsonville, SC.

In order to be considered, all bids must be hand carried or mailed <u>in a sealed envelope</u> to the Florence County Procurement Office, Florence County Complex, 180 N. Irby Street – MSC-R, Rm. B-5, Florence, SC 29501-3431 later than <u>Thursday</u>, June 29, 2017 at 3:00 p.m. (EST).

The sealed bids will then be opened and read aloud in room 210-C of the County Complex at 3:05 p.m. (ET) on Thursday, June 29, 2017.

Bids must be clearly marked, "Bid No. 32-16/17". Contractors mailing bids should allow delivery time to ensure timely receipt of their bid. The responsibility for getting the bid to Florence County on or before the specified time and date is solely and strictly the responsibility of the proposing firm. Any bids received later than the submission deadline <u>will not be accepted/considered</u>. Electronic bids will not be accepted. Directions may be obtained by calling (843) 665-3018. Florence County will in no way be responsible for delays caused by any occurrence.

Florence County under Title VI of the Civil Rights Act of 1964 and related statutes ensures that no person shall on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

Minority Business Owners (minority or woman owned businesses) will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex or national origin in consideration for an award. It is the policy of the County that minority business and women owned business enterprises (MBE/WBE) have an opportunity to participate at all levels of contracting in the performance of County projects to the extent practical and consistent with the efficient performance of the contract.

This request for bids does not commit Florence County to award a contract; to pay any cost incurred in the preparation of a bid; or, to procure or contract for the services. Florence County reserves the right to accept or reject any or all bids received as a result of this request; to negotiate with any or all qualified proposers; or, to cancel in part or in its entirety this bid invitation, if it is in the best interest of the County to do so.

#### SPECIFICATIONS/SCOPE OF WORK

One (1) 2,000 SF Pre-Engineered Metal Building to be use as a Canteen, Restroom & Storage for the Johnsonville Ball Fields in Johnsonville, SC (Please see the Attachment 1 Construction Plans). Building is located at the center of the ball fields, on a cleared fill area. Please note that the building is shown on the Civil Plans as a pentagon; it has since been changed to a standard 40'x50' metal building.

Contractor is responsible for the following:

- Metal Building: plans, County review and construction
- Foundation: design, plans, County review and construction
- Internal walls & architectural elements: County review and construction
- PM&E: County review and construction
- Special inspections (geotech, concrete, compaction, bolt tests)

Water and Sewer will be provided by the City of Johnsonville. A 4-inch C900 water line is located on site within 40 feet of the building location. A sewer manhole is located within 80 feet of the building location. See Civil drawings of Attachment A.

The proposed building location is accessible, clear of trees and vegetation, and located on approximately 18 inches of clean compacted fill. It has *not* been compacted and dressed for a building foundation. It is the Contractor's responsibility to insure that the pad is adequate prior to installing the foundation.

There has been no geotechnical exploration performed on this site.

#### MINIMUM MANDATORY REQUIREMENTS

The following minimum mandatory requirements shall be met and documented:

- 1. In business for at least the past five (5) years under the current business name without declaring bankruptcy. A letter on company letterhead declaring that the company has been in business for five (5) years + and has not declared bankruptcy can be included with the bid form in lieu of a bid bond. (Include with bid).
- 2. A minimum of four (4) similar project references with contact names and contact information (including a current e-mail address) that are past customers within the last three (3) years. Provide a brief project description, project budget, start and completion dates, and contact information. (Include with bid).
- 3. Copy of Worker's Compensation and General Liability Insurance with Florence listed as additional insured supplied to the Procurement Office prior to contract execution or commencement of any work. (Must be provided prior to execution of a contract).
- 4. The successful vendor must be able to meet all Federal, State, and local regulations required for this project. To be acceptable to the Owner, bidders must be skilled and/or licensed, if applicable, in the class of work on which they respond, and no bid will be considered from any bidder who is unable to show that he has actually performed considerable work of similar character to that on which he is bidding.

#### **INSTRUCTIONS TO BIDDERS**

#### 1) TAXES:

- a) Florence County pays SC Sales Taxes in the amount of 8%. **INCLUDE SC SALES TAX WITH YOUR BID.**
- 2) NON-RESIDENT TAXPAYER REGISTRATION AFFIDAVIT Nonresident proposers receiving income from business conducted in South Carolina are required to pay taxes to the state on that income. To facilitate this requirement, a nonresident proposer must register with the South Carolina Secretary of State or the South Carolina Department of Revenue. In compliance with South Carolina Code Section 12-8-540 and 12-8-550, a proposer located outside of South Carolina that receives a contract from the County, must furnish Form 1-312 (Rev.10/5/07), Nonresident Taxpayer Registration Affidavit Income Tax Withholding, properly executed and signed.
  - a) If your firm is not presently registered with the appropriate state office, you may indicate the intent to do so should your firm be awarded a contract. Questions concerning this form may be directed to the South Carolina Department of Revenue.
- 3) EMPLOYEE VERIFICATION PER THE SOUTH CAROLINA ILLEGAL IMMIGRATION REFORM ACT By entering into this Agreement, the Design Team hereby certifies to County that it will verify the employment status of any new employees, and require any consultants or subconsultants performing services hereunder to verify any new employees status, per the terms of the South Carolina Illegal Immigration Reform Act, and as set out in Title 41, Chapter 8 of the Code of Laws of South Carolina, 1976.

#### 4) RECEIPT AND OPENING OF SEALED BIDS:

- a) Sealed bids will be received and opened as specified in this Invitation-To-Bid document.
- b) The Owner will consider as non-responsive any bid not prepared and submitted in accordance with the provisions hereof and may waive any informality or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 120 days after the actual date of the opening thereof or as provided for the in the bid documents whichever is later.

#### 5) PREPARATION OF BID:

- a) All bids will be evaluated in accordance with procedures and specifications contained herein and Florence County Code. The responsiveness to same determined in accordance to the instructions and criteria in this document. Any bid not providing sufficient information and documentation to comply with the Invitation-To-Bid Evaluation requirements will be considered non-responsive and removed from further consideration.
- b) A bid shall be made in the official name of the firm or individual under which business is conducted (showing the official business address) and must be signed in ink by a person duly authorized to legally bind the person, partnership, company, or corporation submitting the bid.

- c) All information requested of the bidder shall be entered in the appropriate spaces on the provided forms. If additional space is required, attach additional pages as needed within the sealed bid response.
- d) Bidders mailing their bid must allow a sufficient mail delivery period to insure timely receipt of their bid. Florence County is not responsible for bids delayed by mail and/or delivery services of any nature. It is the bidder's sole responsibility to insure that all documents are received by person (or office) at the time indicated in the bid document. No facsimile or email submissions.
- e) Bidders must clearly mark as "Confidential" each part of their offer which they consider to be proprietary information that could be exempt from disclosure under Section 30-4-40, Code of Laws of South Carolina, 1976 as amended (Freedom of Information Act). If any part is designated as "confidential", there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. Florence County reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against Florence County or his agents for its determination in this regard.
- f) All information shall be entered in ink or typewritten.
- g) All proposed costs shall be for all licenses, permits, taxes, labor, material, transportation, equipment and any other components/services that are required to complete the work embraced herein this Invitation-To-Bid document.
- h) If applicable, each bidder shall show the names, address and license number of any subcontractors and the scope of their work, which he may employ on the Project. Subcontractors will be required to comply with all applicable requirements of the Specifications. If applicable, each bid shall include the bidder's name, address and South Carolina Contractor's License Number. In South Carolina, where a contract amounts to \$17,500 or more, the name and license number of the subcontractor, where bid is issued, shall also be shown. The license numbers shall be shown on the bid form bid which will be enclosed in the sealed bid.
- i) Each bid must be submitted in a sealed envelope, addressed to the Owner along with the name of the project for which the bid is submitted. The bidder shall also show his name and address, on the outside of the envelope. Failure to show the required information may result in rejection of the response and removal from further consideration. If forwarded by mail or carrier, the sealed envelope containing the bid must be enclosed in another outer envelope. Florence County shall not be responsible for unidentified bids.
- j) Each bidder must be registered with Vendor Registry to receive all addendums in conjunction with this project via e-mail. It shall be each bidder's responsibility to assure that all addenda have been received. No claim for failure to receive addenda will be considered. All addendums issued in accordance with this bid request can also be obtained from the Florence County Procurement Office located at the County Complex, 180 N. Irby Street; Room B-5, Florence, SC 29501, by e-mailing pfletcher@florenceco.org.

#### 6) BID BOND (SURETY) REQUIRMENTS:

- a) As discussed in the Bid Surety Requirement document contained herein, Bid Surety must accompany any and all responses submitted that contain estimated project costs exceeding thirty thousand dollars (\$30,000.00) Failure to satisfy this Bid Surety requirement will result in your bid being considered non-responsive and removed from further consideration for award of the subject contract. Bid Surety can be provided as discussed below.
- b) Bid Surety will not be required from Contractors that have been in business for five (5) consecutive years without filing for bankruptcy. A statement on the company's letterhead from the firm stating this qualification will replace the bid bond and must accompany the bid.
- c) For all bidders not meeting the criteria of "b" above, a deposit in the amount of five percent (5%) of the proposed total contract price shall accompany the bid. These deposits shall take the form of certified check, cashier's check or bond executed by a corporate surety licensed under the laws of this state. The cashier's check or certified check shall be deposited to the County's account if the successful bidder fails to enter into the proposed contract within ten (10) days after the award. Bid deposits of unsuccessful bidders will be returned as soon as the contract is awarded.

#### d) One of the above requirements must be met for your response to be considered.

#### 7) EXECUTION OF CONTRACT:

a) The bidder to whom an award is made shall deliver to the County a certificate of insurance as discussed in **Item 10 below**. The County's issuance of a purchase order and/or verbal notification of such execution may serve as the official "Notice to Proceed". Bidders failing to enter the proposed contract may be subject to Debarment and Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts. Bidders failing to enter the proposed contract may result in claims against bonds.

#### 8) LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

a) The successful bidder, upon his failure or refusal to execute and deliver the contract required within fourteen (14) calendar days after he has received "Notice of Award", shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid. Forfeiture of guaranty under this section may result in the bidder being subjected to Debarment or Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts.

#### 9) TERM OF CONTRACT AND CONTRACT DOCUMENTS:

a) The contract documents that will form the contract shall include:

The Complete Bid Document All Addenda The Successful Bidder's Submitted Bid Document Notice of Award (Verbal or Written) Purchase Order/Agreement/Contract Insurance Certification

#### 10) ORDER OF PRECEDENCE

a) In the event of inconsistent or conflicting provision of this contract and referenced documents, the following descending order of precedence shall prevail: (1) Florence County Procurement Ordinance, as amended (2) Bid Announcement/Advertisement (3) Special Terms and Conditions, (4) Instructions

to Responders and Vendor Agreements (5) Other provisions of the contract whether incorporated by reference or otherwise, and (6) the Specifications.

#### 11) INSURANCE AND BONDS:

a) Upon award of the contract or Purchase Order, the bidder shall maintain, throughout the performance of its obligations a policy of Worker's Compensation insurance with such limits as may be required by SC law, and a policy or policies of general liability insurance insuring against liability for injury to, and death of, persons and damage to, destruction of, property arising out of, or based upon, any act or omission of the bidder or any of its subcontractors of their respective officers, directors employees or agents. Such liability insurance shall have limits sufficient to cover any loss or potential loss resulting from this contract. Florence County must be listed as additional insured. The certificate must allow a minimum of a 30 day written notice of cancellation. Bidder shall provide a Certificate of Insurance to the Florence County Procurement offices prior to start of work.

#### 12) EXAMINATION OF PROJECT'S WORK SITES:

a) Each of the bidders shall fully familiarize itself with the conditions relating to the bid to insure complete understanding of all the details involved. The bidder shall satisfy itself as to the actual requirements of the bid by personal examination of its location or other means, so as to enable the bidder to make an informed bid. Failure to do so shall not relieve the successful bidder of its obligation to furnish all materials, products, and/or labor necessary to complete the provision of the awarded contract and failure to do so may result in the claims against bonds. No allowance will be made for any claims that a bid and/or response was based on incomplete information as to the nature and character of the sites and of the work involved.

#### 13) INTERPRETATIONS OF PLANS AND SPECIFICATIONS:

a) No binding interpretation of the meaning of the documents or any questions relating to the bid will be made to any bidder orally prior to the receipt of bids. Any request for such interpretation or questions shall be made in writing via e-mail the Florence County Procurement Director (<u>pfletcher@florenceco.org</u>) or his designee. To be given consideration, such requests must be received by 5:00 p.m. Friday, June 23, 2017. Any such interpretations or supplemental instructions will be issued in the form of addendum(s) to the Contract Documents which will be mailed or emailed to persons receiving a set of documents, not later than three days prior to the date for opening of bids. Failure of any bidder to receive such addendum(s) shall not relieve the successful bidder of any obligation under the awarded contract and this Document.

#### 14) RIGHT TO INCREASE OR DECREASE THE AMOUNT OF WORK:

a) The Owner reserves the right to increase or decrease the amount of work under the Contract at the unit prices quoted in the bid received from the successful bidder.

#### 15) POWER OF ATTORNEY:

a) Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power-of-attorney

#### 16) LAW AND REGULATIONS:

- a) The bidder's attention is directed to the fact that all applicable Federal, State (including SCDHEC), and Local laws, statutes, ordinances, and the rules and regulations of all authorities having jurisdiction over the project shall apply to the contract and the project throughout, and they will be deemed to be included in the contract the same as though herein written out in full.
- b) The bidder's attention is directed to the fact that all bids will comply as prescribed under the most current Florence County Code.

#### 17) METHOD OF AWARD:

- a) Contracts will be awarded to the bidder whose bid appears to serve the best interest of the owner. The successful bidder will be determined as prescribed herein this Document.
- b) Florence County reserves the right to accept or reject, in whole, in part, together or separately, any and all responses as appears in its judgment to be in the best interests of the County, or to waive any and all technicalities and informalities in determining the action of each bid.
- 18) OBLIGATION OF BIDDER:
  - a) At the time of the opening of bids, each bidder will be presumed to have inspected the site, if applicable, and to have read and to be thoroughly familiar with the Documents (including all addenda). The failure or omission of any bidder to examine any form, instruction or document shall in no way relieve any bidder from any obligation in respect to this Invitation-To-Bid.

#### 19) LOCAL PREFERENCE

- a) During the bid evaluation process, any vendor who meets the criteria for Local Preference will have their bid price reduced by Five percent (5%), not to exceed a maximum consideration of \$10,000 total. If after application of the Local Vendor Preference, the vendor is determined to be the low responsive/responsible bidder, they will receive the award. The local vendor will be required to match the bid submitted by the non-local low responsive/responsible bidder.
- b) A vendor shall be deemed to be a resident of this County if such vendor is an individual, partnership, association or corporation that is authorized to transact business within the State, maintains an office in Florence County, and maintains within the County a representative inventory or commodities on which the bid is submitted and has paid all taxes duly assessed.

#### VENDOR AGREEMENTS

#### 1) IRAN DIVESTMENT ACT- CERTIFICATION (JAN 2015)

- a) The Iran Divestment Act List is a list published by the Board pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: <u>http://procurement.sc.gov/PS/PS-iran-divestment.phtm</u> Section 11-57-310 requires the government to provide a person ninety days written notice before he is included on the list. The following representation, which is required by Section 11-57-330(A), is a material inducement for the State to award a contract to you.
- b) By signing your Offer, you certify that, as of the date you sign, you are not on the then-current version of the Iran Divestment Act List. (c) You must notify the Procurement Officer immediately if, at any time before posting of a final statement of award, you are added to the Iran Divestment Act List. [02-2A077-1]

#### 2) STATEMENT OF RIGHTS

a) Florence County reserves the right to obtain clarification or additional information necessary to properly evaluate a bid. Vendors may be asked to give a verbal presentation of their bid after submission. Failure of vendor to respond to a request for additional information or clarification could result in rejection of that vendor's bid. Florence County reserves the right to accept or reject any and all bids, in whole or in part, separately or together, with or without cause; to waive technicalities in submissions, to secure a project that is deemed to be in the best interest of the

County. Florence County also reserves the right to make purchases outside of the awarded contracts where it is deemed in the best interest of the County.

#### 3) GENERAL TERMS:

a) Each bidder by submitting a response to Florence County as a result of this Invitation-To-Bid, agrees to and acknowledges its acceptance of and agreement with the procedures outlined below and the terms, conditions and requirements of the applicable Florence County Invitation-To-Bid document. Agreement is evident by the submission of a response to Florence County. If a vendor cannot agree to these terms, or violates these procedures, the response will be judged non-responsive and not considered. If the procedures are violated during the evaluation process or prior to the issuance of a contract by Florence County, the offer of the firm in question will be void and Florence County will procure the goods/services in question from other eligible vendors.

#### 4) SPECIFIC TERMS:

- a) Products offered shall meet all requirements of the Uniform Commercial Code, if applicable.
- b) Responses submitted are final and complete offers by the vendor. No additions, corrections, modifications, changes or interpretations will be allowed. In the event questions arise on what is meant by an offer, the Procurement Officer will make a determination as to the county interpretation of the vendor's offer. If, after informing the vendor of the county's opinion, disagreement as to scope of the offer is present, the offer will be declared VOID.
- c) Florence County reserves the right to award bids received on the basis of individual items, groups of items, or the entire list of items; to reject any and all bids; and to waive any technicalities. In every case, Florence County reserves the right to make awards deemed to be in the best interest of the County and to negotiate further the offer determined by the County to be in the best interest of the County.
- d) Unit prices will govern over extended prices. Prices must be stated per unit and extended for the total quantity.
- e) Florence County is not exempt from sales tax, if applicable. Sales, use, or excise tax, as well as any handling and shipping charges, must be shown as separate items.
- f) Florence County has a local preference of 5%, which may be applied in bid award determination.
- g) Any deviation from specifications in the bid must be clearly pointed out; otherwise, it will be considered that the items offered are in strict compliance with these specifications, and the successful bidder will be held responsible therefore. Unless otherwise stated, it is understood and agreed that any item offered or shipped on this bid shall be new and suitable for storage or shipment, and that prices include standard commercial packaging and handling.
- h) Any attempt by a vendor to influence the opinion of the county staff, or County Council, by discussion, promotion, advertising or any procedure to promote their offer, will constitute grounds to judge such an offer non-responsive. All offers presented to Florence County will be evaluated based on the current County Code and the offer as presented to the county on the date/time specified in the given bid.
- i) In the event of inconsistent or conflicting provision of this contract and referenced documents, the following descending order of precedence shall prevail: (1) Florence County Procurement Ordinance, as amended (2) Bid Announcement/Advertisement (3) Special Terms and Conditions,

(4) Instructions to Responders and Vendor Agreements (5) Other provisions of the contract whether incorporated by reference or otherwise, and (6) the Specifications.

- j) Florence County reserves the right to make periodic inspections of the manner and means the service is performed or the goods are supplied.
- k) All vendors are informed that the Procurement Officer may exercise the County's option to extend the contract, (purchase order) under the provisions of County Code should such extension be mutually agreeable between the County and the selected vendor.
- The Bidder agrees to secure at Bidder's own expense all personnel necessary to carry out 1) Bidder's obligations under this Bid. Such personnel shall not be deemed to be employees of the County nor shall they or any of them have or is deemed to have any direct contractual relationship with the County. The County shall not be responsible for withholding taxes with respect to the Bidder's compensation hereunder. Bidder shall not hold himself out as an employee of the County, and shall have no power or authority to bind or obligate the County in any manner, except County shall make payment to Bidder for services as herein provided. Bidder shall obtain and maintain all licenses and permits required by law for performance of this contract by him. The Bidder shall have no claim against the County hereunder or otherwise for vacation pay, sick leave, retirement benefits, social security, worker's compensation, health or disability benefits, unemployment insurance benefits, or employee benefits of any kind. State or Federal governments, including but not limited to Social Security, workmen's compensation, Employment Security, sales or use tax and any other taxes and licenses or insurance premiums required by law. The County shall pay no employee benefits or insurance premiums of any kind to or for the benefit of Bidder or his employees, agents, and servants by reason of this contract. The Bidder will carry liability insurance relative to any service that he performs for the County. A certificate of insurance must be submitted to the procurement office prior to services performed, with the requested coverage and limits per the County, with Florence County listed as additional insured.
- m) The vendor will act in an independent capacity and not as officers or employees of the County. The vendor shall indemnify, defend and hold harmless Florence County, its officers, agents and employees from liability and any claims, suits, judgments, and damages of any nature brought because of, arising out of, or due to breach of the agreement by Vendor, its subcontractors, suppliers, agents, or employees or due to any negligent act or occurrence or any omission or commission of Vendor, its subcontractors, suppliers, agents, or employees.
- n) The successful vendor shall indemnify and hold harmless the Florence County, its officers, agents and employees from all suits or claims of any character resulting from patent, trademark or copyright infringement or accidents/injury at any point in the delivery of goods/services.
- o) It is the responsibility of the prospective bidder to review the entire invitation for bids packet and to notify the Procurement Department if the specifications are formulated in a manner that would unnecessarily restrict competition. Any such protest or question regarding the specifications or bidding procedures must be received by the Procurement Department not less than five (5) days prior to the time set for bid opening. These requirements also apply to specifications or instructions that are ambiguous.
- p) Should any vendor fail to perform or comply with any provision or terms and conditions of any documents referenced and made part hereof, Florence County may terminate this contract, in whole or in part, and may consider such failure or non-compliance a breach/default of contract. The County, the County reserves the right to purchase any/all items or service in default on the open market. By submittal of a response all vendors agree to this provision. No additional

responses will be considered from a firm in default until the default expenses are paid. No principals of a defaulting firm may submit a response under another organization or individual name until their previous default is settled.

- q) Florence County may terminate this agreement with or without cause at any time. In the event of termination by either party, fees due for services satisfactorily performed or goods accepted prior to the termination shall be paid.
- r) Unless specifically requested, submit one (1) copy of your response.
- s) In the event no funds are appropriated by Florence County for the goods or services in any fiscal year or insufficient funds exist to purchase goods or services, then the Contract shall expire upon the expenditure of previously appropriated funds or the end of the current fiscal year, whichever occurs first, with no further obligations owed to or by either party.
- t) All submittals become the property of Florence County.
- all bids (and supporting documents) will be retained by Florence County for a period of ninety (90) days from the date the bids are opened, and no bid shall be received nor shall any bidder be allowed to withdraw a bid after the opening hour commences.
- v) Brand names and numbers, when used, are for reference only to indicate character or quality desired and do not indicate a preference. Equal items will be considered; equal items shall state the brand name or quality; and Florence County's determination of what shall constitute equality shall be final and conclusive.
- w) S.C. LAW CLAUSE: Upon award of a contract or Purchase Order under this bid, the person, partnership, association, or corporation to whom the award is made must comply with the laws of South Carolina, which require such person or entity to be authorized and/or licensed to do business in this state. Notwithstanding the fact that applicable statutes may exempt or exclude the successful bidder from requirements that it be authorized and/or licensed to do business in this state, by submission of this signed bid, the bidder agrees to subject itself to the jurisdiction and process of the courts of the State of South Carolina, to all matters and disputes arising or to arise under the contract and performance thereof, including any questions as to the liability for taxes, licenses, or fees levied by the State.
- 5) LIQUIDATED DAMAGES: The time limit that is set for this project is One Hundred Twenty (120) calendar days. In order to ensure a sincere and reasonable effort on the Contractor's part to accomplish the work in a timely fashion, delay damages due to inconveniences to the owner for work not being accomplished on time will be at the rate of five hundred dollars (\$500.00) per day. The Contractor should realize that delays due to bad weather, materials, and such, not under the control of the Contractor will be considered by the Engineer for time extension.

#### 6) FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR: Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

FLORENCE COUNTY, SOUTH CAROLINA, a Body Politic and Corporate and a Political Subdivision of the State of SC SEALED BID #32-16/17, JOHNSONVILLE	MAIL TO: Florence County Procurement 180 N. Irby Street County Complex MSC-R Florence, SC 29501 HAND CARRY TO: Procurement Office, Room B-5	CF CF CF CF CF CF CF CF CF CF CF CF CF C
BALL FIELD CANTEEN BUILDING	County Complex, 180 N. Irby Street Florence, South Carolina 29501	
Bids will be received at the Procurement Office at 180 N. Irby Street, Rm. B-5 until Thursday, June 29, 2017 at 3:00 p.m. (EST).	TELEPHONE NO. (843) 665-3018	
Then Publicly Opened Room 210-C at 3:05 p.m. (EST).		

LEGAL COMPANY NAME:		
D/B/A IF APPLICABLE:		
MAILING ADDRESS:		
PHYSICAL ADDRESS:		
CITY-STATE-ZIP:		
TELEPHONE NO:	FAX NO:	
FEDERAL ID (TAX ID) NO:	E-MAIL:	
AUTHORIZED SIGNATURE :		
PRINTED NAME:		
SC CONTRACTOR'S LICENSE #		

Total cost, including all taxes and expenses needed to construct the Johnsonville Ball Field Canteen Building to be located at the Johnsonville Commerce Center at the Intersection of Holder Boulevard and J. Tanner Court in Johnsonville, SC.

**TOTAL BID PRICE:** 

\$\_\_\_\_

#### Total Bid Amount in Words \_\_\_\_\_

### The contractor has One Hundred Twenty (120) calendar days from the date of the Notice to Proceed letter to complete the project.

The Bidder declares their Bid Response is made without any connection with any other individual that may be submitting a Bid Response to this IFB and their Bid Response, in all respects, is fair and in good faith, without collusion or fraud, with another Bidder, representative or agent.

By submission of a response to this Invitation for Bid, the bidder agrees and certifies, to deliver all required services and perform all required work with the strictest conformance to meet or exceed the scope of services, specifications and minimum requirements contained within this Invitation to Bid.

All pricing is firm and will remain firm for at least ninety (90) calendar days from the time and date of the IFB submittal and opening. During this period, the Bidder may only withdraw their Bid Response by submitting a written request to Florence County and Florence County approving said written request.

The bidder agrees to abide by all conditions of this bid and verifies that he is authorized to sign this bid for the offerer. The bidder further states that the company affiliated with this bid currently complies with all applicable federal and state laws and directives relative to non-discriminatory practices in employment.

The Bidder, in compliance with the Invitation-To-Bid, and having examined the Project Documents, and being familiar with all of the conditions surrounding the proposed project, including the availability of materials, labor, and work site environmental conditions, hereby proposes to furnish all permits, labor, materials, supplies, and equipment and to perform the duties in accordance with the contract documents of which this Bid Form is a part.

The Bidder declares that he has read, understands, and accepts the Vendor Agreements and Instructions to Responders which are part of the bid documents.

The Bidder further proposes and agrees, if this Bid is accepted, to contract with Florence County, to furnish all permits, materials, equipment, tools, apparatus, means of transportation, and labor necessary hereto, and to complete the proposed project in full and complete accordance with the Project Documents, to the full and entire satisfaction of the Owner, at the prices listed in the Bid Schedule. The amounts listed on the Bid Schedule section of this Bid Form also include all costs associated with the compliance of all applicable State laws, local ordinances, and the rules and regulations of all authorities and professional association standards having jurisdiction over the project or the materials used throughout, and they will be deemed to be included in the contract the same as though herein written out in full. Unit prices and/or lump sums are shown in the Bid Schedule section below. In case of error in extension, the Unit Price shall govern rather than the Amount. Where Lump Sum Amounts are bid, the amount for each bid item shall govern rather than the total of any several items.

#### BID BOND (SURETY) REQUIREMENT

Bid Surety acts to protect the County from delays and expenses incurred in the lengthy competitive sealed bidding and competitive sealed bid processes, and provides the County with some financial assurance that should the bidder be awarded the project, the successful bidder will enter into the contract with the County. The successful bidder forfeits its Bid Surety in the event it cannot perform the work required by the invitations-for-bid or request-for-bids.

