

BID PROPOSAL
MRF IMPROVEMENTS
RFB # 15-0359



COUNTY COMMISSIONERS

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Section 1 - Advertisement

Pursuant to GS 143-129, sealed bids addressed to Lena Butler, Purchasing Supervisor, New Hanover County Finance Department, 230 Government Center Drive, Suite 165, Wilmington, NC 28403 and marked “**MRF IMPROVEMENTS: RFB # 15-0359**” will be accepted until **2:00 PM EST, Wednesday, June 24, 2015** for the following work:

MRF (Materials Recovery Facility) Improvements: Improvements to be made to an existing building per sealed plans to include removing existing deteriorated slab, fill in old incinerator pit and construct a new slab, add a riser room, fire alarm, new sprinkler system per plans, and make structural repairs to walls and roof per structural plans. The scope of work will also include installation of a new fire alarm for administrative office adjacent to the MRF building per sealed electrical plans.

The bids will be publicly opened and read aloud following the latest time for receipt of bids in the New Hanover County Finance Office, Suite 165, Conference Room 500, Wilmington, North Carolina.

Bids will be received for a Single Prime Contract. Bidders must be properly licensed under Chapter 87 of the North Carolina General Statutes.

All prime bidders on this project must be pre-qualified in accordance with New Hanover County’s Pre-qualification Ordinance in order to bid. Bids will not be accepted unless the bidder is pre-qualified. Pre-qualification applications may be obtained at the County Legal Department, 230 Government Center Drive, Suite 155, Wilmington, NC 28403 or by visiting the County’s website at <http://legalinsurance.nhcgov.com/contractors-approved-for-bidding/>. **The deadline for submission of the pre-qualification application is 5:00 p.m. on Friday, June 12, 2015.**

Bidding Documents and Plans are posted on the county’s website at <http://www.nhcgov.com/business-nhc/bids/>. Bidders are responsible for printing any copies they need for bidding purposes. Upon award the county will provide 4 full size copies to the successful bidder.

The County will conduct a Mandatory Pre-Bid meeting at 10:00 AM on Monday, June 8, 2015. The meeting will be held in Environmental Management’s Conference Room located at 3002 US Highway 421 S., Wilmington, NC 28401. A tour of the MRF site will be included and required at the end of the pre-bid meeting.

A Bid Bond Equal to 5% of the base bid price is required by all bidders. The successful bidder will be required to provide Performance and Payment bonds equal to one hundred percent (100%) of the contract price.

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

The bidder shall make good faith efforts, as defined in the bid specifications, to subcontract 10% of the dollar value of the single prime contract to businesses owned and controlled by minorities.

The County reserves the right to waive any informalities, to reject any or all bids, and to accept that Bid or Bids which is in the best interest of the County.

Section 2 Instructions to Bidders

2.1 SCHEDULE

Advertisement	Monday, June 1, 2015
Mandatory Pre-Bid Meeting	Monday, June 8, 2015 at 10:00 AM New Hanover County Environmental Management Dept. Conference Room 3002 U.S. Highway 421 North Wilmington, NC 28401
Deadline for Questions	Friday, June 12, by 5:00 PM
Deadline for Submission Of Bidder Pre-Qualification Application	Friday, June 12, by 5:00 PM
Deadline for Answers	Monday, June 15 by 5:00 PM (issued via written addendum Emailed to all bidders present at pre-bid meeting).
Deadline for Receipt of Bids	Wednesday, June 24, 2015 at 2:00 PM New Hanover County Finance Office 230 Government Center Drive, Suite 165 Wilmington, NC 28403 (Bid Opening: Conference Room 500)
Board Meeting for Award	Monday, July 20, 2015 at 4:00 PM

2.2 PRE-BID CONFERENCE

The County will conduct a **Mandatory Pre-Bid meeting at 10:00 AM on Monday June 8, 2015**. Bidders must attend this meeting in order for their bid to be accepted by the County. The meeting will be held in NHC Environmental Management Department Conference Room located at 3002 US Highway 421 N., Wilmington, NC 28401. A walk through the existing building to be improved will be required. Please dress appropriately for the jobsite and bring PPE including hard hat and eye protection. The purpose of this conference is to review project requirements and to respond to questions from prospective bidders and their subcontractors or material suppliers related to the intent of bidding documents.

It is requested that prospective Bidders review the bidding documents and submit their questions to Lena Butler, Purchasing Supervisor by emailing lbutler@nhcgov.com. Bidders are asked to begin submitting their questions prior to the Pre-Bid meeting on Monday, June 8th. Questions received will be answered at the meeting. Final questions must be submitted no later than **5:00 PM on Friday, June 12, 2015**. All questions and answers will be issued via written addendum emailed to all bidders that attended the mandatory pre-bid meeting by 5:00PM on Monday June 15, 2015.

2.3 PREQUALIFICATION REQUIRED

All prime bidders on this project must be pre-qualified in accordance with New Hanover County's Pre-qualification Ordinance in order to bid. Bids will not be accepted unless the bidder is pre-qualified. Pre-qualification applications may be obtained at the County's Legal Department, 230 Government Center Drive, Suite 155, Wilmington, NC 28403 or by visiting the County's website <http://legalinsurance.nhcgov.com/contractors-approved-for-bidding/>. **The deadline for submission of the pre-qualification application is 5:00 p.m. on Friday, June 12, 2015.**

2.4 BID PROPOSAL

Proposals shall be made in strict accordance with the "Bid Proposal Package" provided herein, and all blank spaces for bids, alternates and unit prices shall be properly filled in. When requested alternates are not bid, the proposal may be considered incomplete. Any modifications to the "Bid Proposal Package" (including alternates and/or unit prices) may disqualify the bid and cause the bid to be rejected.

The Bidder agrees that the "Bid Proposal Package" detached from specifications will be considered and will have the same force and effect as if attached thereto. Photocopied or faxed proposals will not be accepted. Numbers shall be stated both in writing and in figures for the base bids and alternates.

Unit prices quoted in the "Bid Proposal Package" shall include overhead, profit and taxes and shall be the full compensation for the Bidder's cost involved in the work.

Proposals may be rejected if they show omissions, alterations of form, additions not called for, conditional bids, or irregularities of any kind.

Bidder shall identify on the bid, the minority businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit listing good faith efforts or an affidavit indicating work under contract will be self-performed, as required by G.S. 143-128.2(c) and G.S. 143-128.2(f). **Failure to comply with these requirements is grounds for rejection of the bid.**

2.5 EXAMINATION OF CONDITIONS

By submitting a bid, the Bidder is affirming that he has carefully examined all documents pertaining to the work, the location, accessibility and general character of the site of the work and all existing buildings and structures within and adjacent to the site, and has satisfied himself as to the nature of the work, the condition of existing buildings and structures, the conformation of the ground, the character, quality and quantity of the material to be encountered, the character of the equipment, machinery, plant, and any other facilities needed preliminary to and during prosecution of the work, the general and local conditions, the construction hazards, and all other matters, including but not limited to the labor situation which can in any way affect the work under the contract, and

including all safety measures required by the Occupational Safety and Health Act of 1970 and all rules and regulations issued pursuant thereto.

The Bidder further affirms by submitting a proposal that he has satisfied himself as to the feasibility and meaning of the plans, drawings, specifications, and other contract documents for the construction of work and that he accepts all the terms, conditions and stipulations contained therein, and that he is prepared to work in cooperation with other Contractors performing work on the site.

Reference is made to contract documents for the identification of those surveys and investigative reports of subsurface or latent physical conditions at the site or otherwise affecting performance of the work which have been relied upon by the Designer/owner in preparing the documents. The County will make copies of all such surveys and reports available to the Bidder upon request. Each Bidder may, at his own expense, make such additional surveys and investigations as he may deem necessary to determine his bid price for the performance of the work. Any on-site investigation shall be done at the convenience of the County. Any reasonable request for access to the site will be honored by the County.

2.6 FAMILIARITY WITH LAWS

The bidders are assumed to have made themselves familiar with all laws, ordinances, and regulations which in any manner affect those engaged or employed in the work or the materials or equipment used in or upon the work, or in any way affects the conduct of the work.

2.7 CODES AND STANDARDS

Wherever reference is given to codes, standard specifications or other data published by regulating agencies including, but not limited to, national electrical codes, North Carolina state building codes, federal specifications, ASTM specifications, various institute specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

2.8 PREPARATION OF PROPOSAL

The bidder must submit their bid proposal on the form herewith provided, and prices must be given both in writing and in figures (if requested). The bidder shall sign the bid proposal. **Bids not signed will be rejected.**

2.9 SUBMISSION OF BID FORM

2.9.1 Bid Bond: Each bid shall be accompanied by a deposit of cash, or a cashier's check, or a certified check on some bank or trust company insured by the Federal Deposit Insurance Corporation in an amount equal to not less than five percent (5%) of the proposal. In lieu of making the cash deposit as above provided, such bidder may file a bid

bond executed by a corporate surety licensed under the laws of North Carolina to execute such bonds, conditioned that the surety will upon demand forthwith make payment to the obligee upon said bond if the bidder fails to execute the contract in accordance with the bid bond. This deposit shall be retained if the successful bidder fails to execute the contract within 10 days after the award or fails to give satisfactory surety as required herein. **(Bidders providing a bid bond in lieu of the cash deposit must use the attached bid bond form).**

2.9.2 Addressee: Bids must be on the form contained in this bid package and must be submitted in a sealed envelope properly marked “**MRF IMPROVEMENTS: RFB # 15-0359**” and shall be addressed to County at the following address:

New Hanover County Finance Office
Attn: Lena Butler, Purchasing Supervisor
230 Government Center Drive, Suite 165
Wilmington, NC 28403

2.9.3 Unacceptable Bids: Bids submitted via telegraph, facsimile (FAX), telephone, and electronic means, including but not limited to e-mail, in response to the Request for Bids will not be acceptable.

2.10 LICENSING

The successful Contractor must be properly licensed to do the work in accordance with the North Carolina General Statutes (Chapter 87, Article 1). The Contractor’s license number is to be written on the Bid Proposal Form. Upon request, bidders shall show evidence of proper license type and limitation.

2.11 LATE BIDS

Late bids will not be accepted. It is the responsibility of the Bidder to have his/her bid in the office specified in the Request for Bids by the time and date of the opening.

2.12 COMMUNICATION

After the bid issue date, all communications between the County and prospective Bidders regarding this bid request shall be in writing. Any inquires, requests for interpretation, technical questions, clarification, or additional information shall be directed to **Lena Butler** by emailing lbutler@nhcgov.com . All questions concerning this bid shall reference the bid number, section number and paragraph. Questions and responses affecting the specifications of the bid will be provided by issuance of an Addendum to all known bidders of record.

2.13 TIME OF BID OPENING

Bids shall be opened and read aloud. After the opening of bids, no bid may be withdrawn, except under the provisions of General Statute 143-129.1, for a period of ninety (90) days

unless otherwise specified. Should the successful bidder default and fail to execute a contract, the contract may be awarded to the next lowest and responsible bidder. **Bids will be publicly opened and read aloud on Wednesday, June 24, 2015 at 2:00 PM** in Conference Room 500 located within the New Hanover County Finance Department, 230 Government Center Drive, Suite 165, Wilmington, NC 28403.

2.14 WITHDRAWAL OF BIDS

Bidders may withdraw or withdraw and resubmit their bid at any time prior to the closing time for receipt of bids. No bid may be withdrawn after the scheduled closing time for receipt of bids for a period of ninety (90) days except as provided under G.S. 143-129.1 which allows a bidder to withdraw his/her bid from consideration after the bid opening without forfeiture of his/her bid security if the price bid was based upon a mistake, which constituted a substantial error, provided the bid was submitted in good faith, and the bidder submits credible evidence that the mistake was clerical in nature as opposed to a judgment error, and was actually due to an unintentional and substantial arithmetic error or an unintentional omission of a substantial quantity of work, labor, apparatus, supplies, materials, equipment, or services made directly in the compilation of the bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of the original work papers, documents or materials used in the preparation of the bid sought to be withdrawn.

2.15 AWARD OF CONTRACT

The award of any contract resulting from this bid will be made to the lowest responsible bidder, taking into consideration quality, performance and time specified in the bid for the performance of the contract. In the event the lowest responsible, responsive bid is in excess of the funds available for the project, the County may enter into negotiations with the lowest responsible, responsive bidder and may make reasonable changes in the plans and specifications to bring the price within the funds available for the project and award the bid. If such negotiations prove to be unsuccessful, the County will re-advertise the project after making such changes in the plans and specifications as may be necessary to bring the cost of the project within the funds available.

2.16 SUBSTITUTIONS

In accordance with the provisions of G.S. 133-3, material, product, or equipment substitutions proposed by the bidders to those specified herein can only be considered during the bidding phase until ten (10) days prior to the receipt of bids when submitted to the Designer/owner with sufficient data to confirm material, product, or equipment equality. Proposed substitutions submitted after this time will be considered only as potential change order.

Submittals for proposed substitutions shall include the following information:

- a. Name, address, and telephone number of manufacturer and supplier as appropriate.
- b. Trade name, model or catalog designation.

- c. Product data including performance and test data, reference standards, and technical descriptions of material, product, or equipment. Include color samples and samples of available finishes as appropriate.
- d. Detailed comparison with specified products including performance capabilities, warranties, and test results.
- e. Other pertinent data including data requested by the Designer/owner to confirm product equality. If a proposed material, product, or equipment substitution is deemed equal by the Designer/owner to those specified, all bidders of record will be notified by Addendum.

2.17 PERFORMANCE BOND

Each contractor shall furnish a performance bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount. Bonds shall be executed in the form included with these specifications. The bond shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

2.18 PAYMENT BOND

Each contractor shall furnish a payment bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount. Bonds shall be executed in the form included with these specifications. The bond shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

2.19 ADDENDA

Any addenda to specifications issued during the time of bidding are to be considered covered in the proposal and in closing a contract they will become a part thereof. It shall be the bidder's responsibility to ascertain prior to bid time the addenda issued and to see that his bid includes any changes thereby required.

Should the bidder find discrepancies in, or omission from, the drawings or documents or should he be in doubt as to their meaning, he shall at once notify Lena Butler by emailing lbutler@nhcgov.com who will send written instructions in the form of addenda to all bidders. Notification should be no later than seven (7) days prior to the date set for receipt of bids. Neither the owner nor the designer/owner will be responsible for any oral instructions.

All addenda should be acknowledged by the bidder(s) on the Bid Proposal Form. However, even if not acknowledged, by submitting a bid, the bidder has certified that he has reviewed all issued addenda and has included all costs associated within his bid.

2.20 LIQUIDATED DAMAGES

Since actual damages for any delay in the completion of the work which the contractor is required to perform under this contract are or will be difficult to determine, Bidders and his /her sureties shall be liable for and shall pay to the Owner the sum of **\$500** as fixed

and agreed as liquidated damages, and not as penalty for each calendar day of delay from the date stipulated for completion, or as modified in accordance with the terms of this agreement until such work is satisfactorily completed and accepted. Said liquidated damages may be deducted from any payments owed to the contractor by the Owner or collected from the sureties, whichever is deemed expedient by the Owner.

2.21 COMPLIANCE WITH BID REQUIREMENTS

Failure to comply with these provisions or any other provisions of the General Statutes of North Carolina will result in rejection of bid.

2.22 E-VERIFY

Pursuant to N.C.G.S. § 143-48.5 (Session Law 2014-418), Contractor shall fully comply and certify compliance of each of its subcontractors with Article 2 of Chapter 64 of the N.C. General Statutes, including the requirement for each employer with more than 25 employees in North Carolina to verify the work authorization of its employees through the federal E-Verify system. County shall be provided affidavits attesting to Contractor's and subcontractor's compliance or exemption. Violation of the provision, unless timely cured, shall constitute a breach of Contract.

2.23 RIGHT TO REJECT BIDS

The County reserves the right to waive any or all informalities, to reject any or all bids, and to accept that Bid or Bids which is in the best interest of the County.

Section 3 – General Conditions

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ARTICLE 1-DEFINITIONS

1. The **contract documents** consist of the Instructions to Bidders; General Conditions, special conditions if applicable; drawings and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the proposal; the contract; the performance bond; the payment bond; and insurance certificates.
2. The **owner** is New Hanover County.
3. The **designer** are those referred to within this contract, or their authorized representatives. The Designer/owner(s), as referred to herein, shall mean architect and/or engineer. They will be referred to hereinafter as if each were of the singular number, masculine gender.
4. The **contractor**, as referred to hereinafter, shall be deemed to be either of the several contracting parties called the "Party of the First Part" in either of the several contracts in connection with the total project. Where, in special instances hereinafter, a particular contractor is intended, an adjective precedes the word "contractor," as "general," "heating," etc. For the purposes of a single prime contract, the term Contractor shall be deemed to be the single contracting entity identified as the "Party of the First Part" in the single Construction Contract. Any references or adjectives that name or infer multiple prime contractors shall be interpreted to mean the single prime Contractor.
5. A **subcontractor**, as the term is used herein, shall be understood to be one who has entered into a direct contract with a contractor, and includes one who furnishes materials worked to a special design in accordance with plans and specifications covered by the contract, but does not include one who only sells or furnishes materials not requiring work so described or detailed.
6. **Written notice** shall be defined as notice in writing delivered in person to the contractor, or to a partner of the firm in the case of a partnership, or to a member of the contracting organization, or to an officer of the organization in the case of a corporation, or sent to the last known business address of the contracting organization by registered mail.
7. **Work**, as used herein as a noun, is intended to include materials, labor, and workmanship of the appropriate contractor.
8. The **project** is the total construction work to be performed under the contract documents.
9. **Project Expediter**, as used herein, is an entity stated in the contract documents, designated to effectively facilitate scheduling and coordination of work activities. **For the purposes of a single prime contract, the single prime contractor shall be designated as the Project Expediter.**
10. **Change order** shall mean a written order to the Contractor executed by the County, issued after execution of this Contract, authorizing and directing a change in the Work or an adjustment in the Contract Price or the Contract Time, or any combination thereof. The Contract Price and the Contract Time may be changed only by Change Order.
11. **Field Order**, as used herein, shall mean a written approval for the contractor to proceed with the work requested by owner prior to issuance of a formal Change Order. The field order shall be signed by the contractor, designer/owner, owner, and State Construction Office.
12. **Time of completion**, as stated in the contract documents, is to be interpreted as consecutive calendar days measured from the date established in the written Notice to Proceed.
13. **Liquidated damages**, as stated in the contract documents, is an amount reasonably estimated in advance to cover the consequential damages associated with the Owner's economic loss in not being able to use the Project for its intended purposes at the end of the contract's completion date as amended by change order, if any, by reason of failure of the contractor(s)

to complete the work within the time specified. Liquidated damages does not include the Owner's extended contract administration costs (including but not limited to additional fees for architectural and engineering services, testing services, inspection services, commissioning services, etc.), such other damages directly resulting from delays caused solely by the contractor, or consequential damages that the Owner identified in the bid documents that may be impacted by any delay caused solely by the Contractor (e.g., if a multi-phased project-subsequent phases, delays in start other projects that are dependent on the completion of this Project, extension of leases and/or maintenance agreements for other facilities).

14. **Surety**, as used herein, shall mean the bonding company or corporate body which is bound with and for the contractor, and which engages to be responsible for the contractor and his acceptable performance of the work.
15. **Routine written communications between the Designer/owner and the Contractor** are any communication other than a "request for information" provided in letter, memo, or transmittal format, sent by mail, courier, electronic mail, or facsimile. Such communications cannot be identified as "request for information."
16. **Clarification or Request for information (RFI)** is a request from the Contractor seeking an interpretation or clarification by the Designer/owner relative to the contract documents. The RFI, which shall be labeled (RFI), shall clearly and concisely set forth the issue or item requiring clarification or interpretation and why the response is needed. The RFI must set forth the Contractor's interpretation or understanding of the contract documents requirements in question, along with reasons for such an understanding.
17. **Approval** means written or imprinted acknowledgement that materials, equipment or methods of construction are acceptable for use in the work.
18. **Inspection** shall mean examination or observation of work completed or in progress to determine its compliance with contract documents.
19. **"Equal to" or "approved equal"** shall mean materials, products, equipment, assemblies, or installation methods considered equal by the bidder in all characteristics (physical, functional, and aesthetic) to those specified in the contract documents. Acceptance of equal is subject to approval of Designer/owner and owner.
20. **"Substitution" or "substitute"** shall mean materials, products, equipment, assemblies, or installation methods deviating in at least one characteristic (physical, functional, or aesthetic) from those specified, but which in the opinion of the bidder would improve competition and/or enhance the finished installation. Acceptance of substitution is subject to the approval of the Designer/owner and owner.
21. **Provide** shall mean furnish and install complete in place, new, clean, operational, and ready for use.
22. **Indicated and shown** shall mean provide as detailed, or called for, and reasonably implied in the contract documents.
23. **Special inspector** is one who inspects materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with the approved construction documents and referenced standards as defined in the 2012 NC Building Code Chapter 17.
24. **Commissioning** is a quality assurance process that verifies and documents that building components and systems operate in accordance to the owner's project requirements and the project design documents.
25. **Final Inspection** is the inspection performed by the County to determine the completeness of the project in accordance with NC Building Codes and approved plans and specifications.

26. **Beneficial Occupancy** is requested by the owner and is occupancy or partial occupancy of the building after all life safety items have been completed as determined by the County. Life safety items include but not limited to fire alarm, sprinkler, egress and exit lighting, fire rated walls, egress paths and security.
27. **Final Acceptance** is the date in which the County accepts the construction as totally complete. This includes the County's Final Inspection and certification by the designer/owner that all punch lists are completed.
28. **Property Management** shall be the Owner's representative assigned to monitor the project and receive communication from the contractor regarding all issues related to the project.

ARTICLE 2 - INTENT AND EXECUTION OF DOCUMENTS

- a. The drawings and specifications are complementary, one to the other, and that which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a bid for a complete job. In case of discrepancy or disagreement in the contract documents, the order of precedence shall be: Agreement, Modifications, Addenda, Supplementary Conditions, Special Conditions, and Instructions to Bidders, General Conditions, Specifications and Drawings.
- b. The wording of the specifications shall be interpreted in accordance with common usage of the language except that words having a commonly used technical or trade meaning shall be so interpreted in preference to other meanings.
- c. The contractor shall execute each copy of the proposal, contract, performance bond and payment bond as follows:
 1. If the documents are executed by a sole owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.
 2. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.
 3. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.
 4. If the documents are made by a joint venture, they shall be executed by each member of the joint venture in the above form for sole owner, partnership or corporation, whichever form is applicable to each particular member.
 5. All signatures shall be properly witnessed.
 6. If the contractor's license is held by a person other than an owner, partner or officer of a firm, then the licensee shall also sign and be a party to the contract. The title "Licensee" shall appear under his/her signature.
 7. The bonds shall be executed by an attorney-in-fact. There shall be attached to each copy of the bond a certified copy of power of attorney properly executed and dated.
 8. Each copy of the bonds shall be countersigned by an authorized individual agent of the bonding company licensed to do business in North Carolina. The title "Licensed Resident Agent" shall appear after the signature.

The seal of the bonding company shall be impressed on each signature page of the bonds.

10. The contractor's signature on the performance bond and the payment bond shall correspond with that on the contract. The date of performance and payment bond shall not be prior to the date of the contract.

ARTICLE 3 - CLARIFICATIONS AND DETAIL DRAWINGS

a. In such cases where the nature of the work requires clarification by the designer/owner, such clarification shall be furnished by the designer/owner with reasonable promptness by means of written instructions or detail drawings, or both. Clarifications and drawings shall be consistent with the intent of contract documents, and shall become a part thereof.

b. The contractor(s) and the designer/owner shall prepare, if deemed necessary, a schedule fixing dates upon which foreseeable clarifications will be required. The schedule will be subject to addition or change in accordance with progress of the work. The designer/owner shall furnish drawings or clarifications in accordance with that schedule. The contractor shall not proceed with the work without such detail drawings and/or written clarifications.

ARTICLE 4 - COPIES OF DRAWINGS AND SPECIFICATIONS

Bidding Documents and Plans are posted on our website for bidding purposes. The successful low bidder will be given 4 full size copies upon award of contract.

ARTICLE 5 - SHOP DRAWINGS, SUBMITTALS, SAMPLES, DATA

a. Within 10 consecutive calendar days after the notice to proceed, the contractor shall submit a schedule for submission of all shop drawings, product data, samples, and similar submittals to the Owner. This schedule shall indicate the items, relevant specification sections, other related submittal, data, and the date when these items will be furnished to the designer.

b. The Contractor(s) shall review, approve and submit to the Owner all Shop Drawings, Coordination Drawings, Product Data, Samples, Color Charts, and similar submittal data required or reasonably implied by the Contract Documents. Required Submittals shall bear the Contractor's stamp of approval, any exceptions to the Contract Documents shall be noted on the submittals, and copies of all submittals shall be of sufficient quantity for the Owner to retain up to two (2) copies of each submittal for his own use plus additional copies as may be required by the Contractor. Submittals shall be presented to the Owner in accordance with the schedule submitted in paragraph (a) so as to cause no delay in the activities of the Owner or of separate Contractors, if applicable.

c. The Owner shall review required submittals promptly, noting desired corrections if any, and retaining two (2) copies for the Owners use. The remaining copies of each submittal shall be returned to the Contractor not later than twenty (20) days from the date of receipt by the Owner, for the Contractor's use or for corrections and resubmittal as noted by the Owner. When resubmittals are required, the submittal procedure shall be the same as for the original submittals.

d. Approval of shop drawings/submittals by the Designer/owner shall not be construed as relieving the Contractor from responsibility for compliance with the design or terms of the contract documents nor from responsibility of errors of any sort in the shop drawings, unless such lack of compliance or errors first have been called in writing to the attention of the Designer/owner by the Contractor.

ARTICLE 6 - WORKING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE

a. The contractor shall maintain, in readable condition at his job office, one complete set of working drawings and specifications for his work including all shop drawings. Such drawings and specifications shall be available for use by the designer/Owner and any authorized representative.

b. The contractor shall maintain at the job office, a day-to-day record of work-in-place that is at variance with the contract documents. Such variations shall be fully noted on project drawings by the contractor and submitted to the designer/owner upon project completion and no later than 30 days after final acceptance of the project.

c. The contractor shall maintain at the job office a record of all required tests that have been performed, clearly indicating the scope of work inspected and the date of approval or rejection.

ARTICLE 7 - OWNERSHIP OF DRAWINGS AND SPECIFICATIONS

All drawings and specifications are instruments of service and remain the property of the owner. The use of these instruments on work other than this contract without permission of the owner is prohibited. All copies of drawings and specifications other than contract copies shall be returned to the owner upon request after completion of the work.

ARTICLE 8 - MATERIALS, EQUIPMENT, EMPLOYEES

a. The contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, heat, sanitary facilities, water, scaffolding and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.

b. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.

c. Upon notice, the contractor shall furnish evidence as to quality of materials.

d. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. However, the contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable. Request for substitution of materials, items, or equipment shall be submitted to the designer/owner for approval or disapproval; such approval or disapproval shall be made by the designer/owner prior to the opening of bids. Alternate materials may be requested after the award if it can clearly be demonstrated that it is an added benefit to the owner and the designer/owner and owner approves.

e. The designer/owner is the judge of equality for proposed substitution of products, materials or equipment.

f. If at any time during the construction and completion of the work covered by these contract documents, the language, conduct, or attire of any workman of the various crafts be adjudged a nuisance to the owner or designer/owner, or if any workman be considered detrimental to the work, the contractor shall order such parties removed immediately from grounds.

ARTICLE 9 - ROYALTIES, LICENSES AND PATENTS

It is the intention of the contract documents that the work covered herein will not constitute in any way infringement of any patent whatsoever unless the fact of such patent is clearly evidenced herein. The contractor shall protect and save harmless the owner against suit on account of alleged or actual infringement. The contractor shall pay all royalties and/or license fees required on account of patented articles or processes, whether the patent rights are evidenced hereinafter.

ARTICLE 10 - PERMITS, INSPECTIONS, FEES, REGULATIONS

a. The contractor shall give all notices and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the designer/owner in writing. See Instructions to Bidders, Bulletins and Addenda. Any necessary changes required after contract award shall be made by change order. If the contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the designer/owner, he shall bear all cost arising therefrom. Additional requirements implemented after bidding will be subject to equitable negotiations.

b. All work under this contract shall conform to the North Carolina State Building Code and other State, local and national codes as are applicable. The cost of all required inspections and permits shall be the responsibility of the contractor and included within the bid proposal.

All water taps, meter barrels, vaults and impact fees shall be paid by the contractor unless otherwise noted.

c. Projects constructed by the County are subject to inspection by county authorities and are subject to county building codes. Permits shall be obtained at no cost.

ARTICLE 11 - PROTECTION OF WORK, PROPERTY AND THE PUBLIC

a. The contractors shall be jointly responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the owner or designer/owner, and by laws or ordinances governing such conditions. They shall be responsible for any damage to the owner's property or of that of others on the job, by them, their personnel, or their subcontractors, and shall make good such damages. They shall be responsible for and pay for any damages caused to the owner. All contractors shall have access to the project at all times.

b. The contractor shall provide cover and protect all portions of the structure when the work is not in progress, provide and set all temporary roofs, covers for doorways, sash and windows, and all other materials necessary to protect all the work on the building, whether set by him, or any of the subcontractors. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the owner.

c. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the designer/owner and owner.

d. The contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around same. He shall barricade all walks, roads, etc., as directed by the designer/owner to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.

e. The contractor shall provide all necessary safety measures for the protection of all persons on the job, including the requirements of the A.G.C. *Accident Prevention Manual in Construction*, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, elevator shafts, stairwells and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.

f. The contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.

g. The contractor shall designate a responsible person of his organization as safety officer/inspector to inspect the project site for unsafe health and safety hazards, to report these hazards to the contractor for correction, and whose duties also include accident prevention on the project, and to provide other safety and health measures on the project site as required by the terms and conditions of the contract. The name of the safety inspector shall be made known to the designer/owner and owner at the time of the preconstruction conference and in all cases prior to any work starting on the project.

h. In the event of emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the contractor is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage. Any compensation claimed by the contractor on account of such action shall be determined as provided for under Article 19(b).

i. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

ARTICLE 12 - SEDIMENTATION POLLUTION CONTROL ACT OF 1973

a. Any land-disturbing activity performed by the contractor(s) in connection with the project shall comply with all erosion control measures set forth in the contract documents and any additional measures which may be required in order to ensure that the project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15, North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 N.C.A.C. 4A, 4B and 4C).

b. Upon receipt of notice that a land-disturbing activity is in violation of said act, the contractor(s) shall be responsible for ensuring that all steps or actions necessary to bring the project in compliance with said act are promptly taken.

c. The contractor(s) shall be responsible for defending any legal actions instituted pursuant to N.C.G.S. 113A-64 against any party or persons described in this article.

d. To the fullest extent permitted by law, the contractor(s) shall indemnify and hold harmless the owner, the designer/owner and the agents, consultants and employees of the owner and designer/owner, from and against all claims, damages, civil penalties, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance of work or failure of performance of work, provided that any such claim, damage, civil penalty, loss or expense is attributable to a violation of the Sedimentation Pollution Control Act. Such obligation shall not be construed to negate, abridge or otherwise reduced any other right or obligation of indemnity which would otherwise exist as to any party or persons described in this article.

ARTICLE 13 - INSPECTION OF THE WORK

a. It is a condition of this contract that the work shall be subject to inspection during normal working hours and during any time work is in preparation and progress by the designer/owner, designated official representatives of the owner, and those persons required by state law to test special work for official approval. The contractor shall therefore provide safe access to the work at all times for such inspections.

b. All instructions to the contractor will be made only by or through the designer/owner or his designated project representative. Observations made by official representatives of the owner shall be conveyed to the designer/owner for review and coordination prior to issuance to the contractor.

c. All work shall be inspected by the designer/owner and/or special inspector prior to being covered by the contractor. Contractor shall give a minimum two weeks' notice unless otherwise agreed to by all parties. If inspection fails, after the first re-inspection all costs associated with additional re-inspections shall be borne by the contractor.

d. Where special inspection or testing is required by virtue of any state laws, instructions of the designer/owner, specifications or codes, the contractor shall give adequate notice to the designer/owner of the time set for such inspection or test, if the inspection or test will be conducted by a party other than the designer/owner. Such special tests or inspections will be made in the presence of the designer/owner, or his authorized representative, and it shall be the contractor's responsibility to serve ample notice of such tests.

e. All laboratory tests shall be paid by the owner unless provided otherwise in the contract documents except the general contractor shall pay for laboratory tests to establish design mix for concrete, and for additional tests to prove compliance with contract documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.

f. Should any work be covered up or concealed prior to inspection and approval by the designer/owner, or special inspector, such work shall be uncovered or exposed for inspection, if so requested by the designer/owner in writing. Inspection of the work will be made upon notice from the contractor. All cost involved in uncovering, repairing, replacing, recovering and restoring to design condition, the work that has been covered or concealed will be paid by the contractor involved.

ARTICLE 14 - CONSTRUCTION SUPERVISION AND SCHEDULE

a. Throughout the progress of the work, each contractor shall keep at the job site, a competent superintendent and supervisory staff satisfactory to the designer/owner and the owner. The superintendent and supervisory staff shall not be changed without the consent of the designer/owner and owner unless said superintendent ceases to be employed by the contractor or ceases to be competent as determined by the contractor, designer/owner or owner. The superintendent and other staff designated by the contractor in writing shall have authority to act on behalf of the contractor, and instructions, directions or notices given to him shall be as binding as if given to the contractor. However, directions, instructions, and notices shall be confirmed in writing.

b. The contractor shall examine and study the drawings and specifications and fully understand the project design, and shall provide constant and efficient supervision to the work. Should he discover any discrepancies of any sort in the drawings or specifications, he shall report them to the designer/owner without delay. He will not be held responsible for discrepancies in the drawings and/or specifications, but shall be held responsible to report them should they become known to him.

c. All contractors shall be required to cooperate and consult with each other during the construction of this project. Prior to installation of work, all contractors shall jointly prepare coordination drawings, showing locations of various ductworks, piping, motors, pumps, and other mechanical or electrical equipment, in relation to the structure, walls and ceilings. These drawings shall be submitted to the designer/owner through the Contractor for information only. Each contractor shall lay out and execute his work to cause the least delay to other contractors. Each contractor shall be financially responsible for any damage to other contractor's work and for undue delay caused to other contractors on the project.

d. The contractor is required to attend job site progress conferences as called by the designer/owner. The contractor shall be represented at these job progress conferences by both home office and project personnel. These representatives shall have authority to act on behalf of the contractor. These meetings shall be open to subcontractors, material suppliers and any others who can contribute toward maintaining required job progress. It shall be the principal purpose of these meetings, or conferences, to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the project on schedule and to complete the project within the specified contract time. Each contractor shall be prepared to assess progress of the work as required in his particular contract and to recommend remedial measures for correction of progress as may be appropriate. The designer/owner or his authorized representative shall be the coordinator of the conferences and shall preside as chairman. The contractor shall turn over a copy of his daily reports to the Owner at the progress meetings. Owner will determine daily report format.