For all responses submitted with estimated project costs exceeding thirty thousand dollars (\$30,000.00), Bid Surety in the amount of at least five percent (5%) of the proposed project costs must be submitted with the response. Failure to satisfy this Bid Surety requirement will result in your bid being considered non-responsive and removed from further consideration for award of the subject contract. Bid Surety can be provided as discussed below.

#### **BID SURETY OPTIONS:**

#### **Option A:**

Bid Surety will not be required from Contractors that have been in business for five (5) consecutive years without filing for bankruptcy. A certificate or statement on business letterhead from the firm stating it meets this qualification will replace the bid surety and must accompany the bid. Bidders not meeting this requirement must furnish Bid Surety as discussed in Option B below.

#### **Option B:**

For all bidders not meeting the criteria of "Option A" above, a deposit in the amount of five percent (5%) of the proposed contract price must accompany the bid. These deposits shall take the form of a certified check, cashier's check or a surety bond executed by a corporate surety licensed under the laws of this state. **PERSONAL OR COMPANY CHECKS DO NOT MEET THIS REQUIRMENT**. The cashier's check or certified check shall be deposited to the County's account if the successful bidder fails to enter into the proposed contract. Bid deposits of unsuccessful bidders will be returned as soon as the contract is awarded.

<u>One of the above requirements must be met and submitted with for your response. Failure to satisfy this Bid Surety requirement will result in your response being considered non-responsive and removed from further consideration for award of the subject project's contract.</u>

#### SAMPLE BID BOND

KNOW ALL MEN BY THESE PRESENTS, THA	
Principal, and	, as Surety, are hereby held and firmly bound
unto, As Owner, in the penal sum of	· · · · · · · · · · · · · · · · · · ·
(\$), for the payment of	which, well and truly to be made, we hereby jointly
and severally bind ourselves, our heirs, executors, adn	ninistrators, successors and assigns.
Signed, this day of	, 20

The	condition	of	the	above	obligation	is	such	that	whereas	the	Principal	has	submitted	l to
					a certa	in 1	Bid, at	tached	l hereto a	nd he	reby made	a par	t hereof ir	ito a
conti	act in writi	ng, t	for th	e										<u> </u> .

#### NOW, THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall in all other respects perform the agreement caused by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired of affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_(L. S.)

PRINCIPAL

SURETY

By:\_\_\_\_\_ (SEAL)

#### PAYMENT BOND REQUIREMENT

A Payment Bond must be submitted to the County by the successful responder ("Contractor") once it has been awarded the contract. Payment Bonds encompass the prime Contractor's obligation to pay subcontractor and others for material and labor used in the project. A Payment Bond guarantees that the Contractor will pay certain bills for labor and materials (including those from subcontractors and suppliers), which are associated with the subject contract. The Payment Bond requirement helps assure that the Contractor provides suitable evidence of its financial condition and ability to complete the project without financial difficulty.

For all contracts submitted with costs exceeding thirty thousand dollars (\$30,000.00), a Payment Bond in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. Failure to satisfy this Payment Bond requirement will result in the Contractor being considered non-responsive and possibly removed from consideration for award of future County contracts. Payment Bond guaranty options are discussed below.

#### PAYMENT BOND GUARANTY OPTIONS:

For all contracts submitted with costs exceeding thirty thousand dollars (\$30,000.00), a Payment Bond guaranty in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This Payment Bond requirement can be satisfied utilizing one of the two options below:

#### (1) **Option A:**

The Contractor with the executed contract must submit a Payment Bond in the required amount discussed above and executed by a corporate surety licensed under the laws of this state. Contractors not meeting this requirement must furnish an alternative Payment Bond Guaranty as discussed in Option B below.

#### (2) **Option B:**

For all Contractors not meeting the criteria of "Option A" above, a deposit in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This deposit shall take the form of a certified check or a cashier's check deposited with the County. An irrevocable standby letter of credit issued by the bank is an acceptable alternate. **PERSONAL OR COMPANY CHECKS DO NOT MEET THIS REQUIRMENT**. Failure of the Contractor to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of this deposit.

<u>One of the above requirements must be met and submitted by the successful Contractor with its</u> proposed contract to the County. Failure to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of the Payment Bond guaranty.

<u>Responders failing to enter the proposed contract and also post the required Payment Bond may be</u> <u>subject to Debarment or Suspension, as prescribed under Section 11-102 of the Florence County</u> <u>Code, from future consideration for award of contracts.</u>

#### PERFORMANCE BOND REQUIREMENT

A Performance Bond must be submitted to the County by the successful responder ("Contractor") once it has been awarded the contract. The Performance Bond insures that the project will be completed even if the prime Contractor defaults or abandons the project. A Performance Bond guarantees contract performance by the Contractor, according to the contract specifications, terms and conditions. The Performance Bond requirement helps assure that the Contractor provides suitable evidence of its financial condition and ability to complete the project without financial difficulty.

For all contracts submitted with costs exceeding thirty thousand dollars (\$30,000.00), a Performance Bond in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. Failure to satisfy this Performance Bond requirement will result in the Contractor being considered non-responsive and possibly removed from consideration for award of future County contracts. Performance Bond guaranty options are discussed below.

#### PERFORMANCE BOND GUARANTY OPTIONS:

For all contracts submitted with costs exceeding thirty thousand dollars (\$30,000.00), a Performance Bond Guaranty in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This Performance Bond guaranty requirement can be satisfied utilizing one of the two options below:

#### (3) **Option A:**

The Contractor with the executed contract must submit a Performance Bond in the required amount discussed above and executed by a corporate surety licensed under the laws of this state. Contractors not meeting this requirement must furnish an alternative Performance Bond Guaranty as discussed in Option B below.

#### (4) **Option B:**

For all Contractors not meeting the criteria of "Option A" above, a deposit in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This deposit shall take the form of a certified check or a cashier's check deposited with the County. An irrevocable standby letter of credit issued by the bank is an acceptable alternate. **PERSONAL OR COMPANY CHECKS DO NOT MEET THIS REQUIRMENT**. Failure of the Contractor to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of this deposit.

One of the above requirements must be met and submitted by the successful Contractor with its proposed contract to the County. Failure to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of the Performance Bond Guaranty. Responders failing to enter the proposed contract and also post the required Performance Bond may be subject to Debarment or Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts.

#### **INSURANCE REQUIREMENTS**

The contractor shall agree to hold harmless, indemnify and defend Florence County, its agents and employees from any claims for property damage or personal injury (including death resulting therefrom). Such claims include, but are not limited to, actual, consequential, incidental or punitive damages. The contractor shall agree to maintain sufficient comprehensive general liability insurance, naming Florence County as additional insured in the amounts of \$1,000,000.00 per occurrence and \$1,000,000.00 per person. Proof of such insurance shall be given to the Florence County Procurement Office by an appropriate certificate-of-insurance issued by the contractor's insurance agent.

Further, the contractor shall agree to insure prior to commencement of work on the project (job), all subcontractors, agents, assigns or employees of prime contractor and subcontractor shall agree to hold harmless, indemnify and defend the Florence County, South Carolina, its agents and employees from any claims for property damage or personal injury (including death resulting therefrom). Such claims include but are not limited to, actual, consequential, incidental or punitive damages. Further, prior to commencement of work on the project (job), the contractor shall insure that all subcontractors, agents or assigns of the contractor, maintain sufficient comprehensive general liability insurance, naming the Florence County, South Carolina, as additional insured, in the amounts of \$1,000,000.00 per occurrence and \$1,000,000.00 per person. Proof of such insurance shall be given to the Procurement Officer by an appropriate certificate-of-insurance issued by applicable entity's insurance agent.

With regards to comprehensive general liability insurance, claims may be made during or after the term or terms of the contract agreement.

Vehicle liability insurance with minimum combined single limits of \$1,000,000.00 per occurrence shall be maintained by the contractor.

The contractor shall obtain and maintain, during the life of the contract agreement, workers' compensation and employer's liability insurance for all employees to be engaged in services on this project under this agreement in an amount not less than the minimum allowed by South Carolina law, and in case any such services are sublet, the contractor shall require the subcontractor(s) similarly to provide workers' compensation and employer's liability insurance for all of the subcontractor's employees to be engaged in such services.

#### **STATE OF SOUTH CAROLINA** )

#### SAMPLE CONTRACT NO. 32-16/17

#### COUNTY OF FLORENCE )

#### ARTICLE 1 DOCUMENTS INCORPORATED BY REFERENCE

- 1.1 This Contract includes the specifications and plans for the project identified thereon as such, the County's invitation to Bid. No. 32-16/17, and any addendums thereto, as well as the Contractor's bid submission, including all forms required in the bid documents. All these documents specified in this Article 1 are hereby incorporated herein by reference and made a part hereof (hereinafter collectively referred to as the "Contract" or "Contract Documents"). Change orders issued hereafter and any other amendments properly executed by the County and the Contractor shall become and be a part of this Contract. Documents not included or expressly contemplated in this Article 1 do not, and shall not, form any part of this Contract. The Contract Documents are intended to be complementary, and a requirement in one document shall be deemed to be required in all documents.
- 1.2 Contractor shall comply with all applicable Federal, State, and Local laws which may be applicable to any aspect of the activities under this Contract. By entering into this Contract, Contractor affirmatively warrants that the Contractor, to the best of its knowledge, information, and belief, is currently in compliance with all applicable Federal, State, and Local laws and further warrants that during the term of this Contract, Contractor shall remain in compliance therewith.

#### ARTICLE 2 REPRESENTATIONS OF THE CONTRACTOR

In order to induce the County to execute this Contract and recognizing that the County is relying thereon, the Contractor, by executing this Contract, makes the following express representations to the County:

2.1 The Contractor is fully qualified to act as the general contractor for the project and has, and shall maintain throughout the effective term of this Contract, any and all licenses, permits, and other authorizations necessary to act as the general contractor for, and to construct, the project.

- 2.2 The Contractor has become familiar with the project site and the local conditions under which the project is to be constructed and operated.
- 2.3 The Contractor has received, reviewed and examined all the documents which make up the Contract, including, but not limited to, all plans and specifications, and has found them, to the best of its knowledge, to be complete, accurate, adequate, consistent, coordinated and sufficient to complete the Project.

#### ARTICLE 3 SCOPE OF WORK

The Contractor shall perform the work as outlined in the XX-16/17 invitation to bid document, bid plans, and all addendums thereto (if any). All work required, implied, or reasonably inferable from this Contract includes, but is not limited to, the following:

- 3.1 The Contractor will complete the complete work as described in the contract documents, in accordance with the terms herein, and the specifications/scope of work, all as may be amended from time to time.
- 3.2 Contractor shall furnish any and all required insurance certificate(s) and endorsement(s) as requested by the County.
- 3.3 Contractor agrees to perform and furnish all labor, supervision, materials, equipment, transportation and supplies necessary for the **JOHNSONVILLE BALLFIELD** <u>CANTEEN BUILDING</u> as stated in the specifications/scope of work of bid no. 32-16/17 and the Contractor's response to bid no. 32-16/17.
- 3.4 Coordination of the work and administration of this Agreement shall be Ronnie Pridgen, Parks and Recreation Director located at XXXXXXXXXXXXXX in Florence, SC. (<u>RPridgen@florenceco.org</u>)

#### ARTICLE 4 INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, the County and the Contractor agree as follows:

4.1 This Contract (along with its exhibits and all documents incorporated herein by reference), together with the Contractor's and surety bonds for the project, constitute the entire and exclusive agreements between the parties with reference to the project, and said Contract supersedes any and all prior discussions, communications, representations, understanding, negotiations, or agreement.

- 4.2 Anything that may be required or reasonably inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Contract Price.
- 4.3 Nothing contained in this Contract shall create, nor be interpreted to create, privity or any other relationship whatsoever between the County and any person except the Contractor.
- 4.4 When a word, term or phrase is used in this Contract, it shall be interpreted or construed first, as defined herein; second, if not defined, according to it's generally accepted industry meaning; and third if there is no generally accepted industry meaning, according to its common and customary usage.
- 4.5 The words "include," "includes," and "including," as used in this Contract, shall be deemed to be followed by the phrase, "without limitation".
- 4.6 The listing herein of any items as constituting a material breach of this Contract shall not imply that any other, non-listed item will not constitute a material breach of this Contract.
- 4.7 In the event of any conflict, discrepancy, or inconsistency among any of the documents which make up this Contract, the following shall control:
  - 4.7.1 As between this document and the plans or specifications, this document shall govern.
  - 4.7.2 In the case of any conflict, discrepancy or inconsistency among any of the other Contract documents, the Contractor shall notify the County immediately upon discovery of the same.

#### ARTICLE 5 CONTRACTOR'S PERFORMANCE

The Contractor shall perform all of the work required, implied or reasonably inferable from this Contract including, but not limited to, the following:

- 5.1 The Contractor will complete the entire Work described in the Contract Documents, in accordance with the terms herein, and the scope of work, and all addenda thereto, all as may be amended from time to time only by means of a change order agreed upon by both parties.
- 5.2 Contractor shall furnish any and all required surety bonds and insurance certificate(s) and endorsement(s).

#### ARTICLE 6 TIME FOR CONTRACTOR'S PERFORMANCE

- 6.1 The Contractor shall commence the performance of this Contract on the date of execution of this Contract and shall diligently continue its performance to and until Completion of the Project. The contractor shall accomplish Substantial Completion (as defined below) to the Johnsonville Ball Field Canteen Building in no more than One Hundred Twenty (120) calendar days following the execution of the notice to proceed letter from the County. By signing this contract, the contractor agrees that the contract time is a reasonable time for accomplishing the completion of the project.
- 6.2 The term "Substantial Completion," as used herein, shall mean that point at which, as certified in writing by the County, the Project is sufficiently complete in accordance with the Contract Documents so that the County can utilize the work for its intended use.
- 6.3 The County has the right to impose liquidated damages in the amount of \$500 per calendar day for any days after the required date of completion noted above that the project is not substantially complete.

#### ARTICLE 7 FIXED PRICE AND CONTRACT PAYMENTS

- 7.2 Progress billings shall be submitted to the County for payment by the Contractor on a monthly basis (less 10% retainage) no later than the 25<sup>th</sup> of each month based on the percentage of work completed. The County (or County's representative) shall verify work completed and billed before payment shall occur. When the project is complete and the Contractor is ready for a final review, the Contractor shall notify the County. Thereupon, the County will perform a final site review of the project. If the County concurs that the project is complete and in full accordance with this Contract and that the Contractor has performed all of its obligations to the County thereunder, the County will make final payment of the Contract price to the Contractor.
- 7.3 Guarantees and equipment warranties required by this Contract shall commence on the date of substantial completion.

#### ARTICLE 8

#### DUTIES, OBLIGATIONS, AND RESPONSIBLITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations and responsibilities of the Contractor set forth in the Contract Documents, the Contractor shall have and perform the following duties, obligations and responsibilities to the County:

- 8.1 The Contractor shall not perform work without adequate plans and specifications. If the Contractor performs work knowing or believing, or if through exercise of reasonable diligence it should have known, that such work involves an error, inconsistency or omission in the Contract without first providing written notice to the County, the Contractor shall be responsible for such work and shall correct same bearing the costs therefore.
- 8.2 All work shall strictly conform to the requirements of this Contract. To that end the Contractor shall be solely responsible for and have control over the performance of all portions of the Work, unless otherwise specified in the Contract Documents.
- 8.3 The work shall be strictly supervised the permit the County and its designated representative(s). The Contractor shall bear full responsibility for any and all acts, errors or omissions of those engaged in the work on behalf of the Contractor, including, but not limited to all subcontractors or employees. The Contractor shall provide on-site supervision while any portion of the work is being performed.
- 8.4 The Contractor hereby warrants that all laborers furnished under this Contract shall be qualified and competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results, that all materials and equipment provided shall be new (unless otherwise specified) and of high quality, that the completed work will be complete, of high quality, without defects, and that all work strictly complies with the requirements of this Contract. Any work not strictly complying with the requirements of this section shall constitute a breach of the Contractor's warranty.
- 8.5 The Contractor shall maintain the project site and adjacent areas affected by its work and/or acts of its employees and subcontractors in a reasonably clean condition during the performance of the work. Upon substantial completion, the Contractor shall clean the Project site of all debris, trash and excess materials and equipment. If the Contractor fails to do so, the County may complete the cleanup, by its own forces or by separate contract, and shall be entitled to charge the Contractor for the same through the collection or withholding of funds through the mechanisms provided elsewhere herein.
- 8.6 At all times relevant to this Contract, the Contractor shall permit the County and its designated representative(s) to enter upon the Project site to review or inspect the work and any materials on the site without formality or other procedure.
- 8.7 PROTECTION OF PERSONS AND PROPERTY. It shall be the responsibility of the Contractor to initiate, continue and supervise all safety programs and precautions in performance of the terms of this Contract. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to its employees, subcontractors, employees of the County and members of the public, the Work itself and unassembled components thereof, and other property at

the site or adjacent thereto. As part of the Contractor's obligations hereunder, the Contractor shall erect and maintain safeguards, barriers, signs, warnings, etc.

#### **ARTICLE 9**

#### DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

- 9.1 In the event that the Contractor covers, conceals or obscures its work in violation of this Contract or in violation of an instruction from the County, such work shall be uncovered and displayed for review by the County upon request, and shall be reworked at no cost in time or money to the County.
- 9.2 The Contractor shall, at no cost in time or money to the County, correct work rejected by the County as defective or failing to conform to this Contract. Additionally, the Contractor shall reimburse the County for all review, inspections and other expenses incurred as a result thereof.
- 9.3 In addition to its warranty obligations set forth elsewhere herein and any manufacturer's warranties provided on the project, and in addition to other remedies provide herein or by law to the County, the Contractor shall be specifically obligated to promptly correct any and all defective or nonconforming work, whether obvious or after-discovered, for a period of twelve (12) months following substantial completion upon written direction from the County.

#### ARTICLE 10 TERMINATION BY THE COUNTY

The County may terminate the Contract in accordance with the following terms and conditions:

- 10.1 The County may, by written notice, terminate this Contract in whole or in part at any time, for the failure to fulfill the Contract obligations. Upon receipt of such notice, services shall be immediately discontinued unless the notice directs otherwise, and all materials as may have been accumulated in performing this Contract, whether completed or in progress delivered to the County.
- 10.2 Termination due to the failure to fulfill the Contractor's obligations may cause the County to take over the work and prosecute the same to completion by Contract or otherwise. In such case, the contractor shall be liable to the County for any additional cost occasioned to the County thereby.
- 10.3 The rights and remedies of the County provided in this Article are in addition to any other rights and remedies provided by law or under this Contract.
- 10.4 Notwithstanding any other provision contained herein, any violation or breach of terms of this Contract on the part of the Contractor or their subcontractors may result in the

suspension or termination of this Contract or such other action that may be necessary to enforce the rights of the parties of this Contract. 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 impose or available by law.

#### ARTICLE 11

#### **INDEMNITY**

The Contractor hereby expressly agrees to indemnify and hold the County harmless against any and all expenses and liabilities arising out of the performance or default of this Contract or arising from or related to the Work as follows:

- Contractor expressly agrees to the extent that there is a causal relationship between its 11.1 negligent, reckless or intentionally wrongful action or inaction, or the negligent, reckless or intentionally wrongful action or inaction of any of its employees or any person, firm or corporation directly or indirectly employed or retained by the Contractor, and any damage, liability, injury, loss or expense (whether in connection with bodily injury or death or property damage or loss) that is suffered by the County or its employees or by any member of the public, to indemnify and save the County and its employees harmless against any and all liabilities, penalties, demands, claims, lawsuits, losses, damages, costs, and expenses arising out of the performance or default of this Contract or arising from or related to the Work, regardless of whether such liabilities, penalties, demands, claims, lawsuits, losses, damages, costs, and expenses are caused in part by the County. Such costs are to include, without limitation, defense, settlement and reasonable attorneys' fees incurred by the County and its employees. This promise to indemnify shall include without limitation, bodily injuries, death occurring to Contractor's employees and any person, directly or indirectly employed or retained by the Contractor (including without limitation any employee of any subcontractor), the County's employees, the employees of any other independent contractors, or occurring to any member of the public. When the County submits notice, Contractor shall promptly defend any aforementioned action.
- 11.2 The limits of insurance required herein shall not limit the Contractor's obligations under this Article. The terms and conditions contained in this Article shall survive the termination of this Agreement or the suspension of the Work hereunder. The recovery of fees and costs specified herein will also apply to any actions to enforce this Article.

#### ARTICLE 12 INSURANCE

- 12.1 The successful firm(s) shall procure and maintain insurance for protection from claims under workers' compensations acts; claims for damages because of bodily injury including personal injury, sickness or disease, or death of any and all employees or of any person other than such employees; claims for damages because of injury to or destruction of property, including loss of use resulting therefrom; claims caused by professional errors, acts, or omission; and any other insurance prescribed by law. The successful firm shall name Florence County, South Carolina, its elected and appointed officials, officers, and employees "Additional Insured" as their interests may appear but only with respect to services performed or provided by successful firm on behalf of the County under Consultant's commercial general liability insurance policy.
- 12.2 The successful firm shall, within 10 calendar days of the full execution of any contract, provide the County's Procurement Officer with a certificate(s) of insurance evidencing the coverage required above and containing an endorsement to the effect that any cancellation or non-renewal shall not be until 10 calendar days after the insurer or the selected firm gives written notice to the County.
- 12.3 Without limiting the provisions of paragraph above, the selected firm shall during the term of any contract resulting from this purchase and maintain insurance with limits not less than those set forth below: The successful firm(s) shall take out and maintain, during the life of the contract agreement, workers' compensation and employer's liability insurance for all employees to be engaged in services on this project under this agreement in an amount not less than \$1,000,000.00, and in case any such services are sublet, the firm(s) shall require all subcontractor(s) also to provide workers' compensation and employer's liability insurance in an amount not less than subcontractor(s) also to provide workers' compensation and employer's liability insurance in an amount not less than \$1,000,000.00 for all of the subcontractor's employees to be engaged in such.
  - 12.3.1 Employer's Liability Insurance \$1,000,000 each accident, \$1,000,000 disease policy limit, \$1,000,000 disease each employee.
  - 12.3.2 Commercial General Liability Insurance \$1,000,000 per occurrence (bodily injury and property damage) / \$1,000,000 general aggregate.
  - 12.3.3 Automobile Liability Insurance \$1,000,000 combined single limit (bodily injury and property damage), each accident.
  - 12.3.4 Professional Liability Insurance \$1,000,000 per claim / \$1,000,000 general aggregate The selected firm shall require any subconsultants (if any) to purchase and maintain insurance with limits not less than those required above to be purchased and maintained by the selected firm. In addition, the selected firm shall require any subconsultants (if any) to assume the selected firm's indemnification obligations under any contract resulting from this RFP to the extent they relate to the subconsultant's obligations under any contract with the selected firm.

#### ARTICLE 13

#### SURETY BONDS

The contractor shall furnish separate performance and payment bonds to the county, as required by the invitation to bid document. Each bond shall set forth a penal sum in an amount not less than the Contract Price. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. The

performance and payment bonds furnished by the Contractor shall be in form suitable to the County and shall be executed by a surety, or sureties, reasonably acceptable to the County.

#### ARTICLE 14 ENTIRE AGREEMENT

Any modification to this Contract must be supported by an additional, articulated consideration, and must either be in writing, executed by the parties hereto, or, if made orally, should be confirmed in writing, which writing should state the consideration which supports the modification. Failure to confirm an oral modification in writing shall constitute a waiver of any claim for additional compensation with regard to the oral modification. Nothing in this Article shall be construed to limit the County's authority to issue changes.

#### ARTICLE 15 SEVERABILITY

If any term or condition of this Contract or application thereof to any person(s) or circumstances is held invalid, this invalidity shall not affect other terms, conditions or applications which can be give effect without the invalid term, condition, or application. To this end, the terms and conditions of this Contract are agreed to be severable

#### ARTICLE 16 WAIVER

Waiver of any breach of any term or condition of this Contract shall not be deemed a waiver of any prior or subsequent breach, and shall not entitle any party hereto to any subsequent waiver of any terms hereunder. No term or condition of this Contract shall be held to be waived, modified or deleted except by an instrument, in writing, signed by the parties hereto.

#### ARTICLE 17 NOTICES

All notices to each party to this Contract shall be in writing, and sent as follows:

#### To County:

Patrick D. Fletcher, Procurement Director Florence County 180 North Irby Street, MSC-R Florence, SC 29501 Telephone: (843) 665-3019 E-mail: <u>pfletcher@florenceco.org</u> Fax: (843) 664-9668

#### **To Contractor:**

#### XXXXXXXXXX, XX XXXXXX0 Telephone: XXX-XXX-XXXX E-Mail: XXXXXXXXXXXXXXXXX

All notices, demands, requests, consents or approvals that may or are required to be given by any party to another shall be in writing and shall be deemed given if: (i) served personally by hand delivery; (ii) sent by nationally-recognized overnight courier with return receipt; or (iii) sent by Unites States registered or certified mail, by depositing the same in the United States Mail in the continental United States, postage prepaid, return receipt requested and addressed to such other party at the address specified above or at such other place as such other party may from time to time designate by notice in writing to the other parties hereto. Rejection or other refusal to accept a notice, demand, request or consent, or the inability to deliver because of a changed address, of which no notice was given, shall be deemed to be actual receipt thereof. In the event given by registered or certified mail, such notice, demand, request, or consent so mailed shall be effectively conveyed upon receipt or shall be presumed to have been effectively conveyed and received by the addressee 72 hours after deposit of same in the mail, whichever first occurs.

#### ARTICLE 18 APPLICABLE LAW

The laws of South Carolina shall govern this Contract. In any litigation arising under this Contract, all such litigation shall be litigated in the Circuit Court within the Twelfth Judicial Circuit Court of Florence County, South Carolina. Without limitation upon the prevailing party's rights to recovery such fees and costs, the relevant provisions of Section 15-37-10 et seq. of the Code of Laws of South Carolina (1976, as amended) shall apply to this Article, as the case may warrant. This Contract is **not** subject to arbitration.

#### ARTICLE 19 SUCCESSOR AND ASSIGNS

Each party binds itself, it successor, assigns, executors, administrators or other representative to the other party hereto and to successors, assign, executors, administrators or other representatives of such other party in connection with all terms and conditions of this Contract. The Contractor shall not assign this Contract without prior written consent of the County

**IN WITNESS WHEREOF**, the parties have executed this Agreement in three originals under their several seals the day and year first written above.

\_\_\_\_\_

#### WITNESS:

FOR CONTRACTOR:

Printed Name: \_\_\_\_\_

\_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Federal Tax I.D. No.: \_\_\_\_\_

SC General Contractor's License Number:

#### FOR FLORENCE COUNTY:

Patrick D. Fletcher, CPPB Procurement Director K. G. (Rusty) Smith Florence County Administrator

## ATTACHMENT A

## CONSTRUCTION PLANS -JOHNSONVILLE BALLFIELD CANTEEN BUILDING DATED 5-23-17

# CONSTRUCTION PLANS FOR: JOHNSONVILLE BALL FIELDS PROPOSED CANTEEN BUILDING

## Client:

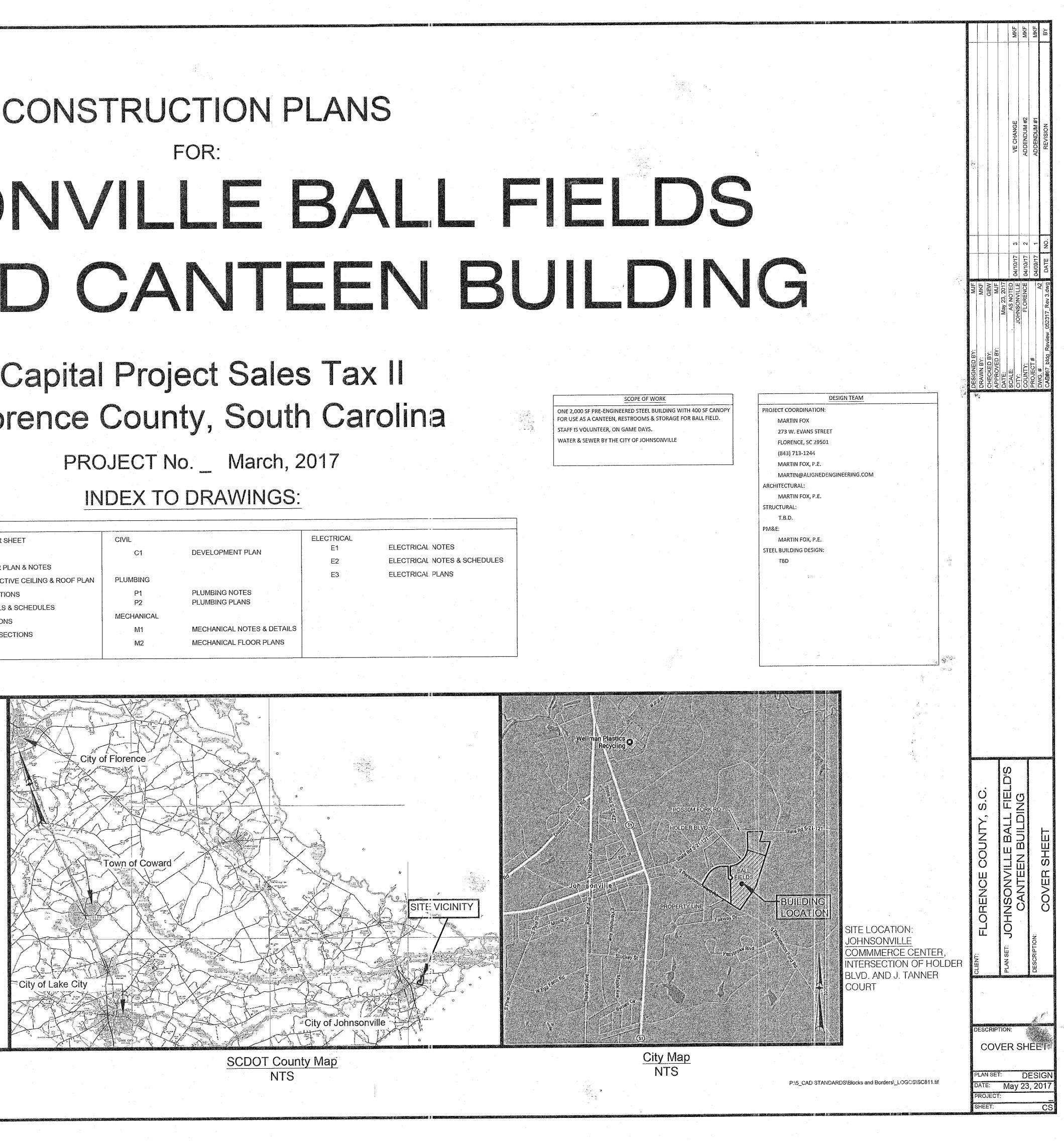
FLORENCE COUNTY 180 NORTH IRBY STREET, MSC-G FLORENCE, SOUTH CAROLINA 29501

**FLORENCE COUNTY** CONTACT: SUZANNE KING PHONE: (843) 665-3035 **PARKS & RECREATION DEPARTMENT** CONTACT: RONNIE PRIDGETT HONE: (843) 667-0920

> YORK OCONEE CHESTER ANCASTE ANDERSON LAURENS FAIRFIELD KERSHAW **DARLINGTON** NEWBERF ABBEVILLE RICHLANE SALUDA SUMTER FXINGTON EDGEFIELD CALHOUN CLARENDON / WILLIAMSBURG AIKEN ORANGEBURG BERKELE AMBEI COLLETON CHARLESTO **Florence County** South Carolina

## Capital Project Sales Tax II Florence County, South Carolina

CS	COVER SHEET	CIVIL		ELECTRICAL E1	ELECTRICAL NOTES
CHITECTURAL		C1	DEVELOPMENT PLAN	E2	ELECTRICAL NOTES & SCHEDULES
A1	FLOOR PLAN & NOTES				
A2	REFLECTIVE CEILING & ROOF PLAN	PLUMBING		E3	ELECTRICAL PLANS
A3	ELEVATIONS	P1	PLUMBING NOTES		
A4	DETAILS & SCHEDULES	P2	PLUMBING PLANS		
A5	SECTIONS	MECHANICAL			
		M1	MECHANICAL NOTES & DETAILS		
A6	WALL SECTIONS	M2	MECHANICAL FLOOR PLANS		



#### STRUCTURAL NOTES:

\_\_\_\_\_

1. THE ARCHITECTURAL DRAWINGS ARE THE LEAD DRAWINGS FOR THE DIMENSIONING FOR THE PROJECT. CONSTRUCTION AND DETAILING DIMENSIONS SHALL BE TAKEN (OR DERIVED) FROM THE ARCHITECTURAL DRAWINGS.

2. THE CONTRACTOR IS SOLEY RESPONSIBLE FOR ANY AND ALL THE DESIGN AND ERECTION OF TEMPORARY BRACING AND SHORING AS REQUIRED FOR STABILITY OF THE STRUCTURAL SYSTEM AND STRUCTURAL COMPONENTS DURING ALL PHASES OF CONSTRUCTION. MEANS AND METHODS ARE SOLELY THE RESPONISBILITY OF THE CONTRACTOR, THE DESIGN PROFESSIONALS DO NOT CONTROL THE CONTRACTOR'S MEANS, METHODS, SEQUENCE, TECHNIQUES, PROCEDURES AND/OR QUALITY CONTROL IN PERFORMING THE WORK. SITE SAFETY OR SAFETY PROGRAMS ARE THE RESPONSIBLITY OF THE CONTRACTOR.

3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, PLUMBING AND/OR VENDER DRAWINGS FOR LOCATIONS OF DEPRESSED FLOOR AREAS, FLOOR DRAINS, FLOOR TOPPINGS AND FLOOR SLOPES.

4. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM CONCRETE TESTS, A MINIMUM OF FOUR CYLINDERS SHALL BE TAKEN FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF) OF EACH CONCRETE TYPE AND STRENGTH. THE CONCRETE CYLINDERS SHALL BE TAKEN AFTER WATER AND ADMIXTURES ARE ADDED TO THE MIX. ONE CYLINDER SHALL BE TESTED AT 7 DAYS, TWO AT 28 DAYS AND HOLD THE FINAL CYLINDER IN RESERVE. IT IS RECOMMENDED THAT THE TEST REPORTS SHALL BE SENT DIRECTLY TO THE GENERAL CONTRACTOR, OWNER, ARCHITECT AND STRUCTURAL ENGINEER.

#### PRE-ENGINEERED METAL BUILDING:

1. THE BUILDING SWAY SHALL BE NO GREATER THAT H/180 (WHERE H= BUILDING EAVE HEIGHT) FOR WIND AND SEISMIC LOADS.

2. (TODD) WILKES ENGINEERING, LLC IS THE STRUCTURAL ENGINEER FOR THE FOUNDATION FOR THIS PROJECT. ALL OTHER STRUCTURAL DESIGN CONSIDERATIONS ARE BY OTHERS.

3. THE PRE-ENGINEERED METAL BUILDING FOR THIS PROJECT SHALL BE DESIGNED TO LOADS PRESCRIBED BY THE APPLICABLE EDITION OF THE INTERNATIONAL BUILDING

CODE. 4. PRE-ENGINEERED METAL BUILDING COLUMN ANCHOR BOLTS TO EXTEND DOWN TO 4" FROM BOTTOM OF COLUMN FOOTING.

DESIGN CODES AND STANDARDS						
INTERNATIONAL BUILDING CODE (IBC), 2015 E	DITION					
INTERNATIONAL MECHANICAL CODE (IMC), 2012 EDITION						
INTERNATIONAL PLUMBING CODE (IPC), 2012	EDITION					
NATIONAL ELECTRIC CODE, NFPA 70, LATEST E	DITION					
State Fire Marshall Regulations, latest revision						
ICC / ANSI - A117.1-2003, Accessible and Usab	le Buildings and Facilities					
AMERICANS WITH DISABILITIES ACT (ADA) - TI	TLE III, latest revision					
Consolidated Zoning Ordinance of Florence Co	ounty					
BASIC CODE REVIEW INFORMATION	1					
OCCUPANCY (per IBC Chapter 3):	STORAGE (S-2)					
TYPE OF CONSTRUCTION (per IBC Chapter 6):						
Construction Classification:	Туре V-В					
is the Building Construction						
Protected or Unprotected	UNPROTECTED					
is the Building Construction of						
Combustible or Noncombustible Mater	ials: COM					
is the Building Provided with a						
Fire Protection Sprinkler System:	NO					
LAND USE INFORMATION						
Municipality and/or County where						
project is located:	FLORENCE CO.					
is the Project in a Wetlands Area:	NO					
SEISMIC DESIGN CRITERIA:	SEE STRUCTURAL DRAWINGS					
WIND LOAD CRITERIA:	SEE STRUCTURAL DRAWINGS					
WASTEWATER RETENTION:	SEE CIVIL DRAWINGS					
NUMBER OF FLOORS:	1					
BUILDING HEIGHT:	21'-0"					

#### LIFE SAFETY SYSTEMS PROVIDED FIRE ALARM/SMOKE DETECTORS MANUAL FIRE EXTINGUISHERS EXIT SIGNS EMERGENCY / MEANS-OF-EGRESS LIGHTING

**RISK CATEGORY II** 

#### FIRE-RESISTANCE RATING FOR BUILDING ELEMENTS

BUILDING ELEMENT	Rating as Designed	Rating as Required	Testing Agency & Design No.
STRUCTURAL FRAME (per IBC Table 601)	0	0	
Including columns, girders, trusses		ļ	
BEARING WALLS			
Exterior (per IBC Table 601 & 602)	о	0	
Interior (per IBC Table 601)	0	0	
NONBEARING WALLS & PARTITIONS		· · · · · · · · · · · · · · · · · · ·	<u></u>
Exterior (per IBC Table 602)	о	0	
Interior (per IBC Section 602)	0	o	
FLOOR CONSTRUCTION (per IBC Table 601)			······································
Including supporting beams & joists	о	0	Ĩ
ROOF CONSTRUCTION (per IBC Table 601)	<u> </u>		
Including supporting beams & joists	0	0	
FIREWALLS (per IBC Section 706)	N/A	0	
FIRE BARRIERS (per IBC Section 706)	N/A	N/A	
Separation of Occupancies	N/Á	0	/
Vertical Exit Enclosures	N/A	N/A	
Incidental Use Areas (per IBC Table 508.2			· · · · · · · · · · · · · · · · · · ·
- Storage Rooms over 100 sq.ft)	N/A	-	
SHAFT ENCLOSURES (per IBC Section 712)	N/A	1	· · · · · · · · · · · · · · · · · · ·
FIRE PARTITIONS (per IBC Sections 420.2 & 708)	N/A	30 MIN	
SMOKE BARRIERS (per IBC Section 709)	N/A	N/A	

#### PLUMBING INFORMATION

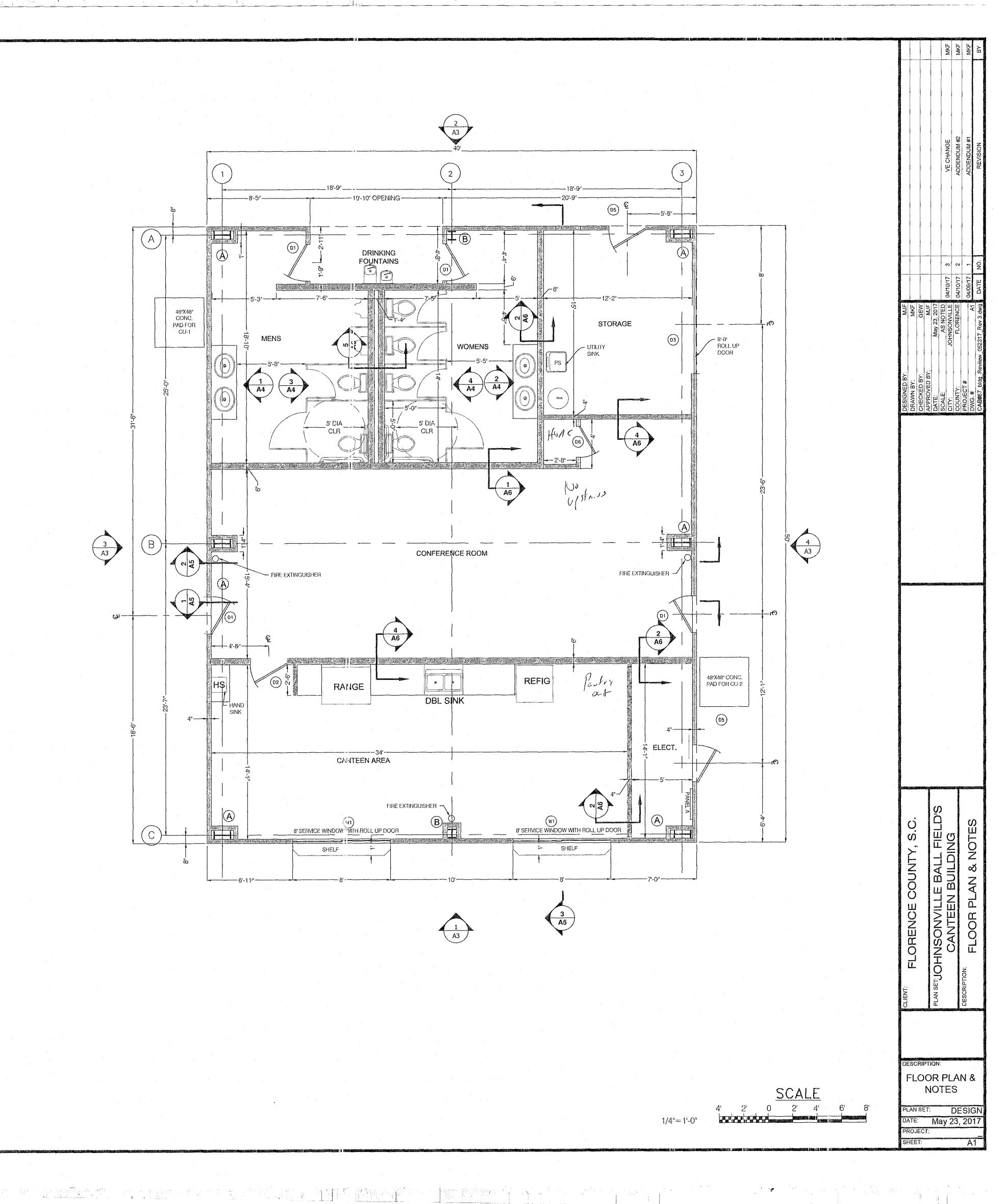
MINIMUM NO: OF PLUM	IBING FIXTURES REC	UIRED	(per IBC Table	2902.1)		
WATER CLOSETS:	Required (S-2):	1	Male: 0	Female:	0	Unisex: 1 (Per IBC 2902.2, Exception 2)
	Provided (S-2):	8	Male: 2	Female:	0	Unisex: 6 (Per IBC 2902.2, Exception 2)
LAVATORIES:	Required (5-2):	1	Male: 0	Female:	0	Unisex: 1 (Per IBC 2902.2, Exception 2)
	Provided (S-2):	4	Male: 0	Female:	0	Unisex: 4 (Per IBC 2902.2, Exception 2)
DRINKING FOUNTAINS:	Required (S-2):	0	(Per IBC 2	902.1, Note	"f"]	)
	Provided (S-2):	2				
SERVICE SINK:	Required (S-2):	1			_	
	Provided (S-2):					

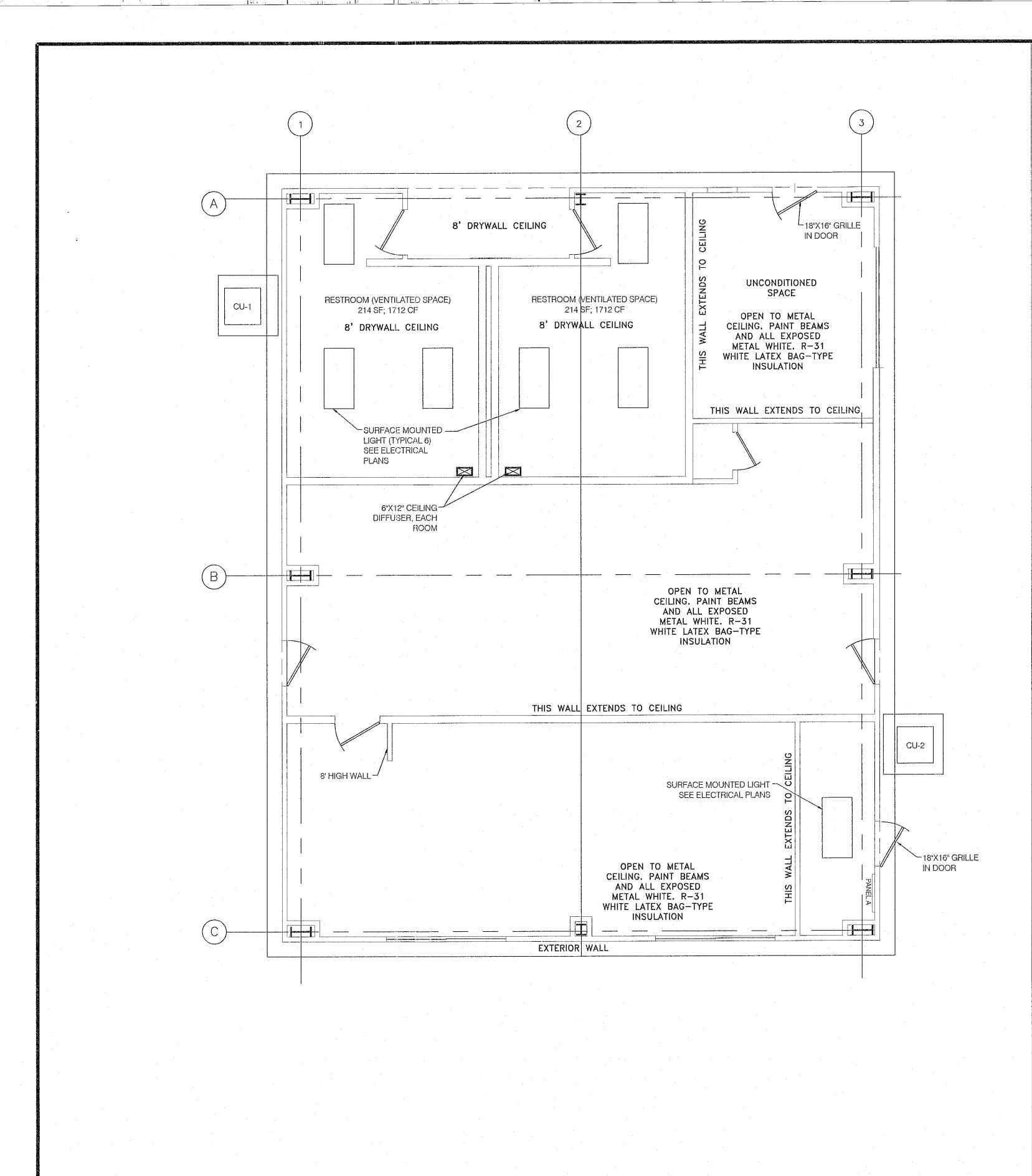
. . 1

Total Allowable
Area (IBC 506.1)
13,500 SF

#### BUILDING DESIGN OCCUPANT LOAD (per IBC 1004)

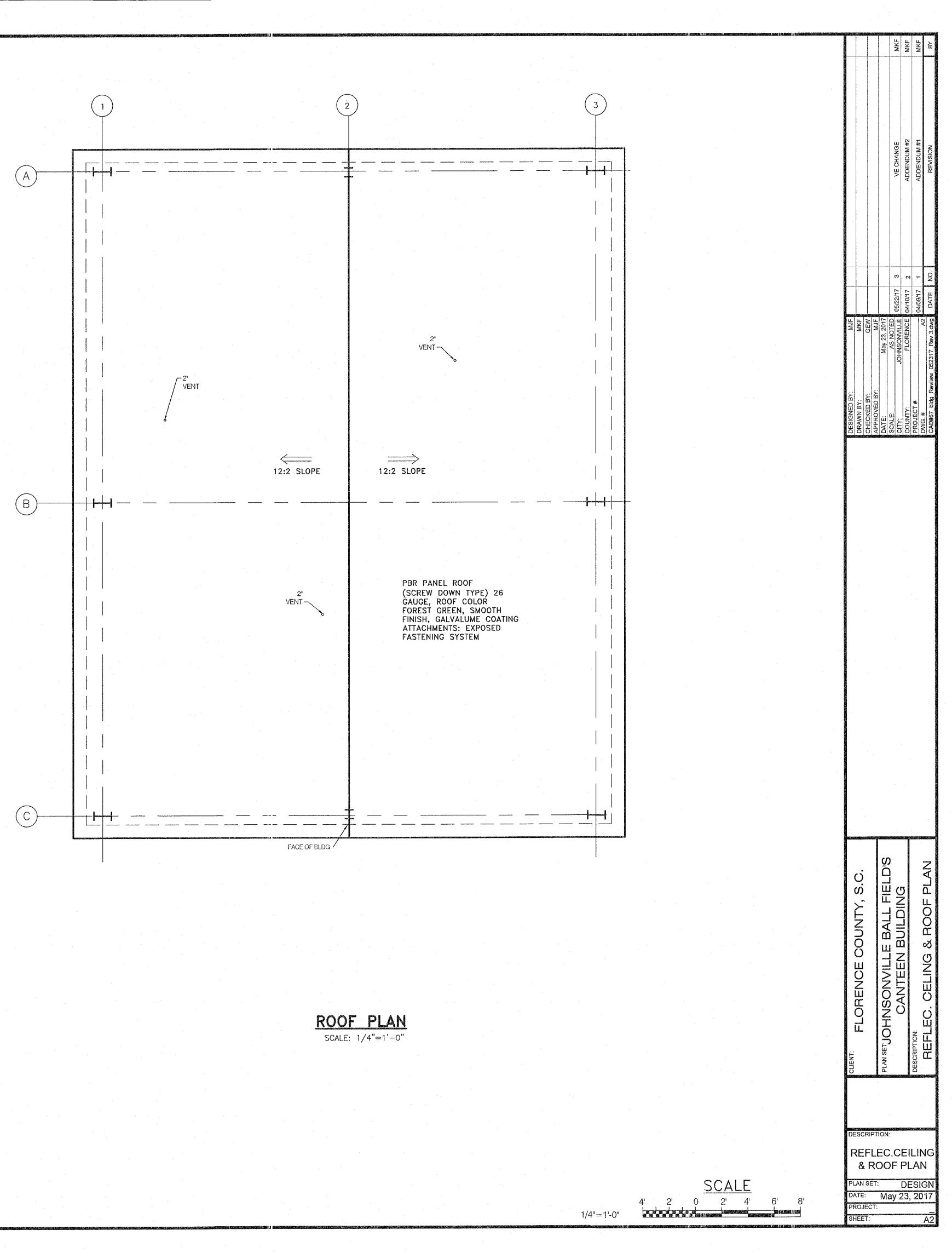
	Column Identification	A	В	С	D
Floor or Level	Оссирапсу Туре	Occupancy Floor Area	Occupant Load Factor (Floor Area in SF/Occupant)	Occupants on floor for this Occupancy	Design Occupant Load
1st Floor		2,000 SF	300 Gross	7:5	7,5