Bar Chart Schedule: Where a bar chart schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by designer/owners, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all commissioning, required inspections and completion of final punchlist(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

CPM Schedule: Where a CPM schedule is required, it shall be in time-scaled precedence format using the Contractor's logic and time estimates. The CPM schedule shall be

Early Completion of Project: The Contractor may attempt to complete the project prior to the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or

the Contract Completion Date. The Contractor shall not be required to pay liquidated damages to the Owner because of its failure to complete by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for early completion nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to complete earlier than the date required by the Contract Documents.

h. The proposed project construction schedule shall be presented to the owner no later than fifteen (10) days after written notice to proceed. No application for payment will be processed until this schedule is accepted by the owner.

i. The approved project construction schedule shall be distributed to all contractors and displayed at the job site by the Contractor.

ARTICLE 15 - SEPARATE CONTRACTS AND CONTRACTOR RELATIONSHIPS

a. Chapter 143, Article 8, allows public contracts to be delivered by the following delivery methods: separate prime, single prime, dual, construction manager at risk, design-build, design-build bridging, private-public-partnership, and alternative contracting method as approved by the State Building Commission. The owner reserves the right to prepare separate specifications, receive separate bids, and award separate contracts for such other major items of work as may be in the best interest of the County. For the purposes of a single prime contract, refer to Article 1 – Definitions.

b. All contractors shall cooperate with each other in the execution of their work, and shall plan their work in such manner as to avoid conflicting schedules or delay of the work. See Article 14, Construction Supervision.

c. If any part of contractor's work depends upon the work of another contractor, defects which may affect that work shall be reported to the designer/owner/owner in order that prompt inspection may be made and the defects corrected. Commencement of work by a contractor where such condition exists will constitute acceptance of the other contractor's work as being satisfactory in all respects to receive the work commenced, except as to defects which may later develop. The designer/owner shall be the judge as to the quality of work and shall settle all disputes on the matter between contractors.

d. Any mechanical or electrical work such as sleeves, inserts, chases, openings, penetrations, etc., which is located in the work of the general contractor shall be built in by the general contractor. The respective mechanical and electrical contractors shall set all sleeves, inserts and other devices that are to be incorporated into the structure in cooperation and under the supervision of the general contractor. The responsibility for the exact location of such items shall be that of the mechanical and/or electrical contractor.

e. The designer/owner and the owner shall have access to the work whenever it is in preparation and progress and during normal working hours. The contractor shall provide facilities for such access so the designer/owner may perform his functions under the contract documents.

f. Should a contractor cause damage to the work or property of another contractor, he shall be directly responsible, and upon notice, shall promptly settle the claim or otherwise resolve the dispute.

ARTICLE 16 - SUBCONTRACTS AND SUBCONTRACTORS

a. The contractor shall submit to the owner a list giving the names and addresses of subcontractors and equipment and material suppliers he proposes to use, together with the scope of their respective parts of the work. Should any subcontractor be disapproved by the owner, the owner shall submit his reasons for disapproval in writing for its consideration with a copy to the contractor. If the Owner concurs with the owner's recommendation, the contractor shall submit a substitute for approval. The owner shall act promptly in the approval of subcontractors, and when approval of the list is given, no changes of subcontractors will be permitted except for cause or reason considered justifiable by the designer/owner or owner.

b. The Owner will furnish to any subcontractor, upon request, evidence regarding amounts of money paid to the contractor on account of the subcontractor's work.

c. The contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or of any employee of either. The contractor agrees that no contractual relationship exists between the subcontractor and the owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the contractor.

ARTICLE 17 - CONTRACTOR AND SUBCONTRACTOR RELATIONSHIPS

The contractor agrees that the terms of these contract documents shall apply equally to each subcontractor as to the contractor, and the contractor agrees to take such action as may be necessary to bind each subcontractor to these terms. The contractor further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to contractor-subcontractor relationships, and that payments to subcontractors shall be made in accordance with the provisions of G.S. 143-134.1 titled Interest on final payments due to prime contractors: payments to subcontractors.

a. On all public construction contracts which are let by a board or governing body of the state government or any political subdivision thereof, except contracts let by the Department of Transportation pursuant to G.S. 136-28.1, the balance due prime contractors shall be paid in full within 45 days after respective prime contracts of the project have been accepted by the owner, certified by the architect, engineer or designer/owner to be completed in accordance with terms of the plans and specifications, or occupied by the owner and used for the purpose for which the project was constructed, whichever occurs first. Provided, however, that whenever the architect or consulting engineer in charge of the project determines that delay in completion of the project in accordance with terms of the plans and specifications is the fault of the contractor, the project may be occupied and used for the purposes for which it was constructed without payment of any interest on amounts withheld past the 45 day limit. No payment shall be delayed because of the failure of another prime contractor on such project to complete his contract. Should final payment to any prime contractor beyond the

date such contracts have been certified to be completed by the designer/owner or architect, accepted by the owner, or occupied by the owner and used for the purposes for which the project was constructed, be delayed by more than 45 days, said prime contractor shall be paid interest, beginning on the 46th day, at the rate of one percent (1%) per month or fraction thereof unless a lower rate is agreed upon on such unpaid balance as may be due. In addition to the above final payment provisions, periodic payments due a prime contractor during construction shall be paid in accordance with the payment provisions of the contract documents or said prime contractor shall be paid interest on any such unpaid amount at the rate stipulated above for delayed final payments. Such interest shall begin on the date the payment is due and continue until the date on which payment is made. Such due date may be established by the terms of the contract. Funds for payment of such interest on state-owned projects shall be obtained from the current budget of the owning department, institution or agency. Where a conditional acceptance of a contract exists, and where the owner is retaining a reasonable sum pending correction of such conditions, interest on such reasonable sum shall not apply.

b. Within seven days of receipt by the prime contractor of each periodic or final payment, the prime contractor shall pay the subcontractor based on work completed or service provided under the subcontract. Should any periodic or final payment to the subcontractor be delayed by more than seven days after receipt of periodic or final payment by the prime contractor, the prime contractor shall pay the subcontractor interest, beginning on the eighth day, at the rate of one percent (1%) per month or fraction thereof on such unpaid balance as may be due.

c. The percentage of retainage on payments made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payments made by the owner to the prime contractor. Any percentage of retainage on payments made by the prime contractor to the subcontractor that exceeds the percentage of retainage on payments made by the owner to the prime contractor shall be subject to interest to be paid by the prime contractor to the subcontractor at the rate of one percent (1%) per month or fraction thereof.

d. Nothing in this section shall prevent the prime contractor at the time of application and certification to the owner from withholding application and certification to the owner for payment to the subcontractor for unsatisfactory job progress; defective construction not remedied; disputed work; third-party claims filed or reasonable evidence that claim will be filed; failure of subcontractor to make timely payments for labor, equipment and materials; damage to prime contractor or another subcontractor; reasonable evidence that subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by owner.

ARTICLE 18 – DESIGNER STATUS

a. The designer shall provide general administration of the performance of construction contracts, including liaison and necessary inspection of the work to ensure compliance with plans and specifications. He is the agent of the owner only for the purpose of constructing this work and to the extent stipulated in the contract documents. He has authority to direct work to be performed, to stop work, to order work removed, or to order corrections of faulty work, where any such action by the designer/owner may be necessary to assure successful completion of the work.

b. The designer is the impartial interpreter of the contract documents, and, as such, he shall exercise his powers under the contract to enforce faithful performance by both the owner and the contractor, taking sides with neither.

c. Should the designer cease to be employed on the work for any reason whatsoever, then the owner shall employ a competent replacement who shall assume the status of the former designer/owner.

d. The designer and his consultants will make inspections of the project. He will inspect the progress, the quality and the quantity of the work.

e. The designer shall have access to the work whenever it is in preparation and progress during normal working hours. The contractor shall provide facilities for such access so the designer and owner may perform their functions under the contract documents.

f. Based on the designer inspections and evaluations of the project, the designer shall issue interpretations, directives and decisions as may be necessary to administer the project. His/her decisions relating to artistic effect and technical matters shall be final, provided such decisions are within the limitations of the contract.

ARTICLE 19 - CHANGES IN THE WORK

a. The owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the contractor from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.

b. Except in an emergency endangering life or property, no change shall be made by the contractor except upon receipt of approved change order or written field order from the designer/owner, countersigned by the owner authorizing such change. No claim for adjustments of the contract price shall be valid unless this procedure is followed:

1. A field order, transmitted by fax, electronically, or hand delivered, may be used where the change involved impacts the critical path of the work. A formal change order shall be issued as expeditiously as possible.
2. In the event of emergency endangering life or property, the contractor may be directed to proceed on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the designer/owner, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined under either Method "c(1)" or Method "c(2)" or both.

c. In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:

1. Where the extra work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the Contractor, Designer/owner, the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed of the items involved, except in such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or

more. In such cases, either party may elect to proceed under subparagraph c2 herein. If neither party elects to proceed under c2, then unit prices shall apply.

2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.

d. Under Paragraph "b" and Methods "c(2)" above, the allowances for overhead and profit combined shall be as follows: all contractors (the single contracting entity (prime), his subcontractors(1st tier subs), or their sub-subcontractors (2nd tier subs, 3rd tier subs, etc)) shall be allowed a maximum of 10% on work they each self-perform; the prime contractor shall be allowed a maximum of 5% on contracted work of his 1st tier sub; 1st tier, 2nd tier, 3rd tier, etc contractors shall be allowed a maximum of 2.5% on the contracted work of their subs. ; Under Method "c(1)", no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under Method "c(2)" and Paragraph (b) above, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.

e. The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:

1. The actual costs of materials and supplies incorporated or consumed as part of the work;

2. The actual costs of labor expended on the project site; labor expended in coordination, change order negotiation, record document maintenance, shop drawing revision or other tasks necessary to the administration of the project are considered overhead whether they take place in an office or on the project site.

3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker's compensation insurance premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor;

4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; and temporary facilities required for the work;

5. The actual costs of premiums for bonds, insurance, permit fees, and sales or use taxes related to the work.

Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the owner.

f. Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change

shall be arrived at by one of the foregoing methods. All change orders shall be supported by a unit cost breakdown showing method of arriving at net cost as defined above.

g. In all change orders, the contractor will provide a proposal and supporting data in suitable format. The designer/owner shall verify correctness. Delay in the processing of the change order due to lack of proper submittal by the contractor of all required supporting data shall not constitute grounds for a time extension or basis of a claim. Within fourteen (14) days after receipt of the contractor's accepted proposal including all supporting documentation required by the designer/owner, the designer/owner shall prepare the change order and forward to the contractor for his signature or otherwise respond, in writing, to the contractor's proposal. Within seven (7) days after receipt of the change order executed by the contractor, the designer/owner shall, certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's signature. The owner shall execute the change order within seven (7) days of receipt. In case of emergency or extenuating circumstances, approval of changes may be obtained verbally by telephone or field orders approved by all parties, then shall be substantiated in writing as outlined under normal procedure.

h. A change order, when issued, shall be full compensation, or credit, for the work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.

i. If, during the progress of the work, the owner requests a change order and the contractor's terms are unacceptable, the owner may require the contractor to perform such work on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the owner, a correct account of cost together with all proper invoices, payrolls and supporting data. Upon completion of the work a change order will be prepared with allowances for overhead and profit per paragraph d. above and "net cost" and "cost" per paragraph e. above. Without prejudice, nothing in this paragraph shall preclude the owner from performing or to have performed that portion of the work requested in the change order.

ARTICLE 20 - CLAIMS FOR EXTRA COST

a. Should the contractor consider that as a result of instructions given by the designer/owner/owner, he is entitled to extra cost above that stated in the contract, he shall give written notice thereof to the designer/owner within seven (7) days without delay. The written notice shall clearly state that a claim for extra cost is being made and shall provide a detailed justification for the extra cost. The contractor shall not proceed with the work affected until further advised, except in emergency involving the safety of life or property, which condition is covered in Article 19(b) and Article 11(h). No claims for extra compensation shall be considered unless the claim is so made. The designer/owner shall render a written decision within seven (7) days of receipt of claim.

b. The contractor shall not act on instructions received by him from persons other than the designer/owner, and any claims for extra compensation or extension of time on account of such instruction will not be honored. The designer/owner shall not be responsible for misunderstandings claimed by the contractor of verbal instructions which have not been confirmed in writing, and in no case shall instructions be interpreted as

permitting a departure from the contract documents unless such instruction is confirmed in writing and supported by a properly authorized change order.

c. Should a claim for extra compensation that complies with the requirements of (a) above by the contractor and is denied by the designer/owner or owner, and cannot be resolved, the contractor may request a mediation in connection with GS 143-128(f1) in the dispute resolution rules adopted by the New Hanover County

ARTICLE 21 - MINOR CHANGES IN THE WORK

The designer/owner will have the authority to order minor changes in the work not involving an adjustment in the contract sum or time for completion, and not inconsistent with the intent of the contract documents. Such changes shall be effected by written order and shall be binding on the owner and the contractor.

ARTICLE 22 - UNCORRECTED FAULTY WORK

Should the correction of faulty or damaged work be considered inadvisable or inexpedient by the owner and the designer/owner, the owner shall be reimbursed by the contractor. A change order will be issued to reflect a reduction in the contract sum.

ARTICLE 23 - TIME OF COMPLETION, DELAYS, EXTENSION OF TIME

a. The time of completion is stated in the Contract Document. The Contractor, upon notice of award of contract, shall prepare a construction schedule to complete the project within the time of completion as required by Article 14.

b. The contractors shall commence work to be performed under this agreement on a date to be specified in a written Notice to Proceed from the owner and shall fully complete all work hereunder within the time of completion stated. Time is of the essence and the contractor acknowledges the Owner will likely suffer financial damage for failure to complete the work within the time of completion. For each day in excess of the above number of days, the contractor(s) shall pay the owner the sum stated as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the owner by reason of failure of said contractor(s) to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof.

c. In the event of multiple prime contractors, the designer/owner shall be the judge as to the division of responsibility between the contractor(s), based on the construction schedule, weekly reports and job records, and shall apportion the amount of liquidated damages to be paid by each of them, according to delay caused by any or all of them.

d. If the contractor is delayed at any time in the progress of his work solely by any act or negligence of the owner, the designer, or by any employee of either; by any separate contractor employed by the owner; by changes ordered in the work; by labor disputes at the project site; by abnormal weather conditions not reasonably anticipated for the locality where the work is performed; by unavoidable casualties; by any causes beyond the contractor's control; or by any other causes which the designer/owner and owner

determine may justify the delay, then the contract time may be extended by change order only for the time which the designer/owner and owner may determine is reasonable. Time extensions will not be granted for rain, wind, snow or other natural phenomena of normal intensity for the locality where work is performed. For purpose of determining extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the locality where work is performed and on daily weather logs kept on the job site by the contractor reflecting the effect of the weather on progress of the work and initialed by the designer/owner's representative. No weather delays shall be considered after the building is dried in unless work claimed to be delayed is on the critical path of the baseline schedule or approved updated schedule. Time extensions for weather delays, acts of God, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Owner do not entitle the Contractor to compensable damages for delays. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents. Contractor caused delays shall be accounted for before owner or designer/owner caused delays in the case of concurrent delays.

e. Request for extension of time shall be made in writing to the owner within twenty (20) days following cause of delay. In case of continuing cause for delay, the Contractor shall notify the owner of the delay within 20 days of the beginning of the delay and only one claim is necessary.

f. No claim for time extension shall be allowed on account of failure of the designer/owner to furnish drawings or instructions until twenty (20) days after demand for such drawings and/or instructions. See Article 5c. Demand must be in written form clearly stating the potential for delay unless the drawings or instructions are provided. Any delay granted will begin after the twenty (20) day demand period is concluded.

ARTICLE 24 - PARTIAL UTILIZATION/BENEFICIAL OCCUPANCY

a. The owner may desire to occupy or utilize all or a portion of the project prior to the completion of the project.

b. Should the owner request a utilization of a building or portion thereof, the designer/owner shall perform a designer/owner final inspection of area after being notified by the contractor that the area is ready for such. After the contractor has completed designer/owner final inspection punch list and the designer/owner has verified, then the designer/owner shall schedule a beneficial occupancy inspection at a time and date acceptable to the owner, contractor(s) and State Construction Office. If beneficial occupancy is granted by the State Construction Office, in such areas the following will be established:

1. The beginning of guarantees and warranties period for the equipment necessary to support in the area.
2. The owner assumes all responsibilities for utility costs for entire building.
3. Contractor will obtain consent of surety.

4. Contractor will obtain endorsement from insurance company permitting beneficial occupancy.
- c. The owner shall have the right to exclude the contractor from any part of the project which the designer/owner has so certified to be substantially complete, but the owner will allow the contractor reasonable access to complete or correct work to bring it into compliance with the contract.
- d. Occupancy by the owner under this article will in no way relieve the contractor from his contractual requirement to complete the project within the specified time. The contractor will not be relieved of liquidated damages because of beneficial occupancy. The owner may prorate liquidated damages based on the percentage of project occupied.

ARTICLE 25 - FINAL INSPECTION, ACCEPTANCE, AND PROJECT CLOSEOUT

- a. Upon notification from the contractor(s) that the project is complete and ready for inspection, the designer/owner shall make a final inspection to verify that the project is complete.
- b. The designer/owner and his consultants shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the contract documents. At the conclusion of the final inspection, the designer/owner shall make one of the following determinations:
 1. That the project is completed and accepted.
 2. That the project will be accepted subject to the correction of the list of discrepancies (punch list). All punch list items must be completed within thirty (30) days of final inspection or the owner may invoke Article 28, Owner's Right to Do Work.
 3. That the project is not complete and another date for a final inspection will be established.
- c. Within fourteen (14) days of final acceptance per Paragraph b1 or within fourteen (14) days after completion of punch list per Paragraph b2 above, the designer/owner shall certify the work and issue applicable certificate(s) of compliance.
- d. Any discrepancies listed or discovered after the date of SCO final inspection and acceptance under Paragraphs b1 or b2 above shall be handled in accordance with Article 42, Guarantee.
- e. The final acceptance date will establish the following:
 1. The beginning of guarantees and warranties period.
 2. The date on which the contractor's insurance coverage for public liability, property damage and builder's risk may be terminated.
 3. That no liquidated damages (if applicable) shall be assessed after this date.
 4. The termination date of utility cost to the contractor.
- f. Prior to issuance of final acceptance date, the contractor shall have his authorized representatives visit the project and give full instructions to the designated**

personnel regarding operating, maintenance, care, and adjustment of all equipment and special construction elements. In addition, the contractor shall provide to the owner a complete instructional video (media format acceptable to the owner) on the operation, maintenance, care and adjustment of all equipment and special construction elements.

ARTICLE 26 - CORRECTION OF WORK BEFORE FINAL PAYMENT

- a. Any work, materials, fabricated items or other parts of the work which have been condemned or declared not in accordance with the contract by the designer/owner shall be promptly removed from the work site by the contractor, and shall be immediately replaced by new work in accordance with the contract at no additional cost to the owner. Work or property of other contractors or the owner, damaged or destroyed by virtue of such faulty work, shall be made good at the expense of the contractor whose work is faulty.
- b. Correction of condemned work described above shall commence within twenty-four (24) hours after receipt of notice from the designer/owner, and shall make satisfactory progress, as determined by the designer/owner, until completed.
- c. Should the contractor fail to proceed with the required corrections, then the owner may complete the work in accordance with the provisions of Article 28.

ARTICLE 27 - CORRECTION OF WORK AFTER FINAL PAYMENT

See Article 35, Performance Bond and Payment Bond, and Article 42, Guarantee. Neither the final certificate, final payment, occupancy of the premises by the owner, nor any provision of the contract, nor any other act or instrument of the owner, nor the designer/owner, shall relieve the contractor from responsibility for negligence, or faulty material or workmanship, or failure to comply with the drawings and specifications. Contractor shall correct or make good any defects due thereto and repair any damage resulting there from, which may appear during the guarantee period following final acceptance of the work except as stated otherwise under Article 42, Guarantee. The owner will report any defects as they may appear to the contractor and establish a time limit for completion of corrections by the contractor. The owner will be the judge as to the responsibility for correction of defects.

ARTICLE 28 - OWNER'S RIGHT TO DO WORK

If, during the progress of the work or during the period of guarantee, the contractor fails to prosecute the work properly or to perform any provision of the contract, the owner, after seven (7) days' written notice sent by certified mail, return receipt requested, to the contractor from the designer/owner, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the contractor, such action and cost of same having been first approved by the designer/owner. Should the cost of such action of the owner exceed the amount due or to become due the contractor, then the contractor or his surety, or both, shall be liable for and shall pay to the owner the amount of said excess.

ARTICLE 29 - ANNULMENT OF CONTRACT

If the Contractor persistently or repeatedly refuses or fails to prosecute the Work in a timely and/or competent manner, supply enough properly skilled workers, supervisory personnel or proper equipment or materials, or if it fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a material provision of this Contract, then the County may by written notice to the Contractor, without prejudice to any other right or remedy, terminate the employment of the Contractor and take possession of the site and of all materials owned by the County and may finish the Work by whatever methods it may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished.

29.1 If the unpaid balance of the Contract Price exceeds the cost of finishing the work, including compensation for the County's additional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such cost exceeds the unpaid balance, the Contractor shall pay the difference to the County. This obligation for payment shall survive the termination of the Contract.

29.2 In the event the employment of the Contractor is terminated by the County for cause and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience, such termination shall thereupon be deemed a Termination for Convenience.

ARTICLE 30 - CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

a. Should the work be stopped by order of a court having jurisdiction, or by order of any other public authority for a period of three months, due to cause beyond the fault or control of the contractor, or if the owner should fail or refuse to make payment on account of a certificate issued by the owner within forty-five (45) days after receipt of same, then the contractor, after fifteen (15) days' written notice sent by certified mail, return receipt requested, to the owner, may suspend operations on the work or terminate the contract.

b. The owner shall be liable to the contractor for the cost of all materials delivered and work performed on this contract to date.

ARTICLE 31 - REQUEST FOR PAYMENT

a. Not later than the fifth day of the month, the contractor shall submit to the Owner a request for payment for work done during the previous month. The request shall be in the form agreed upon between the contractor and owner. The Request for Payment shall show substantially the value of work done and materials delivered to the site during the period since the last payment, and shall sum up the financial status of the contract with the following information:

1. Total of contract including change orders.
2. Value of work completed to date.

3. Less five percent (5%) retainage, provided however, that after fifty percent (50%) of the contractor's work has been satisfactorily completed on schedule, with approval of the owner, further requirements for retainage will be waived only so long as work continues to be completed satisfactorily and on schedule.
 4. Less previous payments.
 5. Current amount due.
 6. Sales & use tax affidavits must be submitted with each payment request. If no sales tax was paid, Bidder is instructed to submit a zero (0) report.
- b. The contractor, upon request of the Owner, shall substantiate the request with invoices of vouchers or payrolls or other evidence.
 - c. Prior to submitting the first request, the contractor shall prepare for the owner a schedule showing a breakdown of the contract price into values of the various parts of the work, so arranged as to facilitate payments to subcontractors in accordance with Article 17, Contractor and Subcontractor Relationships. The contractor(s) shall list the value of each subcontractor and supplier, identifying each minority business subcontractor and supplier as listed in Affidavit C, if applicable.
 - d. When payment is made on account of stored materials and equipment, such materials must be stored on the owner's property, and the requests for payments shall be accompanied by invoices or bills of sale or other evidence to establish the owner's title to such materials and equipment. Such payments will be made only for materials that have been customized or fabricated specifically for this project. Raw materials or commodity products including but not limited to piping, conduit, CMU, metal studs and gypsum board may not be submitted. Responsibility for such stored materials and equipment shall remain with the contractor regardless of ownership title. Such stored materials and equipment shall not be removed from the owner's property. Should the space for storage on-site be limited, the contractor, at his option, shall be permitted to store such materials and/or equipment in a suitable space off-site. Should the contractor desire to include any such materials or equipment in his application for payment, they must be stored in the name of the owner in an independent, licensed, bonded warehouse approved by the owner and located as close to the site as possible. The warehouse selected must be approved by the contractor's bonding and insurance companies; the material to be paid for shall be assigned to the owner and shall be inspected by the designer/owner. Upon approval by the designer/owner, of the storage facilities and materials and equipment, payment therefore will be certified. Responsibility for such stored materials and equipment shall remain with the contractor. Such stored materials and equipment shall not be moved except for transportation to the project site. Under certain conditions, the owner may approve storage of materials at the point of manufacture, which conditions shall be approved by the owner prior to approval for the storage and shall include an agreement by the storing party which unconditionally gives the Owner absolute right to possession of the materials at any time. Bond, security and insurance protection shall continue to be the responsibility of the contractor(s).
 - e. In the event of beneficial occupancy, retainage of funds due the contractor(s) may be reduced with the approval of owner to an equitable amount to cover the list of items to be completed or corrected. Retainage may not be reduced to less than two and one-

half (2 1/2) times the estimated value of the work to be completed or corrected. Reduction of retainage must be with the consent and approval of the contractor's bonding company.

ARTICLE 32 - CERTIFICATES OF PAYMENT AND FINAL PAYMENT

- a. Within five (5) days from receipt of request for payment from the contractor, the designer/owner shall issue and forward to the owner a certificate for payment. This certificate shall indicate the amount requested or as approved by the designer/owner. If the certificate is not approved by the designer/owner, he shall state in writing to the contractor and the owner his reasons for withholding payment.
- b. No certificate issued or payment made shall constitute an acceptance of the work or any part thereof. The making and acceptance of final payment shall constitute a waiver of all claims by the owner except:
 1. Claims arising from unsettled liens or claims against the contractor.
 2. Faulty work or materials appearing after final payment.
 3. Failure of the contractor to perform the work in accordance with drawings and specifications, such failure appearing after payment.
 4. As conditioned in the performance bond and payment bond.
- c. The making and acceptance of final payment shall constitute a waiver of all claims by the contractor except those claims previously made and remaining unsettled (Article 20(c)).
- d. Prior to submitting request for final payment to the designer/owner for approval, the contractor shall fully comply with all requirements specified in the "project closeout" section of the specifications. These requirements include but not limited to the following:
 1. Submittal of Product and Operating Manuals, Warranties and Bonds, Guarantees, Maintenance Agreements, As-Built Drawings, Certificates of Inspection or Approval from agencies having jurisdiction. (The designer/owner must approve the Manuals prior to delivery to the owner).
 2. Transfer of Required attic stock material and all keys in an organized manner.
 3. Record of Owner's training.
 4. Resolution of any final inspection discrepancies.
 5. Granting access to Contractor's records, if Owner's internal auditors have made a request for such access pursuant to Article 52.
- e. The contractor shall forward to the designer/owner, the final application for payment along with the following documents:
 1. List of minority business subcontractors and material suppliers showing breakdown of contract amounts and total actual payments to subs and material suppliers.

2. Affidavit of Release of Liens.
 3. Affidavit of contractors of payment to material suppliers and subcontractors. (See Article 36).
 4. Consent of Surety to Final Payment.
- f. The designer/owner will not authorize final payment until the work under contract has been certified by designer/owner, certificates of compliance issued, and the contractor has complied with the closeout requirements. The designer/owner shall forward the contractor's final application for payment to the owner along with respective certificate(s) of compliance required by law.

ARTICLE 33 - PAYMENTS WITHHELD

- a. The designer/owner may withhold payment for the following reasons:
 1. Faulty work not corrected.
 2. The unpaid balance on the contract is insufficient to complete the work in the judgment of the designer/owner.
 3. To provide for sufficient contract balance to cover liquidated damages that will be assessed.
- b. The owner may authorize the withholding of payment for the following reasons:
 1. Claims filed against the contractor or evidence that a claim will be filed.
 2. Evidence that subcontractors have not been paid.
- c. When grounds for withholding payments have been removed, payment will be released. Delay of payment due the contractor without cause will make owner liable for payment of interest to the contractor in accordance with G.S. 143-134.1. As provided in G.S.143-134.1(e) the owner shall not be liable for interest on payments withheld by the owner for unsatisfactory job progress, defective construction not remedied, disputed work, or third-party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

ARTICLE 34 – INSURANCE REQUIREMENTS

Before commencing any work, the successful bidder shall procure insurance in the bidder's name and maintain all insurance policies for the duration of the contract of the types and in the amounts listed below. The insurance shall provide coverage against claims for injuries to persons or damages to property which may arise from operations or in connection with the performance of the work hereunder by the contractor, his agents, representatives, employees, or subcontractors, whether such operations by himself/herself or anyone directly or indirectly employed by him/her.

Commercial General Liability. Bidder shall maintain Commercial General Liability and if necessary, Commercial Umbrella Liability insurance with a total

limit of not less than \$10,000,000 each occurrence for bodily injury and property damage. If such CGL insurance contains a general aggregate limit, it shall apply separately to this project/location or the general aggregate shall be twice the required limit.

CGL insurance shall be written on Insurance Services Office (ISO) “occurrence” form CG 00 01 covering Commercial General Liability or its equivalent and shall cover the liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

New Hanover County, its officers, officials, agents, and employees are to be covered as additional insureds under the CGL by endorsement CG 20 10 **or** CG 20 33 **and** CG 20 37 or an endorsement providing equivalent coverage as respects to liability arising out of activities performed by or on behalf of the contractor; products and completed operations of the contractor; premises owned, leased or used by the contractor; and under the commercial umbrella, if any.

There shall be no endorsement or modification of the CGL or Umbrella Liability limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, employment-related practices, or damage to the named insured’s work.

The bidder’s Commercial General Liability insurance shall be primary as respects New Hanover County, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by New Hanover County, its officers, officials, and employees shall be excess of and not contribute with the bidder’s insurance.

Workers’ Compensation and Employer’s Liability. Bidder shall maintain Workers’ Compensation as required by the general statutes of the State of North Carolina and Employer’s Liability Insurance.

The Employer’s Liability, and if necessary, Commercial Umbrella Liability insurance shall not be less than \$10,000,000 each accident for bodily injury by accident, \$10,000,000 each employee for bodily injury by disease, and \$10,000,000 policy limit.

The insurer shall agree to waive all rights of subrogation against the New Hanover County, its officers, officials, agents and employees for losses arising from work performed by the bidder for New Hanover County.

Business Auto Liability. Bidder shall maintain Business Auto Liability and, if necessary, Commercial Umbrella Liability insurance with a limit of not less than \$10,000,000 each accident.

Such insurance shall cover liability arising out of any auto, including owned, hired, and non-owned autos.

Business Auto coverage shall be written on ISO form CA 00 01, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in ISO form CA 00 01.

The bidder's Business Auto Liability insurance shall be primary as New Hanover County, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by New Hanover County, its officers, officials, and employees shall be excess of and not contribute with the bidder's insurance.

Environmental/Pollution Liability. If required, bidder shall maintain Environmental/Pollution Liability covering losses caused by pollution incidents that arise from the operations of the contractor described under the scope of services of this contract.

Environmental/Pollution Liability shall apply to bodily injury; property damage, including loss of use of damaged property or of property that has not been physically injured; cleanup costs and defense, including costs and expenses incurred in the investigation defense, or settlement of claims. The policy of insurance affording these required coverages shall be written in an amount of at least \$10,000,000 per claim, with an annual aggregate of at least \$10,000,000.

Contractors Pollution Liability shall include as an additional insured New Hanover County, its officers, officials, agents, and employees.

If Contractors Pollution Liability is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years, beginning from the time that work under the contract is complete.

If the scope of services as defined in this contract includes the disposal of any hazardous or nonhazardous materials from the job site, the Contractor must furnish to the New Hanover County evidence of pollution liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting waste under this contract. Coverage certified to the New Hanover County under this paragraph must be maintained in minimum amounts of \$10,000,000 per loss, with an annual aggregate of at least \$10,000,000.

Installation Floater. Bidder shall purchase and maintain in force Installation Floater insurance for the installation of equipment. Such insurance shall be written in an amount equal to the replacement cost of the equipment. The insurance shall apply on a replacement cost basis.

Insured property shall include portions of the work located away from the site but intended for use at the site, and shall also cover portions of the work in transit.

Installation Floater insurance shall name New Hanover County as loss payee.

Installation Floater Insurance shall, at a minimum, cover the perils insured under the ISO special causes of loss form (CP 10 30).

Any deductible applicable to the Installation Floater shall be paid by the Bidder.

If New Hanover County is damaged by the failure of Bidder to maintain Installation Floater insurance, then Bidder shall bear all reasonable costs properly attributable to that failure.

Deductibles and Self-Insured Retentions. Any deductibles or self-insured retentions must be declared to and approved by New Hanover County. At the option of New Hanover County, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects New Hanover County, its officers, officials, agents, and employees; or the contractor shall procure a bond guaranteeing payment deductibles or self-insured retentions. The bidder shall be solely responsible for the payment of all deductibles to which such policies are subject, whether or not New Hanover County is an insured under the policy.

Miscellaneous Insurance Provisions. The policies are to contain, or be endorsed to contain, the following provisions:

Each insurance policy required by this contract shall be endorsed to state that coverage shall not canceled by either party except after 30 days prior written notice has been given to New Hanover County, 230 Government Center Drive #125, Wilmington, NC 28403.

If bidder's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

Acceptability of Insurers. Insurance is to be placed with insurers licensed to do business in the State of North Carolina with an A.M. Best's rating of no less than A VII unless specific approval has been granted by New Hanover County.

Evidence of Insurance. The bidder shall furnish New Hanover County with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements prior to commencing the work, and thereafter upon renewal or replacement of each certified coverage until all operations under this contract are deemed complete.

Evidence of additional insured status shall be noted on the certificate of insurance as per requirements in 2.16.3 above.

Subcontractors. Bidder shall include all subcontractors as insureds under its policies or shall furnish separate certificates for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein. Commercial General Liability coverage shall include independent contractors' coverage, and the contractor shall be responsible for assuring that all subcontractors are properly insured.

Conditions.

The insurance required for this contract must be on forms acceptable to New Hanover County.

Where circumstances warrant, New Hanover County may, at its discretion subject to acceptance by the Risk Management and Finance Department accept letters of credit or custodial accounts in lieu of specific insurance requirements.

The bidder shall provide that the insurance contributing to satisfaction of insurance requirements shall not be canceled, terminated or modified by the contractor without prior written approval of New Hanover County.

The bidder shall promptly notify the Risk Management Office at (910) 798-7497 of any accidents arising in the course of operations under the contract causing bodily injury or property damage.

New Hanover County reserves the right to obtain complete, certified copies of all required insurance policies, at any time.

Failure of New Hanover County to demand a certificate or other evidence of full compliance with these insurance requirements or failure of New Hanover County to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

By requiring insurance herein, New Hanover County does not represent that coverage and limits will necessarily be adequate to protect the bidder and such coverage and limits shall not be deemed as a limitation of bidder's liability under the indemnities granted to New Hanover County in this contract.

If bidder fails to maintain the insurance as set forth herein, New Hanover County shall have the right, but not the obligation, to purchase said insurance at bidder's expense.

The bidder may apply to New Hanover County for approval of higher deductibles based on financial capacity and quality of the carrier affording coverage.