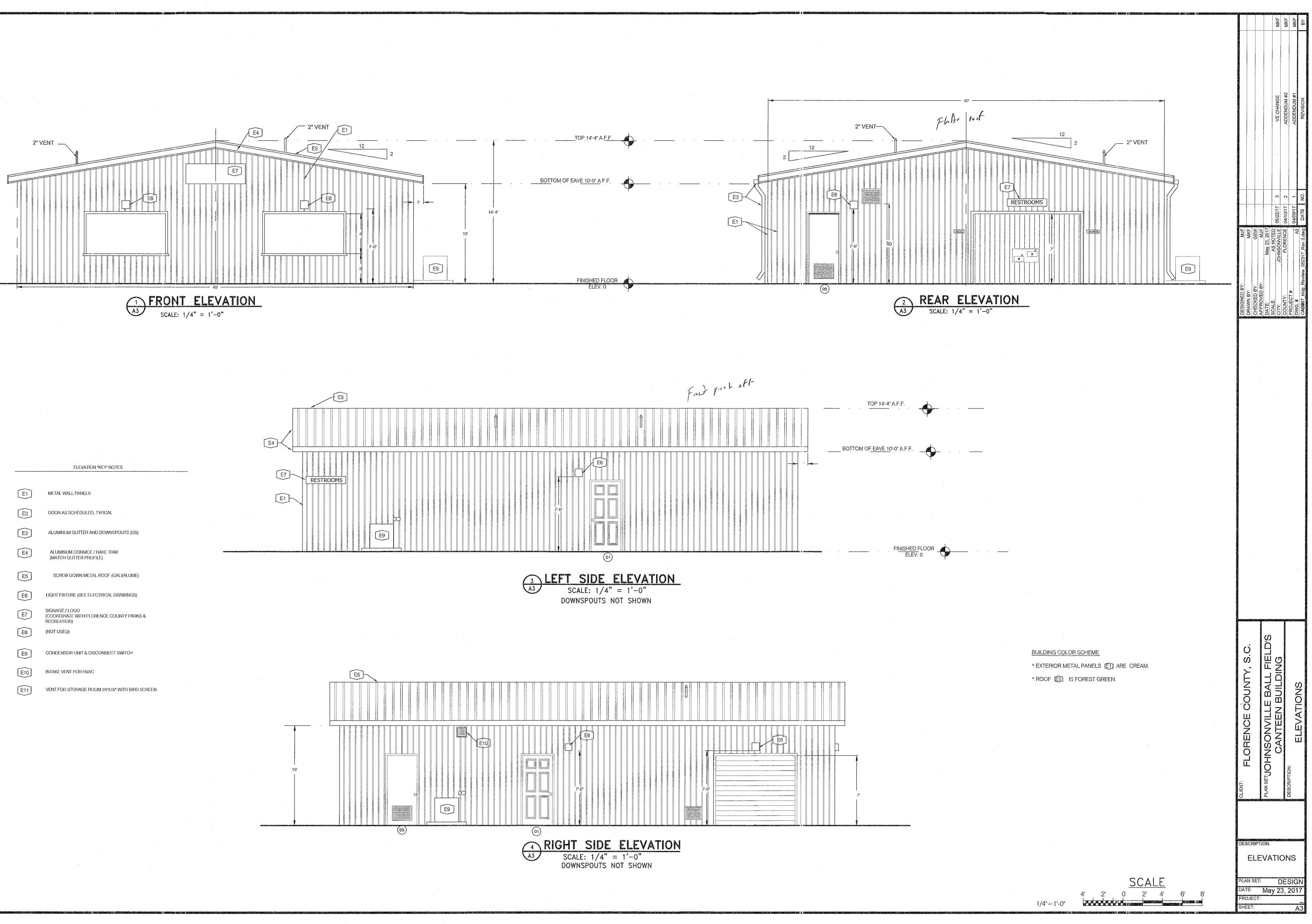


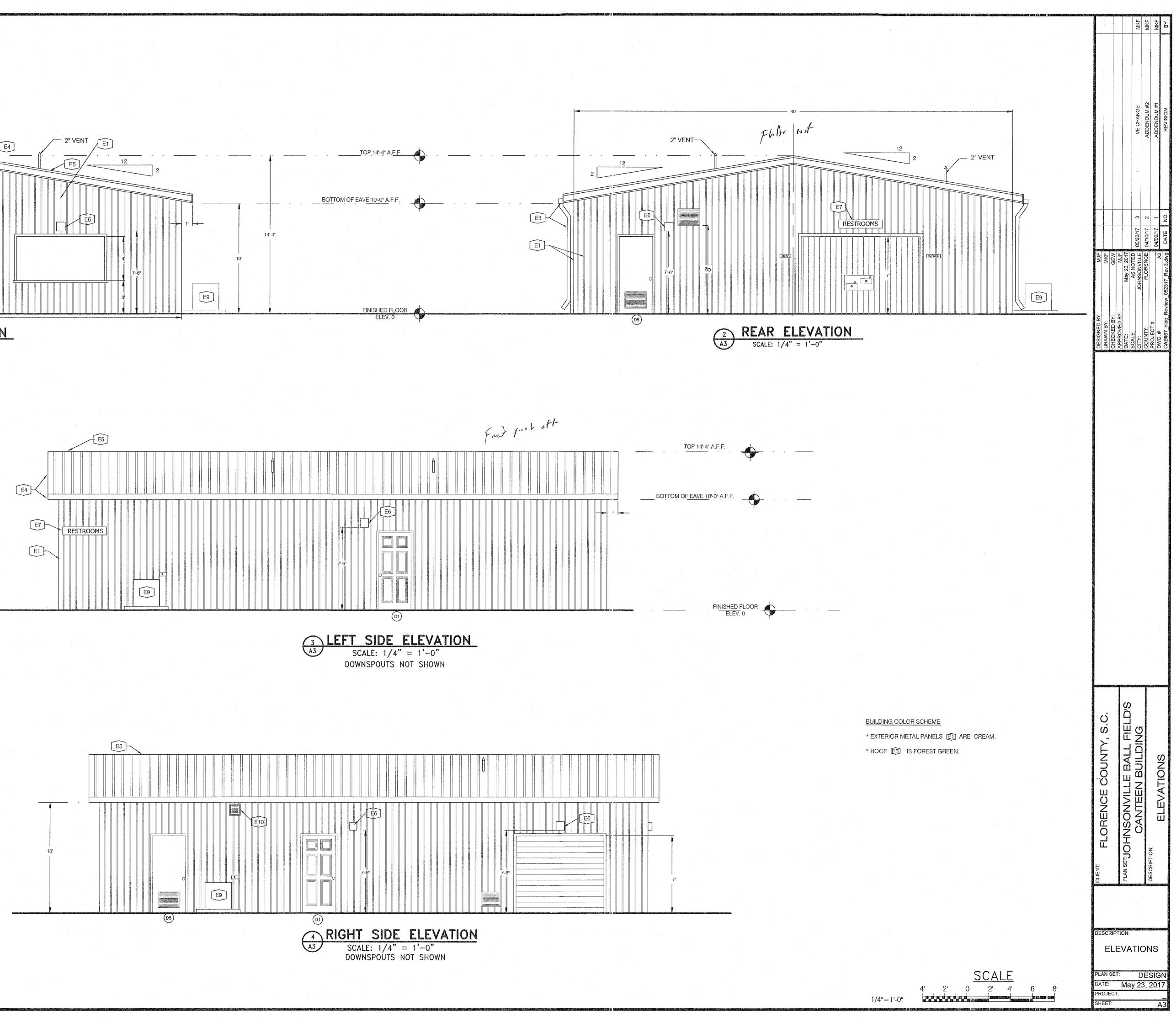


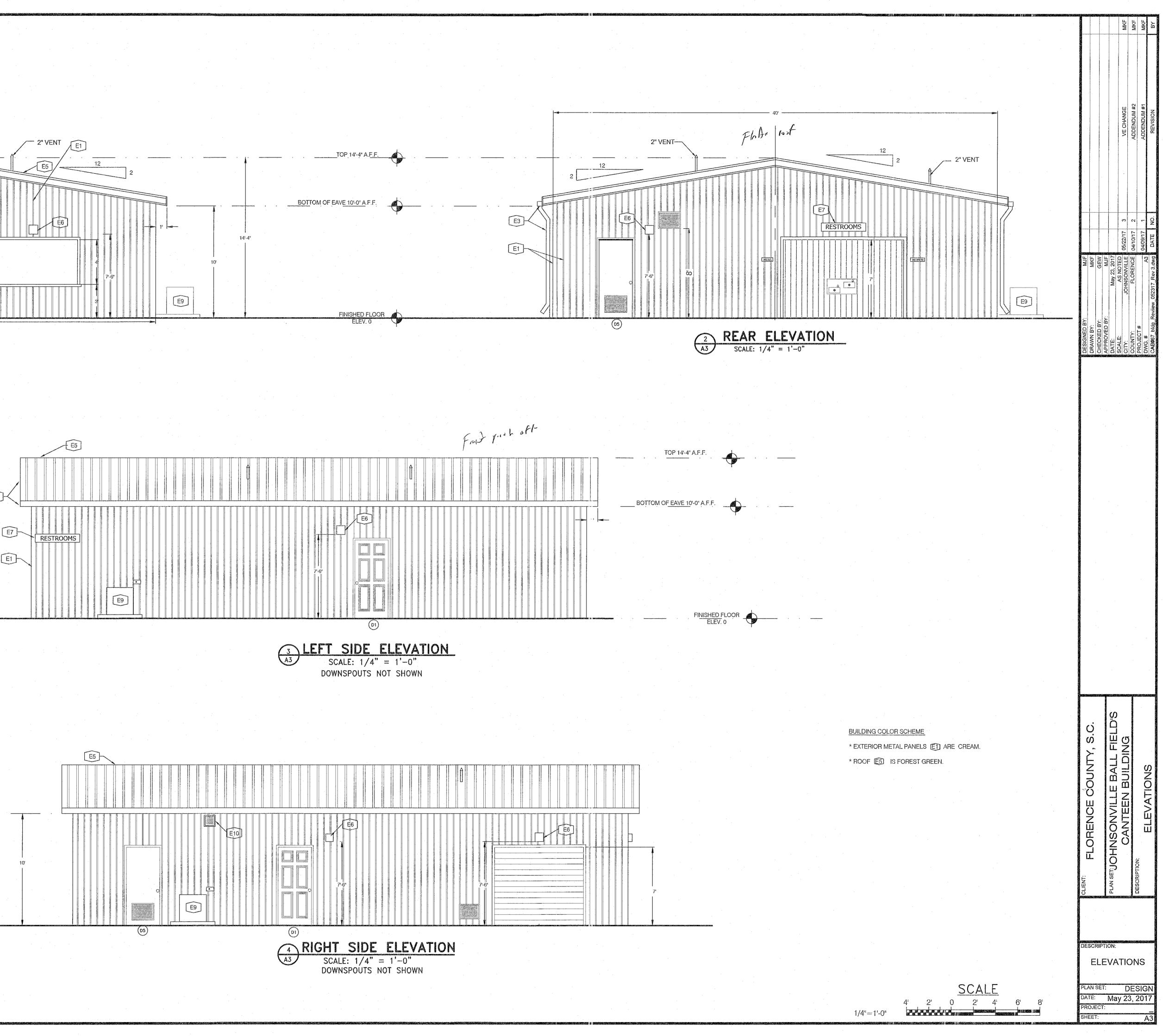
## REFLECTED CEILING PLAN SCALE: 1/4"=1'-0"