New Hanover County shall have the right, but not the obligation of prohibiting bidder or any subcontractor from entering the project site or withhold payment until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by New Hanover County.

ARTICLE 35 - PERFORMANCE BOND AND PAYMENT BOND

- a. Each contractor shall furnish a performance bond and payment bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount. Bonds shall be executed in the form bound with these specifications.
- b. All bonds shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

ARTICLE 36 - CONTRACTOR'S AFFIDAVIT

The final payment of retained amount due the contractor on account of the contract shall not become due until the contractor has furnished to the owner an affidavit signed, sworn and notarized to the effect that all payments for materials, services or subcontracted work in connection with his contract have been satisfied, and that no claims or liens exist against the contractor in connection with this contract. In the event that the contractor cannot obtain similar affidavits from subcontractors to protect the contractor and the owner from possible liens or claims against the subcontractor, the contractor shall state in his affidavit that no claims or liens exist against any subcontractor to the best of his (the contractor's) knowledge, and if any appear afterward, the contractor shall save the owner harmless.

ARTICLE 37 - ASSIGNMENTS

The contractor shall not assign any portion of this contract nor subcontract in its entirety. Except as may be required under terms of the performance bond or payment bond, no funds or sums of money due or become due the contractor under the contract may be assigned.

ARTICLE 38 - USE OF PREMISES

- a. The contractor(s) shall confine his apparatus, the storage of materials and the operations of his workmen to limits indicated by law, ordinances, permits or directions of the designer/owner and owner and shall not exceed those established limits in his operations.
- b. The contractor(s) shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.
- c. The contractor(s) shall enforce the designer/owner's and owner's instructions regarding signs, advertisements, fires and smoking.
- d. No firearms, any type of alcoholic beverages or drugs (other than those prescribed by a physician) will be permitted at the job site.

ARTICLE 39 - CUTTING, PATCHING AND DIGGING

- a. The contractor shall do all cutting, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors shown upon or reasonably implied by the drawings and specifications for the completed structure, as the designer/owner may direct.
- b. Any cost brought about by defective or ill-timed work shall be borne by the party responsible therefor.
- c. No contractor shall endanger any work of another contractor by cutting, digging or other means. No contractor shall cut or alter the work of any other contractor without the consent of the designer/owner and the affected contractor(s).

ARTICLE 40 - UTILITIES, STRUCTURES, SIGNS

- a. The contractor shall provide necessary and adequate facilities for water, electricity, gas, oil, sewer and other utility services which may be necessary and required for completion of the project including all utilities required for testing, cleaning, balancing, and sterilization of designated plumbing, mechanical and electrical systems. Any permanent meters installed shall be listed in the contractor's name until work has a final acceptance. The contractor will be solely responsible for all utility costs prior to final acceptance. Contractor shall contact all affected utility companies prior to bid to determine their requirements to provide temporary and permanent service and include all costs associated with providing those services in their bid. Coordination of the work of the utility companies during construction is the sole responsibility of the contractor.
- b. Meters shall be relisted in the owner's name on the day following final acceptance of the Contractor's work, and the owner shall pay for services used after that date.

- c. The owner shall be reimbursed for all metered utility charges after the meter is relisted in the owner's name and prior to completion and acceptance of the work of **all** contractors. Reimbursement shall be made by the contractor whose work has not been completed and accepted. If the work of two or more contractors has not been completed and accepted, reimbursement to the owner shall be paid by the contractors involved on the basis of assessments by the designer/owner.
- d. Prior to the operation of permanent systems, the Contractor will provide temporary power, lighting, water, and heat to maintain space temperature above freezing, as required for construction operations.
- e. All contractors shall have the permanent building systems in sufficient readiness for furnishing temporary climatic control at the time a building is enclosed and secured. The HVAC systems shall maintain climatic control throughout the enclosed portion of the building sufficient to allow completion of the interior finishes of the building. A building shall be considered enclosed and secured when windows, doorways (exterior, mechanical, and electrical equipment rooms), and hardware are installed; and other openings have protection which will provide reasonable climatic control. The appropriate time to start the mechanical systems and climatic condition shall be jointly determined by the contractor(s), the designer/owner and owner. Use of the equipment in this manner shall be subject to the approval of the Designer/owner and owner and shall in no way affect the warranty requirements of the contractor(s).
- f. The electrical contractor shall have the building's permanent power wiring distribution system in sufficient readiness to provide power as required by the HVAC contractor for temporary climatic control.
- g. The electrical contractor shall have the building's permanent lighting system ready at the time the general contractor begins interior painting and shall provide adequate lighting in those areas where interior painting and finishing is being performed.
- h. Each prime contractor shall be responsible for his permanently fixed service facilities and systems in use during progress of the work. The following procedures shall be strictly adhered to:
 - 1. Prior to final acceptance of work by the Owner, each contractor shall remove and replace any parts of the permanent building systems damaged through use during construction.
 - 2. Temporary filters as recommended by the equipment manufacturer in order to keep the equipment and ductwork clean and free of dust and debris shall be installed in each of the heating and air conditioning units and at each return grille during construction. New filters shall be installed in each unit prior to the owner's acceptance of the work.
 - 3. Extra effort shall be maintained to keep the building and the site adjacent to the building clean and under no circumstances shall air systems be operated if finishing and site work operations are creating dust in excess of what would be considered normal if the building were occupied.

4. It shall be understood that any warranty on equipment presented to the owner shall extend from the day of final acceptance by the owner. The cost of warranting the equipment during operation in the finishing stages of construction shall be borne by the contractor whose system is utilized.

5. The electrical contractor shall have all lamps in proper working condition at the time of final project acceptance.

i. The Contractor shall provide, if required and where directed, a shed for toilet facilities and shall furnish and install in this shed all water closets required for a complete and adequate sanitary arrangement. These facilities will be available to other contractors on the job and shall be kept in a neat and sanitary condition at all times. Chemical toilets are acceptable.

j. The Project Expediter shall, if required by the Supplementary General Conditions and where directed, erect a temporary field office, complete with lights, telephone, heat and air conditioning. A portion of this office shall be partitioned off, of sufficient size, for the use of a resident inspector, should the designer/owner so direct.

k. On multi-story construction projects, the Contractor shall provide temporary elevators, lifts, or other special equipment for the general use of all contractors. The cost for such elevators, lifts or other special equipment and the operation thereof shall be included in the Project Expediter's bid.

l. The Contractor will erect one sign on the project if required. The sign shall be of sound construction, and shall be neatly lettered with black letters on white background. The sign shall bear the name of the project, and the names of prime contractors on the project, and the name of the designer/owner and consultants. Directional signs may be erected on the owner's property subject to approval of the owner with respect to size, style and location of such directional signs. Such signs may bear the name of the contractor and a directional symbol. No other signs will be permitted except by permission of the owner.

ARTICLE 41 - CLEANING UP

a. The contractors shall keep the building and surrounding area reasonably free from rubbish at all times, and shall remove debris from the site on a timely basis or when directed to do so by the Owner. The Contractor shall provide an onsite refuse container(s) for the use of all contractors. Each contractor shall remove their rubbish and debris from the job site on a daily basis. If a building is involved, the Contractor shall broom clean the building as required to minimize dust and dirt accumulation.

b. The Contractor shall provide and maintain suitable all-weather access to the building.

d. Before final inspection and acceptance of the building, each contractor shall clean his portion of the work, including glass, hardware, fixtures, masonry, tile and marble (using no acid), clean and wax all floors as specified, and completely prepare the building for use by the owner, with no cleaning required by the owner.

ARTICLE 42 - GUARANTEE

- a. The contractor shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the date of final acceptance of the work or beneficial occupancy and shall replace such defective materials or workmanship without cost to the owner.
- b. Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The contractor shall replace such defective equipment or materials, without cost to the owner, within the manufacturer's warranty period.
- c. Additionally, the owner may bring an action for latent defects caused by the negligence of the contractor which is hidden or not readily apparent to the owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.
- d. Guarantees for roof, equipment, materials, and supplies shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

ARTICLE 43 - CODES AND STANDARDS

Wherever reference is given to codes, standard specifications or other data published by regulating agencies including, but not limited to, national electrical codes, North Carolina state building codes, federal specifications, ASTM specifications, various institute specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

ARTICLE 44 - INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless County, its officers, officials, agents and employees from and against liability, claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from performance of the Work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, anyone directly or indirectly employed by it or anyone for whose acts they may be liable, regardless of whether or not such liability, claim, damage, loss or expense is caused in part by County, its officers, officials, agents and employees.

ARTICLE 45 - TAXES

- a. Federal excise taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3442(3)).

b. Federal transportation taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3475(b) as amended).

c. North Carolina sales tax and use tax, as required by law, do apply to materials entering into state work and such costs shall be included in the bid proposal and contract sum.

d. Local option sales and use taxes, as required by law, do apply to materials entering into state work as applicable and such costs shall be included in the bid proposal and contract sum.

e. Accounting Procedures for Refund of County Sales & Use Tax

Amount of county sales and use tax paid per contractor's statements: Contractors performing contracts for state agencies shall give the state agency for whose project the property was purchased a signed statement containing the information listed in G.S. 105-164.14(e).

The Department of Revenue has agreed that in lieu of obtaining copies of sales receipts from contractors, an agency may obtain a certified statement as of April 1, 1991 from the contractor setting forth the date, the type of property and the cost of the property purchased from each vendor, the county in which the vendor made the sale and the amount of local sales and use taxes paid thereon. If the property was purchased out-of-state, the county in which the property was delivered should be listed. The contractor should also be notified that the certified statement may be subject to audit.

In the event the contractors make several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices, the counties, and the county sales and use taxes paid thereon.

Name of taxing county: The position of a sale is the retailer's place of business located within a taxing county where the vendor becomes contractually obligated to make the sale. Therefore, it is important that the county tax be reported for the county of sale rather than the county of use.

When property is purchased from out-of-state vendors and the county tax is charged, the county should be identified where delivery is made when reporting the county tax. Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of county sales or use tax paid thereon by the contractor.

Similar certified statements by his subcontractors must be obtained by the general contractor and furnished to the claimant.

Contractors are not to include any tax paid on supplies, tools and equipment which they use to perform their contracts and should include only those building materials, supplies, fixtures and equipment which actually become a part of or annexed to the building or structure.

ARTICLE 46 - EQUAL OPPORTUNITY CLAUSE

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the secretary of Labor, are incorporated herein.

ARTICLE 47 - EMPLOYMENT OF INDIVIDUALS WITH DISABILITIES

The contractor(s) agree not to discriminate against any employee or applicant for employment because of physical or mental disabilities in regard to any position for which the employee or applicant is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with such disabilities without discrimination based upon their physical or mental disability in all employment practices.

ARTICLE 48 - ASBESTOS-CONTAINING MATERIALS (ACM)

There are no asbestos-containing materials in the work areas; however, Contractors are reminded of the requirements of instructions under Instructions to Bidders and General Conditions of the Contract, titled Examination of Conditions.

ARTICLE 49 - MINORITY BUSINESS PARTICIPATION

For construction contracts with an estimated value of \$300,000 or more, the Bidder has the responsibility to make a good faith effort to solicit minority bids. The County has established a verifiable goal of ten percent (10%). Each bidder will make good faith efforts to subcontract with individuals who are minorities to include women, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, and Asian-Indian Americans.

The bidder shall include with his bid his/her a completed Identification of HUB Certified/Minority Business Participation form and Affidavit A or Affidavit B.

With each pay request, the prime contractors will submit the Proof of Payment Certification, listing payments made to M/WBE subcontractors.

The document, "New Hanover County Minority and/or Women Business Enterprise (M/WBE) Program" including Affidavits are hereby incorporated into and made a part of this contract.

ARTICLE 50 – GIFTS

Pursuant to N.C. Gen. Stat. § 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, subcontractor, supplier, vendor, etc.), to make gifts or to give favors to any County employee. This prohibition covers those vendors and contractors who: (1) have a contract

with a governmental agency; or (2) have performed under such a contract within the past year; or (3) anticipate bidding on such a contract in the future. For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review G.S. Sec. 133-32.

During the construction of the Project, the Contractor is prohibited from making gifts to any of the Owner's employees, Owner's project representatives (architect, engineers, construction manager and their employees or any other person that may have any involvement, influence, responsibilities, oversight, management and/or duties that pertain to and/or relate to the contract administration, financial administration and/or disposition of claims arising from and/or relating to the Contract and/or Project.

ARTICLE 51 – AUDITING-ACCESS TO PERSONS AND RECORDS

The County shall have access to Contractor's officers, employees, agents and/or other persons in control of and/or responsible for the Contractor's records that relate to this Contracts for purposes of conducting audits. The Owner's internal auditors shall also have the right to access and copy the Contractor's records relating to the Contract and Project during the term of the Contract and within two years following the completion of the Project/close-out of the Contract to verify accounts, accuracy, information, calculations and/or data affecting and/or relating to Contractor's requests for payment, requests for change orders, change orders, claims for extra work, requests for time extensions and related claims for delay/extended general conditions costs, claims for lost productivity, claims for loss efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass-through claims of subcontractors and/or suppliers, and/or any other type of claim for payment or damages from Owner and/or its project representatives.

ARTICLE 52 – TERMINATION FOR CONVENIENCE

The County may for any reason whatsoever terminate performance under this Contract by the Contractor for convenience. The County shall give written notice of such termination to the Contractor specifying when termination becomes effective.

52.1 The Contractor shall incur no further obligations in connection with the Work and the Contractor shall stop Work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The County may direct the Contractor to assign the Contractor's right, title, and interest under terminated orders or subcontracts to the County or its designee.

52.2 The Contractor shall transfer title and deliver to the County such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights Contractor controls or possesses.

52.3 (a) The Contractor shall submit a termination claim to the County specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the County. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the County shall pay the Contractor, an amount derived in accordance with subparagraph [c] below.

(b) The County and the Contractor may agree to the compensation, if any, due to the Contractor hereunder.

(c) Absent agreement to the amount due to the Contractor, the County shall pay the Contractor the following amounts:

(i) Contract prices for labor, materials, equipment, and other services accepted under this Contract.

(ii) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the Work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for overhead and profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

(iii) Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant hereto. These costs shall not include amounts paid in accordance with other provisions hereof.

Section 4 – Bid Proposal Form

MRF IMPROVEMENTS

RFB # 15-0359

Bid Proposal Form

Deadline for Receipt of Bids: 2:00 P.M. EST, Wednesday, June 24, 2015

Name of Bidder: _____

Bidder's Address: _____

Bidders Phone Number: _____

Bidder's Email: _____

Bidder's License Number: _____

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed. The bidder further declares that he and his subcontractors have fully complied with NCGS 64, Article 2 in regards to E-Verification as required by Section 2.(c) of Session Law 2013-418, codified as N.C. Gen. Stat. § 143-129(j).

The undersigned, as bidder, proposes and agrees if this bid is accepted, to contract with the New Hanover County for the furnishing of all materials, equipment, and labor necessary to complete the construction of the work described in these documents in full and complete accordance with plans, specifications, and contract documents, and to the full and entire satisfaction of the New Hanover County for the sum of:

Bidder's Name: _____

1. Base Bid \$ _____

2. Contingency Allowance
(5% of Base Bid) \$ _____

Total Bid \$ _____

Should the undersigned be required to perform work over and above that required by the Contract Documents, or should he/she be ordered to omit work required by the Contract Documents, he/she will be paid an extra, or shall credit the Owner, as case may be on the basis of unit prices stated herein.

Unit Price: Unsuitable Soil Removal \$ _____ per cubic yard

Unit Price: Suitable Soil Replacement \$ _____ per cubic yard

Unit Price: Concrete \$ _____ per cubic yard

The Contractor is hereby notified that the Contract will contain a Liquidated Damages Clause.

A. Performance and Delivery Time:

The Contractor shall begin work on or before the "commence work" date specified in the **NOTICE TO PROCEED** issued by the Owner and as set forth in the plans, specifications, and proposal. All work shall be completed in all events on or before the date set forth in the **NOTICE TO PROCEED**.

B. Liquidated Damages:

Since actual damages for any delay in the completion of the work which the contractor is required to perform under this contract are or will be difficult to determine, the contractor and his /her sureties shall be liable for and shall pay to the Owner the sum of **\$500** as fixed and agreed as liquidated damages, and not as penalty for each calendar day of delay from the date stipulated for completion, or as modified in accordance with

Bidder's Name: _____

the terms of this agreement until such work is satisfactorily completed and accepted. Said liquidated damages may be deducted from any payments owed to the contractor by the Owner or collected from the sureties, whichever is deemed expedient by the Owner.

Acknowledgment of Addenda

Addendum No. _____ Dated _____

Attachments to Bid Proposal

- 1. Bid Bond
- 2. Sample Certificate of Insurance
- 3. E-Verify Form
- 4. Identification of Minority/Women Business Participation and Affidavit A or Affidavit B

Signature

Printed Name/Title

Date _____

STATE OF _____

COUNTY OF _____

AFFIDAVIT of COMPLIANCE
with N.C. E-Verify Statutes

I, _____ (hereinafter the "Affiant"), duly authorized by and on behalf of _____ (hereinafter the "Employer") after being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer and possess the full authority to speak for and on behalf of the Employer identified above.
2. Employer understands that "E-Verify" means the federal E-Verify program operated by the United States Dept. of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law.
3. _____ Employer employs 25 or more employees in the State of North Carolina, and is in compliance with the provisions of N.C. Gen. Stat. §64-26. Employer has verified the work authorization of its employees through E-Verify and shall retain the records of verification for a period of at least one year.

_____ Employer employs fewer than 25 Employees and is therefore not subject to the provisions of N.C. Gen. Stat. §64-26.
4. All subcontractors engaged by or to be engaged by Employer have or will have likewise complied with the provisions of N.C. Gen. Stat. §64-26.
5. Employer shall keep New Hanover County informed of any change in its status pursuant to Article 2 of Chapter 64 of the North Carolina General Statutes.

Further this affiant sayeth not.

This the _____ day of _____, 20____.

Affiant

STATE OF _____

COUNTY OF _____

Sworn to and subscribed before me, this the _____ day of _____, 20____.

Notary Public

[SEAL]

My commission expires: _____

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT _____
_____ as
principal, and _____, as surety, who
is duly licensed to act as surety in North Carolina, are held and firmly bound unto New
Hanover County as obligee, in the penal sum of _____
DOLLARS, lawful money of the United States of America, for the payment of which, well
and truly to be made, we bind ourselves, our heirs, executors, administrators, successors
and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this ____ day of ____ 20__

WHEREAS, the said principal is herewith submitting proposal for and the principal
desires to file this bid bond in lieu of making the cash deposit as required by G.S. 143-129.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that
if the principal shall be awarded the contract for which the bid is submitted and shall
execute the contract and give bond for the faithful performance thereof within ten days
after the award of same to the principal, then this obligation shall be null and void; but if the
principal fails to so execute such contract and give performance bond as required by G.S.
143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth
in the first paragraph hereof. Provided further, that the bid may be withdrawn as provided
by G.S. 143-129.1

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

FORM OF PERFORMANCE BOND

Date of Contract: _____

Date of Execution: _____

Name of Principal: _____
(Contractor)

Name of Surety: _____

Name of Contracting Body: NEW HANOVER COUNTY

Amount of Bond: _____

Project: PARTIAL DECONSTRUCTION OF FORMER WASTEC FACILITY-RFB-15-0129

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind, ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body, identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the contracting body, with or without notice to the surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

(Corporate Seal)

Contractor: (Trade or Corporate Name)

By: _____

Title: _____
(Owner, Partner, or Corp. Pres. or Vice Pres. only)

(Surety Company)

Witness:

By: _____

Title: _____
(Attorney in Fact)

Countersigned:

(Surety Corporate Seal)

(N.C. Licensed Resident Agent)

Name and Address-Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

FORM OF PAYMENT BOND

Date of Contract: _____

Date of Execution: _____

Name of Principal: _____
(Contractor)

Name of Surety: _____

Name of Contracting Body: NEW HANOVER COUNTY

Amount of Bond: _____

Project: PARTIAL DECONSTRUCTION OF FORMER WASTEC FACILITY-RFB-15-0129

KNOW ALL MEN BY THESE PRESENTS, that we, the principal and surety above named, are held and firmly bound unto the above named contracting body, hereinafter called the contracting body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the contracting body identified as shown above and hereto attached:

NOW, THEREFORE, if the principal shall promptly make payment to all persons supplying labor/material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

(Proprietorship or Partnership)

Attest: (Corporation)

By: _____

Title: _____
(Corp. Sec. or Asst. Sec., only)

(Corporate Seal)

Witness:

Countersigned:

(N.C. Licensed Resident Agent)

Name and Address-Surety Agency

Surety Company Name and N.C.
Regional or Branch Office Address

Contractor: (Trade or Corporate Name)

By: _____

Title _____
(Owner, Partner, or Corp. Pres. or Vice
Pres. only)

(Surety Company)

By: _____

Title: _____
(Attorney in Fact)

(Surety Corporate Seal)

New Hanover County
Minority and/or Women Business Enterprise
(M/WBE) Program



Construction Guidelines and Affidavits

These instructions shall be included with each bid solicitation.

New Hanover County
Minority and/or Women Business Enterprise Program

Construction Guidelines for M/WBE Participants

Policy Statement

It is the policy of New Hanover County that minority businesses, as defined by North Carolina General Statute 143-128 have maximum opportunity to participate in the performance of contracts and subcontracts funded in whole or in part with public funds. This includes all aspects of the County's contracting and procurement programs, including but not limited to construction projects, supplies and materials, as well as professional and personal service contracts.

Goals and Good Faith Efforts

Bidders responding to this solicitation shall comply with the M/WBE program by making Good Faith Efforts to achieve the following aspiration goals for participation.

PROJECT	MBE	WBE
MRF Improvements (Goal is 10%)	6%	4%

Bidders shall submit M/WBE information with their bids on the forms provided. This information will be subject to verification by the County prior to contract award. Firms qualifying as "M/WBE" for the County's goals must be certified by the NC Department of Historically Underutilized Businesses (NCHUB) or by the NC Department of Transportation (NCDOT). Firms qualifying as "WBE" must be designated as "women-owned business and firms qualifying as "MBE" must be certified in one of the other categories (i.e.: Black, Hispanic, Asian American, American Indian, Disabled, or Socially and Economically Disadvantaged). Those firms who are certified as both a "WBE" and "MBE" may only satisfy the "MBE" requirement. A complete database of NC HUB certified firms may be found at <http://www.doa.nc.gov/hub/default.aspx> and NCDOT firms may be found at <https://partner.ncdot.gov/VendorDirectory/default.html> <https://partner.ncdot.gov/VendorDirectory/default.html>.

Please note: A contractor may utilize any firm desired; however, in order for the County to count the participation towards the goal, all M/WBE vendors who wish to do business as a minority or female must be certified by NC HUB or NCDOT.

The Bidder shall make good faith efforts to encourage participation of M/WBEs prior to submission of bids in order to be considered as a responsive bidder. Bidders are cautioned that even though their submittal indicates they will meet the M/WBE goal, they should document their good faith efforts and be prepared to submit this information, if requested.

The M/WBE's listed by the Contractor on the Identification of Minority/Women Business Participation which are determined by the County to be certified shall perform the work and supply the materials for which they are listed unless the Contractors receive prior authorization from the County to perform the work with other forces or to obtain materials from other sources. If a contractor is proposing to perform all elements of the work with his own forces, he must be prepared to document evidence satisfactory to the owner of similar government contracts where he has self-performed.

The Contractor shall enter into and supply copies of fully executed subcontracts with each M/WBE or supply signed Letter(s) of Intent to the Project Manager after award of contract and prior to Notice to Proceed. Any amendments to subcontracts shall be submitted to the Project Manager prior to execution.

Instructions

The Bidder shall provide with the bid the following documentation:

- Identification of Minority/Women Business Participation
(if participation is zero, please mark zero—Blank forms will be considered nonresponsive)
- Affidavit A (if subcontracting)

OR

- Identification of Minority/Women Business Participation
(if participation is zero, please mark zero—Blank forms will be considered nonresponsive)
- Affidavit B (if self-performing; must attest that bidder does not customarily subcontract work on this type of project—includes supplies and materials)

Within 72 hours or 3 business days after notification of being the apparent low bidder who is subcontracting anything must provide the following information:

- Affidavit C (if aspirational goals are met or are exceeded)

OR

- Affidavit D (if aspirational goals are not met)

After award of contract and prior to issuance of notice to proceed:

- Letter(s) of Intent or Executed Contracts

****With each pay request, the prime contractors will submit the Proof of Payment Certification, listing payments made to M/WBE subcontractors.**

*****If a change is needed in M/WBE Participation, submit a Request to Change M/WBE Participation Form. Good Faith Efforts to substitute with another M/WBE contractor must be demonstrated.**

Minimum Compliance Requirements:

All written statements, affidavits, or intentions made by the Bidder shall become a part of the agreement between the Contractor and the County for performance of contracts. Failure to comply with any of these statements, affidavits or intentions or with the minority business guidelines shall constitute a breach of the contract. A finding by the County that any information submitted (either prior to award of the contract or during the performance of the contract) is inaccurate, false, or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the County whether to terminate the contract for breach or not. In determining whether a contractor has made Good Faith Efforts, the COUNTY will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of these efforts.

NEW HANOVER COUNTY AFFIDAVIT A – Listing of Good Faith Efforts

County of _____ (Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 - (10 pts) Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
2 --(10 pts) Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
3 - (15 pts) Broken down or combined elements of work into economically feasible units to facilitate minority participation.
4 - (10 pts) Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
5 - (10 pts) Attended prebid meetings scheduled by the public owner.
6 - (20 pts) Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
7 - (15 pts) Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
8 - (25 pts) Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
9 - (20 pts) Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
10 - (20 pts) Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

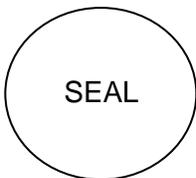
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority/Women Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority/women business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

NEW HANOVER COUNTY --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____
_____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid
**NEW HANOVER COUNTY - AFFIDAVIT C - Portion of the Work to be
 Performed by M/WBE Firms**

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by M/WBE businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within 72 hours after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the
 (Name of Bidder)

 (Project Name)

Project ID# _____ Amount of Bid: \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with MBE firms and a minimum of _____% of the total dollar amount of the contract with WBE firms. Minority/women businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets, if needed

Name and Phone Number	*M/WBE Category	Work description	Dollar Value

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (S) Disabled (D)

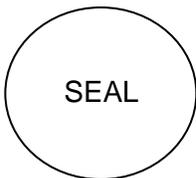
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with M/WBE Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____
 Subscribed and sworn to before me this _____ day of _____ 20____

Notary Public _____

My commission expires _____

NEW HANOVER COUNTY AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by minority/women business is not achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify
that on the _____

(Name of Bidder)

(Project Name)

Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with MBE firms and a minimum of _____% of the total dollar amount of the contract with WBE firms. Minority/women businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

(Attach additional sheets if needed)

Name and Phone Number	*M/WBE Category	Work description	Dollar Value

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (S) Disabled (D)

Examples of documentation required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.

G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.

H. Letter detailing reasons for rejection of minority business due to lack of qualification.

I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with M/WBE Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____
_____ 20_____

Notary Public _____

My commission expires _____

LETTER OF INTENT

M/WBE Subcontractor Performance

Please submit this form or executed subcontracts with M/WBE firms after award of contract and prior to issuance of notice to proceed.

PROJECT: _____
(Project Name)

TO: _____
(Name of Prime Bidder/Architect)

The undersigned intends to perform work in connection with the above project as a:

____ Minority Business Enterprise ____ Women Business Enterprise

The M/WBE status of the undersigned is certified the NC Office of Historically Underutilized Businesses (required). ____ Yes ____ No

The undersigned is prepared to perform the following described work or provide materials or services in connection with the above project at the following dollar amount:

Work/Materials/Service Provided	Dollar Amount of Contract	Projected Start Date	Projected End Date

(Date)

(Address)

(Name & Phone No. of M/WBE Firm)

(Name & Title of Authorized Representative of M/WBE)

(Signature of Authorized Representative of M/WBE)

REQUEST TO CHANGE M/WBE PARTICIPATION

(Submit changes only if notified as apparent lowest bidder, continuing through project completion)

Project: _____

Bidder or Prime Contractor: _____

Name & Title of Authorized Representative: _____

Address: _____ Phone #: _____

_____ Email Address: _____

Total Contract Amount (including approved change orders or amendments): \$_____

Name of subcontractor: _____

Good or service provided: _____

Proposed Action:

Replace subcontractor

Perform work with own forces

For the above actions, you must provide one of the following reasons (Please check applicable reason):

The listed MBE/WBE, after having had a reasonable opportunity to do so, fails or refuses to execute a written contract.

The listed MBE/WBE is bankrupt or insolvent.

The listed MBE/WBE fails or refuses to perform his/her subcontract or furnish the listed materials.

The work performed by the listed subcontractor is unsatisfactory according to industry standards and is not in accordance with the plans and specifications; or the subcontractor is substantially delaying or disrupting the progress of the work.

If replacing subcontractor:

Name of replacement subcontractor: _____

The M/WBE status of the contractor is certified by the NC Office of Historically Underutilized Businesses (required). Yes No

Dollar amount of original contract \$ _____

Dollar amount of amended contract \$ _____

Other Proposed Action:

Increase total dollar amount of work

Add additional subcontractor

Decrease total dollar amount of work

Other

Please describe reason for requested action: _____

If adding additional subcontractor:*

The M/WBE status of the contractor is certified by the NC Office of Historically Underutilized Businesses (required). Yes No

**Please attach Letter of Intent or executed contract document*

Dollar amount of original contract \$ _____

Dollar amount of amended contract \$ _____

Interoffice Use Only:

Approval Y N

Date _____

Signature _____

Pay Application No. _____ Purchase Order No. _____

Proof of Payment Certification M/WBE Contractors, Suppliers, Service Providers

Project Name: _____

Prime Contractor: _____

Current Contract Amount (including change orders): \$_____

Requested Payment Amount for this Period: \$_____

Is this the final payment? ___Yes ___No

Firm Name	M/WBE Category*	Total Amount Paid from this Pay Request	Total Contract Amount (including changes)	Total Amount Remaining

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (S) Disabled (D)

Date: _____

Certified By: _____

Name

Title

Signature

NORTH CAROLINA
NEW HANOVER COUNTY

AGREEMENT

THIS CONTRACT made and entered into this ____ day of _____, 2015 by and between NEW HANOVER COUNTY a political subdivision of the State of North Carolina, hereinafter referred to as "County"; and _____, hereinafter referred to as "Contractor."

WITNESSETH:

That the Contractor, for the consideration hereinafter fully set out, hereby agrees with the County as follows:

ARTICLE I

GENERAL PROVISIONS

1.1 Performance. Contractor shall furnish all labor, materials and equipment and shall perform all work in the manner and form as provided by the specifications and documents, which are made a part hereof as if fully contained herein: **Agreement, Modifications, Addenda, Supplementary Conditions, Special Conditions, Instructions to Bidders, General Conditions, Specifications, Drawings and Architect's Plan for the existing Wastec building modification project, to include filling in the pit, replacing the concrete tipping floor, adding fire sprinklers, and repairing existing damage to walls and roof.**

1.2 No Privity with Others. Nothing contained in this Contract shall create, or be interpreted to create, privity, or any other contractual agreement between the County and any person or entity other than the Contractor.

1.3 Successors and Assigns. The County and Contractor bind themselves, their successors, assigns, and legal representatives to the other party hereto and to successors, assigns and legal representatives of such other party with respect to covenants, agreements, and obligations contained in this Contract. The Contractor shall not assign this Contract without written consent of the County and any surety to this contract.

1.4 The Contractor shall have a continuing duty to read, carefully examine, and compare each of the Contract Documents, the Shop Drawings and the Project Data and shall give written notice to the County of any inconsistency, ambiguity, error or omission which the Contractor may discover with respect to these documents before proceeding with the affected Work. The issuance or the express or implied approval by the County of the Contract Documents, Shop Drawings, or Project Data shall not relieve the Contractor of the continuing duties imposed hereby, nor shall any such approval be evidence of the Contractor's compliance with this contract. THE COUNTY MAKES NO REPRESENTATION OR WARRANTY OF ANY NATURE WHATSOEVER TO THE CONTRACTOR CONCERNING THE ACCURACY OR SUFFICIENCY OF SUCH DOCUMENTS. By the execution of the Contract, Contractor acknowledges and represents that it has received, reviewed and carefully examined such documents, has found them to be complete, accurate, adequate, consistent, coordinated and sufficient for construction, and that the Contractor has not, does not, and will not rely upon any representation or warranties by the County concerning such documents as no such representation or warranties have been or are hereby made.

1.5 Neither the organization of any of the Contract Documents into divisions, sections, paragraphs, articles, (or other categories), nor the organization or arrangement of the Design, shall control the Contractor in dividing the Work or in establishing the extent or scope of the Work to be performed.

1.6 Ownership of Contract Documents. The Contract Documents shall remain the property of the County. The Contractor shall have the right to keep one record set of the Contract Documents upon completion of the Project; provided, however, that in no event shall Contractor use, or permit to be used, any or all of such Contract Documents on other projects without the County's prior written authorization.

1.7 The Work. The Contractor shall perform all of the work required, implied, or reasonably inferable from, this Contract.

1.8 Work Defined. The term "Work" shall mean whatever is done by or required of the Contractor to perform and complete its duties under this Contract, including the following: all required licenses and permits; furnishing of any required surety bonds and insurance; the provision or furnishing of labor, supervision, services,

materials, supplies, equipment, fixtures, appliances, facilities, tools, transportation, storage, power, fuel, heat, light, cooling and all other utilities as required by the County. The Work to be performed by the Contractor is generally described as follows:

The Wastec building modification project, to include filling in the pit, replacing the concrete tipping floor, adding fire sprinklers, and repairing existing damage to walls and roof

1.9 Independent Contractor. It is mutually understood and agreed that Contractor is an independent contractor and not an agent of County, and as such, Contractor, its agents and employees shall not be entitled to any County employment benefits, such as, but not limited to, vacation, sick leave, insurance, worker's compensation, or pension or retirement benefits.

ARTICLE II

TIME AND LIQUIDATED DAMAGES

2.1 Contract Time. The Contractor shall commence the Work upon receipt of a Notice to Proceed and shall achieve Substantial Completion of the Work no later than Sixty (60) calendar days thereafter. The number of calendar days from the date on which the Work is permitted to proceed, through the date set forth for Substantial Completion, shall constitute the "Contract Time."

2.2 Substantial Completion Liquidated Damages. The Contractor shall pay the County the sum of Five Hundred (\$500) Dollars per day for each and every calendar day of unexcused delay in achieving Substantial Completion beyond the date set forth herein for Substantial Completion of the Work. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the County, estimated at or before the date of executing this Contract. When the County reasonably believes that Substantial Completion will be inexcusably delayed, the County shall be entitled to withhold from any amounts due the Contractor an amount then believed by the County to be adequate to recover liquidated damages attributable to such delays. If or when the Contractor overcomes the delay in achieving Substantial Completion, or any part thereof, for which the County has withheld payment, the County shall promptly release to the Contractor those funds withheld as liquidated damages.

2.3 Substantial Completion. "Substantial Completion" shall mean that stage in the progression of the Work when the Work is sufficiently complete for the County to accept the Work.

2.4 Term of Contract. Contractor shall commence work upon Notice to Proceed and contract shall be finally completed, including any punch list, within Two Hundred Ten (210) calendar days from said Notice.

ARTICLE III

CONTRACT CHANGES

3.1 Changes Permitted. Changes in the Work within the general scope of this Contract, consisting of additions, deletions, revisions, or any combination thereof, may be ordered without invalidating this Contract, by Change Order or by Field Order.

3.2 Changes in the Work shall be performed under applicable provisions of this Contract and the Contractor shall proceed promptly with such changes.

3.3 Change Order Defined. Change Order shall mean a written order to the Contractor executed by the County, issued after execution of this Contract, authorizing and directing a change in the Work or an adjustment in the Contract Price or the Contract Time, or any combination thereof. The Contract Price and the Contract Time may be changed only by Change Order.

3.4 Changes in the Contract Price. Any change in the Contract Price resulting from a Change Order shall be determined as follows: (a) by mutual agreement between the County and the Contractor as evidenced by (1) the change in the Contract Price being set forth in the Change Order, (2) such change in the Contract Price, together with any conditions or requirements related thereto, being initialed by both parties and (3) the Contractor's execution of the Change Order.

3.5 Unit Price. If unit prices are provided in the Contract, and if the quantities contemplated are so changed in a proposed Change Order that application of such unit prices to the quantities of Work proposed will cause substantial inequity to the County or to the Contractor, the applicable unit prices shall be equitably adjusted.

3.6 Effect of Executed Change Order. The execution of a Change Order by the Contractor shall constitute conclusive evidence of the Contractor's

agreement to the ordered changes in the Work, the Contract Price, and the Contract Time. The Contractor, by executing the Change Order, waives and forever releases any claim against the County for additional time or compensation for matters relating to or arising out of or resulting from the Work included within or affected by the executed Change Order.

3.7 Minor Changes. The County or Agent may order minor changes in the Work not involving a change in the Contract Price or an extension of the Contract Time and not inconsistent with the intent of this Contract. Such minor changes shall be made by written Field Order. The Contractor shall promptly execute such written Field Orders.

3.8 Notification of Surety. The Contractor shall provide surety bonds whereby the Surety waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

ARTICLE IV

CONTRACT PRICE AND COMPLETION

4.1 The Contract Price. The County shall pay, and the Contractor shall accept, as full and complete payment for all of the Work required herein, _____ (\$ _____) **Dollars.** The sum set forth in this Paragraph shall constitute the maximum Contract Price that shall not be modified except by Change Order.

4.2. Schedule of Values. Within ten (10) calendar days, the Contractor shall submit to the County a Schedule of Values allocating the Contract Price to the various portions of the Work. The Contractor's Schedule of Values shall be prepared in a format and supported with data to allow the County to substantiate its accuracy. The Contractor shall not imbalance its Schedule of Values nor artificially inflate any element thereof. The violation of this provision by the Contractor shall constitute a material breach of this Contract. The Schedule of Values shall be used only as a basis for the Contractor's Applications for Payment and must be approved in writing by the County.

4.3 Payment Procedure. The County shall pay the Contract Price to the Contractor as provided below.

4.3. Progress Payments. Based upon the Contractor's Applications for Payment approved by the County, the County shall make appropriate progress payments to the Contractor toward the Contract Price.

4.4. Retainage. To ensure proper performance of the Contract, the County will retain five percent (5%) of the amount of each approved Pay Application until the Project is 50% complete provided that the Contractor continues to perform satisfactorily and any non-conforming work identified in writing prior to that date has been corrected by the Contractor and accepted by the Project Manager. If the County determines the Contractor's performance is unsatisfactory, the County may reinstate retainage in the amount of five percent (5%) for each subsequent periodic Pay Application until the Contractor's performance becomes satisfactory. The Project shall be deemed fifty percent (50%) complete when the Contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the value of the contract. The value of materials stored on-site shall not exceed twenty percent (20%) of the Contractor's gross project invoices for the purpose of determining whether the Project is fifty percent (50%) complete. Upon fifty percent (50%) completion of the Project, the County may also withhold additional retainage from any subsequent periodic payments, not to exceed five percent (5%), in order to allow the County to retain two and one half percent (2 ½%) total retainage through the completion of the Project. Within sixty (60) days after the submission of a final pay request, the County, with written consent of the Surety shall release to the Contractor all retainage on payments held by the County if (1) the County receives a certificate of substantial completion from the Contractor, Engineer, or Designer in charge of the Project; or (2) The County may release all retainage, less that sum County reasonably estimates necessary to complete all punch lists, when the County receives beneficial occupancy or the use of the Project that is substantially complete. Beneficial occupancy or the use of the Project that is substantially complete means that the building(s) have functional electric, plumbing, HVAC, are fully compliant with applicable building codes, are clean, tidy, and able to accommodate furnishings, and open for business. In all situations, the County may retain sufficient funds to secure completion of the Project or corrections on any work. If the County retains funds, the amount retained shall not exceed two and one

half times the estimated value of the work to be completed or corrected. Any reduction in the amount of the retainage on payments shall be with the consent of the Contractor's surety. Retainer provisions contained within the Contractor's subcontracts may not exceed the terms and conditions for retainage provided herein. Contractor is further required to satisfy the retainage provisions of N.C.G.S. 143-134.1(b)(2) with regard to subcontracts for early finishing trades (structural steel, piling, caisson and demolition) and to coordinate the release of retainage for such trades from the retainage held from the Contractor by the County. Nothing shall prevent the County from withholding payment to the Contractor in addition to the amounts identified herein for unsatisfactory job progress, defective construction, or remedied, disputed work or third-party claims filed against the County or reasonable evidence that a third-party claim will be filed. Payment for stored materials and equipment shall be conditioned upon the Contractor's satisfactory proof to the County that the County has title to such materials and equipment and shall include proof of required insurance. Such Application for Payment shall be signed by the Contractor and shall constitute the Contractor's representation that the Work has progressed to the level for which payment is requested in accordance with the Schedule of Values, that the Work has been properly installed or performed in full accordance with this Contract, and that the Contractor knows of no reason why payment should not be made as requested. Thereafter, the County will review the Application for Payment and may also review the Work at the Project site or elsewhere to determine whether the quantity and quality of the Work is as represented in the Application for Payment and is as required by this Contract. The County shall determine the amount properly owed to the Contractor. The County shall make partial payments of the Contract Price to the Contractor within thirty (30) days following the County's receipt of each Application for Payment. The amount of each partial payment shall be the amount certified for payment by the County less such amounts, if any, otherwise owed by the Contractor to the County or which the County shall have the right to withhold as authorized by this Contract.

4.5 Warranty of Title. The Contractor warrants that title to all Work covered by an Application for Payment will pass to the County no later than at the time of the last payment to Contractor. The Contractor further warrants that upon submittal of

an Application for Payment, all Work for which payments have been received from the County shall be free and clear of liens, claims, security interests, or other encumbrances in favor of the Contractor or any other person or entity.

4.6 Subcontractor Payments. The Contractor shall promptly pay each Subcontractor out of the amount paid to the Contractor for such Subcontractor's Work, the amount to which such Subcontractor is entitled. In the event the County becomes informed that the Contractor has not paid a subcontractor as herein provided, the County shall have the right, but not the duty, to issue future payments to the Contractor and or such subcontractor as joint payees. Such joint payment procedure shall create no rights in favor of any person or entity beyond the right of the named payees to payment of the check and shall not be deemed to create any rights in favor of Contractor or Subcontractors or to commit the County to repeat such payments in the future.

4.7 Acceptance Not Implied. No progress payment, nor any use or occupancy of the Project by the County, shall be interpreted to constitute a final acceptance of any Work that is not in full compliance with this Contract.

4.8 Withheld Payment. The County may decline to make payment, may withhold funds, and, if necessary, may demand the return of some or all of the amounts previously paid to the Contractor, to protect the County from loss because of:

- a) defective Work not remedied by the Contractor nor, in the opinion of the County, likely to be remedied by the Contractor;
- b) claims of third parties against the County or the County's property;
- c) failure by the Contractor to pay Subcontractors;
- d) evidence that the balance of the Work cannot be completed in accordance with the Contract for the unpaid balance of the Contract price;
- e) evidence that the Work will not be completed in the time required for substantial or Final Completion;
- f) persistent failure to carry out the Work in accordance with the Contract;
- g) damage to the County or a third party to whom the County is, or may be, liable.

In the event that the County makes written demand upon the Contractor for amounts previously paid by the County as contemplated in this subparagraph, the Contractor shall comply within thirty (30) business days of receipt of written demand.

4.9 Completion and Final Payment. When the Contractor certifies that the Work is finally complete, the Contractor shall submit to the Senior Project Manager or Agent a list of items completed or corrected. When the Senior Project Manager or Agent based on an inspection determines that the Work is in fact finally complete, a Certificate of Final Completion will be prepared establishing the date of Final Completion. If the Work is complete in full accordance with this Contract and this Contract has been fully performed, the County may proceed with payment. Guarantees required by the Contract shall commence on the date of Final Completion of the Work. The Certificate of Final Completion shall be submitted to the County and the Contractor for their written acceptance of the responsibilities assigned to them in such certificate.

4.10 Final Completion Liquidated Damages. If the Contractor fails to achieve Final Completion within the time fixed therefore by the County in its Certificate of Substantial Completion, the Contractor shall pay the County the sum of Five Hundred (\$500) Dollars per day for each and every calendar day of unexcused delay in achieving Final Completion beyond the date set forth herein for Final Completion of the Work. Any sums due and payable by the Contractor shall be payable, not as a penalty, but as liquidated damages representing an estimate of delay damages likely to be sustained by the County, estimated at or before the time of executing this Contract. When the County reasonably believes that Final Completion will be unexcusably delayed, the County shall be entitled to withhold from any amounts due the Contractor an amount found by the County to be adequate to recover liquidated damages attributed to such delays. If and when the Contractor overcomes the delay in achieving Final Completion, or any part thereof, for which the County has withheld payment, the County shall promptly release to the Contractor those funds withheld as liquidated damages.

4.11 Final Payment Submittals. The Contractor shall not be entitled to final payment unless and until it submits to the County its affidavit that all payrolls, invoices for materials and equipment, and other liabilities connected with the Work have been fully paid, that releases and waivers of lien from all subcontractors of the have

been paid, and that the consent of Surety has been obtained. If any third party fails or refuses to provide a release of claim or waiver of lien as required by the County, the Contractor shall furnish a bond or monies satisfactory to the County to discharge any such lien or indemnify the County from liability.

4.12 Final Payment Due. The County shall make final payment of all sums due the Contractor within ten (10) business days of the County's execution of a final Certificate for Payment.

4.13 Contractor Waiver. Acceptance of final payment shall constitute a waiver of all claims against the County by the Contractor except for documented Contractor's request for final payment.

ARTICLE V

COUNTY RIGHTS AND DUTIES

5.1 Information Provided by County. The County shall deliver to the Contractor, at the time of executing this Contract, any and all written and tangible materials in its possession concerning conditions below ground at the Project site. The County does not represent, warrant, or guarantee the accuracy of the information either in whole, or in part, implicitly, or explicitly and shall have no liability for such material. The County shall also furnish surveys, legal limitations and utility locations, if known, and a legal description of the Project site.

5.2 Excluding permits and fees normally the responsibility of the Contractor, the County shall obtain all approvals, easements, and the like required for construction and shall pay for necessary assessments and charges required for construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

5.3 The County shall furnish the Contractor, free of charge, four (4) copies of the Contract Documents for execution of the Work. The Contractor will be charged, and shall pay the County, \$50.00 per additional set of Contract Documents.

5.4 Right To Stop Work. If the Contractor persistently fails or refuses to perform the Work in accordance with this Contract, the County may order the Contractor to stop the Work immediately, or any described portion thereof, until the County orders that Work be resumed.

5.5 Owner's Right to Perform Work. If the Contractor's Work is stopped by the County, and the Contractor fails within seven (7) days of such stoppage to provide adequate assurance to the County that the cause of such stoppage will be eliminated or corrected, then the County may, without prejudice to any other rights or remedies the County may have against the Contractor, proceed to carry out the subject Work. The County shall issue an appropriate Change Order shall be issued deducting from the Contract Price the cost of correcting the deficiencies. If the unpaid portion of the Contract Price is insufficient to cover the amount due the County, the Contractor shall pay the difference to the County within thirty (30) business days.

5.6 Correction of Defects. County shall give Contractor reasonably prompt notice of all observable defects. If Contractor fails to perform corrective work within a time determined by the County, the County may perform such work and charge Contractor for the costs incurred.

5.7 No Waiver of Legal Rights. Upon completion of the Work, County will promptly make final inspection and notify Contractor of final acceptance. However, final acceptance shall not preclude or estop County from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall County be precluded or estopped from recovering overpayments from Contractor, or its surety, or both. A waiver on the part of the County of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

5.8 County May Accept Defective or Nonconforming Work. If the County chooses to accept defective or nonconforming Work, the County may do so. In such event, the Contract Price shall be reduced by the greater of (a) the reasonable cost of removing and correcting the defective or nonconforming Work, and (b) the difference between the fair market value of the Project as constructed and the fair market value of the Project had it not been constructed in such a manner as to include defective or nonconforming Work. If the remaining portion of the unpaid Contract Price, if any, is insufficient to compensate the County for its acceptance of defective or nonconforming Work, the Contractor shall, upon written demand from the County, pay the County such remaining compensation for accepting defective or nonconforming Work within thirty (30) business days.

ARTICLE VI
CONTRACTOR DUTIES

6.1 Consistent with the Contractor's continuing duty set forth herein, the Contractor shall perform no part of the Work at any time without adequate Contract Documents or, as appropriate, approved Shop Drawings, Product Data, or Samples for such portion of the Work. If the Contractor performs any of the Work knowing it involves a recognized error, inconsistency, or omission in the Contract Documents without such notice to the County, the Contractor shall bear responsibility for such performance and shall bear the cost of correction.

6.2 The Contractor shall perform the Work strictly in accordance with this Contract. The Contractor shall be responsible for verifying all permits have been obtained prior to beginning work.

6.3 The Contractor shall supervise and direct the Work using the Contractor's best skill, effort, and attention. The Contractor shall be responsible to the County for any and all acts or omissions of the Contractor, its employees and others engaged in the Work on behalf of the Contractor.

6.4 Warranty. The Contractor warrants to the County that all labor furnished to progress the Work under this Contract will be competent to perform the tasks undertaken, in a workmanlike manner, so as to meet the standards of workmanlike quality prevailing in North Carolina at the time of construction, that materials and equipment furnished will be of good quality and new unless otherwise permitted by this Contract, and that the Work will be of good quality, free from faults and defects and in strict conformance with this Contract. All Work not conforming to these requirements may be considered defective. Contractor shall be responsible for all costs, damages and expenses including, but not limited to, penalties, fines and fees, that the County may incur as a result of Contractor's failure to perform under this Contract.

6.5 Supervision. The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Absent written instruction from the Contractor to the contrary, the superintendent shall be deemed the Contractor's authorized representative at the site and shall be authorized to receive and accept any and all communications from the County.

6.6 Time of Performance Schedule. The Contractor, within ten (10) days of award of Contract, shall submit to the County for its information, the Contractor's schedule for completing the Work. The Contractor's schedule shall be revised no less frequently than monthly, and updated with each pay application, (unless the parties otherwise agree in writing) and shall be revised to reflect unexpected conditions or occurrences related to the entire Project. Each such revision shall be furnished to the County to consider for approval. Failure by the Contractor to strictly comply with the provisions of this Paragraph shall constitute a material breach of this Contract.

6.7 The Contractor shall continuously maintain at the site, for the benefit of the County, one copy of this Contract marked to record on a current basis changes, selections, and modifications made during construction. Additionally, the Contractor shall maintain at the site the approved Shop Drawings, Product Data, Samples, and other similar required submittals. Upon Final Completion of the Work, all record documents shall be delivered to the County.

6.8 The Contractor shall not perform any portion of the Work requiring submittal and review of Shop Drawings, Product Data, or Samples unless and until such submittal shall have been approved by the County. Approval by the County, however, shall not be evidence that Work installed pursuant thereto conforms to the requirements of this Contract.

6.9 Cleaning the Site and the Project. The Contractor shall keep the site reasonably clean during performance of the Work. Upon Final Completion of the Work, the Contractor shall clean the site and the Project and remove all waste, together with all of the Contractor's property.

6.10 Access to Work. The County shall have access to the Work at all times from commencement of the Work through Final Completion. The Contractor shall provide access when requested.

6.11 Permits and Licenses. Contractor shall procure all applicable permits and licenses, including permits and licenses required pursuant to applicable patent and copyright laws, shall pay all charges and fees, and shall give all notices necessary and incidental to the due and lawful prosecution to the work. There will be no charge for County building permits.

6.12. Indemnity. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless County, its officers, officials, agents and employees from and against liability, claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from performance of the Work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the Contractor, anyone directly or indirectly employed by it or anyone for whose acts they may be liable, regardless of whether or not such liability, claim, damage, loss or expense is caused in part by County, its officers, officials, agents and employees.

ARTICLE VII
INSURANCE

7.1 Commercial General Liability. Contractor shall maintain Commercial General Liability (GCL) with a total limit of not less than \$10,000,000 each occurrence for bodily injury and property damage. If such CGL insurance contains a general aggregate limit, it shall apply separately to the Project or the general aggregate shall be twice the required limit. CGL insurance shall be written on Insurance Services Office (ISO) "occurrence" form CG 00 01 covering CGL or its equivalent and shall cover the liability arising from premises, operations, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract, including the tort liability of another assumed in a business contract.

County, its officers, officials, agents, and employees are to be covered as additional insureds under the CGL by endorsement CG 20 10 and CG 20 37 or an endorsement providing equivalent coverage with respect to liability arising out of activities performed by or on behalf of Contractor; products and completed operations of Contractor; premises owned, leased or used by Contractor; and under the commercial umbrella, if required by County. The coverage shall contain no special limitations on the scope of protection afforded to County, its officers, officials, agents, and employees. The status of County as an additional insured under a CGL obtained in compliance with this Contract shall not restrict coverage under such CGL with respect to the escape or

release of pollutants at or from the Project site. There shall be no endorsement or modification of the CGL or Umbrella Liability limiting the scope of coverage for liability arising from pollution, explosion, collapse, underground property damage, employment-related practices, or damage to the named insured's work. Contractor shall maintain CGL and, if necessary Commercial Umbrella Liability insurance, both applicable to liability arising out of Contractor's completed operations, with a limit of not less than \$10,000,000 each occurrence for at least three (3) years following substantial completion of the Work. Contractor's CGL insurance shall be primary as to the County, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by County, its officers, officials, agents, and employees shall be excess of and not contribute toward Contractor's insurance.

7.2 The Workers' Compensation and Employer's Liability. Contractor shall maintain Workers' Compensation as required by the State of North Carolina and Employer's Liability Insurance. The Employer's Liability, and if necessary, Commercial Umbrella Liability insurance shall not be less than \$10,000,000 each accident for bodily injury by accident, \$10,000,000 each employee for bodily injury by disease, and \$10,000,000 policy limit. The Insurer shall agree to waive all rights of subrogation against the County, its officers, officials, agents, and employees for losses arising from the Work performed by Contractor for County.

7.3 Business Auto Liability. Contractor shall maintain Business Auto Liability and, if necessary, Commercial Umbrella Liability insurance with a limit of not less than \$10,000,000 combined single limit. Such insurance shall cover liability arising out of any auto, including owned, hired, and non-owned autos. Business Auto coverage shall be written on ISO form CA 00 01, or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage equivalent to that provided in ISO form CA 00 01. Contractor's Business Auto Liability insurance shall be primary as to County, its officers, officials, agents, and employees. Any other insurance or self-insurance maintained by County, its officers, officials, agents, and employees shall be excess of and not contribute with Contractor's insurance.

7.4 Safety Policies. Before the commencement of any Work, Contractor and all subcontractors shall have approved by the New Hanover County Risk Manager written safety policies and procedures. All safety policies and procedures shall be submitted with the bid proposals for review.

7.5 Deductibles and Self-Insured Retentions. Contractor shall be solely responsible for the payment of all deductibles to which such policies are subject, whether or not County is an insured under the policy.

7.6 Miscellaneous Insurance Provisions: The policies are to contain, or be endorsed to contain, the following provisions: Any failure to comply with reporting provisions of the policies listed in this Contract shall not affect coverage provided to County, its officers, officials, agents, and employees. Each insurance policy required by this contract shall be endorsed to state that coverage shall not be canceled by either party except after thirty (30) days prior written notice has been given to New Hanover Risk Management, 230 Government Center Drive, Wilmington, North Carolina, 28403.

If Contractor's liability policies do not contain the standard ISO separation of insureds provision, or a substantially similar clause, they shall be endorsed to provide cross-liability coverage.

7.7 Acceptability of Insurers. Insurance is to be placed with insurers licensed to do business in the State of North Carolina with an A.M. Best's rating of no less than A VII unless specific approval has been granted by County.

7.8 Evidence of Insurance. Contractor shall furnish County with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements prior to commencing the Work, and thereafter upon renewal or replacement of each certified coverage until all the Work under this contract are deemed complete. Evidence of additional insured status shall be noted on the certificate of insurance as per requirements in this Contract. Insurance maintained after final payment evidencing such coverage shall be provided to County with final application for payment and thereafter upon renewal or replacement of such insurance until the expiration of the two-year period for which such insurance must be maintained.

7.9 Subcontractors. Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein. CCL coverage shall include independent Contractors' coverage, and Contractor shall be responsible for assuring that all subcontractors are properly insured.

7.10 Conditions. The insurance required for this Contract must be on forms acceptable to County. County may, at its discretion, accept letters of credit or custodial accounts in lieu of specific insurance requirements. Contractor shall provide that the insurance contributing to satisfaction of insurance requirements in this Contract shall not be canceled, terminated, or modified by Contractor without prior written approval of County. Contractor shall promptly notify New Hanover County Environment Management and New Hanover County Risk Management at (910) 798-7498 of any accidents arising in the course of operations under the Contract causing bodily injury or property damage.

County reserves the right to obtain complete, certified copies of all required insurance policies, at any time. Failure of County to demand a certificate of insurance or other evidence of full compliance with these insurance requirements or failure of County to identify a deficiency from evidence that is provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance. By requiring insurance herein, County does not represent that coverage and limits will necessarily be adequate to protect Contractor and such coverage and limits shall not be deemed as a limitation of Contractor's liability under the indemnities granted to County in this Contract. If Contractor fails to maintain the insurance as set forth herein, County shall have the right, but not the obligation, to purchase said insurance at Contractor's expense. County shall have the right, but not the obligation of prohibiting Contractor or any subcontractor from entering the Project site or withholding payment until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by County.

ARTICLE VIII

CLAIMS

8.1 Claims by the Contractor. All Contractor claims shall be initiated by written notice and claim to the County. Such written notice and claim must be furnished within seven (7) days after occurrence of the event, or the first appearance of the condition, giving rise to the claim.

8.2 Contractor's Duty to Continue Work. Pending final resolution of any claim of the Contractor, the Contractor shall diligently proceed with performance of this Contract. The resolution of any claim under this Paragraph shall be reflected by a Change Order executed by the County, and the Contractor.

8.3 Claims for Concealed and Unknown Conditions. Should concealed and unknown conditions encountered in the performance of the Work (a) below the surface of the ground or (b) in an existing structure be at variance with the conditions indicated by this Contract, or should unknown conditions of an unusual nature differing materially from those ordinarily encountered in the area and generally recognized as inherent in Work of the character provided for in this Contract, be encountered, the Contract Price shall be equitably adjusted by Change Order upon the written notice and claim by either party made within seven (7) days after the first observance of the condition. As a condition precedent to the County having any liability to the Contractor for concealed or unknown conditions, the Contractor must give the County written notice of, and an opportunity to observe, the condition prior to disturbing it. The failure by the Contractor to make the written notice and claim as provided in this subparagraph shall constitute a waiver by the Contractor of any claim arising out of or relating to such concealed or unknown condition.

8.4 Claims for Additional Costs. If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the County written notice thereof within seven (7) days after the occurrence of the event giving rise to such claim. Such notice shall be given by the Contractor before proceeding to execute any additional or changed Work. The failure by the Contractor to give such notice and to give such notice prior to executing the Work shall constitute a waiver of any claim for additional compensation. No such claim shall be valid unless so made.

8.4.1 In connection with any claim by the Contractor against the County for compensation in excess of the Contract Price, any liability of the County for the

Contractor's costs shall be strictly limited to direct costs incurred by the Contractor and shall in no event include indirect costs or consequential damages of the Contractor. The County shall not be liable to the Contractor for claims of third parties, including Subcontractors, unless and until liability of the Contractor has been established therefor in a court of competent jurisdiction.

8.5 Claims for Additional Time. If the Contractor is delayed in progressing any task which at the time of the delay is then critical or which during the delay becomes critical, as the sole result of any act or neglect to act by the County or someone acting in the County's behalf, or by changes ordered in the Work, unusual delay in transportation, unusually adverse weather conditions not reasonably anticipatable, fire or any causes beyond the Contractor's control, then the date for achieving Substantial Completion of the Work shall be extended upon the written notice and claim of the Contractor to the County, for such reasonable time as the County may determine by written change order. Any notice and claim for an extension of time by the Contractor shall be made not more than seven (7) days after the occurrence of the event or the first appearance of the condition giving rise to the claim and shall set forth in detail the Contractor's basis for requiring additional time in which to complete the Project. In the event the delay to the Contractor is a continuing one, only one notice and claim for additional time shall be necessary. If the Contractor fails to make such claim as required in this Subparagraph, any claim for extension of time shall be waived.

8.5.1 If the Contractor is delayed in the progress of the work for any reason, including any act or neglect of Owner, any of owner's employers or agents, or any separate contractor employed by the Owner, an extension of time shall be the Contractor's exclusive remedy and the Contractor waives any right it may otherwise have to damages because of delays or disruptions of any nature whatsoever to all or any part of the Work including, that this provision in itself shall not preclude the Contractor from recovering damages for delays solely by acts of the Owner or its agent.

8.6 Conflict of Interest. No party hereto shall acquire or possess any interest, either direct or indirect, in any aspect of the subject property to be constructed or renovated hereunder.

ARTICLE IX
SUBCONTRACTORS

9.1 Subcontractors. A Subcontractor is an entity, which has a direct contract with the Contractor to perform a portion of the Work.

9.2 Award of Subcontracts. Upon execution of the Contract, the Contractor shall furnish the County, in writing, the names of persons or entities proposed by the Contractor to act as a subcontractor on the Project. The County shall within ten (10) days reply to the Contractor, in writing, stating any objections the County may have to such proposed subcontractor. The Contractor shall not enter into a subcontract with a proposed subcontractor with reference to whom the County has made timely objection. The Contractor shall not be required to subcontract with any party to whom the Contractor has objection.

9.2.1 All subcontracts shall afford the Contractor rights against the subcontractor, which correspond to those rights afforded to the County against the Contractor herein, including those rights afforded to the County hereunder by the Subparagraphs captioned, Termination by County.

ARTICLE X
TERMINATION

10.1 Termination by the Contractor. If the Work is stopped for a period of ninety (90) days by an order of any court or other public authority, or as a result of an act of the Government, through no fault of the Contractor or any person or entity working directly or indirectly for the Contractor, the Contractor may, upon ten (10) days' written notice to the County terminate performance under this Contract and recover from the County payment for the actual reasonable expenditures of the Contractor for all Work executed and for materials, equipment, tools, construction equipment and machinery actually purchased or rented solely for the Work, less any salvage value of any such items.

10.1.1 If the County shall persistently or repeatedly fail to perform any material obligation to the Contractor for a period of fifteen (15) days after receiving written notice from the Contractor of its intent to terminate hereunder, the Contractor may terminate performance under this Contract by written notice to the County. In such

event, the Contractor shall be entitled to recover from the County as though the County had terminated the Contractor's performance under this Contract for convenience pursuant to this agreement.

10.2 Termination by the County For Convenience. The County may for any reason whatsoever terminate performance under this Contract by the Contractor for convenience. The County shall give written notice of such termination to the Contractor specifying when termination becomes effective.

10.2.1 The Contractor shall incur no further obligations in connection with the Work and the Contractor shall stop Work when such termination becomes effective. The Contractor shall also terminate outstanding orders and subcontracts. The Contractor shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The County may direct the Contractor to assign the Contractor's right, title, and interest under terminated orders or subcontracts to the County or its designee.

10.2.2 The Contractor shall transfer title and deliver to the County such completed or partially completed Work and materials, equipment, parts, fixtures, information and Contract rights Contractor controls or possesses.

10.2.3 (a) The Contractor shall submit a termination claim to the County specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the County. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the County shall pay the Contractor, an amount derived in accordance with subparagraph [c] below.

(b) The County and the Contractor may agree to the compensation, if any, due to the Contractor hereunder.

(c) Absent agreement to the amount due to the Contractor, the County shall pay the Contractor the following amounts:

(i) Contract prices for labor, materials, equipment, and other services accepted under this Contract.

(ii) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the Work, and in terminating the Contractor's performance, plus a fair and reasonable allowance for overhead and profit thereon

(such profit shall not include anticipated profit or consequential damages); provided however, that if it appears that the Contractor would have not profited or would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

(iii) Reasonable costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant hereto. These costs shall not include amounts paid in accordance with other provisions hereof.

10.3 Termination by the County For Cause. If the Contractor persistently or repeatedly refuses or fails to prosecute the Work in a timely and/or competent manner, supply enough properly skilled workers, supervisory personnel or proper equipment or materials, or if it fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a material provision of this Contract, then the County may by written notice to the Contractor, without prejudice to any other right or remedy, terminate the employment of the Contractor and take possession of the site and of all materials owned by the County and may finish the Work by whatever methods it may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished.

10.3.1 If the unpaid balance of the Contract Price exceeds the cost of finishing the work, including compensation for the County's additional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such cost exceeds the unpaid balance, the Contractor shall pay the difference to the County. This obligation for payment shall survive the termination of the Contract.

10.3.2 In the event the employment of the Contractor is terminated by the County for cause and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience, such termination shall thereupon be deemed a Termination for Convenience.

ARTICLE XI

COMPLIANCE WITH LAWS

11.1 Laws To Be Observed. Contractor shall observe and comply with all Federal and State laws, including Department of Labor Health and Safety Regulations, and all local laws, ordinances and regulations, which in any way affect the conduct of the contract work. Contractor shall have the duty to maintain safety on the job site. Any violations OSHA or other Federal, State or Local laws, rules or regulations pertaining to safety shall be the sole responsibility of the Contractor and not the County. The Contractor shall fully indemnify and hold owner harmless for any such safety violations assessed against owner.

11.2 Underground Damage Prevention. Contractor shall comply with N.C.G.S. Chapter 87, Article 8 and provide all notification required by statute and Contractor shall be responsible for cost of repair to all utilities damaged during construction.

11.3 Taxes. Contractor shall pay all applicable Federal, State, and Local taxes, including sales taxes on all equipment and materials used in the Project. County is qualified to receive all sales taxes paid on the project as a rebate. Contractor shall submit a statement showing the invoice, sales taxes paid to State, sales taxes paid to County of vendor's location, and name of County of all material, and equipment used in the Project. A tax statement shall be submitted with each pay request and shall be accompanied by an affidavit verifying validation.

11.4. Contractor Non-Discrimination. Contractor will take affirmative action not to discriminate against any employee or applicant for employment or otherwise illegally deny any person participation in or the benefits of the activities that are the subject of this contract, because of race, creed, color, sex, age, disability, or national origin.

11.5 Goal for Participation by Minority Businesses. It is the policy of the County that minority businesses shall have the maximum opportunity to participate in the performance of contracts financed with public money including contracts awarded pursuant to the requirements of N.C.G.S Chapter 143, Article 8. County has adopted a ten percent (10%) verifiable goal for participation by minority businesses in the total

value of work required by the terms and conditions of this Contract. Contractor covenants and agrees to comply with said policy of the County and the provisions of N.C.G.S. Chapter 143, Article 8 and shall follow County guidelines specifying the actions that Contractor must take to ensure a good faith effort in the recruitment and selection of minority businesses for participation in this Contract.

11.6 E-Verify Compliance. Pursuant to N.C.G.S. § 153A-449(b) (Session Law 2015-119), Contractor shall fully comply and certify compliance of each of its subcontractors with Article 2 of Chapter 64 of the N.C. General Statutes, including the requirement for each employer with more than 25 employees in North Carolina to verify the work authorization of its employees through the federal E-Verify system. County shall be provided affidavits attesting to Contractor's and subcontractor's compliance or exemption. Violation of the provision, unless timely cured, shall constitute a breach of Contract.

ARTICLE XI

INTERPRETATION

12.1 Intent and Interpretation. The intent of this Contract is to require complete, correct, and timely execution of the Work. Any Work that may be required, implied, or inferred by the Contract Documents, or any one or more of them, as necessary to produce the intended result shall be provided by the Contractor for the contract price. The contract documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Supplementary Conditions, Special Conditions, Instructions to Bidder, General Conditions, Specifications and Drawings.

12.2. Law Applied. All of the terms and conditions contained in the contract documents shall be interpreted in accordance with the laws of the State of North Carolina.

12.3 Entire Agreement. This Contract and the noted documents and specifications constitute the entire understanding of the parties. The contract documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Supplementary Conditions, Special Conditions, Instructions to Bidders, General Conditions, Specifications and Drawings.

12.4 Shop Drawings, Product Data and Samples. Shop Drawings, Product Data, Samples, and other submittals from the Contractor do not constitute Contract Documents. Their purpose is merely to demonstrate the manner in which the Contractor intends to implement work in conformance with information received from the Contract Documents.

12.5 Interpretation and Construction. 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 its generally accepted meaning in the construction industry; and third, if there is no generally accepted meaning in the construction industry, according to its common and customary usage. As between numbers and scaled measurements on the Drawings and in the Design, the numbers shall govern; as between larger scale and smaller scale drawings, the larger scale shall govern.

12.5.1 The words "include," "includes," or "including", as used in this contract, shall be deemed to be followed by the phrase, "without limitation".

12.5.2 Words or terms used as nouns in this Contract shall be inclusive of their singular and plural forms, unless the context of their usage clearly requires a contrary meaning.

12.5.3 The specification herein of any act, failure, refusal, omission, event, occurrence, or condition as constituting a material breach of this contract shall not imply that any other, non-specified act, failure, refusal, omission, event, occurrence, or condition shall be deemed not to constitute a material breach of this Contract.

12.6 Dispute Resolution. The County hereby adopts those dispute resolutions procedures promulgated by the State Building Commission, as amended from time to time by the Commission or County. Said procedures shall be available to address any issues arising out of the contract or construction process wherein the matter in controversy exceeds Fifteen Thousand (\$15,000.00) Dollars. Should the Contractor herein utilize such dispute resolution procedures it must pay half of any administrative costs to be incurred by the County in conducting the dispute resolution.