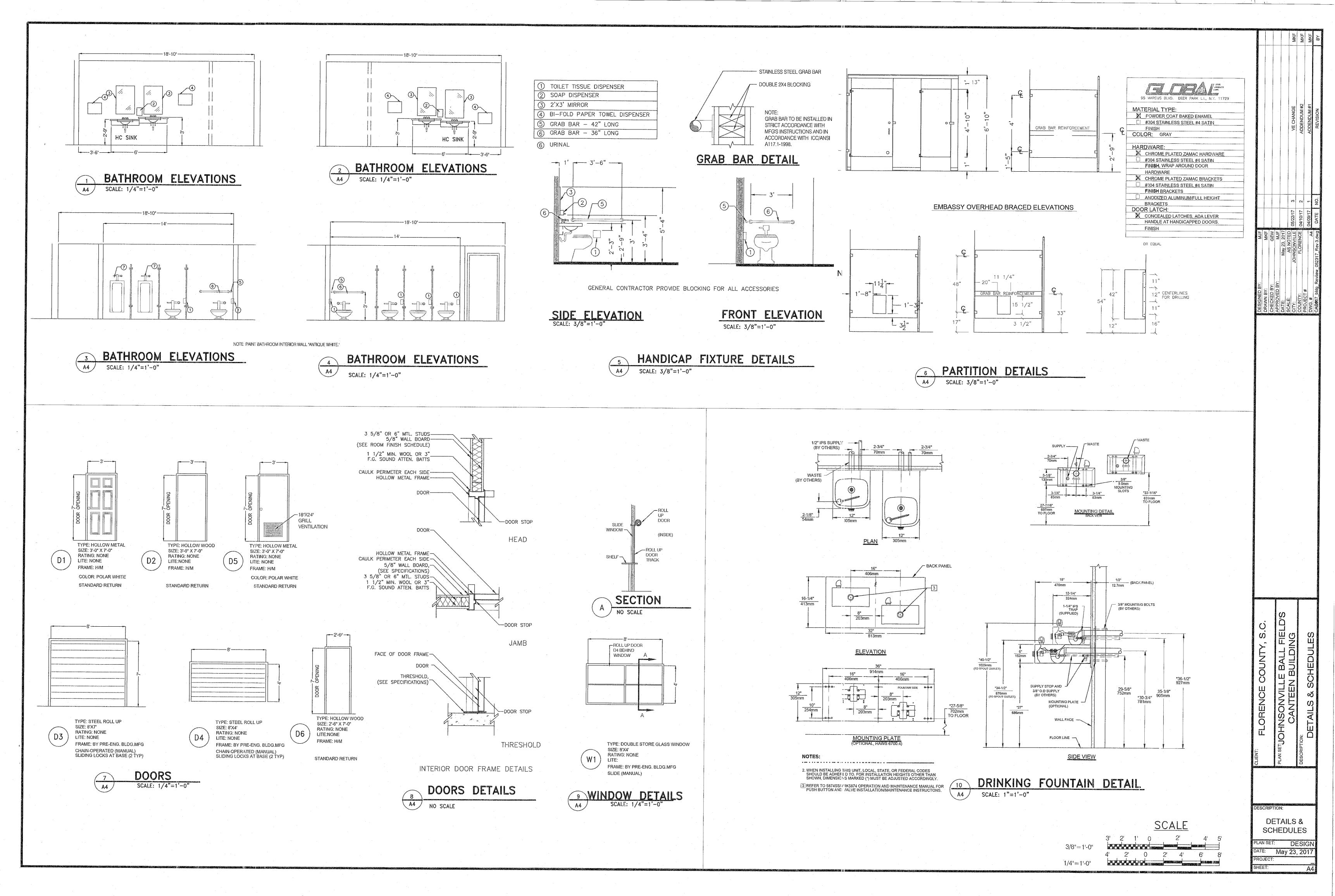
NOTE: SUPPENDED LIGHT FIXTURES NOT SHOWN

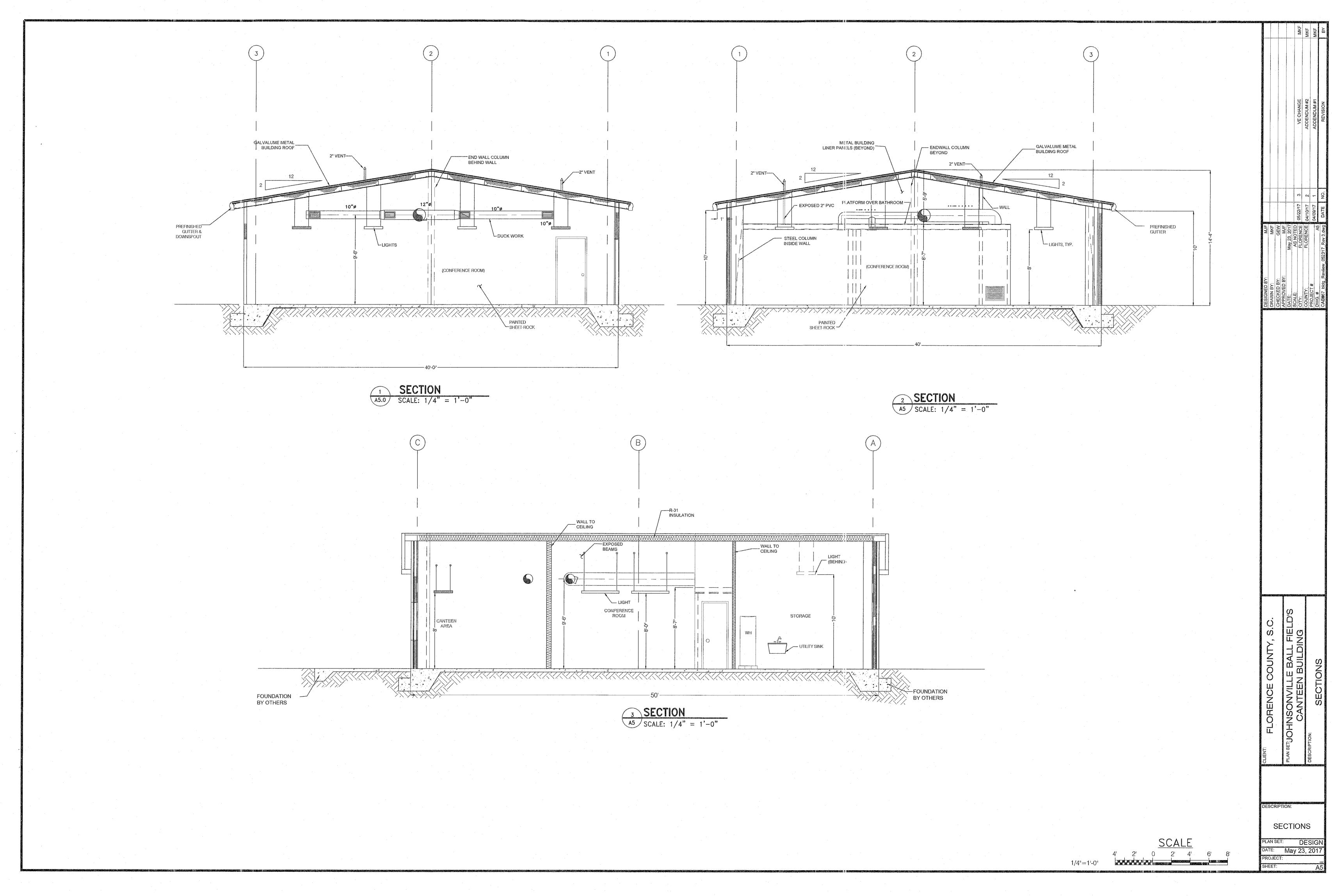


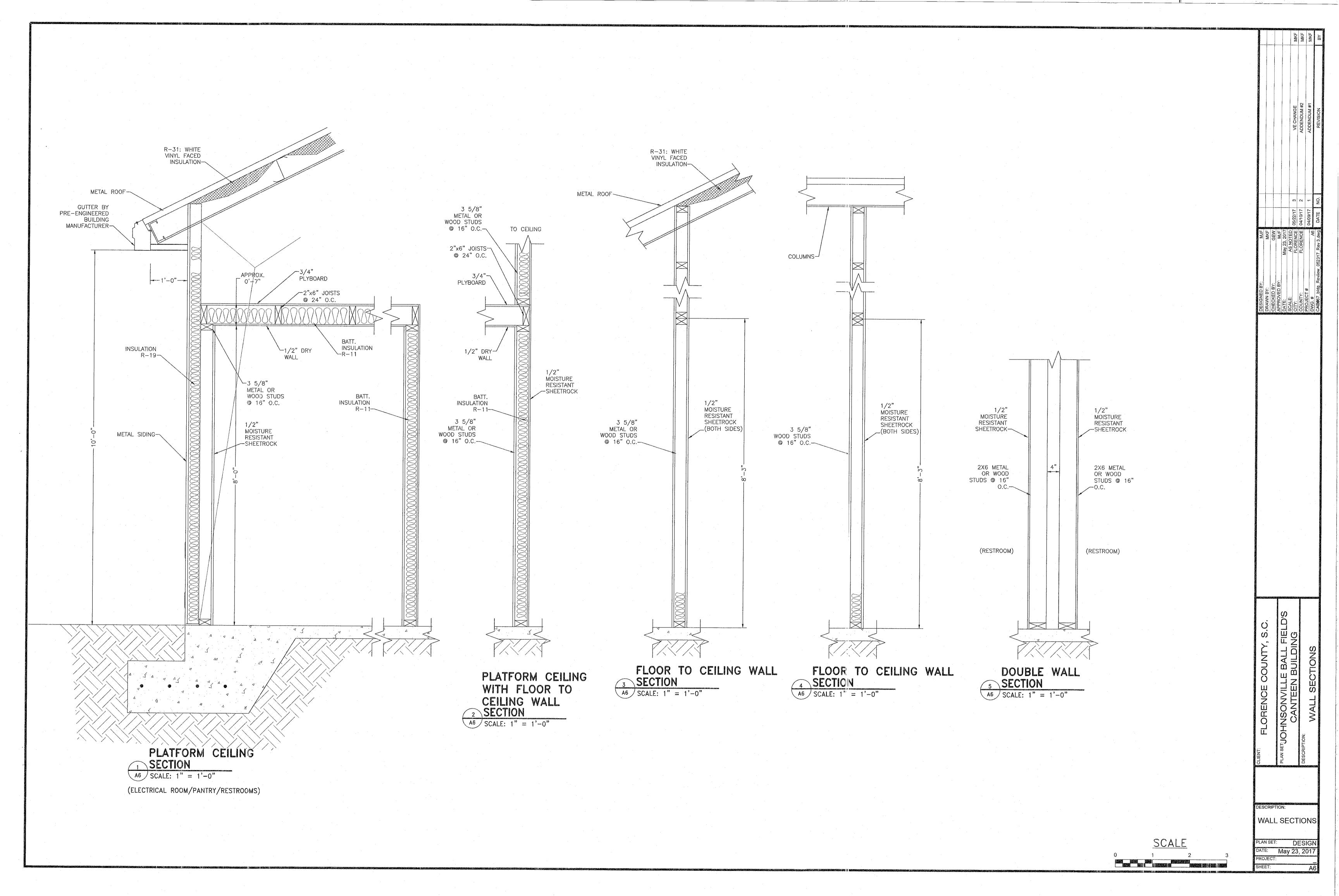


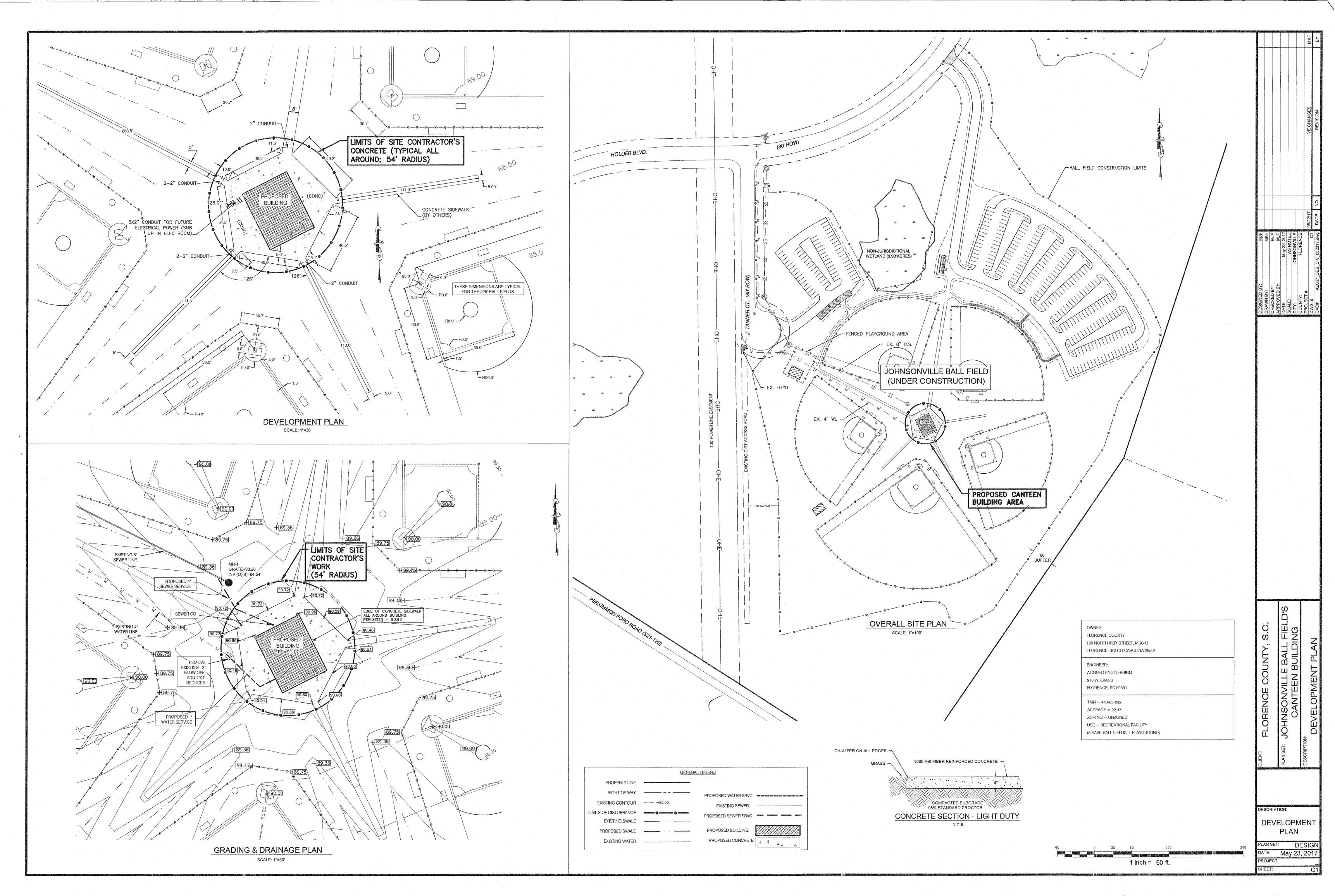












PLUMBING (P) NOTES		· ·	
GENERAL (PG) PG-1 SCOPE: PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL PLUMBING SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE CODES.	· · ·		
PG-2 PERMITS: APPLY AND PAY FOR ALL NECESSARY PERMITS, FEES AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION. ACREAGE CHARGES, FACILITIES CHARGES AND BOND PROPERTY ASSESSMENTS ARE NOT TO BE CONSTRUED TO BE A PART OF THIS CONTRACT.			
PG-3 WARRANTY: PROVIDE A ONE YEAR WARRANTY, FROM THE DATE OF ACCEPTANCE OF WORK BY THE OWNER, FOR ALL PLUMBING MATERIALS AND EQUIPMENT.	ΥΤΟ	SYMBOL	
PG-4 SUBSTITUTIONS: THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SUBSTITUTIONS TO SPECIFIED PLUMBING FIXTURES AND EQUIPMENT INCLUDING BUT NOT LIMITED TO; PROVIDING MAINTENANCE ACCESS CLEARANCE, PIPING, ELECTRICAL, REPLACEMENT OF OTHER SYSTEM COMPONENTS, BUILDING ALTERATIONS, ETC. AND ANY MODIFICATIONS TO ASSOCIATED MECHANICAL, ELECTRICAL OR PLUMBING SYSTEMS REQUIRED BY THE EQUIPMENTS INSTALLATION INSTRUCTIONS. ALL COSTS ASSOCIATED WITH SUBSTITUTIONS SHALL BE INCLUDED IN THE	6	P1	
ORIGINAL BASE BID. PG-5 COORDINATE ALL PLUMBING PIPING LOCATIONS. ROUGH-IN LOCATIONS AND EQUIPMENT LOCATIONS SHALL BE A			
CODE COMPLAINT INSTALLATION FOR ALL TRADES. PG6 PLUMBING PLANS SHALL NOT BE SCALED. REFERENCE THE ARCHITECTURAL PLANS FOR ALL LOCATIONS OF PLUMBING FIXTURES, WALLS, DOORS, WINDOWS, ETC.			
PEUMBING PIXTORES, WALLS, BOORS, WINDOWS, ETC. PG-7 PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO: PLUMBING FIXTURES AND EQUIPMENT, FIRE STOPPING, SEISMIC BRACING, PIPE IDENTIFICATION, DOMESTIC WATER SYSTEM, SANITARY WASTE AND VENT SYSTEM, LP GAS PIPING.	4	<u>P2</u>	
PG-8 PROVIDE COMPLETE PLUMBING FIXTURES AND EQUIPMENT. INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAIL PIECES, ETC		······	
PG-9 VERIFY PROPER OPERATION OF EXISTING SYSTEMS BEFORE STARTING CONSTRUCTION. NOTIFY THE ARCHITECT/ENGINEER OF RECORD OF ANY PROBLEMS OR DISCREPANCIES BETWEEN THE OBSERVED SYSTEM BEFORE CONTINUING WORK IN THE EFFECTED AREAS.	1	<u>P3</u>	
PG10 WHERE DISCREPANCIES ARE FOUND IN THE DRAWINGS AND SPECIFICATIONS THE MORE STRINGENT SHALL APPLY. CONTACT ENGINEER FOR CLARIFICATION.			0
PG-11 ALL PIPING SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA.	5	HB	A
PG12 ALL VALVES, BACKFLOW PREVENTERS, BOOSTER PUMPS, ETC. SERVING THE DOMESTIC WATER SYSTEM SHALL MEET LEAD FREE STANDARDS PER ANSI/NSF 372 AND NSF 61, ANNEX G.		<u> </u>	-
PI-1 PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE SOUTH CAROLINA STATE PLUMBING CODE AND WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.			
PI-2 PLUMBING FIXTURES AND EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.			
PI-3 CUT WALLS, FLOORS AND CEILINGS AS REQUIRED FOR INSTALLATION OF PLUMBING WORK. ALL CUTTING SHALL BE HELD TO A MINIMUM. PATCH AND FINISH SURFACES TO MATCH ADJOINING SURFACES.	2	YCO	
PI-4 PLUMBING PIPING AND SPECIALTIES SHALL BE LOCATED CONCEALED IN WALLS, PARTITIONS OR ABOVE CEILINGS UNLESS NOTED OTHERWISE. PLUMBING PIPING IN EXPOSED AREAS SHALL BE RUN TIGHT TO UNDERSIDE OF STRUCTURE. PROVIDE ACCESS DOORS FOR CONCEALED SPECIALITIES.	6	FD1	+
PI-5 PROVIDE ACCESS DOORS FOR VALVES, WATER HAMMER ARRESTORS, TRAP PRIMERS, ETC. CONCEALED IN MASONRY WALLS, GYPBOARD WALLS AND/OR CEILINGS THAT WILL REQUIRE MAINTENANCE ACCESS.			
PI-6 PROVIDE NON-CONDUCTING DIELECTRIC UNIONS WHENEVER CONNECTING DISSIMILAR METALS.	1	SA	
<ul> <li>PI-7 PIPE IDENTIFICATION:</li> <li>1. PIPE IDENTIFICATION SHALL MATCH THE FACILITY'S EXISTING STANDARD. IF NO STANDARD EXISTS, THEN THE PIPE IDENTIFICATION SHALL BE IN ACCORDANCE WITH ANSI A13.1.</li> <li>2. PROVIDE PIPING LABELS FOR ALL PLUMBING PIPING. PIPING LABELS SHALL BE ACRYLIC FACED, WRAP-AROUND TYPE. EACH LABEL SHALL INDICATE THE PIPING CONTENTS, DIRECTION OF FLOW AND SHALL BEAR THE MANUFACTURER'S STANDARD COLOR FOR THE SERVICE INDICATED.</li> </ul>	1	<u>WH1</u>	
PIPE PENETRATIONS (PP) PP-1 FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS, AND PARTITIONS. PROVIDE A DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTENED AS COMPLYING WITH ASTM E-814 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE A DEVICE9S) OR SYSTEM(S) WITH AN 'f' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED. REFER TO ARCHITECTURAL PLANS FOR WALL AND FLOOR TYPES	2	<u>P-4</u>	
PP-2 PLUMBING PIPING, VENTS, ETC. EXTENDING THROUGH EXTERIOR WALLS AND/OR THE ROOF SHALL BE FLASHED AND COUNTER FLASHED IN A WATERPROOF MANNER. COORDINATE FLASHING WITH THE GENERAL CONTRACTOR.	.1	<u>P-5</u>	1
PP-3 DO NOT INSTALL PLUMBING PIPING IN AREAS SUBJECT TO FREEZING TEMPERATURES. INSTALL PLUMBING PIPING SHOWN IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.			
SEISMIC BRACING (PB)		· · ·	
PB-1 PROPERLY SUPPORT AND BRACE VERTICALLY AND HORIZONTALLY ALL PIPING, APPARATUS, EQUIPMENTS, ETC. IN ACCORDANCE WITH APPLICABLE CODES TO PREVENT EXCESSIVE MOVEMENT DURING SEISMIC CONDITIONS.			
PB-2 ATTACH HANGERS TO STRUCTURE, HANGERS SHALL <u>NOT</u> ATTACH TO THE DECK.	1	<u>P-6</u>	
DW-1 DOMESTIC WATER PIPING AND JOINTS BELOW GRADE: PROVIDE PEX PIPING AND JOINTS.			
DW-2 DOMESTIC WATER PIPING AND JOINTS <u>ABOVE GRADE</u> ; PROVIDE PEX PIPE AND JOINTS. DW-3 STERILIZE THE DOMESTIC WATER SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S			
SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS. DW-4 INSULATE DOMESTIC WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH GLASS FIBER INSULATION HAVING A VAPOR BARRIER AND JACKET. PIPE INSULATION SHALL HAVE A. CONDUCTIVITY NOT EXCEEDING 0.27 BTUH X SQ. FT. FOLLOW SCHEDULE BELOW:			
SERVICE TYPE PIPE SIZES INSULATION THICKNESS DOMESTIC HOT WATER 1/2"-1 1/4" 1" DOMESTIC COLD WATER 1/2" - 1 1/4" 1/2"			
DOMESTIC COLD WATER 1 1/2" – 4" 1" DW–5 DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS, AND ADHESIVES ARE REQUIRED TO MEET A FLAME-SPREAD RATING OF 25 OR LESS AND A SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 (NFPA 255) METHOD AND SHALL BE PLENUM RATED. PROVIDE PVC JACKET FOR EXPOSED PIPING IN		T P C	PPR HE ROV
MECHANICAL ROOMS. DW-6 DOMESTIC WATER PIPING SHALL BE SLOPED FOR DRAINAGE WITH DRAIN VALVES INSTALLED AT LOW POINTS.			ROD
SANITARY WASTE AND VENT PIPING (SS) SS-1 SANITARY WASTE PIPING <u>BELOW</u> GRADE: PROVIDE SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPE (ASTM A 74) WITH COMPRESSION JOINTS (CISPI HSN) AND NEOPRENE GASKETS (ASTM C 564) OR NO-HUB PIPE AND FITTINGS (CISPI 301) WITH NEOPRENE GASKET/STAINLES STEEL CLAMP JOINTS (CISPI 310) OR PROVIDE SCHEDULE 40 PVC PIPE AND SOCKET FITTINGS (ASTM D 2665) WITH SOLVENT WELD JOINTS (ASTM D2855). FOAM CORE PIPE IS <u>NOT</u> APPROVED.			
SS-2 SANITARY WASTE/VENT PIPING <u>ABOVE</u> GRADE: PROVIDE SERVICE WEIGHT CAST IRON NO-HUB PIPE AND FITTINGS (CISPI 301) WITH NEOPRENE GASKET AND STAINLESS STEEL CLAMP JOINTS (CISPI 310) OR PROVIDE SCHEDULE 40 PVC PIPE AND SOCKET FITTINGS (ASTM D 2665) WITH SOLVENT WELD JOINTS (ASTM D2855).			
FOAM CORE PIPE IS <u>NOT</u> APPROVED. SS-3 SLOPE SANITARY WASTE PIPING AT 1/4" PER FOOT MINIMUM FOR PIPING 2 1/2" OR SMALLER AND 1/8" PER FOOT MINIMUM FOR PIPING 3"AND LARGER UNLESS PERMITTED OTHERWISE.	•		
SS-4 PROVIDE CLEAN-OUTS AT EVERY TURN IN PIPING IN EXCESS OF 45 AND NO FURTHER THAN 100'-0" APART IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.			
SS-5 PROVIDE FLOOR CLEANOUTS WITH TOPS DESIGNED TO MATCH SPECIFIC FLOOR FINISHES SUCH AS CARPET,			
TILE, ETC. YARD CLEANOUTS SHALL BE PROVIDED IN AN 18"x18"x6" CONCRETE PAD. SS-6 WHERE WASTE PIPING IS EXPOSED IN REST ROOM AREAS, PROVIDE REMOVABLE P-TRAPS, MATCHING STOPS AND			
ESCUTCHEONS FOR ALL LAVATORIES.			

	C	ONNECTIO	NS (IN.	.)		
DESCRIPTION	W	V	CW	ΗŴ	SPECIFICATION	REMARKS
WATER CLOSET, ADA COMPLIANT STANDARD BOWL FLOOR MOUNTED FLUSH TANK, 1.28 GPF	4"	2"	1/2"			SEAT HEIGHT 16 1/2" PROVIDE LEVER ON WIDE SIDE OF STALL. PROJECT SOURCE; WHITE TWO-PIECE TOILET
LAVATORY ADA. COMPLIANT 20"X18" WLL MOUNTED 0.5 GPM FAUCET	2"	12"	1/2"	1/2"		SEE NOTE 1 BELOW. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT. PROVIDE 0.5 GPN AERATO JACUZZI ANNA FARMHOUSE WITH DROP-11 RECTANGULAR BATHROOM SINK WIHT OVERFLOW 17"X22"X5.5" DEEP BOWL. FAUCET: AQUASOURCE CHROME 2 HANDLE WATERSENSE BATHROOM FAUCET WITH DRAIN
UTILITY TUB FREE STANDING (18"X24" BOWL W/FAUCET)	1 1/2"	12"	1/2"	1/2"		MUSTEE UTILATUB LAUNDRY/UTILITY TUE POLYPROPYLENE ONE-PIENCE MOLDED CONSTRUCTION WITH BUILT-IN DRAIN AND STEEL LEGS WITH LEVELERS. 13" DEEP COMPLETE WITH FAUCET, TWO SUPPLY _ NES, AND 1 1/2" P-TRAP.
OUTSIDE HOSE BIBB, EXPOSED ROST PROOF, AUTOMATIC DRAINING ANTI-SIPHON VACUUM BREAKER, KEYLESS	National	-	3/4"	-	EQUIPMENT: WOODFORD 65EP	EXTERIOR: MOUNT 18" AFF. INTERIOR: MOUNT 24" AFF.
FLOOR CLEANOUT CAST IRON BODY ADJUSTABLE TOP	4"	·			CLEANOUT: JAY R. SMITH 4020 SERIES OUTLET: NO-HUB PLUG: ABS, IRON OR BRONZED WITH GASKET SEAL COVER: ROUND, NICKEL BRONZE	
YARD CLEANOUT ADJUSTABLE, CST IRON BODY, COATED CAST IRON TOP	4"	· · · · · · · · · · · · · · · · · · ·			CLEANOUT: JAY R. SMITH 4050 SERIES OUTLET: NO-HUB PLUG: ABS, GASKET SEAL COVER: CAST IRON, HEAVY DUTY	SET IN CONCRETE PAD 18"W X 18"L X 6" THICK
FLOOR DRAIN CAST IRON BODY ADJUSTABLE TOP	2"				DRAIN: ZURN INDUSTRIES STRAINER: 5" DIA, TYPE – , NICKEL BRONZE P–TRAP: DEEP SEAL (MATCH DRAIN SIZE)	
SHOCK ARRESTOR		_	1/2"		SIOUX CHIEF 650 SERIES WATTS PPP, INC	PDI WH201 STANDARD DESIGNATION 'A" INSTALL PER PDI WH201 GUIDELINES
WATER HEATER 50 GALLON RESIDENTIAL ELECTRIC			3/4"	3/4"	AO SMITH EXT-50 4500W AT 240V DUAL ELEMENTS	
URINAL FLOOR MOUNTED SLOPING FRONT STALL	3 1/2"	1 1/2"	3/4"			AMERICAN STANDARD FLOOR MOUNTED WHITE URINAL. 18" WIDE X 38" HIGH WITH INTEGRAL FLUSH SPREADER AND MANUAL FLUSH VALVE
DOUBLE BOWL KITCHEN SINK KIT 2 SINKS, STANLESS STEEL (20 GAL) SINGLE FAUCET	2"	1 1/2"	1/2"	1/2"	FIXTURE: AMERICAN STANDARD "TULSA STAINLESS STEEL KITCHEN SINK KIT" 33"X22" OVERALL #20DB.332211C.075 BRUSHED FINISHED STRAINERS INCLUDED EQUAL BOWL SIZES: 14-9 1/16" WIDE 19-7/16" FRONT TO BACK 9" DEEP	
DRINKING FOUNTAIN REFRIGERATED BIPLEVEL ADA COMPLIANT	1 1/2"	1 1/2"	3/8"		FIXTURE: ELKAY MODEL EZ (S) TLVR8*C 115V/60H2, 8 GPH, 370 WATTS	STAINLESS STEEL BASIN, GALVANIZED STEEL CHA5515, SELF-CLOSING PUSHBAR CONTROLS ON FRONT & SIDE.

NOTES:

1. PROVIDE PRE-MANUFACTURED INSULATION KIT FOR EXPOSED TRIM UNDER SINK.

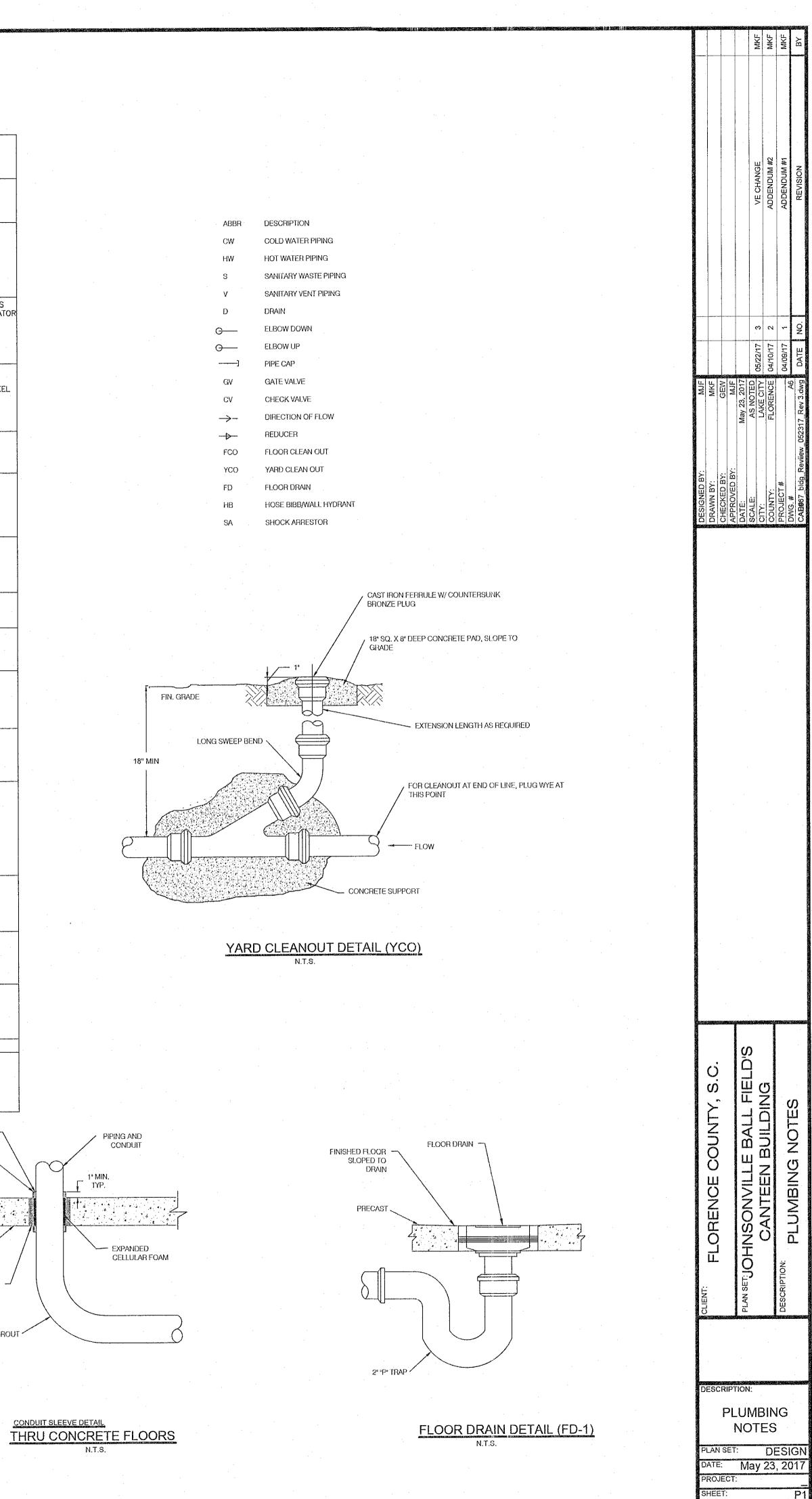
	SPECIFIED PRODUCT:	ACCEPTED EQUAL:
APPROVED EQUALS: THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE MODEL WHICH MOST CLOSELY MATCHES THE SPEDIFIED PRODUCT. PROVIDE PRODUCTS MADE BY THE MANUFACTURER'S LISTED.	AMERICAN STANDARD (VITREOUS CHINA FIXTURES) MOEN (FAUCETS) ELKAY (S.S. SINKS) McGUIRE (SUPPLY STOPS) JAY R. SMITH (DRAINS, CLEANOUTS)	KOHLER, ELJER, TOPO DELTA, KOHLER, AMERICAN STANDARD JUST, ACCORN BRASSCRAFT, E.B.C. ZURN, WADE

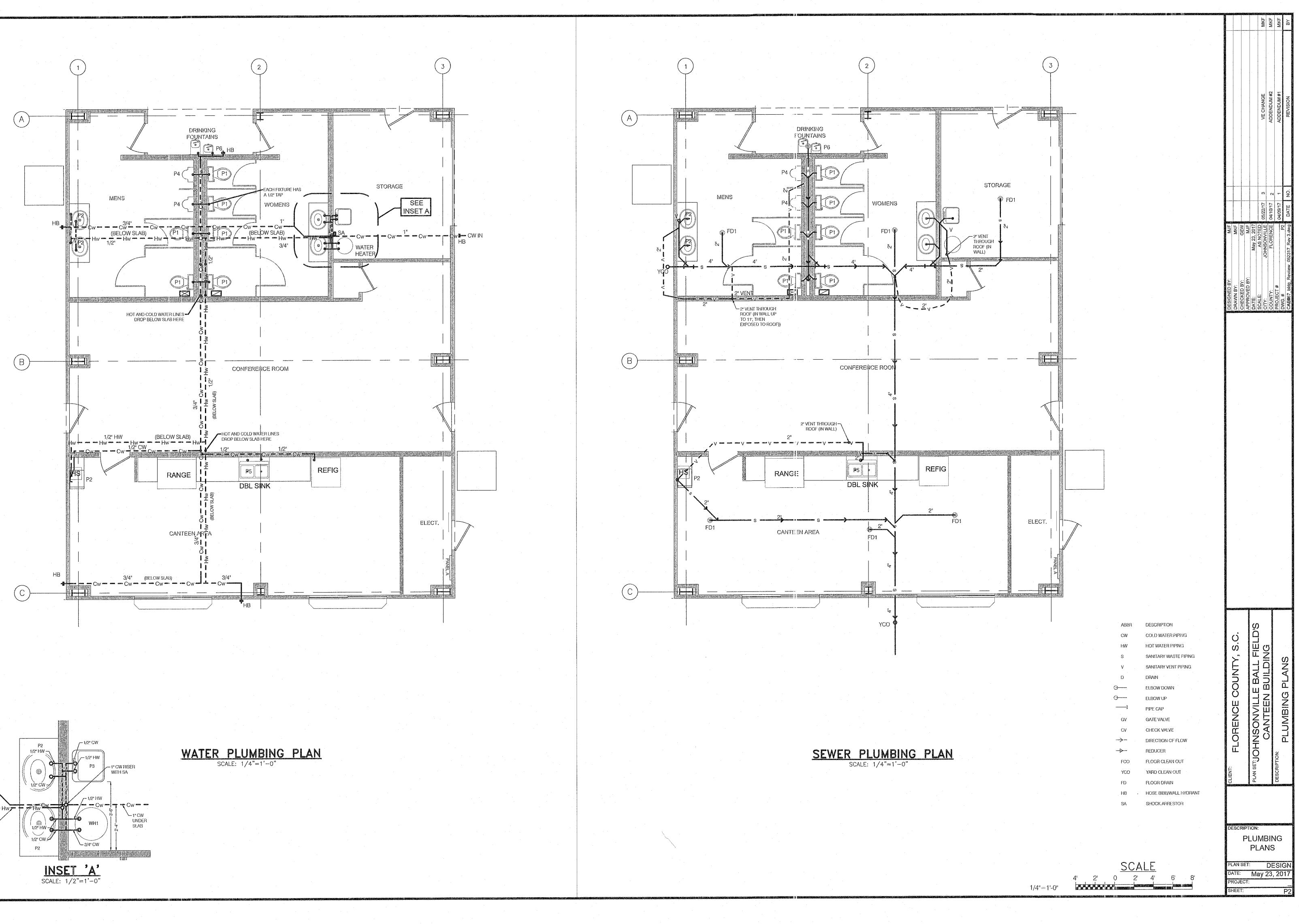
BROUT -

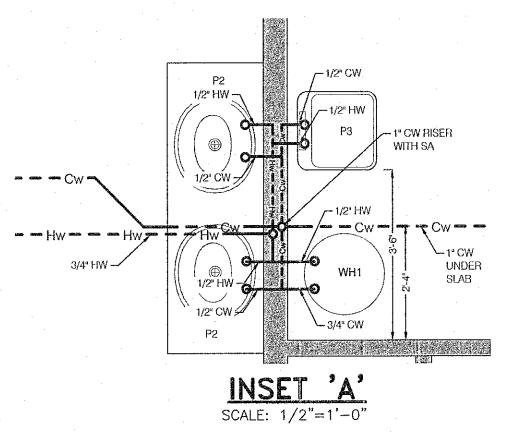
GROUT -

1\* MIN. TYP.

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#### MECHANICAL (M) NOTES

GENERAL (MG) MG-1 DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS AND REFLECTED CEILING PLANS FOR EXACT LOCATION OF DOORS, WINDOWS, CEILING DIFFUSERS, ETC.

- MG-2 ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT TO COMPLY WITH BASIS OF DESIGN, INCLUDING PROVIDING MAINTENANCE ACCESS, CLEARANCE, PIPING, SHEET METAL, ELECTRICAL, REPLACEMENT OF OTHER SYSTEM COMPONENTS, BUILDING ALTERATIONS, ETC., SHALL BE INCLUDED IN THE ORIGINAL BASE BID. NO ADDITIONAL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT DURING CONSTRUCTION WILL BE ACCEPTED AND ALL COST WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THIS INCLUDES ANY MODIFICATIONS TO ANY ASSOCIATED MECHANICAL, PLUMBING, OR ELECTRICAL SYSTEMS REQUIRED BY THIS SPECIFIC MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- MG-3 UPON PROJECT COMPLETION, THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER INSTALLATION INFORMATION INCLUDING RECORD SUBMITTALS (WITH ANY SUBMITTAL REVIEW COMMENTS ADDRESSED) AND O&M MANUALS FOR EACH PIECE OF EQUIPMENT INCLUDING ALL SELECTED OPTIONS, THE NAME AND ADDRESS OF AT LEAST ONE SERVICE AGENCY, FULL CONTROL SYSTEM O&M AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, SCHEMATICS, FULL SEQUENCE OF OPERATION, AND PROGRAMMED SETPOINTS.
- MG-4 PROVIDE A ONE YEAR WARRANTY FOR ALL WORK PERFORMED BEGINNING ON THE DAY THE SYSTEM IS COMPLETELY OPERATIONAL AND ACCEPTABLE BY THE OWNER.
- MG-5 THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING RESTRAINTS TO RESIST THE EARTHQUAKE EFFECTS ON THE MECHANICAL SYSTEMS. THE REQUIREMENTS FOR THOSE RESTRAINTS ARE FOUND IN THE LOCAL BUILDING CODE AND ASCE 7.
- DUCTWORK (MD) MD-1 ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS, DUCT DIMENSIONS ON PLANS ARE FREE AREA SIZE. MD-2 ALL DUCTWORK SHALL BE SEALED PER THE REQUIREMENTS OF THE INTERNATIONAL
- MECHANICAL CODE. SEAL EXHAUST DUCTWORK FOR POSITIVE/NEGATIVE 2" PRESSURE CLASS, SMACNA SEAL CLASS A, SMACNA LEAKAGE CLASS 12. MD-3 ALL PIPING, DUCTS, VENTS, ETC., EXTENDING THROUGH WALLS AND ROOF SHALL BE FLASHED
- AND COUNTERFLASHED IN A WATERPROOF MANNER.
- MD-4 MECHANICAL; CONTRACTOR SHALL VERIFY LOCATION OF ROOF PENETRATIONS WITH ARCHITECT & OWNER PRIOR TO INSTALLATION.
- MD-5 MECHANICAL CONTRACTOR SHALL LOCATE EXHAUST FANS, OUTLETS, AND GAS FLUES A MINIMUM OF 15'-0" FROM ANY OUTSIDE AIR INTAKE,
- MD-6 ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED WITH THE WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, TO AVOID INTERFERENCE.
- EQUIPMENT (ME) ME-1 PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES AROUND ALL EQUIPMENT FOR MAINTENANCE AND FILTER REMOVAL.
- ME-2 ANY DEVICE REQUIRING A THERMOSTAT FOR CONTROL SHALL BE FURNISHED WITH A THERMOSTAT WHETHER INDICATED ON THE DRAWINGS OR NOT.
- ME-3 INSTALL THE TOP OF ALL THERMOSTATS, SENSORS, AND SWITCHES AT 4-0" (MAXIMUM.) ABOVE FINISH FLOOR. COORDINATE EXACT THERMOSTAT LOCATION WITH OWNER PRIOR TO INSTALLATION,
- ME-4 PROVIDE UNIONS, FLANGES OR COUPLINGS AT CONNECTION TO ALL VALVES AND EQUIPMENT. DO NOT USE DIRECT WELDED OR THREADED CONNECTIONS TO VALVES, EQUIPMENT, OR OTHER APPARATUS,
- ME-5 PROVIDE NON-CONDUCTING DIELECTRIC UNIONS WHENEVER CONNECTING DISSIMILAR METALS.

ME-6 EQUIPMENT OPERATED DURING CONSTRUCTION SHALL USE FILTERED MEDIA TO PREVENT CONSTRUCTION DEBRIS FROM ENTERING COILS, DUCTWORK SYSTEMS, AIR TERMINALS ETC. AT COMPLETION OF CONSTRUCTION, MECHANICAL CONTRACTOR SHALL CLEAN ALL SYSTEMS WITH ALL CONTROL DEVICES WIDE OPEN AND REMOVE ANY REMAINING DEBRIS PRIOR TO TEST AND BALANCING. MECHANICAL CONTRACTOR SHALL REPLACE ALL FILTRATION WITH NEW FILTERS AT COMPLETION OF CONSTRUCTION, ANY DUCTWORK, AIR TERMINALS, AND/OR OTHER EQUIPMENT UPSTREAM OF FILTRATION SHALL BE CLEANED THOROUGHLY OF CONSTRUCTION DEBRIS BEFORE HANDING OVER TO OWNER.

MECHANIC	AL/ELECTRICAL COORDINATION (MEC) NOTES
MEC-01	ELECTRICAL CONTRACTOR SHALL CONNECT AND/OR PROV ALL PLUMBING AND MECHANICAL EQUIPMENT.
MEC-02	ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONNIN IN USING APPROVED CATALOG SHEETS AND SHOP DRAWIN
MEC-03	THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTA SWITCHERS, DISCONNECT SWITCHES, RECEPTORS, ETC. TO EQUIPMENT. ALL STARTERS (OTHER THAN MANUAL STARTE PROVIDED BY OTHERS, BUT INSTALLED BY ELECTRICAL CON
MEC-04	ALL DISCONNECT SWITCHES AND FUSE SIZES SHALL BE CO DRAWINGS PRIOR TO INSTALLATION. ANY EQUIPMENT INSTA BECAUSE OF OR LACK OF COORDINATION WILL BE REMOVE CORRECTLY AT THE ELECTRICAL CONTRACTOR'S EXPENSE.

EQUIVALENT MANUFACTURERS LISTING

LISTING OF MANUFACTURER'S NAME DOES NOT GUARA	Ν
OR EXCEED QUALITY AND CAPACITIES OF SPECIFIED E	C
ON EQUIPMENT SUBMITTALS. ANY MANUFACTURER NOT	
SHALL SUBMIT A WRITTEN REQUEST A MINIMUM OF 7	
THE SPECIFICATIONS, PRIOR APPROVAL IS REQUIRED F	
CONSTRUCTION AND ALL COST WILL BE THE RESPONS	

	VEN	TILA	TIO	<u>N (</u>	CA	١L
AREA		· .		- -		
RESTROOMS (2	EACH)					
OFFICE AREA		· .				
KITCHEN						

	MECHANICAL	LEGEND
SYMBOL		DESCRIPTION
T		THERMOSTAT/TEMP SENSOR (4'0" AFF TO TOP)
S		SWITCH (4'-0" AFF TO TOP)
©		CARBON MONOXIDE SENSOR (4'-0" AFF TO TOP) (SENSOR BY EC)
	· .	EXHAUST AIR GRILLE
<u>}</u>		DOUBLE LINE DUCTWORK
8" ¢	5	8" DIAMETER ROUND DUCT

#### OVIDE FINAL CONNECTIONS TO

NECTIONS PRIOR TO ROUGH -INGS.

#### TALL ALL MANUAL STARTER TO MECHANICAL/PLUMBING TER SWITCHES) SHALL BE

CONTRACTOR. COORDINATED WITH SHOP STALLED INCORRECTLY OVED AND INSTALLED

MEC-05 ELECTRICAL CONTRACTOR SHALL INSTALL ALL STARTERS PROVIDED BY OTHER TRADES.