12.7 Arbitration. Arbitration of claims, disputes, and questions arising under this contract may only be used when both parties agree to arbitrate. Arbitration shall be in accordance with the Construction Industry Arbitration Rules of the American

Arbitration Association then obtaining. In no event shall fewer than three (3) arbitrators be used; County and Contractor shall each select one (1) arbitrator and the two (2) arbitrators shall select a third. The award rendered by the arbitrators shall be final, specifically enforceable, and recordable as a judgment in any court having jurisdiction thereof.

12.8 County Non-Discrimination. The County covenants and agrees that no person shall be denied benefits of, or otherwise be subjected to discrimination in connection with the County's performance under this Contract on the grounds of race, religion, color, national origin, sex or handicap.

12.9 Notices. All notices required hereunder to be sent to either party shall be sent to the following designated addresses, or to such other address or addresses as may hereafter be designated by either party by mailing of written notice of such change of address, by Certified Mail, Return Receipt Requested:

To County:
New Hanover County Environmental Management
Attention: Kim Roane, Business Officer
3002 U.S. Hwy 421 North
Wilmington, NC 28401

To Contractor

12.10 Contract Under Seal. The parties hereto expressly agree to create a contract under seal.

IN WITNESS WHEREOF, the parties have affixed their hands and seals and caused the execution of this instrument, by authority duly given and on the day and year first above written.

NEW HANOVER COUNTY

[SEAL]

Jonathan Barfield, Jr., Chairman

ATTEST:

Clerk to the Board

CONTRACTOR

[CORPORATE SEAL]

President

ATTEST:

Secretary

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Approved as to form:

County Finance Director

County Attorney

NORTH CAROLINA

NEW HANOVER COUNTY

I, _____, a Notary Public of the State and County aforesaid, certify that Teresa P. Elmore personally came before me this day and acknowledged that she is Clerk to the Board of County Commissioners of New Hanover County, and that by authority duly given and as the act of the Board, the foregoing instrument was signed in its name by Jonathan Barfield, Jr., Chairman, sealed with its official seal and attested by herself as its Clerk.

WITNESS my hand and official seal, this ____ day of _____, 2015.

Notary Public

My commission expires: _____

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public of the State and County aforesaid, certify that _____, personally came before me this day and acknowledged that (s)he is Secretary of _____, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its President, sealed with its official seal and attested by herself as its Secretary.

WITNESS my hand and official seal, this _____ day of _____, 2015.

Notary Public

My commission expires: _____

DRAFT

STATE OF NORTH CAROLINA

AFFIDAVIT

COUNTY OF _____

I, _____ (hereinafter Affiant), being duly authorized by and on behalf of _____ (hereinafter "Employer") after first being duly sworn hereby swears or affirms as follows:

1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).
2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a).
3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. (Mark Yes or No)
 - a. YES _____, or
 - b. NO _____
4. Employer's subcontractors must comply with E-Verify and Employer will ensure compliance with E-Verify by any subcontractors subsequently hired.

This ____ day of _____, 2015.

Signature of Affiant

Print or Type Name: _____

State of North Carolina County of _____

Signed and sworn to (or affirmed) before me, this the _____

day of _____, 2015.

My Commission Expires:

Notary Public

(Affix Official/Notarial Seal)

WD Jones Engineering, PLLC

100 B Old Eastwood Road, Unit 24

Wilmington, NC 28403

(910) 523-5381

office@wdjonesengineerig.com

May 29, 2015

Statement of Special Inspections

Project: MRF (NHC Recycling Center)

Location: 3002 US Hwy 421, Wilmington, NC

Owner: New Hanover Count

Architect of Record: M.W. Williard, Architect, PLLC

Engineer of Record: WD Jones Engineering, PLLC

This statement of special inspections is submitted as a condition for permit issuance in accordance with the Special Inspections requirements of the current edition of the North Carolina Building Code. It includes a Schedule of Special Inspection Services applicable to this project. That form has a location for the owner/contractor to fill in the names of the special inspector, testing agency, etc.

The Special Inspector shall keep records of all inspections and shall furnish interim (monthly) inspection reports to the Building Official, Owner, Architect of Record, Structural Engineer of Record, and General Contractor. Discovered deficiencies shall be brought to the immediate attention of the Contractor for correction. If such deficiencies are not corrected, the deficiencies shall be brought to the attention of the Code Enforcement Official, Structural Engineer of Record, and Architect of Record. The special inspections program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Code Enforcement Official, Owner, Structural Engineer, and Architect of Record.

A Final Report of Special Inspections documenting completion of all required Special Inspections and corrections of any discrepancies should be submitted prior to issuance of a Certificate of Use or Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Prepared by: WD Jones

 5/29/15
Signature Date

Owner's Authorization:

Accepted by:

Signature

Date

Signature

Date

WD Jones Engineering, PLLC
 100B Old Eastwood Road
 Units 23 and 24
 Wilmington, NC 28405

Project: New Hanover County Recycling Center, 3002 US 421, Wilmington, NC

Schedule of Special Inspection Services

The following comprises the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Structural Steel | <input type="checkbox"/> Special Foundations (Piles or Piers) |
| <input checked="" type="checkbox"/> Cold-Formed Steel Framing | <input checked="" type="checkbox"/> Wall Panels/Veneer |
| <input checked="" type="checkbox"/> Cast-in-Place Concrete | <input type="checkbox"/> Sprayed Fire Resistant Material |
| <input type="checkbox"/> Masonry | <input type="checkbox"/> Exterior Insulation & Finish System |
| <input type="checkbox"/> Wood Construction | <input type="checkbox"/> Smoke Control |
| <input checked="" type="checkbox"/> Soils | |

Owner and/or contractor to fill in the names of firms below. The special inspector and testing laboratory can be from the same firm.

Recommended Inspection Agents	Firm	Address
1. Special Inspector		
2. Inspector		
3. Testing Laboratory		
4. Other		

Note: The special inspector shall be engaged by the Owner or his agent, and not by the Contractor or Subcontractor whose work is to be inspected. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Seismic Design Category: C
 Basic Wind Speed: 130 mph
 Exposure Category: C

Qualifications: The New Hanover County Special Inspections Guidelines specifies the requirements for the inspections listed above. An EI with one year of related experience is the minimum requirement for both the concrete and soils sections.

Dates for Inspections: The date of actual visits to the site will vary. It is recommended that a minimum of 24 hour notice be given to the particular agent that needs to come to the site (verify if the agencies chosen require more notice.)

WD Jones Engineering, PLLC
 100B Old Eastwood Road
 Units 23 and 24
 Wilmington, NC 28405

Cast-in-Place Concrete (new 8" slabs on grade/fill)

Item	Agent	Scope
1. Mix Design / Material Cert.	1, 3	a. Collect mix designs and verify appropriate mix use during specific installation
2. Reinforcement Installation	1	a. Periodic inspection of reinforcing steel & welded wire fabric
	1	b. Collection of certified mill test reports
3. Conc. Placement / Monitoring fresh concrete; Sampling & prep of test samples	1	a. Continuous inspection of cast-in-place concrete placement
	3	b. Continuous monitoring of sampling of fresh concrete, slump test, air content test, temperature of concrete and creation of strength test specimens
	1	c. Continuous inspection of bolts to be installed in concrete prior to and during placement
4. Curing & Protection	1	a. Periodic inspections of curing techniques
5. Precast Concrete Members	N/A	a. Periodic inspection of attachment of precast members

Soils

Item	Agent	Scope
1. Site Preparation	3	a. Determine that site has been prepared appropriately to match drawing requirements.*
2. Fill Placement	3	a. Determine that material used and maximum lift thickness comply with drawings for pit infill.
3. Density Evaluation	3	a. Determine that in-place dry density of the compacted fill complies with drawings.

*Fill is being brought in prior to this project. Obtain record indicating its adequacy for slab and ribbon footing support or perform testing to ensure the fill is adequate for those items.

WD Jones Engineering, PLLC
 100B Old Eastwood Road
 Units 23 and 24
 Wilmington, NC 28405

Structural Steel

Item	Agent	Scope
1. Fabricator Certification/Quality Control Procedures	1	a. Ensure fabricator meets requirements of NCSOC 704.2.2
	1	b. Collect certificate of compliance from fabricator at completion of fabrication
2. Welding	1	a. Periodic inspection of welded connections.
	1	b. Collect certificate of compliance for weld filler material
	1	c. Identify use of approved filler material and in accordance with AWS D1.1
3. Metal Deck	1	a. Collect material data sheets for decking and connectors or fasteners
	1	b. Periodic inspection of connections of decking
4. Structural Details	1	a. Periodic inspection of steel framing and joint details
5. Bolting	1	a. Collect material data sheets for bolts, nuts, and washers
	1	b. Collect certificate of compliance from bolt supplier
	1	c. Periodic inspection of bolted connections
6. Material Certification	1	a. Collect Certified mill test reports

Cold-Formed Steel Framing including Girts

Item	Agent	Scope
1. Plant Certification/Quality Control Procedures	1	a. Ensure fabricator meets requirements of NCSBC 1704.2.2
	1	b. Collect certificate of compliance from fabricator at completion of fabrication
2. Mechanical Connections	1	a. Periodic inspection of all field connections including anchorage to the structural frame
3. Welding	1	a. Periodic inspection of all field connections including anchorage to the structural frame
4. Framing Details	1	a. Periodic inspection of framing and details

Wall Panels and Veneers

Item	Agent	Scope
1. Anchorage	n/a	a. Periodic review of fasteners and installation of wall panels.

**2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**

Name of Project: New Hanover County Recycling Facility
 Address: 3002 US-421, Wilmington NC Zip Code: 28403
 Proposed Use: _____
 Owner/Authorized Agent: Kevin Caison Phone # (910) 798-4338 E-Mail kcaison@nhcgov.com
 Owned By: County
 Code Enforcement Jurisdiction: City _____ County: New Hanover State

LEAD DESIGN PROFESSIONAL: Doug Jones, PE

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE	EMAIL
Architectural	MW Willard, Architect, PLLC	Matthew W. Willard, AIA	10180	(910) 297-3665	mwillard@cloud.com
Civil					
Electrical	McFadyen Engineers, PLLC	Duncan McFadyen, PE	8433	(910) 399-1125	dmcfadyen@mcfaengineers.com
Fire Alarm	McFadyen Engineers, PLLC	Duncan McFadyen, PE	8433	(910) 399-1125	dmcfadyen@mcfaengineers.com
Plumbing					
Mechanical					
Sprinkler-Standpipe	WD Jones Engineering, PLLC	Doug Jones, PE	02582	(910) 523-5381	doug@wjonesengineering.com
Structural					
Retaining Walls >5' High					
Other					

2012 EDITION OF NC CODE FOR: New Construction Addition Upfit
 EXISTING: Reconstruction Alteration Repair Renovation
 CONSTRUCTED: (date) 1983 ORIGINAL USE(S) (Ch. 3): _____
 RENOVATED: (date) _____ CURRENT USE(S) (Ch. 3): _____
 PROPOSED USE(S) (Ch. 3): _____

BASIC BUILDING DATA

Construction Type: I-A II-A III-A IV V-A
 (check all that apply) I-B II-B III-B V-B

Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D

Standpipes: No Yes Class I II III Wet Dry

Fire District: No Yes (Primary) Flood Hazard Area: No Yes

Building Height: (feet) _____

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3rd Floor			
2nd Floor			
Mezzanine			
1st Floor	32,850		
Basement			
TOTAL			

ALLOWABLE AREA

Occupancy: A-1 A-2 A-3 A-4 A-5 (STORAGE AND SORTING OF RECYCLABLE MATERIALS)

Business Educational Factory F-1 Moderate F-2 Low H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM

Hazardous Institutional I-1 I-2 I-3 I-4 I-5 Condition 1 2 3 4 5

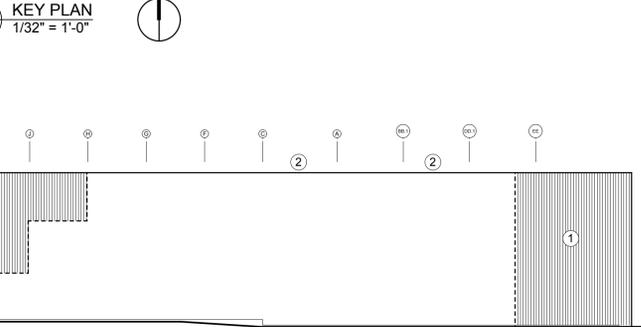
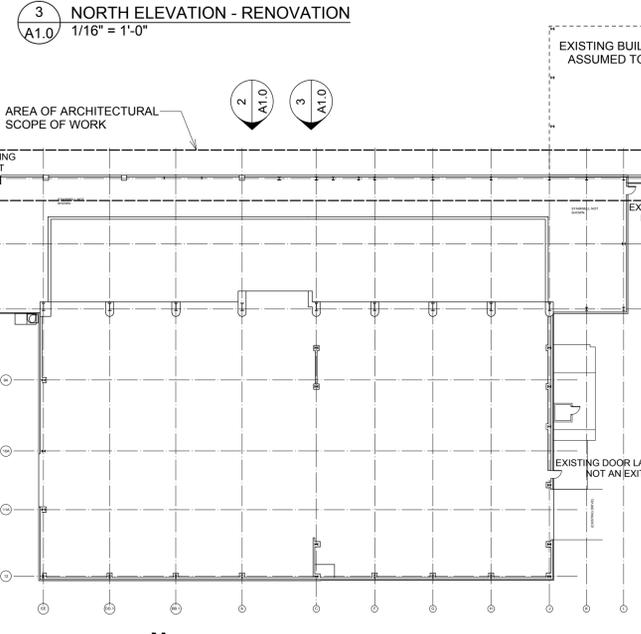
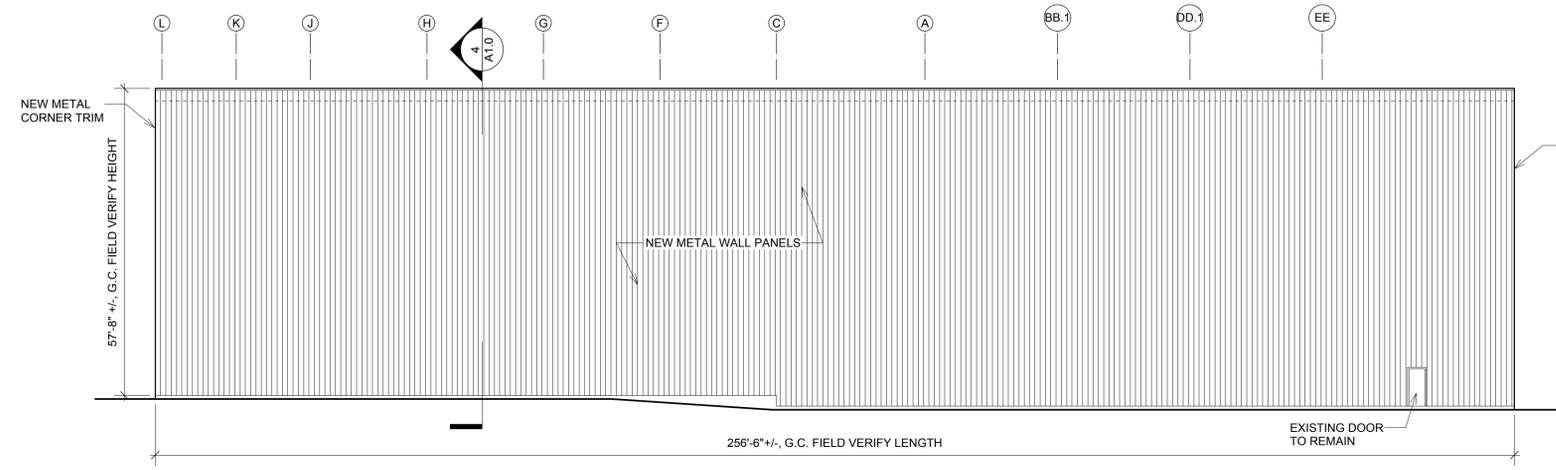
Mercantile Residential R-1 R-2 R-3 R-4 S-1 Moderate S-2 Low High-piled Storage Parking Garage Open Enclosed Repair Garage

Utility and Miscellaneous



SPRINKLER NOTES:
 ALL SPRINKLER SYSTEM SCOPE OF WORK AND DESIGN CRITERIA PROVIDED BY NEW HANOVER COUNTY AND NEW HANOVER COUNTY FIRE SERVICES.

- REMOVE ALL SPRINKLER PIPING AND COMPONENTS FROM THE EXISTING BUILDING.
- INSTALL A NEW FDC CONNECTION ON THE OUTSIDE WALL OF THE RISER ROOM. COORDINATE THE LOCATION WITH NEW HANOVER COUNTY.
- PROVIDE A COMPLETE DRY SPRINKLER SYSTEM PER NFPA 13 STANDARDS FOR THE EXISTING BUILDING. DRY SYSTEM TO BE DESIGNED TO A DENSITY OF 0.30.
- SUBMIT NEW SPRINKLER SYSTEM SHOP DRAWINGS, DESIGN CALCULATIONS, MANUALS, AND WARRANTIES TO NEW HANOVER COUNTY FOR REVIEW.
- RECHARGE THE EXISTING FIRE PUMP AND PROVIDE A FULL FIRE PUMP TEST TO NEW HANOVER COUNTY FOR REVIEW.



- DEMOLITION NOTES:**
- CAREFULLY REMOVE METAL SIDING AND TURN OVER TO OWNER.
 - REMOVE MISC. METAL FRAMING FROM ROOF EDGE. PREPARE ROOF EDGE FOR NEW PARAPET.

ROOF NOTES:
 1. GENERAL CONTRACTOR TO FIELD VERIFY THE EXISTING ROOF MEMBRANE TYPE AND COMPOSITION. MEMBRANE ROOFING APPLIED TO NEW PARAPET TO MATCH EXISTING ROOF TYPE.

METAL WALL PANELS:
 SUBMITTALS: PROVIDE MANUFACTURER'S PRODUCT DATA SHEETS AND SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE LAYOUTS OF METAL PANELS AND INCLUDE DETAILS OF EACH CONDITION OF INSTALLATION, PANEL PROFILES, AND ATTACHMENT TO BUILDING.

METAL PANEL MATERIALS: ALUMINUM-ZINC ALLOY-COATED STEEL SHEET: ASTM A 792/A 792M, STRUCTURAL QUALITY, GRADE 50, COATING CLASS AZ50 (GRADE 340, COATING CLASS AZM150), PREPARED BY THE COIL-COATING PROCESS PER ASTM A 755/A 755M.

METAL WALL PANELS: LARGE TAPERED-RIB-PROFILE, EXPOSED FASTENER METAL PANELS: STRUCTURAL METAL PANEL CONSISTING OF FORMED METAL SHEET WITH TRAPEZOIDAL MAJOR RIBS WITH INTERMEDIATE STIFFENING RIBS SYMMETRICALLY PLACED BETWEEN MAJOR RIBS, INSTALLED BY LAPPING EDGES OF ADJACENT PANELS.

MANUFACTURERS: MBCI, PBR PANEL (BASIS OF DESIGN), PETERSON ALUMINUM, AND MCELROY METAL COVERAGE WIDTH: 36 INCHES (914 MM), MAJOR RIB SPACING: 12 INCHES (305 MM) ON CENTER, RIB HEIGHT: 1-1/4 INCH (31.8 MM), NOMINAL COATED THICKNESS: 26 GAGE, PANEL SURFACE: SMOOTH, EXTERIOR FINISH: FLUOROPOLYMER TWO-COAT SYSTEM, COLOR: MATCH EXISTING BUILDING WALL PANELS, APPROVED BY OWNER.

FINISHES: PREPARE, PRETREAT, AND APPLY COATING TO EXPOSED METAL SURFACES TO COMPLY WITH COATING AND RESIN MANUFACTURERS' WRITTEN INSTRUCTIONS. FLUOROPOLYMER TWO-COAT SYSTEM: 0.2 - 0.3 MIL PRIMER WITH 0.7 - 0.8 MIL 70 PERCENT PVDF FLUOROPOLYMER COLOR COAT, AAMA 621.

EXPOSED FASTENER METAL WALL PANEL INSTALLATION: INSTALL WEATHERTIGHT METAL PANEL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPROVED SHOP DRAWINGS, AND PROJECT DRAWINGS. INSTALL METAL PANELS IN ORIENTATION, SIZES, AND LOCATIONS INDICATED, FREE OF WAVES, WARPS, BUCKLES, FASTENING STRESSES, AND DISTORTIONS. ANCHOR PANELS AND OTHER COMPONENTS SECURELY IN PLACE. PROVIDE FOR THERMAL AND STRUCTURAL MOVEMENT.

PANEL FASTENING: ATTACH PANELS TO SUPPORTS USING SCREWS, FASTENERS, AND SEALANTS RECOMMENDED BY MANUFACTURER AND INDICATED ON APPROVED SHOP DRAWINGS.

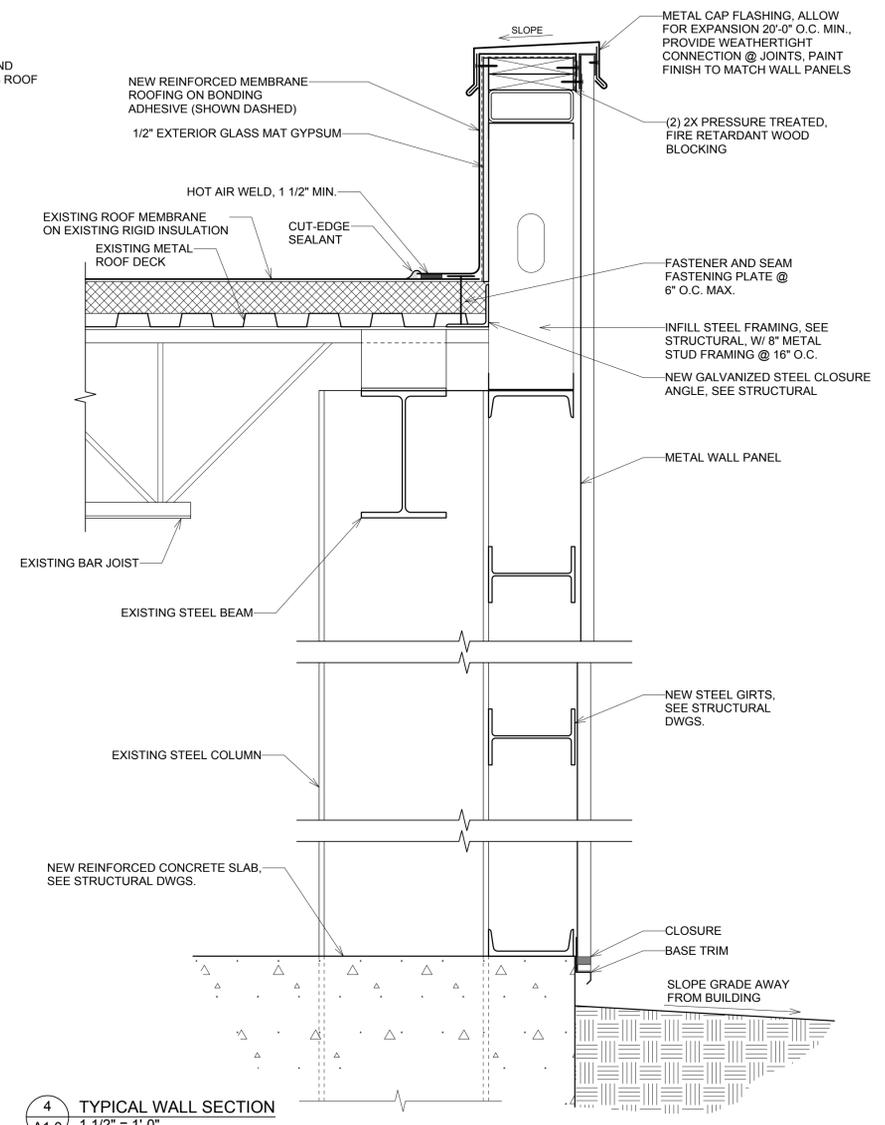
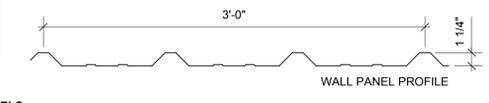
WARRANTY: ON MANUFACTURER'S STANDARD FORM, IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE METAL PANEL ASSEMBLIES THAT FAIL IN MATERIALS AND WORKMANSHIP WITHIN ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION. SPECIAL PANEL FINISH WARRANTY: ON MANUFACTURER'S STANDARD FORM, IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE METAL PANELS THAT EVIDENCE DETERIORATION OF FACTORY-APPLIED FINISH WITHIN 25 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

EXTERIOR GLASS-MAT GYPSUM SHEATHING:
 SUBMITTALS: PRODUCT DATA; MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH PRODUCT SPECIFIED.

MANUFACTURERS: 1/2 INCH DENSGLASS SHEATHING, GEORGIA-PACIFIC GYPSUM LLC. (BASIS OF DESIGN), CERTANTEED CORP., NATIONAL GYPSUM COMPANY, AND USG CORPORATION. FIBERGLASS-MAT FACED GYPSUM SHEATHING: ASTM C1177; THICKNESS: 1/2 INCH, WEIGHT: 1.9 LB/SQ. FT., EDGES: SQUARE, SURFACING: FIBERGLASS MAT ON FACE, BACK, AND LONG EDGES, RACKING STRENGTH ASTM E72: NOT LESS THAN 540 POUNDS PER SQUARE FOOT, DRY, FLEXURAL STRENGTH, PARALLEL (ASTM C473): 80 LBF. PARALLEL, HUMIDIFIED DEFLECTION (ASTM C1177): NOT MORE THAN 2/8 INCH, PERMEANCE (ASTM E96): NOT LESS THAN 25 PERMS, MOLD RESISTANCE (ASTM D3273): 10, IN A TEST AS MANUFACTURED, MICROBIAL RESISTANCE (ASTM D6329, UL ENVIRONMENTAL GREENGUARD 3-WEEK PROTOCOL): WILL NOT SUPPORT MICROBIAL GROWTH, SCREWS: ASTM C1002, CORROSION RESISTANT TREATED.

INSTALLATION: IN ACCORDANCE WITH GA-253, ASTM C1280 AND THE MANUFACTURER'S RECOMMENDATIONS.

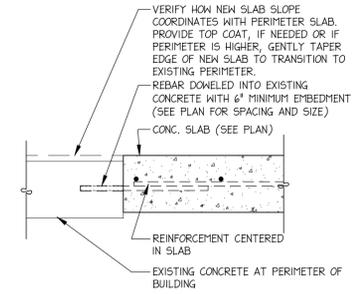
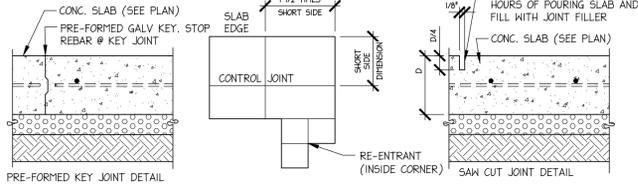
WARRANTY: FIVE YEARS AGAINST MANUFACTURING DEFECTS FROM THE DATE OF PURCHASE OF THE PRODUCT FOR INSTALLATION.



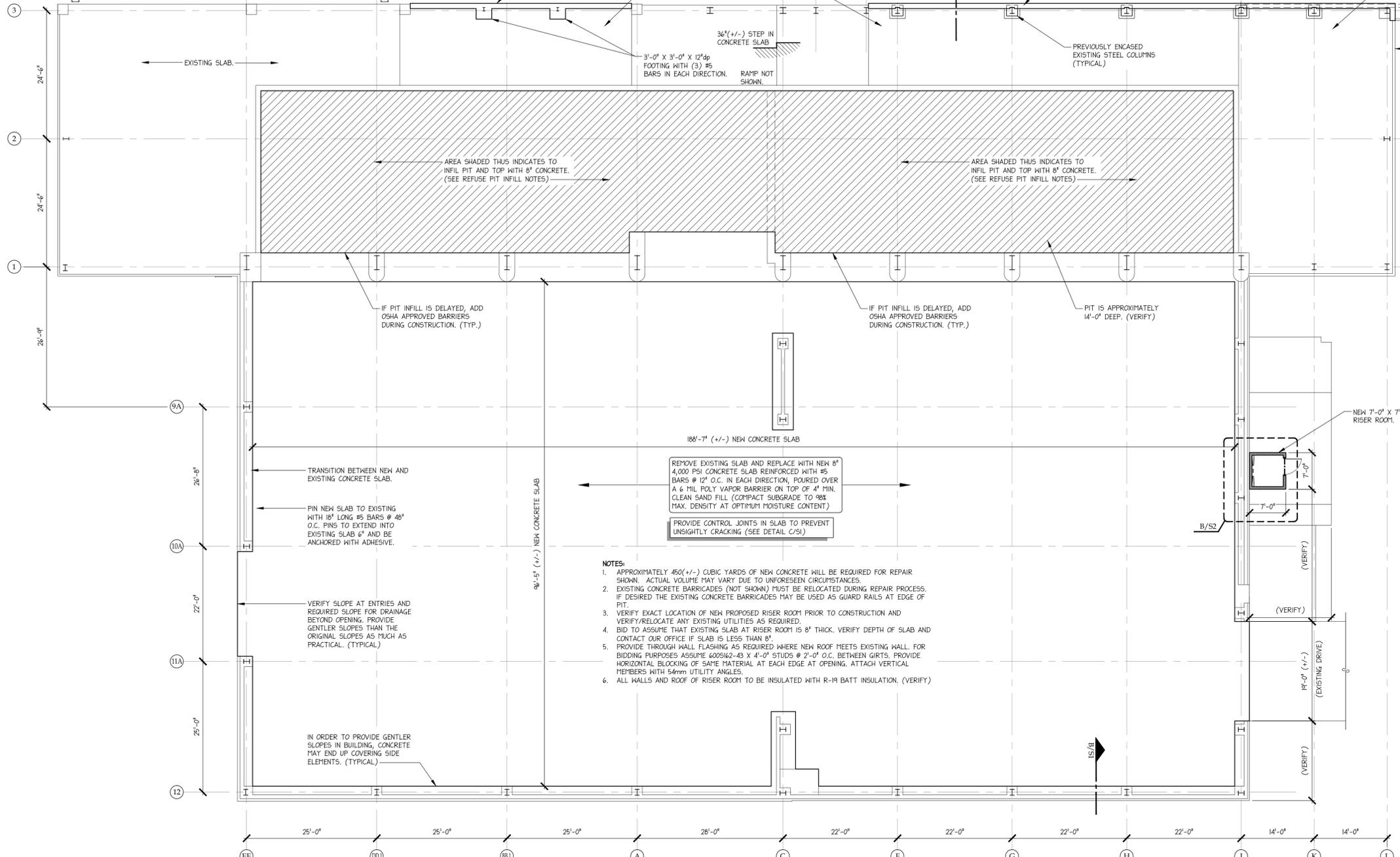
	Design Firm M. W. Willard, Architect, PLLC 3519 Stratford Blvd., Wilmington, NC 28403 (910) 297-3665 mwillard@cloud.com	Project Title New Hanover County Recycling Facility 3002 US-421 Wilmington, NC 28403	Drawn By MWW Reviewed By MWW Date 6/1/15 CAD File Name NHC Recycling	Scale Varies Sheet No. A1.0
	Sheet Title App B, Elevation, Section			

CONTROL JOINT NOTES:

1. PROVIDE CONTROL JOINTS TO PREVENT UNSIGHTLY EXPANSION/CONTRACTION CRACKING OF THE SLAB.
2. THE CONTROL JOINTS SHOULD FORM AN APPROXIMATE SQUARE $\frac{1}{2}$ LONGER SIDE BEING NO MORE THAN $1\frac{1}{2}$ TIMES LONGER THAN SHORT SIDE.
3. MAXIMUM LENGTH OF LONGEST CONTROL JOINT SHALL NOT EXCEED A.C.I. STANDARDS.
4. CONTROL JOINTS TO EITHER BE SAW CUTS OR PREFORMED KEY JOINTS.
5. D_v SLAB DEPTH/SLAB THICKNESS
6. CONTROL JOINTS SHOULD BE PLACED AT RE-ENTRANT CORNERS AND OTHER AREAS LIKELY TO INDUCE CRACKS.



C CONTROL JOINT DETAIL



- NOTES:**
1. APPROXIMATELY 450(+/-) CUBIC YARDS OF NEW CONCRETE WILL BE REQUIRED FOR REPAIR SHOWN. ACTUAL VOLUME MAY VARY DUE TO UNFORESEEN CIRCUMSTANCES.
 2. EXISTING CONCRETE BARRICADES (NOT SHOWN) MUST BE RELOCATED DURING REPAIR PROCESS, IF DESIRED THE EXISTING CONCRETE BARRICADES MAY BE USED AS GUARD RAILS AT EDGE OF PIT.
 3. VERIFY EXACT LOCATION OF NEW PROPOSED RISER ROOM PRIOR TO CONSTRUCTION AND VERIFY/RELOCATE ANY EXISTING UTILITIES AS REQUIRED.
 4. BID TO ASSUME THAT EXISTING SLAB AT RISER ROOM IS 8" THICK. VERIFY DEPTH OF SLAB AND CONTACT OUR OFFICE IF SLAB IS LESS THAN 8".
 5. PROVIDE THROUGH WALL FLASHING AS REQUIRED WHERE NEW ROOF MEETS EXISTING WALL. FOR BIDDING PURPOSES ASSUME 6009162-43 X 4'-0" STUDS @ 2'-0" O.C. BETWEEN GIRTS. PROVIDE HORIZONTAL BLOCKING OF SAME MATERIAL AT EACH EDGE AT OPENING. ATTACH VERTICAL MEMBERS WITH 54mm UTILITY ANGLES.
 6. ALL WALLS AND ROOF OF RISER ROOM TO BE INSULATED WITH R-19 BATT INSULATION. (VERIFY)

EXISTING STRUCTURE:
DRAWINGS ASSUME BUILDING WILL BE REMOVED PRIOR TO NEW WORK AND AREA WILL BE PREPARED FOR NEW WORK SHOWN ON THESE DRAWINGS. IF BUILDING REMAINS, NEW SIDING WILL TERMINATE OVER ITS ROOF AND APPROPRIATE FLASHING WILL BE REQUIRED. ALSO, APPROPRIATE RETAINING WALLS AND COLUMN PROTECTION WILL BE REQUIRED AND NEED TO BE IN PLACE BEFORE WORK ON COLUMN LINE 3 CAN PROCEED.

VERIFY CONDITION OF GROUND LEVEL SLAB AND STAIRS (NOT SHOWN) FROM GROUND LEVEL TO 1st LANDING. PROVIDE QUOTE FOR NEW SLAB ON GRADE AND LOW SECTION OF CONCRETE STAIRS.

DIMENSION NOTE:
DIMENSIONS WERE DETERMINED FROM A COMBINATION OF FIELD MEASUREMENTS AND EXISTING PLANS. SOME AREAS INDICATED ON THESE PLANS WERE NOT ACCESSIBLE DURING SITE VISITS AND WERE NOT INDICATED ON EXISTING PLANS. SOME ASSUMPTIONS WERE MADE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

TIPPING FLOOR/RISER ROOM NOTES:

1. APPROXIMATELY 450(+/-) CUBIC YARDS OF NEW CONCRETE WILL BE REQUIRED FOR REPAIR SHOWN. ACTUAL VOLUME MAY VARY DUE TO UNFORESEEN CIRCUMSTANCES.
2. EXISTING CONCRETE BARRICADES (NOT SHOWN) MUST BE RELOCATED DURING REPAIR PROCESS. IF DESIRED THE EXISTING CONCRETE BARRICADES MAY BE USED AS GUARD RAILS AT EDGE OF PIT.
3. VERIFY EXACT LOCATION OF NEW PROPOSED RISER ROOM PRIOR TO CONSTRUCTION AND VERIFY/RELOCATE ANY EXISTING UTILITIES AS REQUIRED.
4. BID TO ASSUME THAT EXISTING SLAB AT RISER ROOM IS 8" THICK. VERIFY DEPTH OF SLAB AND CONTACT OUR OFFICE IF SLAB IS LESS THAN 8".
5. PROVIDE THROUGH WALL FLASHING AS REQUIRED WHERE NEW ROOF MEETS EXISTING WALL. FOR BIDDING PURPOSES ASSUME 6009162-43 X 4'-0" STUDS @ 2'-0" O.C. BETWEEN GIRTS. PROVIDE HORIZONTAL BLOCKING OF SAME MATERIAL AT EACH EDGE AT OPENING. ATTACH VERTICAL MEMBERS WITH 54mm UTILITY ANGLES.
6. ALL WALLS AND ROOF OF RISER ROOM TO BE INSULATED WITH R-19 BATT INSULATION. (VERIFY)

REFUSE PIT INFILL NOTES:

1. VERIFY THE CONDITION OF THE PIT WALLS AND FLOORS PRIOR TO PLACING FILL. THE DEMOLITION BEYOND COLUMN LINE 3 IS SUPPOSED TO INCLUDE THE PLACEMENT OF FILL ON THE OPPOSITE SIDE OF THE PIT WALL, SO INFILL IN THE PIT SHOULD REDUCE LOAD ON THE PIT WALLS. DAMAGED WALL SECTIONS MAY STILL NEED TO BE REPAIRED AND WILL NEED TO BE SHORED PROPERLY TO ENSURE SAFETY.
2. INSTALL 8" DEEP #5 STONE BED AT BASE OF PIT IN THE LOW AREAS. COVER THE STONE IN FILTER CLOTH. THE ACTUAL AREA REQUIRING STONE WILL NEED TO BE FIELD VERIFIED, BUT TWO 500 SQUARE FEET AREAS SHOULD BE ASSUMED AT THIS TIME.
3. INFILL THE PIT USING STRUCTURAL FILL COMPACTED IN 4" LIFTS/LAYERS TO 98% MINIMUM OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT (ASTM D-698). THE UPPER MOST 4" OF THE FILL MUST CONSIST OF CLEAN SAND FILL.
4. REFER TO STATEMENT OF SPECIAL INSPECTIONS FOR MORE INFORMATION ON OBSERVATION OF FILL. FILL MUST BE TESTED TO DETERMINE ADEQUACY FOR SLAB BEARING.
5. INFILL SHOULD BE ABLE TO SUPPORT FOUNDATION LOADS OF 2,000 PSF MINIMUM. NEW EQUIPMENT SHALL BE ATTACHED TO THE NEW 8" SLAB PER MANUFACTURERS RECOMMENDATIONS. ADDITIONAL FOUNDATION ELEMENTS SHOULD NOT BE REQUIRED.

DRAWING AND DIMENSION NOTES:

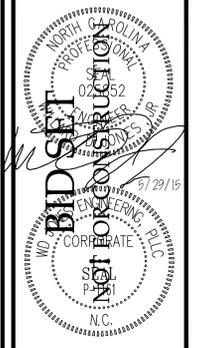
1. ALL DIMENSIONS MUST BE FIELD VERIFIED. DIMENSIONS LISTED ARE BASED ON A COMBINATION OF SITE MEASUREMENTS AND PREVIOUS BUILDING DRAWINGS. DRAWINGS WERE NOT AVAILABLE FOR EVERY PORTION OF BUILDING. SOME MINOR DIMENSIONAL DISCREPANCIES WERE FOUND BETWEEN DRAWINGS PROVIDED AND SITE MEASUREMENTS.
2. SITE VISITS WERE MADE IN ORDER TO DEFINE THE SCOPE OF WORK, HOWEVER DEMOLITION WAS IN PROGRESS. DEMOLITION WAS IN DIFFERENT STAGES AT EACH VISIT BUT WAS NOT COMPLETED BEFORE THESE DRAWINGS NEEDED TO BE DEVELOPED. EXISTING CONDITIONS MAY VARY SOMEWHAT FROM WHAT IS SHOWN IN THIS DRAWING SET.
3. THE DEMOLITION OF THE ADJOINING BUILDING REMOVED THE PRIMARY ACCESS TO THE HIGH ROOF, SO THE ROOF WAS NOT ACCESSED. CERTAIN ASSUMPTIONS WERE MADE BASED ON THE BUILDING TYPE AND THE DRAWINGS THAT WERE AVAILABLE.
4. CONTACT OUR OFFICE IF ANY DISCREPANCIES ARE FOUND THAT ALTER THE SCOPE OF THE WORK OR REQUIRE REVISED STRUCTURAL COMPONENTS.
5. CONTRACTOR TO REVIEW THE PLANS AGAINST EXISTING CONDITIONS AND DETERMINE IF ADJUSTMENTS ARE NEEDED PRIOR TO STARTING WORK ON SITE.

GENERAL NOTE:
ENGINEER RESPONSIBLE FOR ALL STRUCTURAL COMPONENTS ON THIS DRAWING. ALL DIMENSIONS AND DETAILS MAY NOT BE SHOWN ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS TO VERIFY WITH ENGINEER ANY ADDITIONAL DETAILS REQUIRED FOR CONSTRUCTION. PLEASE CONTACT OUR OFFICE IF ANY DISCREPANCIES ARE FOUND.



NO.	REVISION	DATE	INTL.

New Hanover County Recycling
3002 US-421
Wilmington, NC
PROJECT DESCRIPTION: REPAIR PLAN & RISER ROOM
DRAWN BY: D.N.U. DATE: 05-29-2015
PROJECT NO.: 15060
DESIGNED BY: W.D.J.



WD JONES ENGINEERING, PLLC
EMAIL: OFFICE@WDJONESENGINEERING.COM
PHONE: 910-523-5381
100 B OLD EASTWOOD ROAD, UNIT 24
WILMINGTON, N.C. 28403

WALL COMPONENT & CLADDING PRESSURES

AREA 1, 3	ZONE 4 3		ZONE 5 3	
	BEYOND 15'-0" OF CORNER	WITHIN 15'-0" OF CORNER	BEYOND 15'-0" OF CORNER	WITHIN 15'-0" OF CORNER
10 sq. ft.	53.11 / -57.53 PSF	53.11 / -70.81 PSF		
20 sq. ft.	50.75 / -55.18 PSF	50.75 / -66.10 PSF		
30 sq. ft.	47.64 / -52.07 PSF	47.64 / -59.88 PSF		
40 sq. ft.	46.74 / -51.16 PSF	46.74 / -58.07 PSF		
50 sq. ft.	45.29 / -49.72 PSF	45.29 / -55.18 PSF		
100 sq. ft.	42.94 / -47.36 PSF	42.94 / -50.47 PSF		

WALL/CLADDING PRESSURE NOTES:

1. AREA TO BE DETERMINED BY (SPAN)² DIVIDED BY 3 OR ACTUAL TRIBUTARY LENGTH, WHICHEVER IS GREATER.
2. WALL PRESSURES SHOULD BE USED TO DETERMINE REQUIRED DESIGN PRESSURES FOR DOORS & WINDOWS AS WELL AS IN THE DESIGN OF FINISH MATERIAL AND ATTACHMENTS.
3. INTERPOLATION OF VALUES IS PERMITTED.
4. IF ANY PORTION OF A DOOR OR WINDOW IS IN ZONE 5, THE WHOLE UNIT MUST MEET ZONE 5 PRESSURES.

GIRT NOTES:

1. FIELD VERIFY CONNECTION REQUIREMENTS.
2. ALL GIRTS SHALL BE COLD FORMED C OR Z SECTIONS WITH STIFFENED FLANGES COMPLYING WITH AISI STANDARDS.
3. PRE-PUNCH GIRTS FOR LAP SPLICES AT COLUMNS AND ANGLE CONNECTORS AT CONCRETE COLUMNS OR FIELD WELD ALL LAPS AND CONNECTOR ANGLES TO GIRTS.
4. CONNECTION BOLTS MUST BE INSTALLED THROUGH THE WEB OF THE GIRTS - NOT THROUGH FLANGES.
5. GIRT INSTALLER SHALL SUBMIT SEALED SHOP DRAWINGS FOR THE GIRTS AND AFFILIATED MATERIALS SUCH AS BASE ANGLES, CONNECTOR ANGLES, SAG RODS, ETC.
6. SEALED SHOP DRAWINGS MUST INCLUDE THE GRADE OF STEEL FOR THE GIRTS AND NOTE THE FINAL DESIGN SIZE FOR THE GIRTS.

DIMENSION NOTE:

DIMENSIONS WERE DETERMINED FROM A COMBINATION OF FIELD MEASUREMENTS AND EXISTING PLANS. SOME AREAS INDICATED ON THESE PLANS WERE NOT ACCESSIBLE DURING SITE VISITS AND WERE NOT INDICATED ON EXISTING PLANS. SOME ASSUMPTIONS WERE MADE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

NOTE:

SOME FRAMING DEMOLITION BETWEEN COLUMN LINES 2 & 3 MAY HAVE OCCURRED. ALL BEAMS JOINING COLUMNS FROM COLUMN LINE 3 TO COLUMN LINE 2 MUST REMAIN.

GENERAL NOTE:
ENGINEER RESPONSIBLE FOR ALL STRUCTURAL COMPONENTS ON THIS DRAWING. ALL DIMENSIONS AND DETAILS MAY NOT BE SHOWN ARE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR IS TO VERIFY WITH ENGINEER ANY ADDITIONAL DETAILS REQUIRED FOR CONSTRUCTION. PLEASE CONTACT OUR OFFICE IF ANY DISCREPANCIES ARE FOUND.

NO.	REVISION	DATE	INTL.

DESIGNED BY: **W.D.J.**

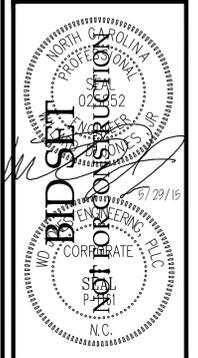
New Hanover County Recycling
3002 US-421
Wilmington, NC

PROJECT DESCRIPTION: **REPAIR PLAN & RISER ROOM**

PROJECT NO.: **15060**

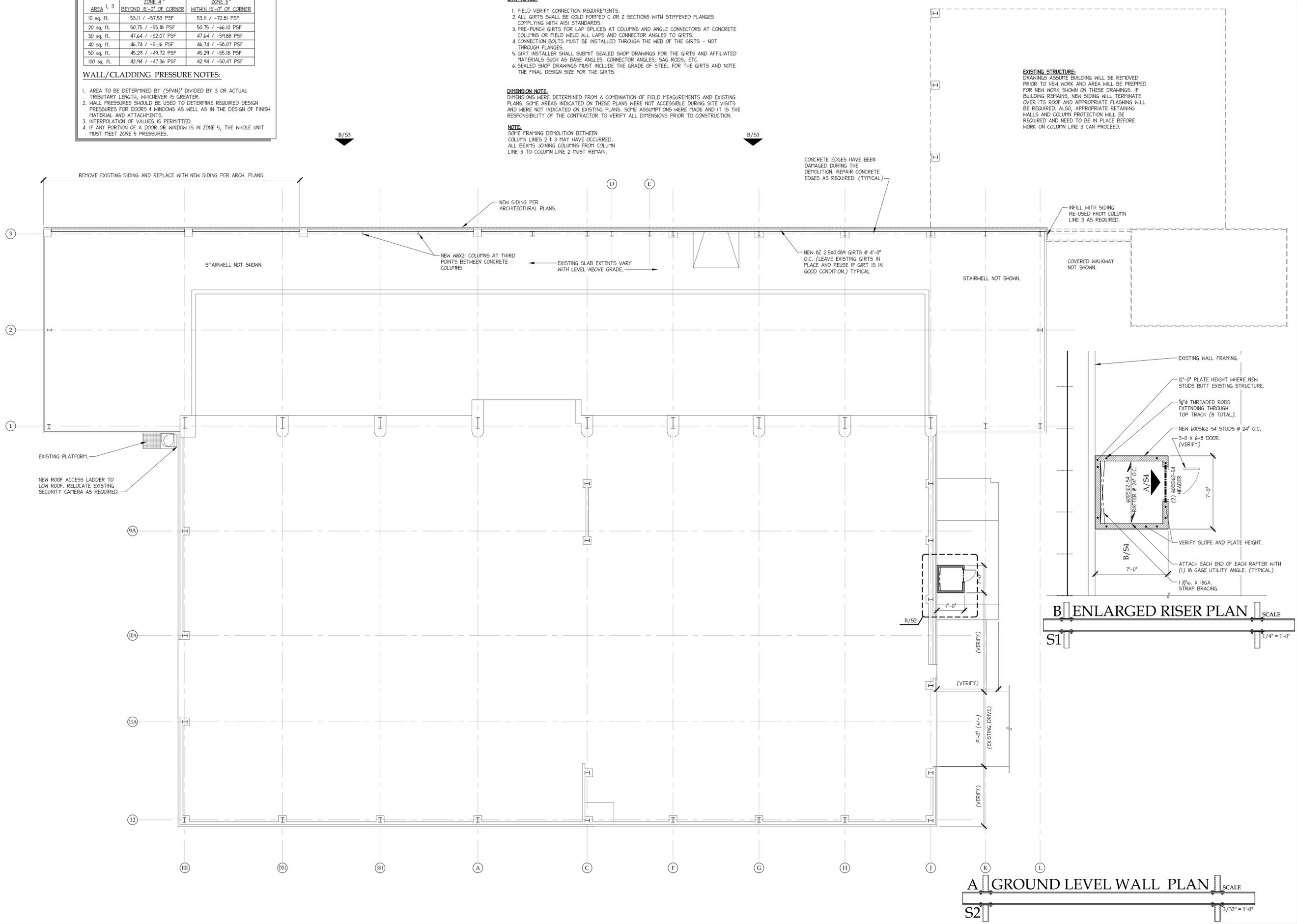
DATE: **05-29-2015**

DRAWN BY: **D.N.U.**



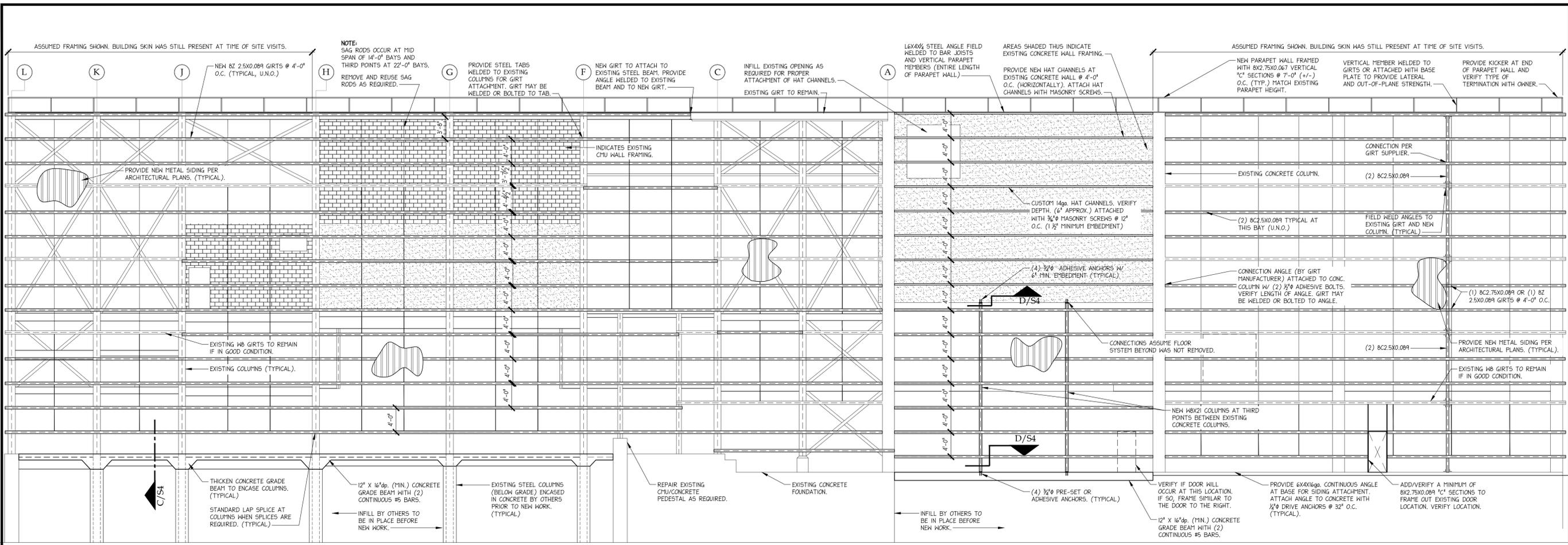
WD JONES ENGINEERING, PLLC
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WILMINGTON, N.C. 28403

SHEET: **S2** OF **4**



B ENLARGED RISER PLAN SCALE 1/4" = 1'-0"

A GROUND LEVEL WALL PLAN SCALE 3/32" = 1'-0"

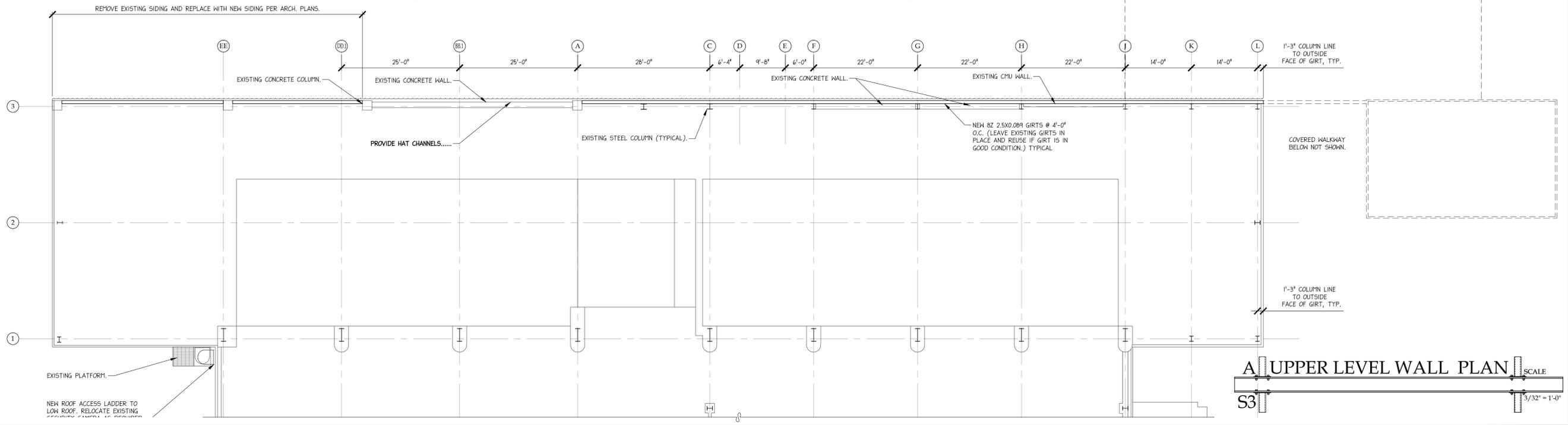


B FRAMING ELEVATION AT COLUMN LINE "3" SCALE 1/8" = 1'-0"

DIMENSION NOTE:
DIMENSIONS WERE DETERMINED FROM A COMBINATION OF FIELD MEASUREMENTS AND EXISTING PLANS. SOME AREAS INDICATED ON THESE PLANS WERE NOT ACCESSIBLE DURING SITE VISITS AND WERE NOT INDICATED ON EXISTING PLANS. SOME ASSUMPTIONS WERE MADE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

- GIRT NOTES:**
1. FIELD VERIFY CONNECTION REQUIREMENTS.
 2. ALL GIRTS SHALL BE COLD FORMED C OR Z SECTIONS WITH STIFFENED FLANGES COMPLYING WITH AISI STANDARDS.
 3. PRE-PUNCH GIRTS FOR LAP SPLICES AT COLUMNS AND ANGLE CONNECTORS AT CONCRETE COLUMNS OR FIELD WELD ALL LAPS AND CONNECTOR ANGLES TO GIRTS.
 4. CONNECTION BOLTS MUST BE INSTALLED THROUGH THE WEB OF THE GIRTS - NOT THROUGH FLANGES.
 5. GIRT INSTALLER SHALL SUBMIT SEALED SHOP DRAWINGS FOR THE GIRTS AND AFFILIATED MATERIALS SUCH AS BASE ANGLES, CONNECTOR ANGLES, SAG RODS, ETC.
 6. SEALED SHOP DRAWINGS MUST INCLUDE THE GRADE OF STEEL FOR THE GIRTS AND NOTE THE FINAL DESIGN SIZE FOR THE GIRTS.

EXISTING STRUCTURE:
DRAWINGS ASSUME BUILDING WILL BE REMOVED PRIOR TO NEW WORK AND AREA WILL BE PREPARED FOR NEW WORK SHOWN ON THESE DRAWINGS. IF BUILDING REMAINS, NEW SIDING WILL TERMINATE OVER ITS ROOF AND APPROPRIATE FLASHING WILL BE REQUIRED. ALSO, APPROPRIATE RETAINING WALLS AND COLUMN PROTECTION WILL BE REQUIRED AND NEED TO BE IN PLACE BEFORE WORK ON COLUMN LINE 3 CAN PROCEED.



NO.	REVISION	DATE	INTL.

DESIGNED BY: W.D.J.

PROJECT NO.: 15060

DATE: 05-29-2015

DRAWN BY: D.N.U.

PROJECT DESCRIPTION: REPAIR PLAN & RISER ROOM

3002 US-421
Wilmington, NC

New Hanover County Recycling

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PHONE: 910-523-5381

NOT FOR CONSTRUCTION

WD JONES ENGINEERING, PLLC

SHEET: S3 OF 4

**STRUCTURAL INFORMATION FOR APPENDIX B
STRUCTURAL DESIGN**

DESIGN LOADS:

IMPORTANT FACTORS: WIND (w) L0
SNOW (s) L0
SEISMIC (e) L0

LIVE LOADS: ROOF 20 psf
MEZZANINE EXISTING psf
FLOOR 150 psf

GROUND SNOW LOAD: 10 psf

WIND LOAD: BASIC WIND SPEED 130 mph (ASCE-7)
EXPOSURE CATEGORY C
WIND BASE SHEARS (for MWFRS) $V_x = \text{Unchanged}$ $V_y = \text{Unchanged}$

SEISMIC DESIGN CATEGORY: A B X C D

Provide the following Seismic Design Parameter:

OCCUPANCY CATEGORY (TABLE 1604.5) I X II III IV
SPECTRAL RESPONSE ACCELERATION S_s 29.5% S_1 9.8%
SITE CLASSIFICATION D Field Test X Presumptive Historical Data
BASIC STRUCTURAL SYSTEM (Check One)
Bearing Wall Dual w/ Special Moment Frame
X Building Frame Dual w/ Intermediate R/C or Special Steel
Moment Frame Inverted Pendulum

SEISMIC BASE SHEARS $V_x = \text{Reduced by recent demo}$ $V_y = \text{Reduced by recent demo}$

ANALYSIS PROCEDURE Simplified X Equivalent Lateral Force Modal

LATERAL DESIGN CONTROL: Earthquake Wind X

SOIL BEARING CAPACITY:

Field Test (Provide copy of test report) psf

Presumptive Bearing capacity 2000 psf

Pile size, type, & capacity psf

GENERAL NOTES:

- DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE.
- REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION WHEN APPLICABLE.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION AND COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL, AND OTHER DOCUMENTS.
- STRUCTURAL FRAME TO BE BRACED UNTIL ERECTION IS COMPLETE.
- SPECIAL INSPECTIONS WILL BE REQUIRED FOR THIS PROJECT. SEE SEPARATE SPECIAL INSPECTIONS PACKAGE.

CONCRETE NOTES:

- CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS: 4,500 PSI
- CONCRETE REINFORCING STEEL TO BE ASTM A615, GRADE 60 AND WELDED WIRE FABRIC TO BE ASTM A185
- MINIMUM COVER AROUND REINFORCING BARS FOR CAST-IN-PLACE CONCRETE (NON-PRESTRESSED) CAST AGAINST EARTH, SUCH AS FOOTINGS
EXPOSED TO WEATHER & SLAB ON GRADE: 3" / 1 1/2"
& #5 OR SMALLER REINFORCING (2" COVER IS REQUIRED FOR LARGER REINFORCING)
- DOVELS AND CONT. REINFORCING SHALL HAVE A MINIMUM LAP OF 36 BAR DIAMETERS OR 2'-1" MINIMUM, U.N.O. PROVIDE HOOKED BARS AT CORNERS OR INTERSECTIONS. (SEE MASONRY NOTES FOR LAP SPLICE REQUIREMENTS IN MASONRY.)
- PROVIDE AIR ENTRAINMENTS OF 4 TO 6 PERCENT AND MAXIMUM AGGREGATE SIZE. WATER-CEMENTIOUS MATERIAL RATIO BY WEIGHT TO BE 0.45.
- REINFORCED CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318).
- PROVIDE CLASS B BARS AND MESH SUPPORTS.

ADHESIVE ANCHOR NOTES:

- THE GROUT ADHESIVE MUST BE AS FOLLOWS:
1. SOLID OR FILLED MASONRY & CONCRETE
- "HILTI" HVA ADHESIVE ANCHOR SYSTEM OR "HILTI" HIT HY 150 INJECTION ADHESIVE ANCHOR SYSTEM
- "SIMPSON" SET-XP HIGH STRENGTH EPOXY
- EQUIVALENT OR BETTER PRODUCT
- HOLLOW MASONRY:
- "HILTI" HY20 ADHESIVE ANCHOR SYSTEM WITH HIT SCREEN TUBE AND DISPENSER.
- ONLY BOLT TO HOLLOW MASONRY WHEN SPECIFIED ON DRAWINGS.
- EQUIVALENT OR BETTER PRODUCT
- HOLES MUST BE DRILLED AND CLEANED PER ADHESIVE MANUFACTURER'S RECOMMENDATIONS. HOLES MUST BE BLOWN AND BRUSHED CLEAN. FAILURE TO PROPERLY CLEAN THE HOLES WILL COMPROMISE THE CAPACITY OF THE ANCHOR.
- THREADED RODS AND ANCHOR BOLTS MUST BE A36 STEEL OR BETTER. REBAR MUST BE ASTM A615 GRADE 60 STEEL OR BETTER.
- ALLOW PROPER SETTING AND CURING TIMES FOR THE ADHESIVE. THE ADHESIVE MANUFACTURER CAN SUPPLY GUIDELINES OR CONTACT OUR OFFICE FOR ADDITIONAL INFORMATION.
- THE MINIMUM EMBEDMENT DEPTH FOR ADHESIVE GROUTED ANCHORS IN SOLID MATERIAL IS 6", U.N.O.

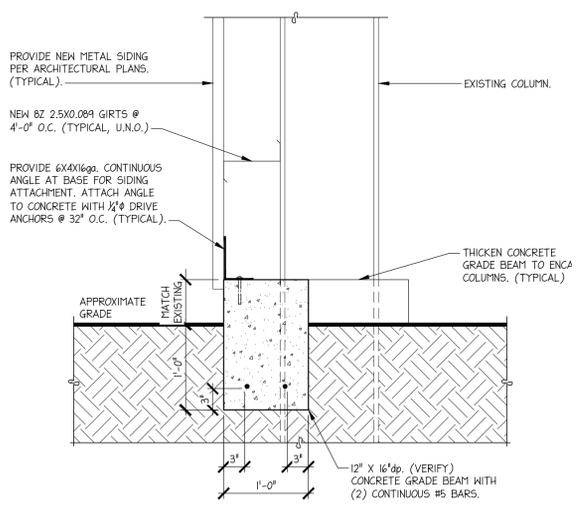
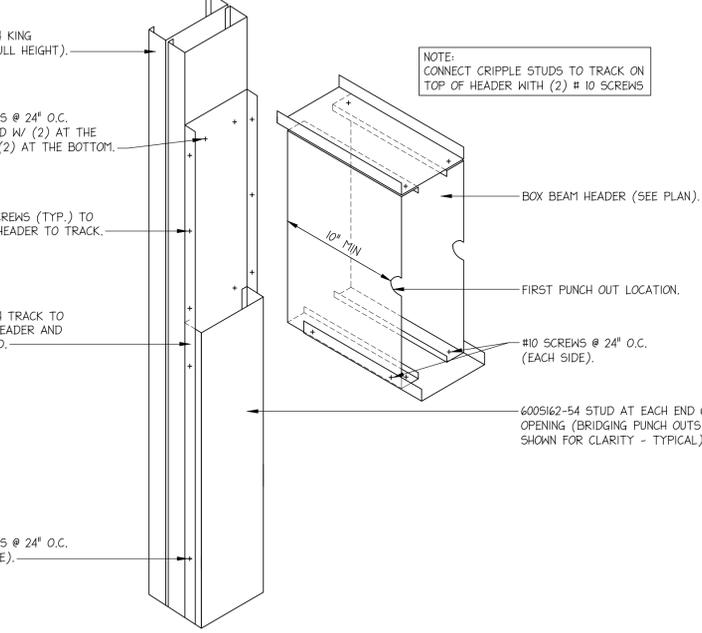
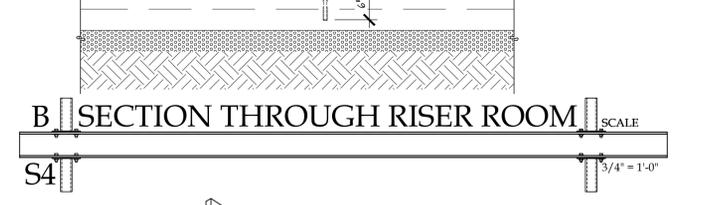
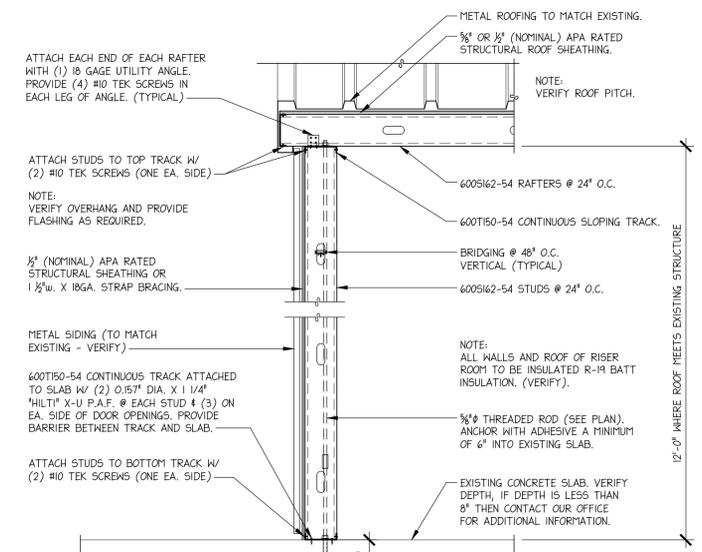
LIGHT GAUGE STEEL FRAMING NOTES:

- ALL LIGHT GAUGE STEEL COMPONENTS ARE BASED ON "CLARK-DIETRICH" SPECIFICATIONS. (AN APPROVED EQUAL MAY BE SUBSTITUTED)
- ALL LIGHT GAUGE STEEL FRAMING SHALL BE COLD FORMED STEEL STRUCTURAL MEMBERS DESIGNED BY LATEST SPECIFICATIONS OF A.I.S.I.
- GALVANIZED STEEL STUDS, 12, 14, AND 16 GAUGE, SHALL CONFORM TO A 653, S0, GRADE 50 CLASS 1, WITH FY = 50 KSI GALVANIZED STEEL STUDS, 18 AND 20 GAUGE, SHALL CONFORM TO A 653, C0, GRADE 33, WITH FY = 33 KSI
- ALL WELDS TO BE MADE BY A CERTIFIED WELDER OF AWS FOR TYPE OF WELD REQUIRED. WELDING ELECTRODES -E70 SERIES.
- BRIDGING IN WALLS SHALL BE AT 5'-0" O.C. WITH (2) ROWS BRIDGING MAX.
- SCREWS: SCREW PENETRATION THROUGH JOINED MATERIALS MUST BE A MINIMUM OF THREE EXPOSED SCREW THREADS. SPACING AND EDGE DISTANCE SHALL BE 1/2" OR MORE (OR AS SPECIFIED BY SCREW MANUFACTURER.)
- ITEMS LISTED AS DEFLECTION TRACKS ARE TO BE DEEP LEG TRACKS WITH THE STUDS NESTED IN IT. THE STUDS MUST BE BRACED AT THE TOP WITH BRIDGING OR FLAT STRIPS OR A VERTITRACK BY THE STEEL NETWORK (OR EQUAL) MAY BE USED. (USE VTD SERIES FOR INTERIOR WALLS AND VTX SERIES FOR EXTERIOR WALLS.)
- ALL INTERIOR NON LOAD BEARING WALLS ARE AS SPECIFIED ON ARCHITECTURAL DRAWINGS AND MUST MEET MIN. CODE REQUIREMENTS.
- CONTRACTOR TO SUBMIT LIGHT GAUGE SHOP DRAWINGS FOR REVIEW.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL LOCATIONS AND WIDTHS OF METAL STUD WALLS. CONTRACTOR TO DETERMINE REQUIRED GAUGE AND SPACING.
- P.D.F. TO BE A POWER DRIVEN OR POWER ACTUATED STEEL FASTENER APPROPRIATE FOR USE INDICATED IN LENGTH & STYLE.

STRUCTURAL STEEL NOTES:

- H55 = HOLLOW STRUCTURAL SECTION
- STRUCTURAL STEEL ANGLES, "M" SECTIONS, "S" SECTIONS, CHANNELS, AND PLATES = ASTM A36 STRUCTURAL STEEL "HP" SECTIONS = ASTM A572, GRADE 50 STRUCTURAL STEEL "W" SECTIONS = ASTM A992
ALL "TEE" SECTIONS USE SAME MATERIAL AS THEIR ROOT SHAPE
H55 (TUBE STEEL) RECTANGULAR AND ROUND = ASTM A500, GRADE B STEEL PIPE = ASTM A53, GRADE B
- DESIGN ALL CONNECTIONS FOR FULL STRENGTH OF MEMBERS, ALL BOLTS TO BE 3/4" DIA. H.S. ASTM (MIN.) UNLESS NOTED OTHERWISE. WELDING ELECTRODES TO BE E70 SERIES.
- ALL WELDS TO BE MADE BY A CERTIFIED WELDER OF AWS FOR TYPE OF WELD WHICH IS REQUIRED.