ANTEE APPROVAL, ALL EQUIPMENT MUST MEET EQUIPMENT, FINAL APPROVAL WILL BBE BASED IT LISTED BUT WISHING TO BID THIS PROJECT DAYS PRIOR TO BID DATE OR AS INDICATED IN OR ALL MANUFACTURERS NOT LISTED. ISIBILITY OF THE MECHANICAL CONTRACTOR.

#### \_CULATIONS : **AIR VOLUME** EXCHANGE SERVED BY VOLUME AIR FLOW RATE RATE AHU-1 17.1 MIN 1,713 CF 100 CFM ZONE 1 (3 PER HOUR) 12.9 MIN \_\_\_\_\_ AHU-1 ZONE 1 12,900 CF 1000 CFM (4 PER HOUR) AHU-2 10.2 MIN 8,700 CF 850 CFM ZONE 2

(6 PER HOUR)

PRESCRIPTIVE X CLIMATE ZONE: 3A-EXTERIOR DESIGN CO WINTER DRY BUL SUMMER DRY BU

INTERIOR DESIGN CO WINTER DRY BUL SUMMER DRY BUI

BUILDING HEATING L

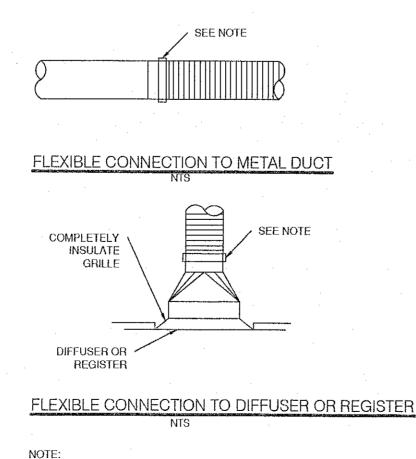
BUILDING COOLING L MECHANICAL SPACIN ZONE 1

DESCRIPTION OF COOLING EFFICI HEAT OUTPUT O COOLING OUTPL

ZONE 2 DESCRIPTION OF COOLING EFFICI HEAT OUTPUT O COOLING OUTPL

SIGNED: NAME: MARTIN FOX, TITLE: MECHANICAL

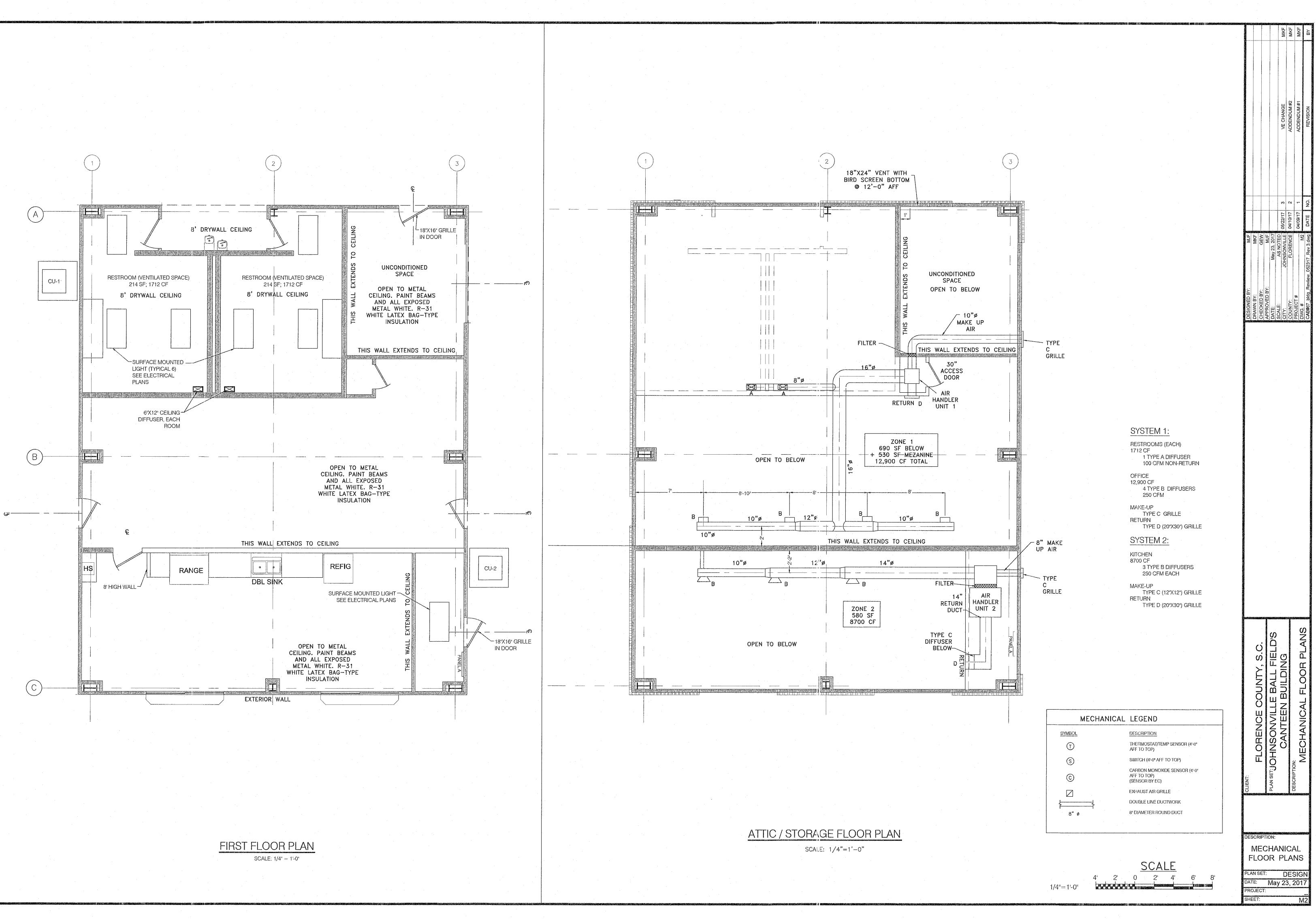
E	QUIPMENT SC	HEDULE					
QTY	DESCRIPTION	<u>1[)</u>	MODEL & MFR	VOLTAGE	AIR FLOW	AMPS	BKR
2	CONDENSOR UNIT 2 TON 14.0 SEER 11.50 EER	CU - 1 CU - 2	RUUD ACHIOVER SERIES HEAT PUMP (SINGLE STAGE) RP 1424AJINA 24K BTU/HR AIR-COOLED CONDENSER COILS WITH UPWARD-DISCHARGE DIRECT-DRIVE PROPELLER-TYPE CONDENSERS FAN OR EQUAL	208/230 1 PH, 60HZ	N/A	14.0	20 A
1	AIR HANDER UNIT, ZONE 1 HEATER COIL	AHU1	RUUD HIGH-EFFICIENCY AIR HANDLER (SINGLE STAGE UP FLOW) WITH ELECTRIC HEATING COIL RHIT2417STANAA AND FILTER 30.0 BTUH HEATING, OR 9.0 KW HEATING LOAD OR EQUAL	115 1 PH, 60HZ 115	1,200 CFM N/A	1.6 15.0	15 A 50 A
1	AIR HANDER UNIT, ZONE 2 HEATER COIL	AHU~2	RUUD HIGH-EFFICIENCY AIR HANDLER (SINGLE STAGE UP FLOW) WITH ELECTRIC HEATING COIL RHIT2417STANAA AND FILTER 30.0 BTUH HEATING, OR 9.0 KW HEATING LOAD	115 1 PH, 60HZ 115	1,200 CFM N/A	1.6 15.0	15 A 50 A



ALL FLEXIBLE DUCT CONNECTIONS TO SHEET METAL SHALL BE SECURED WITH APPROVED STRAP AND SEALANT.

INTERNATION CONSERVAT IECC 2006 SEC COMPLIANCE WITH MECHANICAL S	TION CODE TION 501.1 1 ASHRAE 90.1
MECHANICAL SYSTEMS, SERV EQUIPMENT METHOD (	
X         PERFORMANCE           3A- FLORENCE COUNTY, SC	ENERY COST BUDGET
IN CONDITIONS BULB Y BULB	27° F. 96° F.
N CONDITIONS BULB / BULB	70° F. 74° F
NG LOAD	54,000 BTUH
NG LÓAD	44,000 BTUH
ACING CONDITIONING SYSTEM	
N OF UNIT FFICIENCY JT OF UNIT UTPUT OF UNIT	HEAT PUMP ZONE 1 14 SEER EER 11.50 24KBTUH 24K BTUH
N OF UNIT FFICIENCY JT OF UNIT JTPUT OF UNIT	HEAT PUMP ZONE 2 14 SEER EER 11.70 24K BTUH 22K BTUH
FOX, P.E. ICAL ENGINEER	

			MKF	MKF	MKF	ΒY
			VE CHANGE	ADDENDUM #2	ADDENDUM #1	REVISION
			05/22/17 3	10/17 2	04/09/17   1	ATE NO.
MJF	MKF GEW	MJF	10.00 10.000	FLORENCE 04/10/17	M1 04/C	7 Rev 3.dwg DATE
		May 2	JOHNSONVILLE	FLOF		
DESIGNED BY:	DRAWN BY: CHECKED BY:	APPROVED BY: DATE:	SUALE: CITY:	COUNTY:	DWG.#	CAE#67 bldg Revilew 05231
CLIENT:	FLORENCE COUNTY, S.C.	PLAN SETJOHNSONVILLE BALL FIELD'S	CANTEEN BUILDING	DESCRIPTION	MECHANICAL NOTES & DETAILS	100
	D N SET: E: JECT:			& S ESI	GN	



		FLECT	RICAL L	FGEND
	_ (TELECOMMUNICATIONS) LEGEND			EVICES AND PATHWAYS
ચ_	PHONE OUTLET PHONE OUTLET MOUNTED ABOVE COUNTER BACKSPLASH, OR AT HEIGHT NOTED.		WIRING	SYSTEM CONCEALED IN WALL OR CEILING. WHEN SHOWN, CROSS LINES INDICATE R OF WIRES. (GROUND WIRES ARE NOT SHOWN)
-4p	DATA OUTLET.			SYSTEM CONCEALED IN OR UNDER SLAB OR UNDERGROUND.
	DATA OUTLET MOUNTED ABOVE COUNTER BACKPLASH, OR AT HEIGHT NOTED.			SYSTEM EXPOSED.
T <u>elecomm</u> et-1 fl	UNICATIONS (ET) NOTES JRNISH A COMPLETE TELEPHONE CONDUIT SYSTEM AS INDICATED ON THE DRAWINGS.	<u></u>	CONDU	IT TURNED UP TO FLOOR ABOVE.
	ELECOMMUNICATION OUTLETS (TELEPHONE OR TELE/DATA) SHALL CONSIST OF A 4*		CONDU	IT TURNED DOWN TO FLOOR BELOW
S	QUARE DEEP BOX WITH SINGLE GANG PLASTER RING.			H CIRCUIT HOMERUN TO PANEL.
N	ROVIDE MINIMUM 1" RACEWAY, UNLESS OTHERWISE NOTED, FROM EACH BOX TO ABOVE EAREST ACCESSIBLE CEILING SPACE OR CABLE TRAY AS APPLICABLE. PROVIDE MINIMUM 10# TEST NYLON PULL CORD AND NYLON BUSHINGS IN ALL EMPTY RACEWAYS.	<b>O</b>	JUNCTI 4" SQU/	ON BOX WITH CONNECTION TO EQUIPMENT SERVED. ARE BOX WITH A SINGLE-GANG OPENING AND PLASTER RING.
	ROVIDE RACEWAYS FOR ALL EXTERIOR AND/OR EXPOSED LOCATIONS.	Sc	SHORE	CONNECTION (CEILING MOUNTED): WHITE CORD REEL WITH 50' CABLE AND OUTLETS. ICTIX INSUL 8 PART #121120305016 RB-5-20R, OR REELCRAFT EQUAL
FT-5 PI	ROVIDE GROUNDING FOR ALL TELEPHONE/DATA SYSTEMS AND EQUIPMENT PER	SC	SINGLE	RECEPTACLE, 20 AMP, 120 VOLT
	EQUIREMENTS AND SPECIFICATIONS PROVIDED BY THE OWNERS DESIGNATED VENDOR.	Ð		LL 5251, OR EQUAL ( RECEPTACLE, 20 AMP, 120 VOLT (USE 20 AMP FOR SINGLE RECEPTACLE ON A
	LL OUTLET BOXES (INCLUDING TELEPHONE, CABLE TV, AND COMPUTER) SHALL HAVE		CIRCUI	T.) HUBBELL 5352, OR EQUAL
	OVER PLATES, BLANK IF NOT USED.	-00		RECEPTACLE MOUNTED ABOVE COUNTER BACKSPLASH, OR AT HEIGHT NOTED.
MECHANIC	AL / ELECTRICAL LEGEND		groun Within	ID FAULT RECEPTACLE. NEMA 5-20R DUPLEX. ALL RECEPTACLES INSTALLED OUTSIDE, 3' OF A SINK OR IN A KITCHEN SHALL BE GFCI.
	AL/ELECTRICAL DISCONNECTS	ELEC		DUTLET BOX (EO) NOTES
	FUSED HEAVY DUTY DISCONNECT SWITCH. NUMERALS INDICATE SWITCH RATING.	EO-1	MAN	ICTION AND PULL BOXES SHALL BE CODE GAUGE GALVANIZED STEEL. ACCEPTED NUFACTURERS SHALL BE STEEL CITY (THOMAS & BETTS), RACO, CROUSE-HINDS,
	D HEAVY DUTY DISCONNECT SWITCH, NUMERALS INDICATE SWITCH RATING.	EO-2		PLETON (EMERSON), OR APPROVED EQUIVALENT. TLET BOXES SHALL NOT BE MOUNTED BACK TO BACK IN COMMON WALLS.
MOU	NTED ON 4" SQUARE BOX (FLUSH BOX)	EO-3		ACH EMT WITH CONNECTORS HAVING INSULATED THROAT.
<u> </u>	NECTION TO MOTOR. STARTER PROVIDED BY OTHERS UNLESS OTHERWISE NOTED	EO-4		ACH BOXES TO STUD WORK USING CADDY BAR STRAPS THAT CONNECT TO TWO
MECHANIC. EM-1	AL/ELECTRICAL DISCONNECT (EM) NOTES DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE IN NEMA 1 ENCLOSURES, UNLESS OTHERWISE NOTED.	EO-5		JACENT STUDS TO PREVENT TWISTING OF BOX IN WALL. OUTLET BOXES (INCLUDING TELEPHONE, CABLE TV, AND COMPUTER) SHALL HAVE
EM-2	DISCONNECTS SHALL BE FUSED OR NON-FUSED AS INDICATED ON PLANS. SWITCHES		CO	VER PLATES, BLANK IF NOT USED.
	WILL HAVE REJECTION-TYPE FUSE CLIPS.	EO-6		EXTERIOR BOXES SHALL BE WATER-TIGHT.
EM-3	APPROVED MANUFACTURERS: EATON, SQUARE-D, GENERAL ELECTRIC, OR APPROVED EQUAL.	ELEC ED-1	\ <b>\</b> /{E	MRING DEVICE (ED) NOTES RING DEVICES SHALL BE SPECIFICATION GRADE, MINIMUM, EQUAL TO COOPER QUALITY
EM-4	FUSES SHALL BE CLASS RK-5, DUAL-ELEMENT, TIME-DELAY WITH INDICATION.		IND	ICATED BELOW OR AS MANUFACTURED BY HUBBELL, LEGRAND-PASS & SEYMOUR, ITON, OR APPROVED EQUAL, UNLESS OTHERWISE NOTED:
EM-5	A SET OF THREE FUSES OF EACH SIZE AND TYPE SHALL BE FURNISHED TO THE OWNER.			ITCHES (120/277V) SHALL BE AS FOLLOWS: SINGLE-POLE 20 AMP COOPER AH1221
MECHANIC	AL/ELECTRICAL COORDINATION (MEC) NOTES ELECTRICAL CONTRACTOR SHALL CONNECT AND/OR PROVIDE FINAL CONNECTIONS TO		Ę	SINGLE-POLE 20 AMP     COOPER AH1221       DOUBLE-POLE 20 AMP     COOPER AH1222       THREE-WAY 20 AMP     COOPER AH 1223
MEC-01	ALL PLUMBING AND MECHANICAL EQUIPMENT.		F	FOUR-WAY 20 AMP COOPER AH 1224
MEC-02	ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONNECTIONS PRIOR TO ROUGH - IN USING APPROVED CATALOG SHEETS AND SHOP DRAWINGS.		-	PLEX RECEPTACLES SHALL HAVE A NYLON FACE AND SHALL BE AS FOLLOWS: 15 AMP DUPLEX COOPER 5252 20 AMP DUPLEX COOPER 5352
MEC-03	THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANUAL STARTER SWITCHERS, DISCONNECT SWITCHES, RECEPTORS, ETC. TO MECHANICAL/PLUMBING		-	20 AMP DUPLEX     COOPER 5352       15 AMP DUPLEX GECI     COOPER VGF15F       20 AMP DUPLEX GECI     COOPER VGF20F
	EQUIPMENT. ALL STARTERS (OTHER THAN MANUAL STARTER SWITCHES) SHALL BE PROVIDED BY OTHERS, BUT INSTALLED BY ELECTRICAL CONTRACTOR.		тн	F PART NUMBERS ABOVE ARE FOR WIRING DEVICE TYPE ONLY. SEE ARCHITECTURAL
MEC-04	ALL DISCONNECT SWITCHES AND FUSE SIZES SHALL BE COORDINATED WITH SHOP DRAWINGS PRIOR TO INSTALLATION. ANY EQUIPMENT INSTALLED INCORRECTLY	50.0	+	ECIFICATIONS FOR WIRING DEVICE COLOR AND PLATE MATERIAL/COLOR.
	DRAWINGS PRIOR TO INSTALLATION. ANY EQUIPMENT INSTALLED INCORRECTLY BECAUSE OF OR LACK OF COORDINATION WILL BE REMOVED AND INSTALLED CORRECTLY AT THE ELECTRICAL CONTRACTOR'S EXPENSE.	ED-2	DE	VICES, UNLESS OTHERWISE NOTED.
MEC-05	ELECTRICAL CONTRACTOR SHALL INSTALL ALL STARTERS PROVIDED BY OTHER TRADES.	ED-3	EA( TYP	CH DUPLEX RECEPTACLE INDICATED TO BE ON A DEDICATED CIRCUIT SHALL BE 20 AMP PE.
MEC-06	THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT RUNS & LIGHT FIXTURE LOCATIONS ABOVE THE CEILING WITH OTHER TRADES PRIOR TO INSTALLATION.	ED-4	AD	JACENT DEVICES SHALL HAVE A COMMON WALL TYPE.
	FIXTURE LUCATIONS ABOVE THE CEILING WITH OTHER TRADES FROM TO INSTALLATION.	ED-5	WE WI	ATHERPROOF COVERS SHALL BE :"WHILE-IN-USE® SO PLUGS MAY BE INSTALLED THOUT COMPROMISING THE WP FUNCTION. COOPER #WIU-2 DOUBLE-GANG WITH
ELEC	CTRICAL (E) NOTES		CLI	EAR COVER OR APPROVED EQUAL.
CON EC-1		ED-6 ED-7		AXIMUM OF 10 GENERAL PURPOSE RECEPTACLES SHALL BE ON EACH BRANCH CIRCUIT
EC-2	WESTERN TUBE, OR APPROVED EQUIVALENT. MINIMUM CONDUIT SIZE SHALL BE 3/4' FOR INTERIOR WORK, 1" FOR EXTERIOR WORK.	1.1.2	Wľ	TH AN EQUIPMENT WITH AN EQUIPMENT GROUNDING CONDUCTOR.
EC-S	FOR INTERIOR WORK, CONDUIT SHALL BE ZINC COATED EMT EXCEPT WHERE NOT	ED-8	PR	OUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL SHALL BE OVIDED IN ALL LOCATIONS PER NEC 210.8. WHERE A DEVICE LOCATION IS NOT CESSIBLE, THE GFCI PROTECTION SHALL BE PROVIDED WITH THE BREAKER SERVING
	PERMITTED BY CODE. USE SCHEDULE 40 PVC BELOW CONCRETE SLAB AND FOR EXTERIOR WORK WHERE NOT SUBJECT TO DAMAGE. USE IMC WHERE SUBJECT TO PHYSICAL			E DEVICE.
EC-4	DAMAGE. PROVIDE MINIMUM 210# TEST NYLON PULL CORD AND NYLON BUSHINGS IN ALL EMPTY			
20	RACEWAYS.		ELECTF	ICAL (E) NOTES
EC-	5 EMT FITTINGS SHALL BE COMPRESSION GLAND TYPE, OF MALLEABLE STEEL. CONNECTORS SHALL HAVE INSULATED THROATS. CAST, SET SCREW, OR INDENTER TYPE FITTINGS ARE			OARDS (EP) PANELBOARDS SHALL BE PROVIDED AS MANUFACTURED BY EATON, SQUARE-D, GENERAL
	NOT ACCEPTABLE. ALL FITTINGS FOR EMT SHALL BE MADE OF STEEL.		EP-1	ELECTRIC OR APPROVED EQUAL. ALL NEW EQUIPMENT FOR THE PROJECT SHALL BE OF THE SAME MANUFACTURER.
EC-6	6 ALL CONDUIT/RACEWAY SHALL BE RUN CONCEALED, UNLESS OTHERWISE NOTED. FISH ALL NEW OUTLETS IN EXISTING WALLS, WHERE POSSIBLE.		EP-2	PANELS SHALL BE FULLY RATED (AIC). NO SERIES AIC RATINGS ARE ALLOWED.
EC-7			EP-3	PANELS SHALL HAVE FULL SIZE EQUIPMENT GROUNDING BARS AND NEUTRAL BARS,
EC-			EP-4	EXCEPT WHERE INDICATED TO BE 200%. ALL BUSSING, INCLUDING NEUTRAL AND GROUND, SHALL BE COPPER.
	FROM STRUCTURE AND PROPERLY SECURED.		EP-5	ALL BREAKERS SHALL BE AUTOMATIC THERMAL-MAGNETIC TYPE, MOLDED CASE BOLT-ON
EC-9	9 WHERE CONDUITS PASS THROUGH A BUILDING EXPANSION JOINTS, PROVIDE GALVANIZED EXPANSION FITTINGS WITH BONDING JUMPERS.			TYPE, CALIBRATED FOR 40 DEGREE C, OR AMBIENT COMPENSATION, UNLESS OTHERWISE NOTED.
EC-	FILLED WITH IMPERVIOUS, NON-SHRINK GROUT SUFFICIENTLY TIGHT TO PREVENT THE		EP-6	ALL PANELBOARD AND BREAKER LUGS SHALL BE SIZED AND RATED PER THE CONDUCTOR SIZE AND MATERIAL.
	TRANSFER OF SMOKE, WATER, AND DUST. ROOF PENETRATIONS SHALL BE WITHIN THE EQUIPMENT ROOF CURB.		EP-7	LIGHTING AND APPLIANCE PANELS (100A TO 600A) SHALL HAVE FRONT ACCESSIBLE HINGE
EC-	11 LOW VOLTAGE CABLING NOT SPECIFIED TO BE INSTALLED IN CONDUIT, SHALL BE INSTALLED IN A CABLE TRAY SYSTEM OR J-HOOK SYSTEM CONSISTING OF MINIMUM 2"			DOOR-IN-DOOR COVERS WITH DEAD FRONT, SHALL BE 20" WIDE MINIMUM WITH 4" WIDE MINIMUM WIRING GUTTERS.
	DIAMETER HOOKS LOCATED ON 3-0" CENTERS IN ALL ACCESSIBLE CEILINGS. WHERE THERE ARE INACCESSIBLE CEILINGS, PROVIDE CONDUIT FOR ENTIRE LENGTH OF		EP-8	DISTRIBUTION PANELS (600A TO 1200A) SHALL HAVE FRONT ACCESSIBLE DEAD FRONT COVERS.
	INACCESSIBILITY.		EP-9	PROVIDE HANDLET OCK-ON DEVICES FOR ALL CIRCUIT BREAKERS CONNECTED TO
EC-	ALARM, SECURITY, CCTV, CONTROLS, AND SIMILAR CONDUITS ABOVE THE CEILING AND			EMERGENCY, EXIT, NIGHT LIGHTING, FIRE ALARM, TELEPHONE BOARDS, AND SECURITY SYSTEMS.
	BACKBOARD(S) SHALL BE PROVIDED WITH INSULATED THROAT BUSHINGS AT EACH CONDUIT TERMINATION. THESE BUSHINGS SHALL BE INSTALLED PRIOR TO PULLING LOW-VOLTAGE CABLES.		EP-10	BREAKERS USED FOR SWITCHING SHALL BE SWITCHING DUTY (SWD) RATED.
EC-	13 LIQUID-TIGHT METAL CONDUIT SHALL ONLY BE USED FOR FINAL CONNECTIONS TO		EP-11	BREAKERS USED FOR HEATING, AIR CONDITIONING AND/OR REFRIGERATION SHALL BE HACR RATED.
	EQUIPMENT AND ALL OTHER ROTATING AND VIBRATING EQUIPMENT, MAXIMUM LENGHT OF 3'-0".		EP-12	GROUND-FAULT CIRCUIT-INTERRUPTER (GFCI) PROTECTION FOR PERSONNEL SHALL BE
EC-	14 FLEXIBLE METAL CONDUIT, MINIMUM SIZE 3/8", SHALL ONLY BE USED FOR FINAL CONNECTION TO LIGHTING FIXTURES, MAXIMUM LENGTH OF 6'-0".			PROVIDED IN ALL LOCATIONS PER NEC 210.8. WHERE A DEVICE LOCATION IS NOT ACCESSIBLE, THE GFCI PROTECTION SHALL BE PROVIDED WITH THE BREAKER SERVING THE DEVICE.
EC-	15 PROVIDE PULL BOXES, SUCH THAT NO SINGLE CONDUIT RUN HAS BENDS IN EXCESS OF		EP-13	BREAKERS WITH ARC-FAULT CIRCUIT-INTERRUPTER (AFCI) PROTECTION SHALL BE
	360. PULL BOXES SHALL BE SUITABLE AND APPROVED FOR THE INTENDED USE. WHERE CONDUITS PASS UNDER PAVED AREAS, THEY SHALL BE RGS.			INSTALLED FOR ALL 120V, 15A AND 20A BRANCH CIRCUITS IN DWELLING UNITS AS DEFINE BY THE NEC. THIS EXCLUDES KITCHENS, BATHROOMS, UNFINISHED BASEMENTS, GARAGI
EC-	16 ALL CONDUIT BENDS/ELBOWS EMERGING FROM UNDERGROUND SHALL BE IMC AND SHALL EXTEND A MINIMUM OF 18* BELOW GRADE.			AND OUTDOOR LOCATIONS, GUEST ROOMS/SUITES WITH PERMANENT PROVISIONS FOR COOKING SHALL BE CONSIDERED A DWELLING UNIT. STUDENT HOUSING UNITS SHALL BE CONSIDERED A DWELLING UNIT.
EC-	ALL UNDERGROUND RACEWAYS SHALL BE THOROUGHLY COATED WITH TWO COATS OF	. *	EP-14	ALL OVERCURRENT DEVICES WHICH COMPRISE THE EMERGENCY SYSTEM SHALL BE
50	ASPHALIUM BITUMASTIC. 18 ALL CONDUITS INSTALLED UNDERGROUND OR IN CONCRETE SHALL HAVE JOINTS MADE	·		SELECTIVELY COORDINATED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE MANUFACTURER DOCUMENTATION INDICATING COMPLIANCE WITH THE SELECTIVE COORDINATION REQUIREMENTS PER THE NEC.
EC-	ALL CONDUTS INSTALLED UNDERGROUND OR IN CONCRETE SHALL TAVE SOUNTS WADE WATERTIGHT BY USE OF POLYETRA FLUOROETHYLENE TAPE.			
EC-	19 THE USE OF AC OR NM CABLE IS NOT PERMITTED.			

#### ELECTRICAL (E) NOTER

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LIGHTING	CAL (E) NOTES				
GENERAL		a de la composition de la comp			IICAL (E) NOTES
EL-1	MOUNT ALL FIXTURE		E WITH ROWS ALIGNED.	<u>GENER</u> EG-1	THE WORK COVERED BY THESE SPECIFICATIONS CONSISTS OF FURNISHING ALL LABOR, EQ NECESSARY FOR THE COMPLETE AND SATISFACTORY OPERATING ELECTRICAL SYSTEMS AS
			PLANS FOR EXACT LOCATION OF FIXTURES.	EG-2	ALL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, NEPA, STATE
		BE UL LISTED AND LA			REQUIREMENTS THAT MAY APPLY. CONTRACTOF SHALL PAY FOR ALL REQUIRED PERMITS, F
			RECTED PER THE NEC.	EG-3	CONTRACTOR SHALL OBTAIN AND PAY FOR ALL ELECTRICAL PERMITS AND INSPECTION FEE ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY THE UNDERWRITI
	SHALL BE MOUNTED	AT LEAST 1/4" FROM	THE SURFACE OF THE MATERIAL, EXCEPT FOR UL APPROVED FOR MOUNTING DIRECTLY TO	EG-4	APPROVED THIRD PARTY TESTING AGENCY FOR THE USE INTENDED WHERE A STANDARD FO ITEMS OF THE SAME TYPE AND RATING SHALL ELLIDENTICAL AND OF THE SAME MANUFACTU
	SUCH SURFACES.	, , , , , , , , , , , , , , , , , , ,		EG-5	CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (IND CATALOG DATA IN ELECTRONIC FORMA
		BE GROUNDED PER			SCOPE OF WORK, INCLUDING, BUT NOT LIMITED TO, RACEWAYS, BOXES, FITTINGS, CONDUC DEVICES, SAFETY SWITCHES, DISCONNECTS, TR INSFORMERS, PANELBOARDS, FIRE ALARM,
	SYSTEM SHALL CAR	RY A GREEN BONDING	RIGID RACEWAY PORTION OF THE WIRING		AS APPLICABLE FOR THE PROJECT. ONE COMPLETE SET OF APPROVED SUBMITTALS SHALL
	CLIP OR APPROVED	EQUIVALENT. PHASE A	THE RACEWAY SYSTEM WITH A STEEL CITY "G" AND GROUND CONDUCTORS RUN IN FLEX SHALL ENGTH SHALL BE 6'-0".	EG-6	ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT TO COMPLY WITH THE BASIS OF DE ACCESS, CLEARANCE, CONDUIT, WIRING, REPLACEMENT OF OTHER SYSTEM COMPONENTS SHALL BE INCLUDED IN THE ORIGINAL BASE BID NO ADDITIONAL COSTS ASSOCIATE WITH S
		1	OUBLE-ENDED LAMPS AND CONTAIN BALLAST(S)		AFTER BIDS HAVE BEEN ACCEPTED AND ALL COSTS WILL BE THE RESPONSIBILITY OF THE EI GIVEN TO THE OWNER WHERE SUCH EQUIPMENT AND METHODS RESULT IN LESS EXPENSE
	THAT CAN BE SERVI	ED IN PLACE SHALL	HAVE A DISCONNECTING MEANS (WHETHER AIRE PER NEC 410.130(G).	EG-7	ONE COMPLETE SET OF THE LATEST CONSTRUCTION PLANS OF ALL TRADES SHALL BE MAIN
	ALL FIXTURES SHAL	BE PROVIDED FOR P	ROPER VOLTAGE BASED ON THE CIRCUIT	<u>L</u> G1	ADDENDUMS, BULLETINS, AND/OR SKETCHES SHALL BE INCORPORATED INTO THE ON-SITE PROGRESSES.
	ASSIGNMENT INDIC			EG-8	COMPLETE ADEQUATE HOUSING SHALL BE PROVIDED FOR ALL MATERIALS STORED ON JOE
EL-10	EQUIPMENT SCHEDL FIXTURE TYPES ARE SUBMITTED AS INDIC	AS SCHEDULED ON T	HE PLANS. EQUIVALENT FIXTURES MAY BE RE SCHEDULE, SUBJECT TO THE ENGINEERS	EG-9	BUT NOT IN CONTACT WITH THE GROUND. THE CONDUIT AND NEUTRAL SYSTEM SHALL BE GROUNDED AT THE MAIN SERVICE EQUIPMI
	APPROVAL.			EG-9	BE INSTALLED PER NEC 250.
EL-11	INCLUDING PROVIDI	NG TRIM. ACCESS, MC	D FIXTURES TO COMPLY WITH BASIS OF DESIGN, DUNTING, LAMPS, ETC., SHALL BE INCLUDED IN	EG-10	PROVIDE AN INTERSYSTEM BONDING TERMINATION DEVICE AT THE MAIN ELECTRICAL SERVI
	WILL BE ACCEPTED	DURING CONSTRUCT	COST ASSOCIATED WITH SUBSTITUTED FIXTURES	EG-11	WIRING SHALL BE TESTED FOR CONTINUITY ANE GROUNDS BEFORE BEING ENERGIZED. FA ADDITIONAL EXPENSE TO THE OWNER.
·	ASSOCIATED MECH	Contractor. This i Anical, plumbing, o Turer's installatio	NCLUDES ANY MODIFICATIONS TO ANY R ELECTRICAL SYSTEMS REQUIRED BY THIS	EG-12	PROVIDE ALL CUTTING AND PATCHING FOR INSTALLATION OF WORK AND REPAIR ANY DAM/
EL-12			DENTIFICATION OF FIXTURES ONLY. ALL RELATED	EG-13.	THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL EQUIPMENT REQUIRING ELECTRICAL EXCEPT FOR CONTROL WIRING FOR EQUIPMENT NOT PROVIDED BY THE ELECTRICAL CONT
LL-1 <i>6</i>	PARTS, SUCH AS JU CONNECTORS, STR	NCTION BOXES, PLAS APS. OR OTHER HARD	TER RINGS, LOUVERS, MOUNTING EQUIPMENT, WARE OR ACCESSORIES TO FIT THE FIXTURE		EQUIPMENT SHALL BE PROVIDED BY THE RESPECTIVE DISCIPLINE.
	PROPERLY TO THE S	TRUCTURE, SHALL BE CONTRACTOR SHALL	E FURNISHED AND INSTALLED BY THE ELECTRICAL PROVIDE ANY APPURTENANCES FOR MOUNTING	EG-14.	ALL ELECTRICAL JUNCTION BOXES, SWITCHGEAR, CABLING, VOICE/DATA OUTLETS, LOW VO ETC. SHALL BE LABELED ACCORDING TO PANEL (RACK AND CIRCUIT NUMBER.
	OR TRIM TO CEILING	OR WALL TYPE AS SE DLESS OF THE CATAL	PECIFIED IN THE ARCHITECTURAL FINISH	EG-15	UPON COMPLETION OF WORK, CONTRACTOR SHALL PRESENT ENGINEER WITH CERTIFICAT
EL-13	ALL LIGHTING FIXTU	RES SHALL COME EQ	UIPPED WITH LAMPS. ACCEPTABLE LAMP		AND/OR AUTHORITY HAVING JURISDICTION BEF ORE WORK WILL BE APPROVED FOR FINAL F
	MANUFACTURERS A NOTED ON THE FIXT		IC, PHILIPS, OR SYLVANIA UNLESS OTHERWISE	EG-16	CONTRACTOR SHALL GUARANTEE ALL WORK / I ID MATERIALS FOR A PERIOD OF ONE YEAR ACCEPTED BY THE OWNER. ANY IMPERFECT M≜TERIALS OR WORKMANSHIP SHALL BE REPL
LIGHTINO EL-14	G CONTROLS TIME CONTROLLER	FURNISH AND INSTA	LL WHERE INDICATED AN ELECTRONIC TIME	EG-17	IT IS NOT THE INTENT OF ISSUED PLANS AND/CIT SPECIFICATIONS TO SHOW EVERY MINOR I CONTRACTOR IS EXPECTED TO FURNISH AND IN STALL ALL NECESSARY ITEMS FOR A COMP
(	CONTROLLER AS M EQUAL. CONTROLL	NUFACTURED BY TO R SHALL HAVE THE F	RK (NSI), PARAGON, INTERMATIC, OR APPROVED OLLOWING CHARACTERISTICS:	EG-18	THE WORD "PROVIDE" MEANS THAT THIS CONTFACTOR SHALL FURNISH, FABRICATE, ERECT
	A. CONTACTS B. RATED 120	: SPST, OR AS INDICA 277V AT 20A BALLAST	TED * LOAD		SYSTEMS IN PROPER OPERATING CONDITION. ALL LABOR, PRODUCT OPTIONS, ACCESSORI SHALL BE INCLUDED AS PART OF THIS WORK TO COMPLETE THE INSTALLATION.
	D. MINIMUM 2		ES CATED, OR AS REQUIRED TO MEET THE	EG-19	THE WORD "CONNECT" MEANS THAT THIS CONTRACTOR SHALL PROVIDE (SEE DEFINITION A OVERCURRENT PROTECTION AND WIRING RECUIRED TO PLACE THE EQUIPMENT AND SYST
	E. EACH CHA	THE DRAWINGS NNEL SHALL BE INDIV ON-OFF OPERATIONS	IDUALLY PROGRAMMABLE WITH:		OVERCURRENT PROTECTION AND WHING RECURED TO PLACE THE EQUIPMENT AND STAT COMPLY WITH CODE REQUIREMENTS.
	2. FOU	R SEASONAL SCHEDU	ILES TO MODIFY THE BASE PROGRAM AT OVERRIDES THE WEEKLY OPERATION	EG-20	CONTRACTOR SHALL COORDINATE THE ROUGH IN OF ALL OUTLET LOCATIONS WITH ARCH MILLWORK SHOP DRAWINGS PRIOR TO ROUGH IN.
	F. PHOTOELE G. ASTRONO	CTRIC SENSOR		EG-21	FLECTRICAL CONTRACTOR SHALL NOT SCALE FLANS. CONTRACTOR SHALL REFER TO ARC
	H. BATTERY E I. NON-VOLI	ACKUP ILE MEMORY FOR SCI	HEDULES AND TIME CLOCK		FOR EXACT LOCATIONS OF ALL EQUIPMENT, UNLESS OTHERWISE NOTED.
EL-15	CONTACTORS, LIG	TING CONTACTORS	SHALL SWITCH LOADS AT THE VOLTAGE AND HAVE THE NUMBER OF POLES INDICATED ON THE	EG-22	CONTRACTOR SHALL TEST ALL 'LIFE SAFETY" EQUIPMENT AND SYSTEMS FOR PROPER FUN COMPLETION OF TESTS, CONFIRMATION SHALL BE SENT TO THE ENGINEER OF RECORD IN PERFORMED, THE RESULTS, AND THE DATE TESTS WERE SUCCESSFULLY COMPLETE. "LIFE
	DRAWINGS, OR AS I	REQUIRED. THE CONT.	ACTOR AND CONTACTS SHALL BE CONTINUOUSLY IG TUNGSTEN FILAMENT, INDUCTIVE, AND	· .	THOSE AS SPECIFIED IN THE STATE BUILDING CODE, THE NATIONAL ELECTRICAL CODE (NE
·	HIGH-INRUSH BALL			EG-23	REQUIREMENTS THAT MAY APPLY. IF DURING THE COURSE OF WORK, THE CONT RATIO DISCOVERS A PROBLEM WITH THE P
EL-16	ALL LIGHTING CON NEMA 1 ENCLOSUR	ACTORS SHALL BE EI E, UNLESS OTHERWIS	LECTRONICALLY HELD AND BE INSTALLED IN A DE NOTED.		TO THE PLANS AND SPECIFICATIONS, THE NEC, OR OTHER CODES OR REQUIREMENTS, THE PROBLEM TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER FOR RESOLUTION PR
				EG-24	WHERE THERE ARE CONFLICTS BETWEEN THE PLANS AND SPECIFICATIONS, THE CONTRAC
electri	ical (E) Notes				OF THE ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE WORK OR ORDERI SHALL BE WARRANTED WITHOUT A CHANGE TO THE PROJECT SCOPE.
WIRING/	CONDUCTOR (EW)	SHALL BE IN CONDUF	T	EG-25	NAILS OR POWDER ACTUATED FASTENERS SHALL NOT BE USED.
EW-2	ALL CONDUCTORS	SHALL BE COPPER, R	ATED 75 C WET/DRY EXCEPT WHERE OTHERWISE	EG-26	
		D BY U.L. OR OTHER		EG-27	MINIMUM OF FOUR WIRES, ONE ATTACHED TO FACH CORNER OF LAY-IN FIXTURES. RECES
EW-3	(SUPERSLICK), UNI	LL BE MANUFACTURE ED COPPER (SLK), CE 3Y THE MANUFACTUR	D BY SOUTHWIRE (SIMPULL), ENCORE ERRO (SLP), OR APPROVED EQUAL,		SUPPORTED THE SAME. DO NOT SUPPORT RACEWAY OR FIXTURES FROM CEILING OR DUC LAY-IN FIXTURES.
EW-4		-	ULATED CONDUCTOR, THHN/THWN-2. SIZES #10	SUPPO EG-28	
L-99-4	AWG AND SMALLEF	SHALL BE SOLID, SIZ	ES #8 AWG AND LARGER SHALL BE STRANDED.	EG-20	
EW-5	BRANCH CIRCUITS AWG.	SHALL NOT BE SMALL	ER THAN #12 AWG. CONTROL WIRING MAY BE #14	EG-30	
EW-6	CONDUCTORS SHA	LL BE COLOR CODED	BLACK/RED/BLUE FOR 120/208 VOLT SYSTEMS	EG-31	LIGHTING FIXTURES MOUNTED IN OR ON CEILING SHALL BE SUPPORTED FROM STRUCTUR
	AND BROWN/ORAN RESPECTIVELY NEL	GE/YELLOW FOR 277/ TRAL SHALL BE WHIT	480 VOLT SYSTEMS FOR A, B, AND C PHASES, E FOR 120/208 VOLT SYSTEMS AND NATURAL GRAY	_ ~ ~ /	MINIMUM OF FOUR WIRES, ONE ATTACHED TO EACH CORNER OF LAY-IN FIXTURES. RECES SUPPORTED THE SAME, DO NOT SUPPORT RACEWAY OR FIXTURES FROM CEILING OR DUC
· .	ALL CONDUCTOR S	IZES SHALL HAVE CO	CONDUCTOR SHALL BE GREEN ON ALL SYSTEMS. LOR-CODED INSULATION. THE USE OF COLORED		LAY-IN FIXTURES.
E341 "2		VIRE SIZES SHALL NO	T BE ALLOWED. E THHN/THWN-2 FOR FEEDERS AND BRANCH	PAINT EG-32	
EW-7	CIRCUITS, FIXTURE	TAPS SHALL BE #12 T	THHN/THWN-2 FOR FEEDERS AND BRANCH THHN/THWN-2 IN FLEX WITH GREEN #12 AWG		BLEND WITH ADJACENT SURFACES, OH SHALL SE MANUFACTURER'S STANDARD COLOTTB ARCHITECT.
EW-8			E AS REQUIRED BY UL LABEL.	<u>EQUIF</u> El-1	PMENT IDENTIFICATION (EI) PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT SUPPLIED
EW-9		H CIRCUITS SHALL NO		<b>L.) (</b>	TO, WIRING TROUGHS, SAFETY SWITCHES, DISCONNECTS, TRANSFORMERS, PANELBOARD BREAKERS IN SWITCHGEARS, SWITCHBOARDS AND DISTRIBUTION PANELS.
EW-10	JOINTS IN #10 AW	AND SMALLER SHAL	L BE MADE UP WITH CRIMPED CONNECTORS WITH		EACH NAMEPLATE SHALL INDICATE THE FOLLCWING: 1. DEVICE NAME
	INSULATING CAPS CONNECTOR OR W	NO TAPE) OR WIRENU IRENUT). LARGER WIF	JTS (MAXIMUM OF 3 CONDUCTORS UNDER ANY RE SHALL USE SPLIT BOLTS OR BOLTED CLAMPS.		<ol> <li>SYSTEM VOLTAGE (VOLTAGE/PHASE, V/IRE)</li> <li>UPSTREAM DEVICE &amp; CIRCUIT</li> </ol>
EW-11	ALL WIRING LUGS		ROJECT, INCLUDING, BUT NOT LIMITED TO, D LUGS, SAFETY SWITCH LUGS, MOTOR STARTER	El-2	NAMEPLATE COLORS SHALL BE AS FOLLOWS
	LUGS, TRANSFORM	IERS LUGS, WIRING D HALL BE RATED FOR	EVICE TERMINALS, AND ALL EQUIPMENT USE WITH 75 DEGREE INSULATED CONDUCTORS		TYPE         SURFACE COLOR         CORE COLOR           120/208V EQUIPMENT         BLUE         WHITE
	AT THEIR 75 DEGR	E AMPACITY AND SH	ALL BE SIZED TO MATCH THE CONDUCTOR SIZE.		277/480V EQUIPMENT BLACK WHITE EMERGENCY GREEN WHITE
			N DEVICE TERMINALS.		FIRE ALARM BRIGHT RED WHITE SECURITY BURGUNDI WHITE
EW-13	WIRE WITHIN PANE TAGGED.	l Buards Shall be i	NEATLY TRAINED, SQUARED, BUNCHED, AND		TELEPHONE ORANGE WHITE DATA BROWN WHITE TV PURPLE WHITE
		1	SHALL COMPLY WITH NEC 605.		TV PURPLE WHITE PAGING WHITE BLACK
EW-15	ENCLOSURES THR	DUGH CONCENTRIC P	ICLE 250. BOND WHERE CONDUITS ENTER KNOCKOUTS. ALL FLEX, INCLUDING FIXTURE TAPS,	EI-3	PLATE THICKNESS: NAMEPLATES UP TO 8 SQUARE INCHES = 11 DT LESS THAN 1/16" THICK
	SHALL INCLUDE G	REEN GROUNDING CO	ONDUCTOR, #12 AWG MINIMUM. PROVIDE GREEN ONDUCTOR IN EACH CONDUIT, SIZED PER NEC	· .	NAMEPLATES OVER 8 SQUARE INCHES = $1.0T$ LESS THAN 1/8' THICK
	250-127.			EI-4	LETTERING HEIGHT = $1/2^{\circ}$ MINIMUM
EW-16	ALL CONDUCTORS	INSTALLED IN VERTIC	CAL RACEWAYS SHALL BE SUPPORTED AT 19.	EI-5	NAMEPLATES SHALL BE ATTACHED WITH SELF DRILLING / SELF-TAPPING SCREWS, EXCEP SCREW IS NOT PROTECTED
EW-17	THE ELECTRICAL	ONTRACTOR SHALL F	OLLOW AND APPLY THE TABLE BELOW, EDULE INDICATES, FOR SIZING ALL 120V & 277V, 20	. · ·	MINIMUM NUMBER OF SCREWS; UP TO 5 SQUARE INCHES = 2 SCREWS
	AMP BRANCH CIRC DROP FROM THE (	UITS (COPPER COND RCUIT BREAKER TO	UCTORS) TO ALLOW A MAXIMUM OF 3% VOLTAGE THE FIRST DEVOCE ON THE BRANCH CIRCUIT AND	· ·	UP TO 5 SQUARE INCHES = 2 SCHEWS 5 TO 12 SQUARE INCHES = 4 SCREWS OVER 12 SQUARE INCHES = 6 SCREWS
	ACHIEVE A MAXIM	JM OF 5% VOLTAGE D	ROP ACROSS THE ENTIRE BRANCH CIRCUIT.		
	VOLTAGE	CONDUCTOR LENG	#12	EWH-1	MARLEY ENGINEERED PRODUCTS (OR EQUAL) 1500W-115V-IPH-12.5 AMPS CATALOG #AW WITH RECESS MOUNT PART #SWHS2
	120	51-90	#10		
	120 120	91'-140'	#8	EWH-2	MARLEY ENGINEERED PRODUCTS (OR EQUAL) 1500W-115V-IPH-12.5 AMPS CATALOG #AW
	120 120 120	91'-140' 141'-225'	#8 #6 E CIRCUIT BREAKER TO THE FIRST DEVICE WHICH	EWH-2	MARLEY ENGINEERED PRODUCTS (OR EQUAL) 1500W-115V-IPH-12.5 AMPS CATALOG #AW WITH SURFACE MOUNT, SHALL BE PART #SV/ ISM

BOR, EQUIPMENT, MATERIALS, AND SUPPLIES AS TEMS AS SHOWN ON THE PLANS.
A, STATE BUILDING CODE, AND ANY OTHER LOCAL RMITS, FEES, INSPECTIONS, ETC.
ION FEES.
ERWRITER'S LABORATORIES, INC. OR BY A STATE DARD FOR SUCH MATERIALS AND USE EXISTS. ALL IUFACTURER.
C FORMAT (PDF) FOR ALL ELECTRICAL ITEMS IN THE CONDUCTORS, LUMINAIRES, LAMPS, BALLASTS, WIRING ALARM, TELECOMMUNICATIONS, ETC. FOR APPROVAL S SHALL BE MAINTAINED AT THE JOB SITE.
S OF DESIGN, INCLUDING PROVIDING MAINTENANCE ONENTS, BUILDING ALTERATIONS, METHODS, ETC., E WITH SUBSTITUTED EQUIPMENT WILL BE APPROVED OF THE ELECTRICAL CONTRACTOR. CREDITS SHALL BE XPENSE TO THE CONTRACTOR.
BE MAINTAINED AT THE JOB SITE. IN ADDITION, ALL ON-SITE CONSTRUCTION PLANS AS THE JOB
ON JOB SITE. ONLY CONDUIT MAY BE STORED OUTSIDE,
EQUIPMENT. GROUNDING ELECTRODE SYSTEM SHALL
AL SERVICE PER NEC 250.94.
IZED. FAULTY WIRING SHALL BE REPLACED AT NO
NY DAMAGE.
CTRICAL CONNECTIONS (UNLESS OTHERWISE NOTED), AL CONTRACTOR. CONTROL WIRING FOR SUCH
LOW VOLTAGE CABINETS, EMERGENCY RECEPTACLES,

#### RTIFICATE OF APPROVAL FROM LOCAL INSPECTOR FINAL PAYMENT. E YEAR EFFECTIVE THE DATE THE PROJECT IS BE REPLACED WITHOUT ADDED COST TO THE PROJECT. MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL A COMPLETE AND OPERATING SYSTEM. E, ERECT, CONNECT, AND COMPLETELY INSTALL ESSORIES AND INCIDENTAL MATERIALS REQUIRED

NITION ABOVE) ALL DISCONNECTING MEANS, ND SYSTEMS IN PROPER OPERATING CONDITION AND TO

HARCHITECTURAL FLOOR PLANS, ELEVATIONS, AND

TO ARCHITECTURAL FLOOR PLANS AND ELEVATIONS

PER FUNCTION AND OPERATION. UPON SUCCESSFUL CORD IN THE FORM OF A LETTER STATING THE TESTS E. "LIFE SAFETY" EQUIPMENT AND SYSTEMS CONSIST OF ODE (NEC), NFPA 101, AND ANY OTHER LOCAL

I THE PERFORMANCE OF THE INSTALLATION RELATIVE NTS, THE CONTRACTOR SHALL IMMEDIATELY BRING THE TION PRIOR TO THE EXECUTION OF THE WORK. ONTRACTOR SHALL BRING THE ISSUE TO THE ATTENTION

ORDERING ANY MATERIALS. NO ADDITIONAL COSTS

3'-0" FROM BOXES. TRUCTURE VIA 12 GAUGE STEEL WIRE. PROVIDE A RECESSED DOWNLIGHT FIXTURES SHALL BE OR DUCT WORK. USE U.L. LISTED GRID CLIPS ON ALL

3'-0" FROM BOXES.

RUCTURE VIA 12 GAUGE STEEL WIRE. PROVIDE A RECESSED DOWNLIGHT FIXTURES SHALL BE OR DUCT WORK. USE U.L. LISTED GRID CLIPS ON ALL

OVERS, ETC. SHALL BE PRIMED AND ENAMELED TO OLOR BAKED ENAMEL FINISH, OR AS DIRECTED BY THE

JPPLIED FOR THE PROJECT, INCLUDING BUT NOT LIMITED LBOARDS, ETC. PROVIDE NAMEPLATES FOR CIRCUIT

, EXCEPT RIVETS SHALL BE USED WHERE THE END OF

## G #AW1+3150F

DG #AW1+3150F

#### FIRE ALARM SYSTEM: A. SYSTEM SHALL BE A CENTRALIZED, ANALOG, ADDRESSABLE, FULLY ELECTRONICALLY SUPERVISED (INCLUDING AUXILIARY SYSTEMS INTERCONNECT) WIRING) SYSTEM LISTED BY UL IN COMPLIANCE WITH ALL APPLICABLE NFPA 72 AND OTHER STANDARDS AS WELL AS THE AMERICAN'S WITH DISABILITIES ACT (ADA), ALL FINAL CONNECTIONS, TESTING AND ADJUSTMENTS SHALL BE PERIFORMED BY OR UNDER DIRECT SUPERVISION OF AN AUTHORIZED FACTORY REPRESENTATIVE. SYSTEM SHALL BE SIMPLEX, NOTIFIER, SIEMENS, OR APPROVED EQUAL AS ACCEPTED BY THE ENGINEER. SYSTEM SHALL HAVE A24 HR MINIMUM BATTERY BACKUP. B. INITIATION DEVICE ACTIVATION SHALL CAUSE OPERATION OF THE PROPER ALARM CIRCUIT IN THE CONTROL PANEL, AND OPERATE ALL AUDIBLE AND VISUAL INDICATION ALARMS. ALL AIR HANDLING UNITS SHALL BE STOPPED UPON ANY ALARM INPUT. EACH AIR HANDLER UNIT SHALL BE PROVIDED WITH A SYSTEM CONTROLLED RELAY TO EFFECT SHUTDOWN, ALL ALARM DEVICES AND LAMPS SHALL CONTINUE TO OPERATE UNTIL THE INITIATING DEVICE IS RESET. SUBSEQUENT ALARMS SHALL RESOUND THE SYSTEM. AN AUDIBLE AND VISUAL SIGNAL SHALL INDICATE SYSTEM TROUBLE. THE CONTROL PANEL SHALL PROVIDE FOR ACTIVATING A UL LISTED CENTRAL STATION SIGNAL FOR NOTIFYING THE FIRE DEPARTMENT. C. MANUAL STATIONS SHALL BE NON-CODED, WITH PULL LEVER AND GLASS ROD, SEMI-FLUSH MOUNTED. COMBINATION LIGHT AND HORN SIGNALS SHALL BE FLUSHED MOUNTED. WIRING SHALL BE IN CONDUIT AS PREVIOUSLY SPECIFIED, #14 AWG MINIMUM, THHN. ALL J-BOXES USED FOR THE FIRE ALARM SYSTEM SHALL. BE PAINTED RED. D. CONDUCTORS SHALL BE PLENUM RATED ND INSTALLED IN CONDUIT AND INSTALLED IN COMPLIANCE WITH NEPA 70, ARTICLE 760; IN ADDITION TO WIRING METHODS 300.4. ALL FIRE ALARM WIRING SHALL BE CLASS B. PROVIDE ALL REQUIRED MODULES, POWER EXTENDERS, PROGRAMMING, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM. SUBMIT FIRE ALARM SHOP DRAWINGS CONSISTING OF PRODUCT DATA, TO THE G. ENGINEER AND FOR APPROVAL. H. FILL OUT NEPA 72 CERTIFICATION REPORT AND SUBMIT TO ENGINEER AND AUTHORITY HAVING JURISDICTION. WARRANTY - ALL WORK PERFORMED AND ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS AND SHALL REMAIN SO FOR A PERIOD OF AT LEAST TWO (2) YEARS FROM THE DATE OF ACCEPTANCE BY THE PROFESSIONAL ENGINEER AND/OR OWNER. THE FULL COST OF MAINTENANCE, LABOR, AND MATERIALS REQUIRED TO CORRECT ANY DEFECT DURING THIS TWO YEAR PERIOD SHALL BE IMMEDIATELY CORRECTED AT NO ADDITIONAL COST TO THE OWNER. ANY DEFECTS THAT RENDER THE SYSTEM INOPERATIVE SHALL BE REPAIRED WITHIN 24 HOURS OF THE OWNER NOTIFYING THE CONTRACTOR. OTHER DEFECTS SHALL BE REPAIRED WITHIN 48 HOURS OF THE OWNER NOTIFYING THE CONTRACTOR.

ELECTRICAL SPECIFICATIONS:

 FIRE STOPPING:

 J.
 ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE SEALED WITH RATED

 MATERIALS MEETING ASTM E-814. PROVIDE FIRE STOPPING DEVICES(S) OR SYSTEM(S) WHICH HAVE BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814. INSTALL THE DEVICE(S) OR SYSTEM(S) IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE THE APPROPRIATE DEVICE(S) OR SYSTEM(S) WITH AN 'P RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED. DEVICES(S) AND/OR SYSTEM(S) SHALL BE BY HILTI, 3M OR EQUIVALENT. SEISMI THE ELECTRICAL CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING

SEISMIC SUPPORT AND BRACING OF ELECTRICAL COMPONENTS TO RESIST THE EFFECTS OF EARTHQUAKES ON THE ELECTRICAL SYSTEM AS WELL AS ANY AS REQUIRED. THE SEISMIC RESTRAINTS AND SPECIAL INSPECTION SHALL MEET ALL APPLICABLE STATE AND LOCAL BUILDING CODE REQUIREMENTS AS WELL AS ASCE-7 REQUIREMENTS.

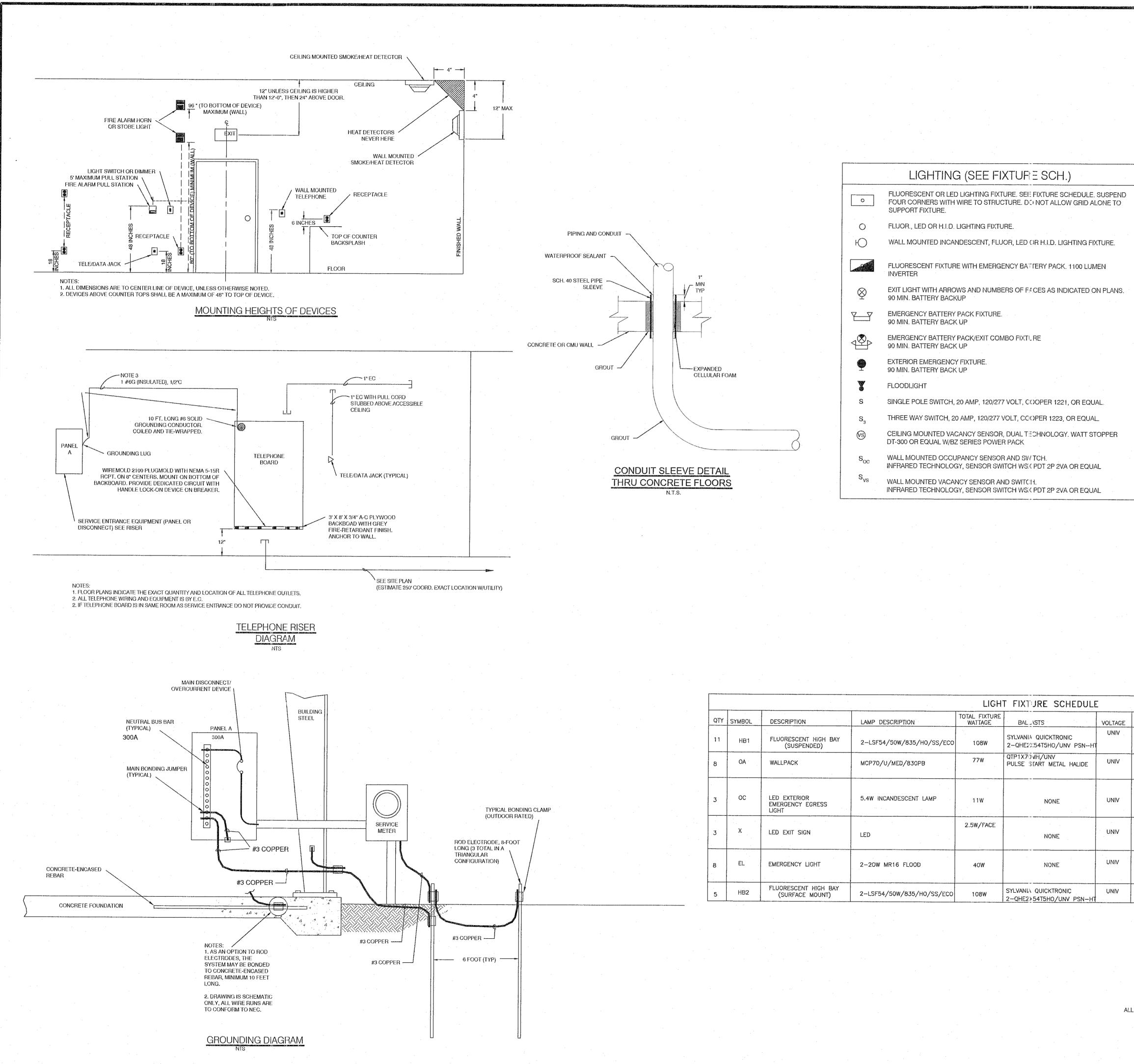
ELECTRICAL COORDINATION WITH OTHER TRADES: Α.

B.

- THE ELECTRICAL CONTRACTOR SHALL CONNECT AND /OR PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS APPLICABLE TO THE PROJECT, INCLUDING BUT NOT LIMIT TO, MECHANICAL, PLUMBING, FIRE PROTECTION AND SUPPRESSION, OWNER FURNISHED, KITCHEN, LABORATORY, ETC. UNLESS OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONNECTIONS PRICE TO
- ROUGH-IN USING APPROVED CATALOG SHEETS AND SHOP DRAWINGS. THE ELECTRICAL C CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANUAL MOTOR STARTER SWITCHES, DISCONNECT SWITCHES, RECEPTACLES, ETC. TO MECHANICAL AND PLUMBING EQUIPMENT. ALL STARTERS, OTHER THAN MANUAL STARTER SWITCHES, SHALL BE PROVIDED BY OTHERS, BUT INSTALLED BY THE ELECTRICAL
- CONTRACTOR. ALL DISCONNECT SWITCHES AND FUSE SIZES SHALL BE COORDINATED WITH SHOP D. NOTALLING ANY FOURMENT INSTALLS DHAWINGS PHICK TO URDERIN INCORRECTLY BECAUSE OF LACK OF COORDINATION WILL BE REMOVED AND INSTALLED CORRECTLY AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT RUNS AND LIGHT FIXTURE LOCATION S ABOVE THE CEILING WITH OTHER TRADES PRICE TO INSTALLATION. ALL DUCT SMOKE DETECTORS SHALL BE PROVIDED AND CONNECTED BY THE
- ELECTRICAL CONTRACTOR, BUT INSTALLED BY THE MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY OUTLETS FOR HEAT TAPE CONNECTIONS FOR MECHANICAL SYSTEMS. PROVIDE CLASS B (30MA) GFCI PROTECTION ON THE BREAKER SUPPLYING THE HEAT TAPE.

O ESCRIPTION: ELECTRICAL NOTES PLAN SET: DESIGN May 23, 2017

ROJECT



				LIGH	T FIXTURE SCHEDULE		
QTY	SYMBOL	DESCRIPTION	LAMP DESCRIPTION	TOTAL FIXTURE WATTAGE	BAL_ASTS	VOLTAGE	MAN
11	HB1	FLUORESCENT HIGH BAY (SUSPENDED)	2-LSF54/50W/835/H0/SS/ECO	108W	SYLVANIA QUICKTRONIC 2-QHE2):54T5H0/UNV PSNHT	UNIV	MET
8	OA	WALLPACK	MCP70/U/MED/830PB	77W	QTP1X70 VH/UNV PULSE START METAL HALIDE	UNIV	LITH
3	oc	LED EXTERIOR EMERGENCY EGRESS LIGHT	5.4W INCANDESCENT LAMP	11W	NONE	UNIV	CHL LITF
3	x	LED EXIT SIGN	LED	2.5W/FACE	NONE	UNIV	CHL #SN LITH
8	EL	EMERGENCY LIGHT	2-20W MR16 FLOOD	40W	NONE	UNIV	CHL LITH
5	HB2	FLUORESCENT HIGH BAY (SURFACE MOUNT)	2-LSF54/50W/835/H0/SS/ECO	108W	SYLVANIA QUICKTRONIC 2QHE2>54T5H0/UNV_PSNHT	UNIV	MET

LIGHT FIXTURE NOTES

1. LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SELECTED TO ACHIEVE REQUIRED/DESIRED FOOT CANDLE LEVELS OF ILLUMINATION IN THEIR RESPECTIVE AREA, HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL ANY DEVIATIONS FROM SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTOR RESPONSIBLE IN PROVING SUCH DEVIATION WILL PROVIDE THE EXACT LIGHTING RESULT IN DUPLICATION TO THE DESIGN HEREIN.

- 2. SUBSTITUTIONS APPROVED BY THE ENGINEER PREVIOUS TO BID ARE ACCEPTABLE AS LONG AS THEY ARE EQUAL TO SPECIFIED. THIS INCLUDES LENS, COLORS, REFLECTORS, PHOTOMETRIC, HOUSING MATERIALS, FINISHES, ETC. ANY SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER WITH COMPLETE CUT SHEETS FOR APPROVAL 10 WORKING DAYS PRIOR TO BID. SUBSTITUTE FIXTURES SHALL BE PRICED WITH THE SPECIFIED FIXTURE AND LISTED SEPARATELY FOR THE ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.
- 3. CONTRACTOR SHALL PROVIDE SUITABLE TRIM AND APPURTENANCES TO MOUNT FIXTURES IN TYPE OF CEILING OR WALL AS SPECIFIED IN ARCHITECTURAL FINISH SCHEDULES REGARDLESS OF CATALOG NUMBER GIVEN. CONTRACTOR SHALL VERIFY TYPE OF CEILING OR WALL BY REVIEWING ARCHITECTURAL FINISH SCHEDULES PRIOR TO ORDERING FIXTURES.
- 4. ALL 3 AND 4 LAMP RECESSED TROFFER TYPE FIXTURES SHALL BE EQUIPPED WITH MORE THAN ONE BALLAST TO ALLOW FOR SEPARATE SWITCHING OF INBOARD AND OUTBOARD LAMPS WITHIN THE SAME FIXTURE. TANDEM WIRING BETWEEN FIXTURES IS ALLOWED TO ACCOMPLISH THE SAME RESULT. TANDEM WIRING MAY ALSO BE USED TO CONTROL A SINGLE LAMP IN A TWO LAMP FIXTURE WHERE MULT-LEVEL CONTROLS ARE ASSOCIATED WITH 2 LAMP FIXTURES.
- 5. CONFIRM FINAL FIXTURE LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS. 6. ELECTRONIC BALLAST FOR T5 LAMPS SHALL HAVE END OF LIFE SHUTDOWN CAPABILITY AS STATED IN SPECIFICATIONS.
- 7. PROVIDE LOW TEMPERATURE (0° F) BALLAST FOR ANY FIXTURE INSTALLED ON EXTERIOR OR OTHER AREAS SUBJECT TO LOW TEMPERATURES.
- 8. FLUORESCENT FIXTURES EQUIPPED WITH EMERGENCY BATTERY PACKS SHALL BE SUPPLIED WITH 1100 LUMEN INVERTERS AND DUAL INPUT TYPE INVERTERS WHERE SO INDICATED ON PLANS AND FED AHEAD OF SWITCHED CIRCUITS FOR THAT DESIGNATED AREA. EMERGENCY BALLAST SHALL BE INSTALLED BY THE FIXTURE MANUFACTURER.
- 9. FLUORESCENT BALLAST THAT CAN BE SERVICED IN PLACE WALL HAVE A DISCONNECT MEANS COMPLIANT WITH NEC 410.130G.
- 10. DURING THE BIDDING PROCESS, THE CONTRACTOR SHALL INFORM ARCHITECT AND ENGINEER OF ANY DELIVERY OR SCHEDULING ISSUES THAT MAY IMPACT THE PROJECT CRITICAL PATH SCHEDULING.
- 11. NO FIXTURE SUBSTITUTIONS WILL BE CONSIDERED DUE TO LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER TIME OF BID.
- 12. ALL MATERIAL EXPEDITING EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 13. ANY FIXTURES BEING BEING INSTALLED IN CEILING, INDICATED BY THE ARCHITECT AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE, SHALL BE IC RATED AND LABELED SUCH FROM THE MANUFACTURER.
- 14. ACCEPTABLE BALLAST MANUFACTURERS FOR SUBMISSION ARE ARE OSRAM/SYLVANIA, ADVANCE, GE, PHILLIPS OR UNIVERSAL TRIAD PROVIDED THEY MEET INTENDED CRITERIA AS LISTED IN THIS SCHEDULE AND PROJECT SPECIFICATIONS.
- 15. ALL FIXTURES SHALL BE MADE IN AMERICA IN AS MUCH AS POSSIBLE.
- 16. ALL INCANDESCENT LIGHT FIXTURES SHALL BEAR A U.L. LABEL INDICATING THE MAXIMUM ALLOWABLE LAMP WATTAGE IN THAT FIXTURE.
- 17. INSTALL ALL FLUORESCENT DOWN-LIGHT FIXTURES SO THAT ALL LAMPS ARE ALIGNED IN THE SAME DIRECTION. 18. SUPPORT RECESSED TROFFERS AT ALL FOUR CORNERS FROM STRUCTURE.
- 19. ALL METAL HALIDE LAMPS AND BALLAST SHALL MEET OR EXCEED THE ENERGY INDEPENDENCE AND SECURITY ACT 2001 (EISA) REQUIREMENTS.
- 20. FLUORESCENT LAMP AND BALLAST WARRANTY SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR AND SUBMITTED WITH A COPY TO THE OWNER UPON PROJECT CLOSE OUT.
- 21. ALL LINEAR FLUORESCENT LAMPS SHALL BE 3500K UNLESS OTHERWISE INDICATED ON SCHEDULE.
- 22. ALL LED SITE LIGHTING FIXTURES SHALL HAVE SURGE PROTECTION BUILT IN INTEGRAL TO THE FIXTURE.
- 23. ALL ELECTRONIC BALLAST SERVING LINEAR FLUORESCENT LAMPS SHALL BE PROGRAM START.
- 24. COMPLETELY EXAMINE LIGHTING PLANS TO COORDINATE SWITCHING, DIMMING AND ANY SPECIAL BALLAST CONTROLS THAT MAY BE PART OF THE DESIGN INTENT.
- 25. EMERGENCY EGRESS FIXTURES SHALL BE IDENTIFIED WITH A 1" DIAMETER RED DOT ON FRAME, VISIBLE FROM THE FLOOR.
- 26. COORDINATE CLOSELY FIXTURES CONTROLLED VIA AUTOMATIC OR DIMMING CONTROLS TO ASSURE FIXTURE APPENDAGES ARE ORDERED PROPERLY TO MEET DESIGN INTENT.
- 27. CONTRACTOR SHALL FURNISH A COMPLETE SET OF PLANS TO HIS SUPPLIER TO ASSURE LIGHTING PACKAGE IS COMPLETE.
- 28. ELECTRICAL VALUE ENGINEERING SHALL BE BILLED AT AN HOURLY RATE BY ENGINEERING BEFORE SUBMITTAL REVIEWS,
- 29. EMERGENCY BALLASTS FOR LED FIXTURES MOUNTED IN UNCONDITIONED SPACES SHALL BE BODINE 'BSL10' SERIERS OR EQUAL.

NUFACTURER/CATALOG NUMBER	SPECIFICS
TALUX HBI451T5MWGUNVUPLFH1	WHITE FINISH, SPECULAR REFLECTOR, WIRE GUARD MOUNTED WITH HOOK AND SEISMIC SUPPORT CABLES. MINIMUM 8% UPLIGHT, SUSPENDED MOUNT WITH SEISMIC BRACE, 8'-0" ABOVE FLOOR UNLESS OTHERWISE SPECIFIED.
HONIA TWP-70M-120-DWH-LP1-PE	DIECAST ALUMINUM HOUSING. DARK BRONZE FINISH. CLEAR TEMPERED GLASS LENS. WET LOCATION LABEL. COORDINATE HEIGHT WITH ARCHITECTURAL ELEVATIONS.
LORIDE SYSTEMS VW2RHP HONIA ELAT6CSWPM12	WHITE POLYCARBONATE HOUSING. WET LOCATION LABEL. MOUNT AT 7'-6" ABOVE FINISHED GRADE. SUPPLY WITH EMERGENCY BATTERY PACK FOR 90 MINUTE OPERATION. BATTERY PACK SHALL BE COLD WEATHER RATED.
LORIDE SYSTEMS SYMMETRY SERIES N1RW HONIA LQM SW3 120/277 ELN	POLYCARBONATE HOUSING WITH SELF-CONTAINED POWER PACK FOR 90 MINUTES OPERATION. NICAD BATTER. WHITE HOUSING. RED LETTERS.
LORIDE SYSTEMS #S250NH20FW HONIA ELMLT W LP06V5	POLYCARBONATE HOUSING WITH SELF-CONTAINED POWER PACK FOR 90 MINUTES OPERATION. NICAD BATTER. WHITE HOUSING.
FALUX HBI451T5M-WGUNV-UPL-FH1	SEISMIC SUPPORT CABLES. MINIMUM 8% UPLIGHT, SURFACE MOUNT

		genourse			
CLIENT	FLORENCE COUNTY, S.C.	PLAN SETJOHNSONVILLE BALL FIELD'S	CANTEEN BUILDING	DESCRIPTION:	<b>ELECTRICAL NOTES &amp; SCHEDULES</b>

DESCRIPTION

LAN SET:

ROJECT:

ELECTRICAL

NOTES & SCHEDULES

DATE: May 23, 2017

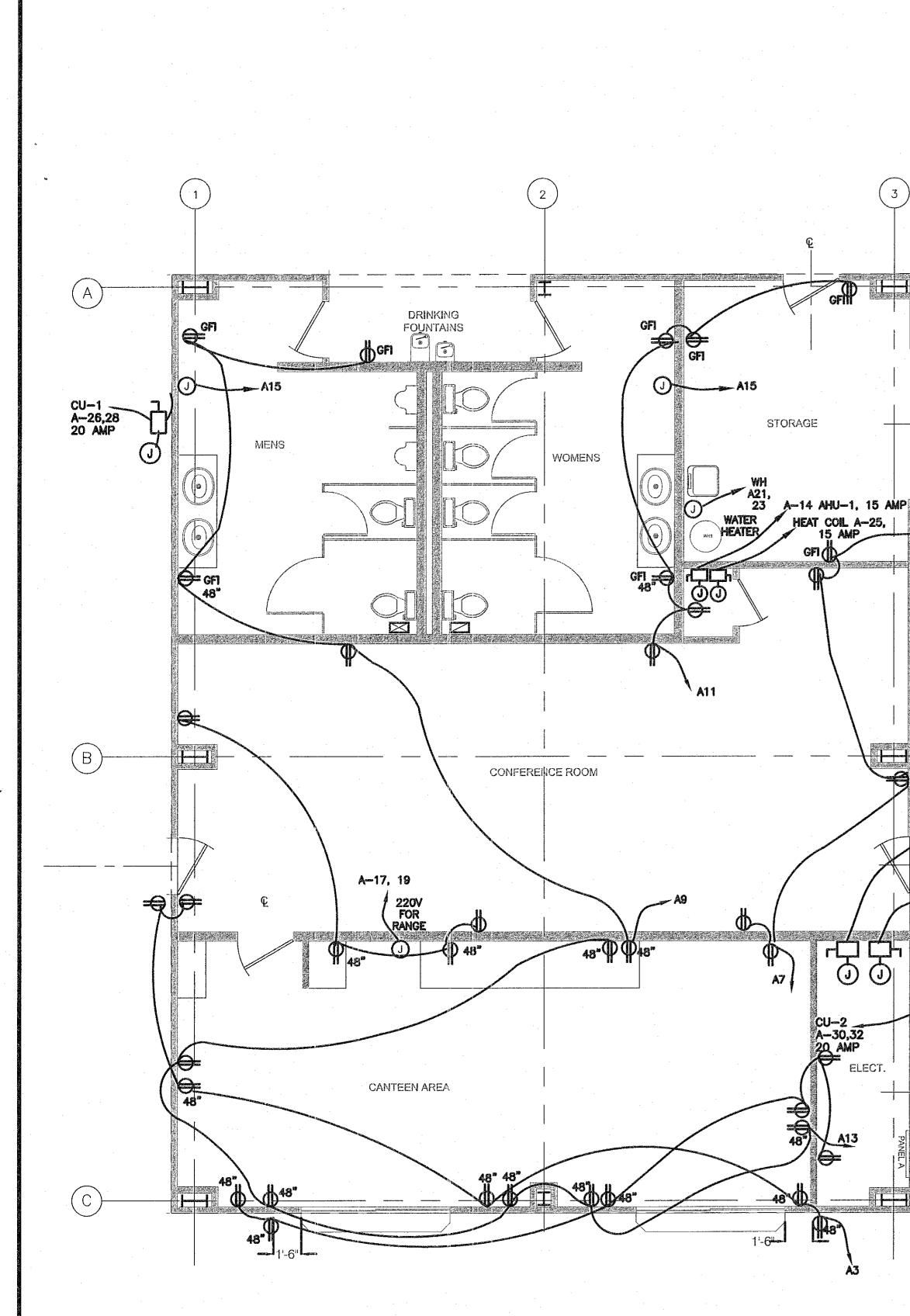
DESIGN

MJF MJF 2017 NCE

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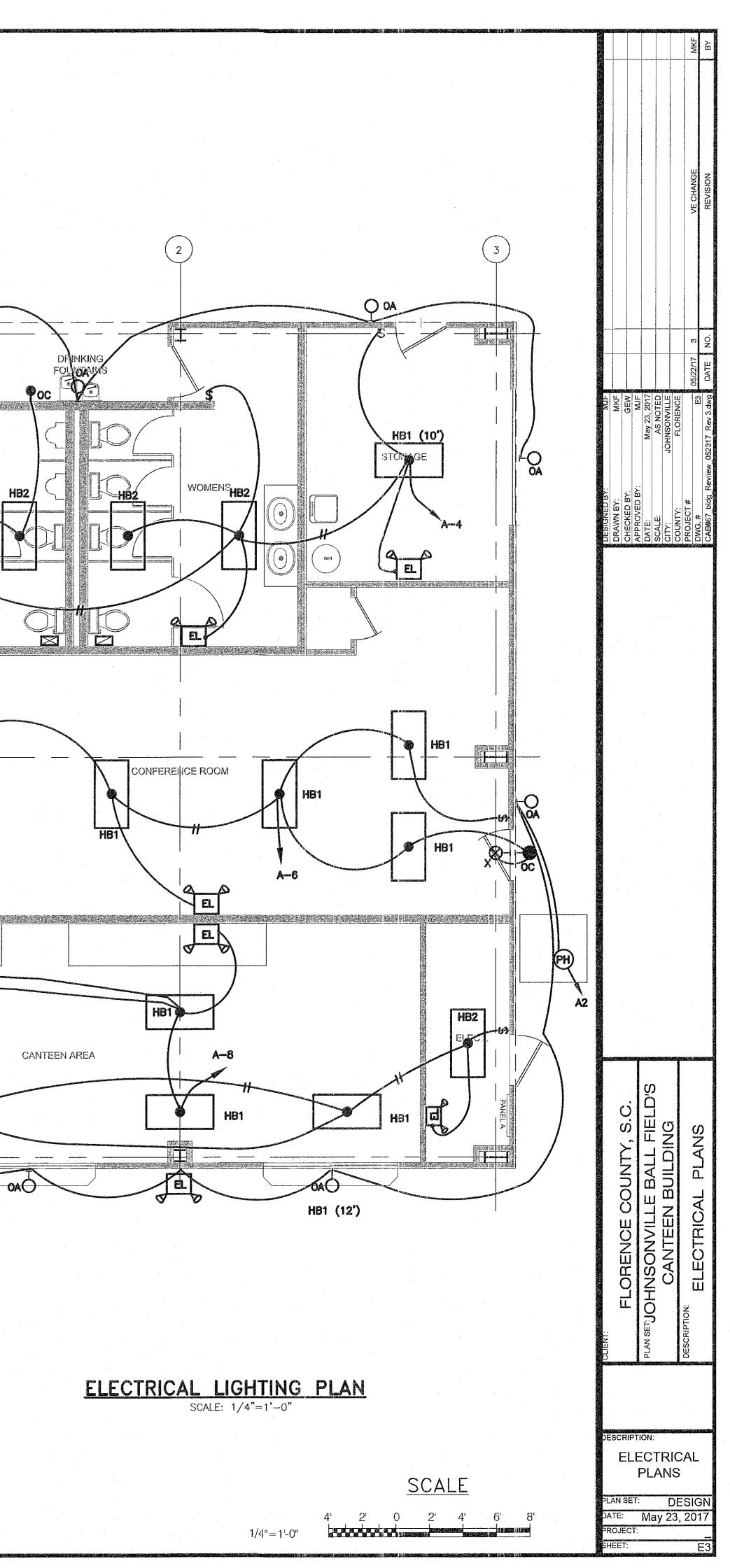
ALL WIRING TO BE BX CABLING OR PLACED INSIDE PROPERLY SIZED CONDUIT.



ELECTRICAL POWER PLAN SCALE: 1/4"=1'-0"

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		A I I I I I I I I I I I I I I I I I I I
GFI HEAT COIL		
A-29, <u>15</u> AMP A-16 AHU-2, 15 AMP		
	PANEL A: JOHNSONVILLE BALL FIELD CANTEEN L20/240VAC * 1 PHASE * 3 WIRE SURFACE MOUNT * INDOOR NEMA Type 1 * 32 CIRCUIT MAIN LUG ONLY           POWER         PIGE LIGHTING           POWER         PHASE LOADING         LIGHTING           DESCRIPTION         WIRE         BRKR         CKT#         A         B         CKT#         BRKR         WIRE         DESCRIPTION           RECEPTACLES (GFI)         #10         15         1         2056         2         15         #10         EXTERIOR BUILDING LIGHTS           RECEPTACLES (GFI)         #10         15         5         2196         6         15         #10         LIGHTING (RESTROOMS)           RECEPTACLES (GFI)         #10         15         7         2196         8         15         #10         LIGHTING (ANOPY)           RECEPTACLES (GFI)         #10         15         7         2196         8         15         #10         LIGHTING (CANOPY)           RECEPTACLES (GFI)         #10         15         11         1440         12         15         #10         LIGHTING (CANOPY)           RECEPTACLES (GFI)         #10         15         13         2940         14         15         #10         HU-1           HAND DRVERS </td <td></td>	



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