STANDARD REBAR/DOWEL SCHEDULE			
d_b = BAR DIAMETER	DOWEL SIZE	BEND RADIUS	BAR EXTENSION (MIN.)
#4	3"	6"	
#5	3.75"	7.5"	
#6	4.5"	9"	
#7	5.25"	10.5"	
#8	6"	12"	
	6 + d_b	12 + d_b	



New Hanover County Recycling
3002 US-421
Wilmington, NC

REPAIR PLAN & RISER ROOM

PROJECT NO: 15060
DATE: 05-29-2015
DRAWN BY: D.N.U.
DESIGNED BY: W.D.J.

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S4 4

NEW HANOVER COUNTY RECYCLING OFFICE

3002 US - 421
WILMINGTON, NC

FIRE ALARM SYSTEM

DRAWING INDEX

GENERAL

CO.1 COVER SHEET

ELECTRICAL

E1.0 ELECTRICAL SPECIFICATIONS AND GENERAL NOTES
E2.0 OFFICE BUILDING FIRE ALARM PLANS AND FUNCTIONAL FIRE ALARM RISER DIAGRAM



McFadyen Engineers, PLLC

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NC# P-1010

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ELECTRICAL SPECIFICATIONS

16000 GENERAL ELECTRICAL

- A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS INsofar AS THEY APPLY.
1. THE NATIONAL ELECTRICAL CODE, 2011 EDITION
 2. THE NATIONAL ELECTRICAL SAFETY CODE
 3. UNDERWRITER'S LABORATORIES, INC., STANDARDS AND APPROVED LISTINGS
 4. ELECTRICAL TESTING LABORATORIES STANDARDS
 5. NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION AND REVISIONS
 6. ALL LOCAL CODES AND ORDINANCES
 7. NFPA 72
 8. ADA
- B. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND SHALL PAY FOR SAME. THE CONTRACTOR SHALL FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.
- C. ALL WORK SHALL BE DONE BY SKILLED MECHANICS AND SHALL PRESENT A NEAT, TRIM AND WORKMANLIKE FINISH WHEN COMPLETED.
- D. COORDINATION: DO NOT SCALE ELECTRICAL DRAWINGS. LOCATIONS SHOWN ARE APPROXIMATE. THE DRAWINGS DO NOT GIVE EXACT DETAILS AS TO ELEVATIONS AND LOCATIONS OF VARIOUS FITTINGS, CONDUIT, ETC., AND DO NOT SHOW ALL OFFSETS AND OTHER INSTALLATION DETAILS WHICH MAY BE REQUIRED.
- E. MATERIALS: ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME, AND UL LABEL WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL. MATERIALS SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S REGULARLY ENGAGED IN THE MANUFACTURE OF THE REQUIRED TYPE OF EQUIPMENT AND THE MANUFACTURER'S LATEST APPROVED DESIGN. OTHER MATERIALS AND EQUIPMENT TO BE AS SHOWN ON THE DRAWINGS. WHERE NO SPECIFIC MATERIAL TYPE IS MENTIONED, A HIGH QUALITY PRODUCT OF A REPUTABLE MANUFACTURER MAY BE USED PROVIDED IT CONFORMS TO THE REQUIREMENTS OF THESE SPECIFICATIONS.
- F. WIRING METHODS: ALL POWER CIRCUITS SHALL BE INSTALLED IN METALLIC RACEWAYS. INTERIOR FIRE ALARM CABLE MAY BE FREE RUN ABOVE ACCESSIBLE CEILINGS AND FISHED IN WALLS. SUPPORT FREE RUN CABLE TO THE STRUCTURE. ALL EXPOSED WORK SHALL BE IN CONDUIT.
- G. ELECTRICAL DISTRIBUTION SYSTEM TESTS
1. ALL CURRENT CARRYING PHASE CONDUCTORS AND NEUTRALS SHALL BE TESTED AS INSTALLED, AND BEFORE CONNECTIONS ARE MADE, FOR INSULATION RESISTANCE AND ACCIDENTAL GROUNDS. THIS SHALL BE DONE WITH A 500 VOLT MEGGER.
 - a. MINIMUM READINGS SHALL BE ONE MILLION (1,000,000) OHMS FOR #8 WIRE AND SMALLER, 250,000 OHMS OR MORE FOR #4 WIRE OR LARGER BETWEEN CONDUCTORS AND BETWEEN CONDUCTOR AND THE GROUNDED METAL RACEWAY.
 - b. AFTER ALL FITTINGS, DEVICES AND EQUIPMENT ARE INSTALLED AND ALL CONNECTIONS COMPLETED TO EACH PANEL, THE CONTRACTOR SHALL DISCONNECT THE NEUTRAL FEEDER CONDUCTOR FROM THE NEUTRAL BAR AND TAKE A MEGGER READING BETWEEN THE NEUTRAL BAR AND GROUNDED ENCLOSURE. IF THIS READING IS LESS THAN 250,000 OHMS, THE CONTRACTOR SHALL DISCONNECT THE BRANCH CIRCUIT NEUTRAL WIRES FROM THIS NEUTRAL BAR. HE SHALL THEN TEST EACH ONE SEPARATELY TO THE PANEL AND UNTIL THE LOW READING ONES ARE FOUND. THE CONTRACTOR SHALL CORRECT TROUBLES, RECONNECT AND RETEST UNTIL AT LEAST 250,000 OHMS FROM THE NEUTRAL BAR TO THE GROUNDED PANEL CAN BE ACHIEVED WITH ONLY THE NEUTRAL FEEDER DISCONNECTED.
 - c. THE CONTRACTOR SHALL CERTIFY IN WRITING THE ABOVE HAS BEEN DONE AND TABULATE THE MEGGER READINGS FOR EACH PANEL.
- H. EXISTING BUILDINGS AND CONSTRUCTION
1. THE CONTRACTOR IS CAUTIONED THAT WORK TO BE PERFORMED UNDER THIS CONTRACT IS TO BE ACCOMPLISHED IN AND ADJACENT TO EXISTING OCCUPIED BUILDINGS. ALL SUCH WORK SHALL BE SCHEDULED AND ARRANGED TO BE DONE AT THE CONVENIENCE OF THE OWNER SO AS NOT TO INTERFERE WITH, DISRUPT, OR DISTURB NORMAL OPERATIONS IN THE BUILDING. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER BEFORE PROCEEDING WITH WORK IN EXISTING BUILDINGS AND SHALL WORK IN EXISTING BUILDINGS ON SCHEDULE AS AGREED UPON WITH THE OWNER.
 2. THE CONTRACTOR SHALL, AT ALL TIMES, PROVIDE SAFETY BARRIERS, PROTECTIVE DEVICES, SCREENING, DUST BARRIERS, ETC., AS REQUIRED TO MAINTAIN THE SAFETY AND COMFORT OF THE BUILDING'S PERSONNEL AND/OR OCCUPANTS IN OR NEAR HIS WORK AREA.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP IN CONNECTION WITH HIS WORK IN EXISTING BUILDINGS. ALL DEMOLISHED EQUIPMENT AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. AT THE END OF EACH WORKING DAY, DEBRIS, BOXES, WASTE, ETC., SHALL BE REMOVED FROM THE BUILDINGS AND PROPERLY DISPOSED OF. CONTRACTOR EQUIPMENT, MATERIALS, ETC., MUST BE PROPERLY STORED, STACKED AND LOCATED AS INSTRUCTED BY THE OWNER.
 4. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING, FINISHING, REPAIRING, PAINTING, ETC., NECESSARY FOR WORK TO BE INSTALLED IN EXISTING BUILDINGS. ALL FINISHES SHALL BE LEFT TO EQUAL FINISH AND CONDITION PRIOR TO CUTTING, NO CUTTING OF STRUCTURAL MEMBERS WILL BE ALLOWED. REMOVE/REPLACE EXISTING LAY-IN CEILING AS REQUIRED TO ACCOMPLISH WORK. ALL CUTTING OF WALLS, FLOORS, ROOFS, ETC., SHALL BE REPAIRED AND/OR REPLACED TO EQUAL FINISH PRIOR TO CUTTING. CORE DRILL ALL HOLES FOR CONDUIT. THE CONTRACTOR SHALL ROUTE CONDUITS AND LOCATE EQUIPMENT AS APPROVED BY THE OWNER'S REPRESENTATIVE. ROUTINGS AND LOCATIONS SHALL BE FIRMLY ESTABLISHED AND APPROVED BEFORE PROCEEDING WITH ANY PHASE OF THE WORK.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING BUILDINGS, GROUNDS, WALKWAYS, PAVING, ETC., CAUSED BY THE WORK. THE CONTRACTOR AND/OR HIS PERSONNEL, AND/OR HIS EQUIPMENT IN THE ACCOMPLISHMENT OF THIS WORK. SUCH DAMAGES SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, TO FINISH EQUAL TO THAT FINISH PRIOR TO DAMAGE. THE OWNER'S REPRESENTATIVE SHALL BE THE JUDGE AS TO EQUAL FINISHES, ETC.
 6. COORDINATE POWER OUTAGES WITH THE OWNER. REQUEST OUTAGES 24 HOURS IN ADVANCE.
- I. SUBMITTALS: SUBMITTALS SHALL INCLUDE PRODUCT DATA FOR THE FIRE ALARM SYSTEM. INCLUDE DIMENSIONS AND MANUFACTURERS TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS AND FINISHES.
- J. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY PARTS OF ANY SYSTEM THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE GUARANTEE PERIOD.

16111 RACEWAYS AND FITTINGS

- A. RACEWAYS SHALL BE ELECTRICAL METALLIC TUBING WITH APPROPRIATE FITTINGS. EMT FITTINGS SHALL BE HEX NUT STEEL COMPRESSION TYPE WITH INSULATED THROATS.
- B. RACEWAYS, BOXES, FITTINGS, ETC., SHALL BE SOLIDLY FASTENED TO MASONRY WITH LEAD ANCHORS AND MACHINE SCREWS OR TOGGLE BOLTS. RACEWAYS SHALL BE FASTENED TO STRUCTURAL STEEL WITH BEAM CLAMPS, CONDUIT HANGERS, TRAPEZE HANGERS, OR OTHER APPROVED DEVICES.
- C. RACEWAYS PASSING THROUGH RAISED WALLS, FLOORS, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH PUBLISHED UL CONFIGURATIONS.
- D. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC UNLESS SHOWN OTHERWISE, MINIMUM SIZE 1/2" INCH, EXCEPT HOMERUNS MINIMUM SIZE SHALL BE 3/4".

16123 CONDUCTORS

- A. CONDUCTORS SHALL BE COPPER WITH 600V INSULATION, MINIMUM SIZE #12. SIZES #10 AND #12 SHALL BE SOLID, #8 AND LARGER, STRANDED.
- B. CONDUCTORS SHALL BE COLOR CODED THROUGHOUT, SIZES #10 AND #12 SHALL BE FACTORY CODED, SIZES #8 AND LARGER MAY BE COLOR TAPED ON THE JOB. COLOR CODING SHALL MATCH EXISTING.
- C. CONDUCTORS SHALL MEET THE LATEST REQUIREMENTS OF NEMA AND IPCEA AND SHALL BE UL APPROVED.
- D. ALL CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPLICE BETWEEN JUNCTION, OUTLET, DEVICE BOXES, ETC., UNLESS NOTED OTHERWISE. NO SPLICING WILL BE PERMITTED IN PANELBOARD CABINETS, SAFETY SWITCHES, ETC.

16130 BOXES

- A. JUNCTION, SWITCH, RECEPTACLE AND OUTLET BOXES FOR INTERIOR USE IN DRY LOCATIONS SHALL BE ZINC COATED OR CADMIUM PLATED SHEET STEEL, 4" SQUARE AND 2-1/8" DEEP, UNLESS OTHERWISE INDICATED ON THE CONTRACT, EXCEPT SINGLE WIRING DEVICE BOXES MAY BE SINGLE GANG. SMALLER AND SHALLOWER OUTLET BOXES WILL BE PERMITTED ONLY BY SPECIAL PERMISSION OF THE ARCHITECT/ENGINEER WHERE SUCH BOXES ARE NECESSARY DUE TO STRUCTURAL CONDITIONS ENCOUNTERED. WHERE LARGER JUNCTION BOXES ARE REQUIRED, THEY SHALL BE FABRICATED FROM NO. 10, 12, 14 OR 16 GAUGE SHEET STEEL AS REQUIRED BY THE UNDERWRITER'S LABORATORIES, INC., AND GALVANIZED AFTER FABRICATION.
- B. ALL JUNCTION BOXES SHALL HAVE BOREW FASTENED COVERS. OUTLET BOXES SHALL BE PROVIDED WITH EXTENSION PLASTER RINGS WHERE REQUIRED BY STRUCTURAL AND FINISH CONDITIONS.
- C. BOXES INSTALLED IN CONCEALED LOCATIONS SHALL BE SET FLUSH WITH THE FINISHED SURFACES AND SHALL BE PROVIDED WITH EXTENSION RINGS WHERE REQUIRED. BOXES SHALL BE RIGIDLY INSTALLED.
- D. SET WALL MOUNTED BOXES AT ELEVATIONS TO ACCOMMODATE MOUNTING HEIGHTS INDICATED AND SPECIFIED IN SECTION FOR OUTLET DEVICE. BOXES ARE SHOWN ON DRAWINGS IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED.
- E. INSTALL BOXES TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS AND OTHER ELEMENTS, USING APPROVED MATERIALS AND METHODS.

16170 GROUNDING

- A. ALL GROUNDING SHALL BE IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. IN ADDITION, THE FOLLOWING REQUIREMENTS SHALL BE MET:
1. GROUNDING CONDUCTORS SHALL BE INSTALLED AS TO PERMIT THE SHORTEST AND MOST DIRECT PATH FROM EQUIPMENT TO GROUND. GROUND CONNECTIONS TO GROUND CONDUCTORS SHALL BE ACCESSIBLE.
 2. EQUIPMENT GROUND CONTINUITY SHALL BE MAINTAINED THROUGH FLEXIBLE METAL CONDUIT.
 3. ALL WIRING DEVICES EQUIPPED WITH GROUNDING CONNECTION SHALL BE SOLIDLY GROUND TO GROUND SYSTEM WITH GROUNDING CONDUCTORS.
 4. THE FRAME OF ALL LIGHTING FIXTURES SHALL BE SECURELY GROUND TO THE EQUIPMENT GROUND SYSTEM WITH GROUNDING CONDUCTORS.
 5. GROUNDING TYPE CONVENIENCE OUTLETS AND SWITCHES SHALL BE SOLIDLY GROUND TO EQUIPMENT GROUNDING SYSTEM WITH A GREEN COLORED INSULATED CONDUCTOR. ELECTRICAL CONNECTIONS SHALL BE CONTINUOUS FROM EQUIPMENT GROUND BUS IN PANELBOARD TO THE HEX NUT ON THE CONVENIENCE OUTLET OR SWITCH.
 6. ALL CIRCUITS SHALL CONTAIN AN INSULATED, GREEN, COPPER GROUNDING CONDUCTOR, SIZED IN ACCORDANCE WITH TABLE 250-122 OF THE NEC. GROUNDING CONDUCTORS SHALL BE CONNECTED TO EQUIPMENT GROUND BUS IN PANELBOARD AND SECURELY ATTACHED AND GROUND TO THE DEVICE OR ENCLOSURE AT THE OTHER END.
 7. ALL EQUIPMENT ENCLOSURES, AND NON-CURRENT METALLIC PARTS OF ELECTRICAL EQUIPMENT, RACEWAY SYSTEMS, ETC., SHALL BE EFFECTIVELY AND ADEQUATELY BONDED TO GROUND.
- B. GROUNDING TYPE INSULATED BONDING BUSHINGS AND JUMPERS SHALL BE PROVIDED WHERE CONCENTRIC, ECCENTRIC OR OVER-SIZED KNOCKOUTS ARE ENCOUNTERED.

16190 SUPPORTING DEVICES

- A. PROVIDE MATERIALS, SIZES, AND TYPES OF ANCHORS, FASTENERS AND SUPPORTS TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT. CONSIDER WEIGHT OF WIRE IN CONDUIT WHEN SELECTING PRODUCTS. PROVIDE ADEQUATE CORROSION RESISTANCE.
- B. ANCHORS AND FASTENERS:
1. CONCRETE STRUCTURAL ELEMENTS: USE EXPANSION ANCHORS.
 2. STEEL STRUCTURAL ELEMENTS: USE BEAM CLAMPS.
 3. CONCRETE SURFACES: USE SELF-DRILLING ANCHORS AND EXPANSION ANCHORS.
 4. HOLLOW MASONRY, PLASTER, AND GYPSUM BOARD PARTITIONS: USE TOGGLE BOLTS.
 5. SOLID MASONRY WALLS: USE EXPANSION ANCHORS.
 6. SHEET METAL: USE SHEET METAL SCREWS OR BOLTS.
 7. WOOD ELEMENTS: USE WOOD SCREWS.
- C. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- D. PROVIDE ANCHORS, FASTENERS, AND SUPPORTS IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION".
- E. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT, AND CONDUIT.
- F. DO NOT USE POWDER-ACTUATED ANCHORS.
- G. OBTAIN PERMISSION FROM ENGINEER BEFORE DRILLING OR CUTTING STRUCTURAL MEMBERS.
- H. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR STEEL CHANNEL. RIGIDLY WELD MEMBERS OR USE HEXAGON HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS.
- I. INSTALL SURFACE-MOUNTED CABINETS WITH MINIMUM OF FOUR ANCHORS.
- J. EXPOSED RACEWAYS 1 INSTALLED IN THE TIPPING BUILDING SHALL BE SPACED AWAY FROM THE MOUNTING SURFACE A MINIMUM OF 1/4" INCH (65MM) USING "CLAMP-BACKS" OR STRUTS.

16195 IDENTIFICATION

- A. WIRE MARKERS: PROVIDE SPLIT SLEEVE TYPE WIRE MARKERS OR APPROVED EQUIVALENT ON EACH CONDUCTOR AT PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND EACH LOAD CONNECTION.
- B. IDENTIFICATION NAMEPLATES: FURNISH AND INSTALL ENGRAVED LAMINATED PHENOLIC NAMEPLATES FOR ALL FIRE ALARM EQUIPMENT. NAMEPLATES SHALL BE SECURELY ATTACHED TO EQUIPMENT WITH METAL SCREWS AND SHALL IDENTIFY BY NAME. LETTERS SHALL BE APPROXIMATELY 1/4"-INCH HIGH MINIMUM. INSTALL NAMEPLATE PARALLEL TO EQUIPMENT LINES. EMBOSSED, SELF-ADHESIVE PLASTIC TAPE IS NOT ACCEPTABLE. NAMEPLATE MATERIAL COLORS SHALL BE RED SURFACE WITH WHITE CORE.
- C. RECEPTACLE CIRCUIT IDENTIFICATION: PROVIDE ADHESIVE BACKED, LAMINATED PLASTIC RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL BE LABEL MACHINE PRINTED, BLACK LETTERING ON A CLEAR BACKGROUND. TO INDICATE PANEL AND CIRCUIT NUMBER AND SHALL BE CASIO, BROTHER, T&B OR APPROVED EQUAL.
- D. PAINT VISIBLE SURFACES OF EXPOSED FIRE ALARM SYSTEM RACEWAYS, JUNCTION AND OUTLET BOXES AND COVERS OF BOXES RED. PAINT ALL BOXES AND COVERS BEFORE INSTALLATION.

16476 CIRCUIT BREAKERS

- A. ENCLOSED CIRCUIT BREAKERS SHALL BE MOLDED CASE, UL LISTED AND SHALL BE RATED AS SHOWN ON THE DRAWINGS WITH APPROPRIATE WITHSTAND RATINGS AND CURRENT LIMITING CHARACTERISTICS AS REQUIRED TO SAFELY FUNCTION AND PROTECT THE DISTRIBUTION SYSTEM. ACCESSORIES SHALL BE PROVIDED AS NOTED OR REQUIRED AND SHALL BE UL LISTED AND FIELD INSTALLABLE.
- B. CIRCUIT BREAKERS INDICATED TO BE INSTALLED IN EXISTING PANELBOARDS SHALL BE MOLDED CASE, UL LISTED AND SHALL BE RATED AS SHOWN ON THE DRAWINGS. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES AS REQUIRED TO INSTALL NEW CIRCUIT BREAKERS. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING TYPES INSTALLED AND BE RATED CONSISTENT WITH THE EXISTING EQUIPMENT TO MAINTAIN EQUIPMENT RATINGS. ACCESSORIES SHALL BE PROVIDED AS NOTED OR REQUIRED AND SHALL BE UL LISTED AND FIELD INSTALLABLE.
- C. CIRCUIT BREAKERS SHALL BE MANUFACTURED BY CUTLER HAMMER, GENERAL ELECTRIC, SIEMENS OR SQUARE D.

16721 FIRE ALARM SYSTEMS

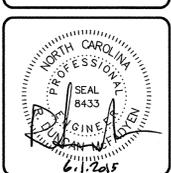
- A. NCSBC SECTION 907 COMPLIANT FIRE DETECTION AND ALARM SYSTEM. THE SYSTEM SHALL BE CLASS "B"; TWO WIRE ADDRESSABLE TYPE WITH SMOKE DETECTORS, HEAT DETECTORS, DOUBLE ACTION TYPE MANUAL STATIONS, SYNCHRONIZED ADA AURAL/VISUAL AND STROBE ONLY NOTIFICATION APPLIANCES, A SOLID STATE FIRE ALARM CONTROL PANEL WITH REMOTE LCD ALPHANUMERIC ANNUNCIATOR AND RECHARGING BATTERY SUPPLY. THE SYSTEM SHALL PROVIDE LOCAL ANNUNCIATION VIA ALARM INDICATING APPLIANCES AND REMOTE ANNUNCIATION VIA TELEPHONE LINES. PROVIDE A DEDICATED 120 VAC BRANCH CIRCUIT WITH BREAKER LOCKING MEANS FOR THE FACP. BATTERY SUPPLY CAPACITY SHALL PROVIDE FOR 80 HOURS IN STANDBY FOLLOWED BY 5 MINUTES WITH ALL DEVICES IN ALARM. ALL AURAL DEVICES SHALL PRODUCE SOUND PRESSURES AS REQUIRED BY THE ADA, NFPA 72 AND NCSBC SECTION 907. SET VISUAL SIGNAL DEVICE INTENSITIES FOR COMPLIANCE WITH THE ADA. PROVIDE A DUAL LINE UNIVERSAL DIGITAL ALARM COMMUNICATOR (UDACT) AND CONNECT TO EXISTING TELEPHONE LINES. ALL NOTIFICATION APPLIANCE WIRING SHALL BE #14 AWG MINIMUM. INITIATING DEVICE CIRCUITS SHALL BE SIZED AS REQUIRED BY THE SYSTEM MANUFACTURER. ALL CONDUCTORS AND CABLE SHALL BE COLOR CODED AND INSTALLED CONCEALED. THE CONTRACTOR SHALL FURNISH ALL PARTS, MATERIALS, LABOR, ACCESSORIES, CONNECTIONS, EQUIPMENT, PROGRAMMING, ETC. REQUIRED FOR COMPLETE AND OPERATING CODE-COMPLIANT SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS, EVEN IF EACH NEEDED ITEM IS NOT SPECIFICALLY SHOWN OR DESCRIBED ON THE CONTRACT DRAWINGS OR SPECIFICATIONS. PROVIDE ALL DOCUMENTATION, TESTING AND CERTIFICATION SERVICES AS REQUIRED BY ALL PERTINENT CODES AND THE AUTHORITY HAVING JURISDICTION (AHJ). SYSTEM MANUFACTURER SHALL BE NOTIFIER, EDWARDS OR FIRE LITE. SYSTEMS SHALL BE NON-PROPRIETARY AND OPEN ARCHITECTURE. THE OWNER SHALL REVIEW AND APPROVE SYSTEM SUBMITTALS AND RESERVES FINAL APPROVAL AUTHORITY FOR ALL PROPOSED SYSTEMS. ALL WORK SHALL BE IN COMPLIANCE WITH NFPA 70 AND 72 AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL EQUIPMENT SUPPLIED SHALL BE LISTED FOR THE PURPOSE FOR WHICH IT IS USED AND INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN ITS LISTING. SYSTEMS SHALL ALSO BE NEW WITH A FULL WARRANTY (PARTS AND LABOR) OF AT LEAST ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. FURNISH SERVICE AND MAINTENANCE OF THE SYSTEM FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- B. THE EXACT SPACING OF SMOKE AND HEAT DETECTORS AND A/V DEVICES SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS, BUT SPACING SHALL NOT EXCEED ADA, NFPA AND EQUIPMENT MANUFACTURERS SPACING CRITERIA. DO NOT INSTALL SMOKE DETECTORS WITHIN 3 FEET OF SUPPLY AIR DIFFUSERS OR RETURN GRILLES.

GENERAL NOTES

1. THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
2. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
3. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.
4. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
5. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
6. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.
7. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL BE STORED IN DRY PERMANENT SHELTERS. PROVIDE HEATING FOR EQUIPMENT SUBJECT TO MOISTURE DAMAGE OR DAMAGE FROM CONDENSATION. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. DO NOT SCALE ELECTRICAL DRAWINGS. FIELD VERIFY ALL DIMENSIONS.
9. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AND CABLES AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.
10. UNLESS DIMENSIONED, DEVICE LOCATIONS (EXCEPT FIRE ALARM INITIATING AND NOTIFICATION APPLIANCES) SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES.
11. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.
12. DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.
13. THE DRAWINGS INDICATE THE NUMBER OF BRANCH CIRCUIT HOMERUN PHASE CONDUCTORS VIA ARROWHEADS. PROVIDE NEUTRAL AND EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.
14. MAINTAIN CEILING FIRE RATINGS WITH ALL NECESSARY LIGHTING FIXTURE TRIM, ACCESSORIES, OPTIONS AND/OR FIELD FABRICATED SHROUDS COMPLYING WITH ALL APPLICABLE CODES.
15. RACEWAYS AND CABLES PENETRATING CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKE TIGHT.
16. RACEWAYS AND CABLES PENETRATING RATED CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES.
17. ALL RACEWAYS AND CABLES SHALL BE CONCEALED EXCEPT THOSE SHOWN TO BE EXPOSED ON DRAWINGS. IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.
18. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANDED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANDED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
19. PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER.
20. CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.
21. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL.
22. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" MINIMUM RACEWAY.
23. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.
24. KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.
25. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.
26. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
27. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE ENGINEER.
28. PROTECT ALL EXISTING POWER, COMMUNICATIONS, DATA, LIFE SAFETY SYSTEMS, ETC. AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
29. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
30. DESIGN AND ADDITION OF NEW CIRCUITING IS BASED ON THE ENGINEER'S BEST INFORMATION REGARDING EXISTING CONDITIONS. AVAILABILITY OF ADEQUATE CIRCUIT BREAKER SPACE FOR NEW WORK IN EXISTING PANELBOARDS SHALL BE VERIFIED BY THE CONTRACTOR. IF ADEQUATE SPACE IS NOT AVAILABLE FOR NEW CIRCUIT BREAKERS THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR RESOLUTION.
31. THE EXISTING ELECTRICAL SYSTEMS DEPICTED ON THESE DRAWINGS HAVE BEEN COMPILED BY THE ENGINEER FROM LIMITED FIELD VERIFICATION OF THE EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, POINTS OF ACCESS AND FIELD CONDITIONS AFFECTING HIS WORK.
32. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS AND THE EXISTING BUILDING. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.
33. THE EXISTING FACILITIES WILL REMAIN OCCUPIED BY THE OWNER'S STAFF THROUGHOUT THE PROJECT. AS SUCH, WORK WILL REQUIRE SPECIAL EFFORT BY THIS CONTRACTOR TO ALLOW THE WORK TO PROCEED IN A TIMELY MANNER. ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE OWNER SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE APPROVED CONSTRUCTION SEQUENCE.
34. SAFETY: COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.

Revision No.	Description

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**New Hanover County Recycling Office
Fire Alarm System
Wilmington, North Carolina**

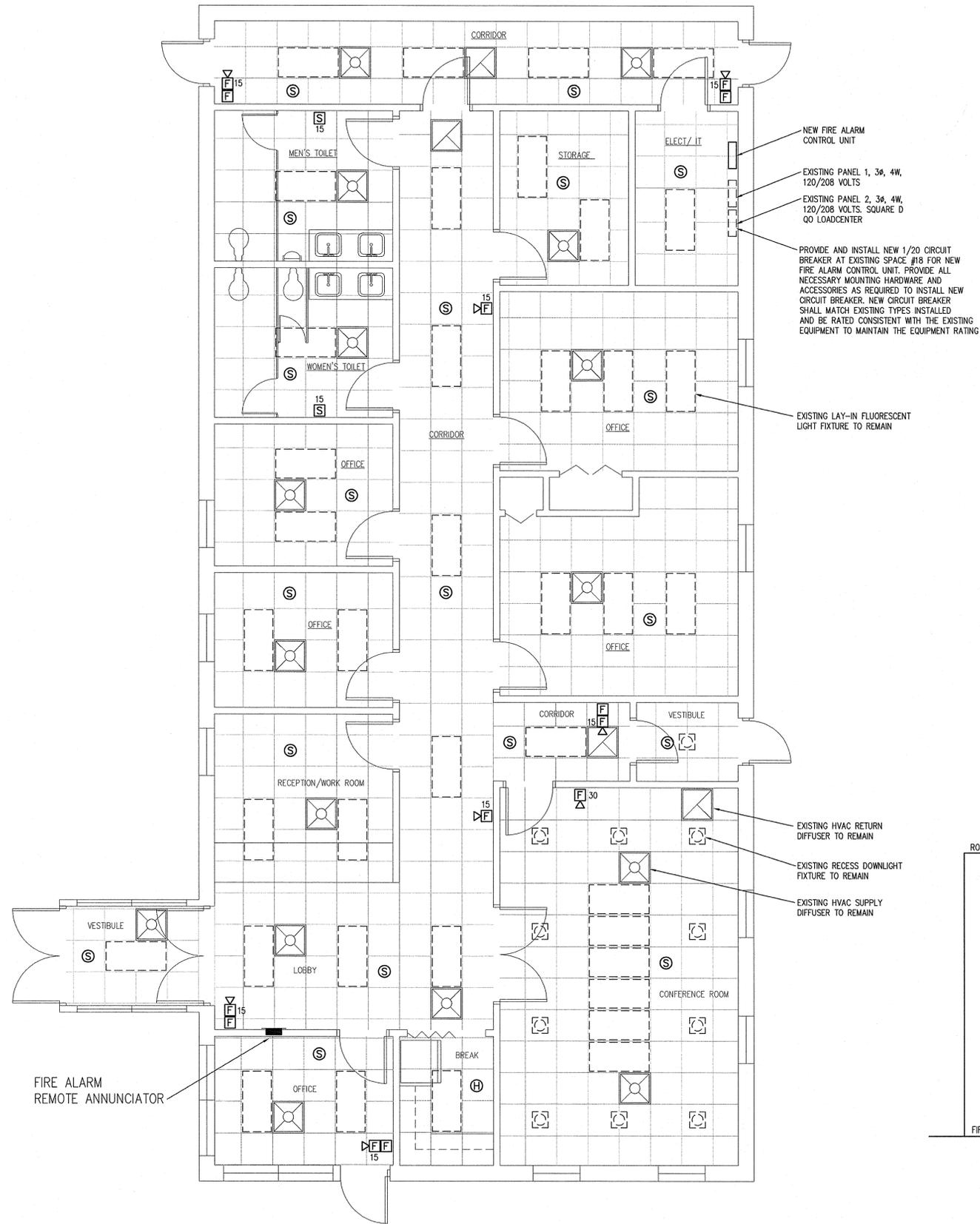
Electrical Specifications and General Notes

Job No.:	15006
Drawn by:	WJF
Designed:	RDJ
Checked:	RDJ

Drawing No:

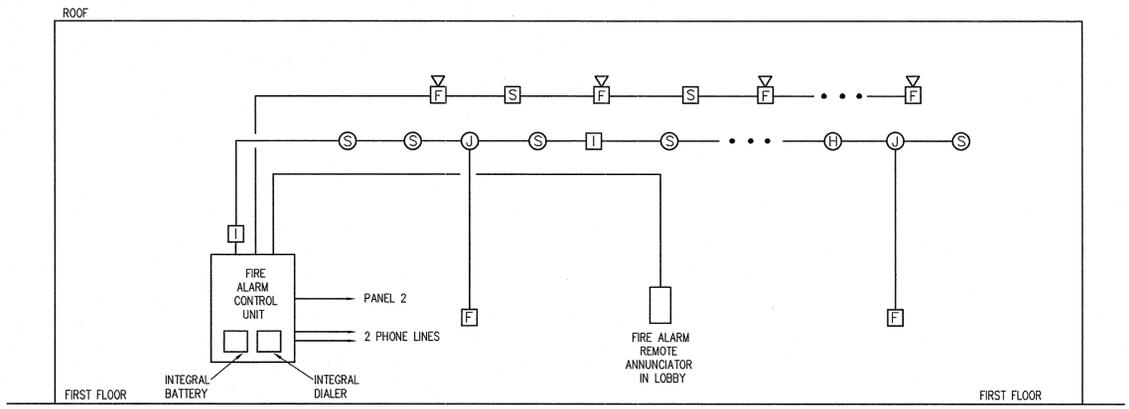
E1.0

Revision:



1 - Office Building Fire Alarm Plan
Scale: 1/4" = 1'-0"

Fire Alarm Legend	
F	FIRE ALARM MANUAL STATION, 48" AFF
75 F	FIRE ALARM AURAL/VISUAL DEVICE, 80" AFF, "75" INDICATED CANDELLA RATING
15 S	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15" INDICATES CANDELLA RATING
S	SMOKE DETECTOR, CEILING MOUNTED
H	HEAT DETECTOR, CEILING MOUNTED
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH
TB	FIRE ALARM SYSTEM TERMINAL BOX



NOTES: FUNCTIONAL FIRE ALARM RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT INDICATED

2 - Functional Fire Alarm Riser Diagram
Not to Scale

Revision No.	REVISIONS
Drawn By	
Checked By	
Date	

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NCF 15-1010



New Hanover County Recycling Office
Fire Alarm System
Wilmington, North Carolina

Office Building Fire Alarm Plan and
Functional Fire Alarm Riser Diagram

Job No.:	15006
Drawn:	WPJ
Designed:	ROM
Checked:	ROM

Drawing No:
E2.0

Revision:

ELECTRICAL SPECIFICATIONS

16000 GENERAL ELECTRICAL

- A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS INsofar AS THEY APPLY.
1. THE NATIONAL ELECTRICAL CODE, 2011 EDITION
 2. THE NATIONAL ELECTRICAL SAFETY CODE
 3. UNDERWRITER'S LABORATORIES, INC., STANDARDS AND APPROVED LISTINGS
 4. ELECTRICAL TESTING LABORATORIES STANDARDS
 5. NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION AND REVISIONS
 6. ALL LOCAL CODES AND ORDINANCES
 7. NFPA 72
 8. ADA
- B. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND SHALL PAY FOR SAME. THE CONTRACTOR SHALL FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.
- C. ALL WORK SHALL BE DONE BY SKILLED MECHANICS AND SHALL PRESENT A NEAT, TRIM AND WORKMANLIKE FINISH WHEN COMPLETED.
- D. COORDINATION: DO NOT SCALE ELECTRICAL DRAWINGS. LOCATIONS SHOWN ARE APPROXIMATE. THE DRAWINGS DO NOT GIVE EXACT DETAILS AS TO ELEVATIONS AND LOCATIONS OF VARIOUS FITTINGS, CONDUIT, ETC., AND DO NOT SHOW ALL OFFSETS AND OTHER INSTALLATION DETAILS WHICH MAY BE REQUIRED.
- E. WORK WITH OTHER CONTRACTORS: THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL ELECTRICAL POWER CONNECTIONS FOR ALL EQUIPMENT. SPRINKLER CONTROL AND SPRINKLER FIRE ALARM FINAL CONNECTIONS SHALL BE MADE BY THE SPRINKLER CONTRACTOR.
- F. MATERIALS: ALL MATERIALS SHALL BE NEW AND SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME, AND UL LABEL WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THE PARTICULAR MATERIAL. MATERIALS SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S REGULARLY ENGAGED IN THE MANUFACTURE OF THE REQUIRED TYPE OF EQUIPMENT AND THE MANUFACTURER'S LATEST APPROVED DESIGN. OTHER MATERIALS AND EQUIPMENT TO BE AS SHOWN ON THE DRAWINGS. WHERE NO SPECIFIC MATERIAL TYPE IS MENTIONED, A HIGH QUALITY PRODUCT OF A REPUTABLE MANUFACTURER MAY BE USED PROVIDED IT CONFORMS TO THE REQUIREMENTS OF THESE SPECIFICATIONS.
- G. WIRING METHODS: ALL POWER AND FIRE ALARM CIRCUITS SHALL BE INSTALLED IN SEPARATE METALLIC RACEWAYS. ALL EXPOSED WORK SHALL BE IN CONDUIT. OBSERVE NEC CLASSIFIED AREA REQUIREMENTS.
- H. ELECTRICAL DISTRIBUTION SYSTEM TESTS
1. ALL CURRENT CARRYING PHASE CONDUCTORS AND NEUTRALS SHALL BE TESTED AS INSTALLED, AND BEFORE CONNECTIONS ARE MADE, FOR INSULATION RESISTANCE AND ACCIDENTAL GROUNDS. THIS SHALL BE DONE WITH A 500 VOLT MEGGER.
 - a. MINIMUM READINGS SHALL BE ONE MILLION (1,000,000) OR MORE OHMS FOR #8 WIRE AND SMALLER, 250,000 OHMS OR MORE FOR #4 WIRE OR LARGER BETWEEN CONDUCTORS AND BETWEEN CONDUCTOR AND THE GROUNDED METAL RACEWAY.
 - b. AFTER ALL FIXTURES, DEVICES AND EQUIPMENT ARE INSTALLED AND ALL CONNECTIONS COMPLETED TO EACH PANEL, THE CONTRACTOR SHALL DISCONNECT THE NEUTRAL FEEDER CONDUCTOR FROM THE NEUTRAL BAR AND TAKE A MEGGER READING BETWEEN THE NEUTRAL BAR AND GROUNDED ENCLOSURE. IF THIS READING IS LESS THAN 250,000 OHMS, THE CONTRACTOR SHALL DISCONNECT THE BRANCH CIRCUIT NEUTRAL WIRES FROM THIS NEUTRAL BAR. HE SHALL THEN TEST EACH ONE SEPARATELY TO THE PANEL AND UNTIL THE LOW READING ONES ARE FOUND. THE CONTRACTOR SHALL CORRECT TROUBLES, RECONNECT AND RETEST UNTIL AT LEAST 250,000 OHMS FROM THE NEUTRAL BAR TO THE GROUNDED PANEL CAN BE ACHIEVED WITH ONLY THE NEUTRAL FEEDER DISCONNECTED.
 - c. THE CONTRACTOR SHALL CERTIFY IN WRITING THE ABOVE HAS BEEN DONE AND TABULATE THE MEGGER READINGS FOR EACH PANEL.
 2. EXISTING BUILDINGS AND CONSTRUCTION
 1. THE CONTRACTOR IS CAUTIONED THAT WORK TO BE PERFORMED UNDER THIS CONTRACT IS TO BE ACCOMPLISHED IN AND ADJACENT TO EXISTING OCCUPIED BUILDINGS. ALL SUCH WORK SHALL BE SCHEDULED AND ARRANGED TO BE DONE AT THE CONVENIENCE OF THE OWNER SO AS NOT TO INTERFERE WITH, DISRUPT, OR DISTURB NORMAL OPERATIONS IN THE BUILDING. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER BEFORE PROCEEDING WITH WORK IN EXISTING BUILDINGS AND SHALL WORK IN EXISTING BUILDINGS ON SCHEDULE AS AGREED UPON WITH THE OWNER.
 2. THE CONTRACTOR SHALL, AT ALL TIMES, PROVIDE SAFETY BARRIERS, PROTECTIVE DEVICES, SCREENING, DUST BARRIERS, ETC., AS REQUIRED TO MAINTAIN THE SAFETY AND COMFORT OF THE BUILDING'S PERSONNEL AND/OR OCCUPANTS IN OR NEAR HIS WORK AREA.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP IN CONNECTION WITH HIS WORK IN EXISTING BUILDINGS. ALL DEMOLISHED EQUIPMENT AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. AT THE END OF EACH WORKING DAY, DEBRIS, BOXES, WASTE, ETC., SHALL BE REMOVED FROM THE BUILDINGS AND PROPERLY DISPOSED OF. CONTRACTOR EQUIPMENT, MATERIALS, ETC., MUST BE PROPERLY STORED, STACKED AND LOCATED AS INSTRUCTED BY THE OWNER.
 4. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING, FINISHING, REPAIRING, PAINTING, ETC., NECESSARY FOR WORK TO BE INSTALLED IN EXISTING BUILDINGS. ALL FINISHES SHALL BE LEFT TO EQUAL FINISH AND CONDITION PRIOR TO CUTTING. NO CUTTING OF STRUCTURAL MEMBERS WILL BE ALLOWED. REMOVE/REPLACE EXISTING LAY-IN CEILING AS REQUIRED TO ACCOMPLISH WORK. ALL CUTTING OF WALLS, FLOORS, ROOFS, ETC., SHALL BE REPAIRED AND/OR REPLACED TO EQUAL FINISH PRIOR TO CUTTING. CORE DRILL ALL HOLES FOR CONDUIT. THE CONTRACTOR SHALL ROUTE CONDUITS AND LOCATE EQUIPMENT AS APPROVED BY THE OWNER'S REPRESENTATIVE. ROUTINGS AND LOCATIONS SHALL BE FIRMLY ESTABLISHED AND APPROVED BEFORE PROCEEDING WITH ANY PHASE OF THE WORK.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING BUILDINGS, GROUNDS, WALKWAYS, PAVING, ETC., CAUSED BY THE WORK, THE CONTRACTOR AND/OR HIS PERSONNEL, AND/OR HIS EQUIPMENT IN THE ACCOMPLISHMENT OF THIS WORK. SUCH DAMAGES SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, TO FINISH EQUAL TO THAT FINISH PRIOR TO DAMAGE. THE OWNER'S REPRESENTATIVE SHALL BE THE JUDGE AS TO EQUAL FINISHES, ETC.
 6. COORDINATE POWER OUTAGES WITH THE OWNER. REQUEST OUTAGES 24 HOURS IN ADVANCE.
 - J. SUBMITTALS: SUBMITTALS SHALL INCLUDE PRODUCT DATA FOR LIGHTING FIXTURES AND FIRE ALARM SYSTEM. INCLUDE DIMENSIONS AND MANUFACTURERS TECHNICAL DATA ON FEATURES, PERFORMANCE, ELECTRICAL CHARACTERISTICS, RATINGS AND FINISHES.
 - K. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY PARTS OF ANY SYSTEM THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE GUARANTEE PERIOD.

16111 RACEWAYS AND FITTINGS

- A. ALL RACEWAYS SHALL BE RIGID GALVANIZED STEEL WITH CAST MALLEABLE BOXES AND FITTINGS.
- B. FLEXIBLE METAL CONDUIT AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT: UL APPROVED AND LABELED WITH HEX NUT MALLEABLE FITTINGS. ALL FLEXIBLE METAL CONDUIT INSTALLED AT OR BELOW 12 FEET AFT/AFG SHALL BE LIQUIDTIGHT.
- C. RACEWAYS, BOXES, FITTINGS, ETC., SHALL BE SOLIDLY FASTENED TO MASONRY WITH LEAD ANCHORS AND MACHINE SCREWS OR TOGGLE BOLTS. RACEWAYS SHALL BE FASTENED TO STRUCTURAL STEEL WITH BEAM CLAMPS, CONDUIT HANGERS, TRAPPEZ HANGERS, OR OTHER APPROVED DEVICES.
- D. RACEWAYS PASSING THROUGH RATED WALLS, FLOORS, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH PUBLISHED UL CONFIGURATIONS.
- E. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC UNLESS SHOWN OTHERWISE, MINIMUM SIZE 1/2 INCH, EXCEPT HOMERUNS MINIMUM SIZE SHALL BE 3/4". FLEXIBLE METAL WATERTIGHT ("SEALITE") CONDUIT IN SIZE 1/2 INCH AND LARGER IS ACCEPTABLE FOR MOTOR, APPLIANCE AND FIXTURE CONNECTIONS PROVIDED GREEN EQUIPMENT GROUND CONDUCTOR IS INSTALLED AND THE NEC IS FOLLOWED.

16123 CONDUCTORS

- A. CONDUCTORS SHALL BE COPPER WITH 600V INSULATION, MINIMUM SIZE #12. SIZES #10 AND #12 SHALL BE SOLID, #8 AND LARGER, STRANDED.
- B. CONDUCTORS SHALL BE COLOR CODED THROUGHOUT, SIZES #10 AND #12 SHALL BE FACTORY CODED, SIZES #8 AND LARGER MAY BE COLOR TAPED ON THE JOB. COLOR CODING SHALL MATCH EXISTING.
- C. CONDUCTORS SHALL MEET THE LATEST REQUIREMENTS OF NEMA AND IPCSA AND SHALL BE UL APPROVED.
- D. ALL CONDUCTORS SHALL BE CONTINUOUS WITHOUT SPICE BETWEEN JUNCTION, OUTLET, DEVICE BOXES, ETC., UNLESS NOTED OTHERWISE. NO SPLICING WILL BE PERMITTED IN PANELBOARD CABINETS, SAFETY SWITCHES, ETC.

16130 BOXES

- A. JUNCTION, SWITCH, RECEPTACLE AND OUTLET BOXES SHALL BE CAST MALLEABLE TYPE WITH HUBS AND CAST, GASKETED PLATES.
- B. ALL JUNCTION BOXES SHALL HAVE SCREW FASTENED COVERS.
- C. SET BOXES AT ELEVATIONS TO ACCOMMODATE MOUNTING HEIGHTS INDICATED. BOXES ARE SHOWN ON DRAWINGS IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED.
- D. INSTALL BOXES TO PRESERVE FIRE RESISTANCE RATING OF PARTITIONS AND OTHER ELEMENTS, USING APPROVED MATERIALS AND METHODS.

16140 WIRING DEVICES

- A. PROVIDE HEAVY DUTY INDUSTRIAL SPECIFICATION GRADE BROWN RECEPTACLES AND SWITCHES. ALL DEVICES SHALL BE RATED 20 AMPERES, HUBBELL HBL 5362 AND HBL 1221 OR EQUAL BY PASS AND SEYMOUR OR LEVITON. PROVIDE CAST DEVICE PLATES.

16170 GROUNDING

- A. ALL GROUNDING SHALL BE IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. IN ADDITION, THE FOLLOWING REQUIREMENTS SHALL BE MET:
 1. GROUNDING CONDUCTORS SHALL BE INSTALLED AS TO PERMIT THE SHORTEST AND MOST DIRECT PATH FROM EQUIPMENT TO GROUND. ALL GROUND CONNECTIONS TO GROUND CONDUCTORS SHALL BE ACCESSIBLE.
 2. EQUIPMENT GROUND CONTINUITY SHALL BE MAINTAINED THROUGH FLEXIBLE METAL CONDUIT.
 3. ALL WIRING DEVICES EQUIPPED WITH GROUNDING CONNECTION SHALL BE SOLIDLY GROUNDED TO GROUND SYSTEM WITH GROUNDING CONDUCTORS.
 4. THE FRAME OF ALL LIGHTING FIXTURES SHALL BE SECURELY GROUNDED TO THE EQUIPMENT GROUND SYSTEM WITH GROUNDING CONDUCTORS.
 5. GROUNDING TYPE CONVENIENCE OUTLETS AND SWITCHES SHALL BE SOLIDLY GROUNDED TO EQUIPMENT GROUNDING SYSTEM WITH A GREEN COLORED INSULATED CONDUCTOR. ELECTRICAL CONNECTIONS SHALL BE CONTINUOUS FROM EQUIPMENT GROUND BUS IN PANELBOARD TO THE HEX NUT ON THE CONVENIENCE OUTLET OR SWITCH.
 6. ALL CIRCUITS SHALL CONTAIN AN INSULATED, GREEN, COPPER GROUNDING CONDUCTOR, SIZED IN ACCORDANCE WITH TABLE 250-122 OF THE NEC. GROUNDING CONDUCTORS SHALL BE CONNECTED TO EQUIPMENT GROUND BUS IN PANELBOARD AND SECURELY ATTACHED AND GROUNDED TO THE DEVICE OR ENCLOSURE AT THE OTHER END.
 7. ALL EQUIPMENT ENCLOSURES, AND NON-CURRENT METALLIC PARTS OF ELECTRICAL EQUIPMENT, RACEWAY SYSTEMS, ETC., SHALL BE EFFECTIVELY AND ADEQUATELY BONDED TO GROUND.
- B. GROUNDING TYPE INSULATED BONDING BUSHINGS AND JUMPERS SHALL BE PROVIDED WHERE CONCENTRIC, ECCENTRIC OR OVER-SIZED KNOCKOUTS ARE ENCOUNTERED.

16190 SUPPORTING DEVICES

- A. PROVIDE MATERIALS, SIZES, AND TYPES OF ANCHORS, FASTENERS AND SUPPORTS TO CARRY THE LOADS OF EQUIPMENT AND CONDUIT. CONSIDER WEIGHT OF WIRE IN CONDUIT WHEN SELECTING PRODUCTS. PROVIDE ADEQUATE CORROSION RESISTANCE.
- B. ANCHORS AND FASTENERS:
 1. CONCRETE STRUCTURAL ELEMENTS: USE EXPANSION ANCHORS.
 2. STEEL STRUCTURAL ELEMENTS: USE BEAM CLAMPS.
 3. CONCRETE SURFACES: USE SELF-DRILLING ANCHORS AND EXPANSION ANCHORS.
 4. HOLLOW MASONRY, PLASTER, AND GYPSUM BOARD PARTITIONS: USE TOGGLE BOLTS.
 5. SOLID MASONRY WALLS: USE EXPANSION ANCHORS.
 6. SHEET METAL: USE SHEET METAL SCREWS OR BOLTS.
 7. WOOD ELEMENTS: USE WOOD SCREWS.
- C. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- D. PROVIDE ANCHORS, FASTENERS, AND SUPPORTS IN ACCORDANCE WITH NECA "STANDARD OF INSTALLATION".
- E. DO NOT FASTEN SUPPORTS TO PIPES, DUCTS, MECHANICAL EQUIPMENT, AND CONDUIT.
- F. DO NOT USE POWDER-ACTUATED ANCHORS.
- G. OBTAIN PERMISSION FROM ENGINEER BEFORE DRILLING OR CUTTING STRUCTURAL MEMBERS.
- H. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR STEEL CHANNEL. RIGIDLY WELD MEMBERS OR USE HEXAGON HEAD BOLTS TO PRESENT NEAT APPEARANCE WITH ADEQUATE STRENGTH AND RIGIDITY. USE SPRING LOCK WASHERS UNDER ALL NUTS.
- I. INSTALL SURFACE MOUNTED CABINETS WITH MINIMUM OF FOUR ANCHORS.
- J. EXPOSED RACEWAYS 1 INSTALLED SHALL BE SPACED AWAY FROM THE MOUNTING SURFACE A MINIMUM OF 1/4 INCH (65MM) USING "CLAMP-BACKS" OR STRUTS.

16195 IDENTIFICATION

- A. WIRE MARKERS: PROVIDE SPLIT SLEEVE TYPE WIRE MARKERS OR APPROVED EQUIVALENT ON EACH CONDUCTOR AT PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND EACH LOAD CONNECTION.
- B. IDENTIFICATION NAMEPLATES: FURNISH AND INSTALL ENGRAVED LAMINATED PHENOLIC NAMEPLATES FOR ALL FIRE ALARM EQUIPMENT. NAMEPLATES SHALL BE SECURELY ATTACHED TO EQUIPMENT WITH METAL SCREWS AND SHALL IDENTIFY BY NAME. LETTERS SHALL BE APPROXIMATELY 1/4-INCH HIGH MINIMUM. INSTALL NAMEPLATE PARALLEL TO EQUIPMENT LINES. EMBOSSED, SELF-ADHESIVE PLASTIC TAPE IS NOT ACCEPTABLE. NAMEPLATE MATERIAL COLORS SHALL BE RED SURFACE WITH WHITE CORE.
- C. RECEPTACLE CIRCUIT IDENTIFICATION: PROVIDE ADHESIVE BACKED, LAMINATED PLASTIC RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL BE LABEL MACHINE PRINTED, BLACK LETTERING ON A CLEAR BACKGROUND, TO INDICATE PANEL AND CIRCUIT NUMBER AND SHALL BE CASIO, BROTHER, 18x OR APPROVED EQUAL.
- D. PAINT VISIBLE SURFACES OF EXPOSED FIRE ALARM SYSTEM RACEWAYS, JUNCTION AND OUTLET BOXES AND COVERS OF BOXES RED. PAINT ALL BOXES AND COVERS BEFORE INSTALLATION.

16476 CIRCUIT BREAKERS

- A. ENCLOSED CIRCUIT BREAKERS SHALL BE MOLDED CASE, UL LISTED AND SHALL BE RATED AS SHOWN ON THE DRAWINGS WITH APPROPRIATE WITHSTAND RATINGS AND CURRENT LIMITING CHARACTERISTICS AS REQUIRED TO SAFELY FUNCTION AND PROTECT THE DISTRIBUTION SYSTEM. ACCESSORIES SHALL BE PROVIDED AS NOTED OR REQUIRED AND SHALL BE UL LISTED AND FIELD INSTALLABLE.
- B. CIRCUIT BREAKERS INDICATED TO BE INSTALLED IN EXISTING PANELBOARDS SHALL BE MOLDED CASE, UL LISTED AND SHALL BE RATED AS SHOWN ON THE DRAWINGS. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES AS REQUIRED TO INSTALL NEW CIRCUIT BREAKERS. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING TYPES INSTALLED AND BE RATED CONSISTENT WITH THE EXISTING EQUIPMENT TO MAINTAIN EQUIPMENT RATINGS. ACCESSORIES SHALL BE PROVIDED AS NOTED OR REQUIRED AND SHALL BE UL LISTED AND FIELD INSTALLABLE.
- C. CIRCUIT BREAKERS SHALL BE MANUFACTURED BY CUTLER HAMMER, GENERAL ELECTRIC, SIEMENS OR SQUARE D.

16510 LIGHTING FIXTURES

- A. LIGHTING FIXTURE TYPES SHALL BE FURNISHED AS REQUIRED BY THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS. CATALOG NUMBERS ARE PROVIDED AS A GUIDE TO THE DESIGN AND QUALITY OF FIXTURE DESIRED. EQUIVALENT DESIGNS AND EQUAL QUALITY FIXTURES OF OTHER MANUFACTURERS LISTED WILL BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY FROM THE CONTRACT DRAWINGS THE TYPE CEILINGS OR WALLS THE FIXTURE IS TO BE USED WITH AND SHALL PROVIDE COMPATIBLE MOUNTING ATTACHMENTS AND TRIM. PROVIDE ALL ACCESSORIES OR ADDITIONAL MATERIALS REQUIRED TO MAINTAIN THE CEILING FIRE RATING AS REQUIRED BY REGULATORY AUTHORITIES.
- B. ALL FIXTURES SHALL BE INSTALLED COMPLETE WITH LAMPS. LAMPS SHALL BE INDICATED ON THE DRAWINGS.

16520 EMERGENCY LIGHTING FIXTURES

- A. EMERGENCY LIGHTING FIXTURES SHALL BE SELF-CONTAINED UNITS AUTOMATICALLY ACTIVATED WHEN THE LINE VOLTAGE DROPS BELOW 80% AND SHALL COMPLY WITH UL 924, NFPA 101 - LIFE SAFETY CODE, NFPA 70 - NEC AND THE NCSBC. LIGHTING FIXTURE TYPES SHALL BE FURNISHED AS REQUIRED BY THE LIGHTING FIXTURE SCHEDULE AS INDICATED ON THE DRAWINGS. CATALOG NUMBERS ARE PROVIDED AS A GUIDE TO THE DESIGN AND QUALITY OF FIXTURE DESIRED. EQUIVALENT DESIGNS AND EQUAL QUALITY FIXTURES OF OTHER MANUFACTURERS LISTED WILL BE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY FROM THE CONTRACT DRAWINGS THE TYPE CEILINGS OR WALLS THE FIXTURE IS TO BE USED WITH AND SHALL PROVIDE COMPATIBLE MOUNTING ATTACHMENTS AND TRIM. PROVIDE ALL ACCESSORIES OR ADDITIONAL MATERIALS REQUIRED TO MAINTAIN THE CEILING FIRE RATING AS REQUIRED BY REGULATORY AUTHORITIES.
- B. ALL FIXTURES SHALL BE COMPLETELY SELF-CONTAINED, PROVIDED WITH MAINTENANCE FREE BATTERY, AUTOMATIC CHARGER AND OTHER FEATURES. THEY SHALL BE INSTALLED COMPLETE WITH LAMPS, BATTERIES, ETC. WHICH SHALL BE NEW AND UNUSED AT TIME OF FINAL INSPECTION OF THE PROJECT FOR ACCEPTANCE.
- C. ALL FIXTURES SHALL HAVE SELF-DIAGNOSTICS. ELECTRONICS SHALL AUTOMATICALLY, OR MANUALLY UPON DEMAND, CONDUCT SELF TEST ON BATTERY CONDITION (INCLUDING ACTUAL DISCHARGE), CHARGER, LAMPS AND INTERNAL WIRING INTEGRITY PER NEC AND NFPA AT PRESCRIBED INTERVALS. A PILOT LIGHT SHALL INDICATE THE UNIT IS CONNECTED TO AC POWER. PROVIDE TEST SWITCH AND VISUAL INDICATOR(S) OF UNIT OPERATIONAL CONDITION INCLUDING CHARGER STATUS, READY AND SERVICE CODE. TEST SWITCH SHALL SIMULATE OPERATION OF THE UNIT UPON LOSS OF AC POWER BY ENERGIZING LAMPS FROM THE BATTERY, AND ALSO EXERCISE THE TRANSFER RELAY.
- D. WARRANTY: EACH UNIT SHALL BE WARRANTED FOR THREE YEARS. THE BATTERY SHALL HAVE AN ADDITIONAL TWO MORE YEARS PRO-RATED WARRANTY. WARRANTY SHALL DATE FROM THE DATE OF FINAL PROJECT ACCEPTANCE AND BE INCLUDED IN THE CONTRACT DOCUMENT.

16721 FIRE ALARM SYSTEMS

- A. NCSBC SECTION 907 COMPLIANT FIRE DETECTION AND ALARM SYSTEM. THE SYSTEM SHALL BE CLASS "B", TWO WIRE, ADDRESSABLE TYPE WITH SMOKE DETECTORS, HEAT DETECTORS, DOUBLE ACTION TYPE MANUAL STATIONS, SYNCHRONIZED ADA AURAL AND VISUAL NOTIFICATION APPLIANCES, A SOLID STATE FIRE ALARM CONTROL PANEL AND RECHARGING BATTERY SUPPLY. THE SYSTEM SHALL PROVIDE LOCAL ANNUNCIATION VIA ALARM INDICATING APPLIANCES AND REMOTE ANNUNCIATION VIA A CELLULAR BASED COMMUNICATIONS DEVICE. PROVIDE A DEDICATED 120 VAC BRANCH CIRCUIT WITH BREAKER LOCKING MEANS FOR THE FACP. BATTERY SUPPLY CAPACITY SHALL PROVIDE FOR 60 HOURS IN STANDBY FOLLOWED BY 5 MINUTES WITH ALL DEVICES IN ALARM. ALL AURAL DEVICES SHALL PRODUCE SOUND PRESSURES AS REQUIRED BY THE ADA, NFPA 72 AND NCSBC SECTION 907. SET VISUAL SIGNAL DEVICE INTENSITIES FOR COMPLIANCE WITH THE ADA. PROVIDE A DUAL LINE UNIVERSAL DIGITAL ALARM COMMUNICATOR (UDACT) AND CONNECT TO A DEDICATED, LISTED CELLULAR COMMUNICATIONS DEVICE. ALL NOTIFICATION APPLIANCE WIRING SHALL BE #14 AWG MINIMUM. INITIATING DEVICE CIRCUITS SHALL BE SIZED AS REQUIRED BY THE SYSTEM MANUFACTURER. ALL CONDUCTORS AND CABLE SHALL BE COLOR CODED AND INSTALLED EXPOSED IN RIGID GALVANIZED CONDUIT. THE CONTRACTOR SHALL FURNISH ALL PARTS, MATERIALS, LABOR, ACCESSORIES, CONNECTIONS, EQUIPMENT, PROGRAMMING, ETC. REQUIRED FOR COMPLETE AND OPERATING CODE-COMPLIANT SYSTEMS IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS, EVEN IF EACH NEEDED ITEM IS NOT SPECIFICALLY SHOWN OR DESCRIBED ON THE CONTRACT DRAWINGS OR SPECIFICATIONS. PROVIDE ALL PROGRAMMING, DOCUMENTATION, TESTING AND CERTIFICATION SERVICES AS REQUIRED BY ALL PERTINENT CODES AND THE AUTHORITY HAVING JURISDICTION (AHJ). SYSTEM MANUFACTURER SHALL BE NOTIFIER, EDWARDS OR FIRE LITE. SYSTEMS SHALL BE NON-PROPRIETARY AND OPEN ARCHITECTURE. THE OWNER SHALL REVIEW AND APPROVE SYSTEM SUBMITTALS AND RESERVES FINAL APPROVAL AUTHORITY FOR ALL PROPOSED SYSTEMS. ALL WORK SHALL BE IN COMPLIANCE WITH NFPA 70 AND 72 AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL EQUIPMENT SUPPLIED SHALL BE LISTED FOR THE PURPOSE FOR WHICH IT IS USED AND INSTALLED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN ITS LISTING. SYSTEMS SHALL ALSO BE NEW, WITH A FULL WARRANTY (PARTS AND LABOR) OF AT LEAST ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. FURNISH SERVICE AND MAINTENANCE OF THE SYSTEM FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- B. THE EXACT SPACING OF SMOKE AND HEAT DETECTORS AND A/V DEVICES SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS.

New Hanover County Recycling
Fire Alarm System
Wilmington, North Carolina



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Revision No. _____
Date: _____

Drawing No:

E1.0

Revision:

ELECTRICAL GENERAL NOTES

1. THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
2. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
3. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.
4. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
5. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
6. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.
7. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL BE STORED IN DRY PERMANENT SHELTERS. PROVIDE HEATING FOR EQUIPMENT SUBJECT TO MOISTURE DAMAGE OR DAMAGE FROM CONDENSATION. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
8. DO NOT SCALE ELECTRICAL DRAWINGS. FIELD VERIFY ALL DIMENSIONS.
9. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.
10. UNLESS DIMENSIONED, DEVICE LOCATIONS (EXCEPT FIRE ALARM INITIATING AND NOTIFICATION APPLIANCES) SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES.
11. THE DRAWINGS INDICATE THE NUMBER OF BRANCH CIRCUIT HOMERUN PHASE CONDUCTORS VIA ARROWHEADS. PROVIDE NEUTRAL AND EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.
12. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.
13. ALL EXTERIOR WIRING DEVICES, BOXES, ETC. SHALL BE WEATHERPROOF. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT.
14. MAINTAIN CEILING FIRE RATINGS WITH ALL NECESSARY LIGHTING FIXTURE TRIM, ACCESSORIES, OPTIONS AND/OR FIELD FABRICATED SHROUDS COMPLYING WITH ALL APPLICABLE CODES.
15. RACEWAYS PENETRATING CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKE/TIGHT.
16. RACEWAYS AND CABLES PENETRATING RATED CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES.
17. ALL RACEWAYS SHALL BE INSTALLED EXPOSED. IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.
18. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
19. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.
20. ALL MOTORS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.
21. SURFACE MOUNTED JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.
22. PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER.
23. ALL EQUIPMENT, MATERIALS, AND INSTALLATION TECHNIQUES USED IN AREAS DESIGNATED AS HAZARDOUS ON THE DRAWINGS, SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLES 500, 501, 502 AND 503. ALL EQUIPMENT AND MATERIALS USED IN HAZARDOUS AREAS SHALL BE U.L. LISTED FOR THE APPROPRIATE HAZARDOUS AREA CLASSIFICATION. OBSERVE CLASSIFIED AREAS MOUNTING HEIGHT REQUIREMENTS AND PROVIDE CONDUIT SEALING FITTINGS AS REQUIRED BY NFPA 70.
24. CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.
25. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL.
26. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" MINIMUM RACEWAY.
27. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.
28. KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.
29. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.
30. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
31. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE ENGINEER.
32. CONNECT BATTERY PACK TYPE EMERGENCY FIXTURES TO THE UNSWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING CLARITY.
33. COORDINATE LOCATIONS OF SPRINKLER EQUIPMENT WITH THE SPRINKLER CONTRACTOR BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ENGINEER OF CONFLICTS BEFORE ROUGH-IN.
34. UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR PROVIDING THE EQUIPMENT SHALL MAKE FINAL CONNECTIONS TO HIS EQUIPMENT.
35. PROTECT ALL EXISTING POWER, COMMUNICATIONS, DATA, LIFE SAFETY SYSTEMS, ETC. AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
36. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
37. CORE DRILL HOLES IN EXISTING CONCRETE WALLS AS REQUIRED.
38. CUT OPENINGS ONLY LARGE ENOUGH TO ALLOW EASY INSTALLATION OF THE CONDUIT.
39. DESIGN AND ADDITION OF NEW CIRCUITING IS BASED ON THE ENGINEER'S BEST INFORMATION REGARDING EXISTING CONDITIONS. AVAILABILITY OF ADEQUATE CIRCUIT BREAKER SPACE FOR NEW WORK IN EXISTING PANELBOARDS SHALL BE VERIFIED BY THE CONTRACTOR. IF ADEQUATE SPACE IS NOT AVAILABLE FOR NEW CIRCUIT BREAKERS THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR RESOLUTION.
40. THE EXISTING ELECTRICAL SYSTEMS DEPICTED ON THESE DRAWINGS HAVE BEEN COMPILED BY THE ENGINEER FROM LIMITED FIELD VERIFICATION OF THE EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, POINTS OF ACCESS AND FIELD CONDITIONS AFFECTING HIS WORK.
41. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS AND THE EXISTING BUILDING. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.
42. THE EXISTING FACILITIES WILL REMAIN OCCUPIED BY THE OWNER'S STAFF THROUGHOUT THE PROJECT. AS SUCH, WORK WILL REQUIRE SPECIAL EFFORT BY THIS CONTRACTOR TO ALLOW THE WORK TO PROCEED IN A TIMELY MANNER. ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE OWNER SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE APPROVED CONSTRUCTION SEQUENCE.
43. SAFETY: COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.

**New Hanover County Recycling
Fire Alarm System**
 Wilmington, North Carolina

Electrical General Notes

Job No.:	15006
Drawn:	WFL
Designed:	RDW
Checked:	RDW

Drawing No:

E2.0

Revision:

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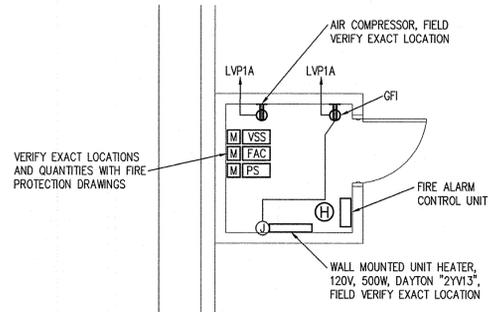


NCEM P-1010

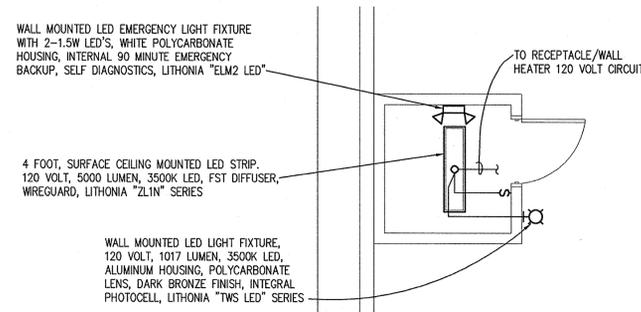
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Date:

Revision No. REVISIONS

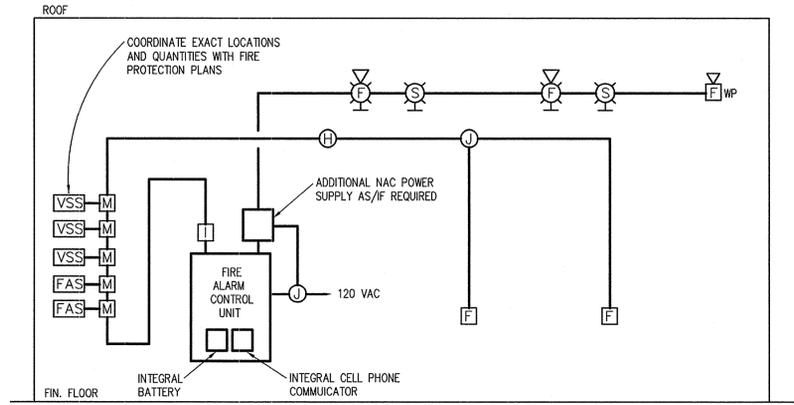


2 - New Sprinkler Riser Room Power Plan
Scale: 1/4" = 1'-0"

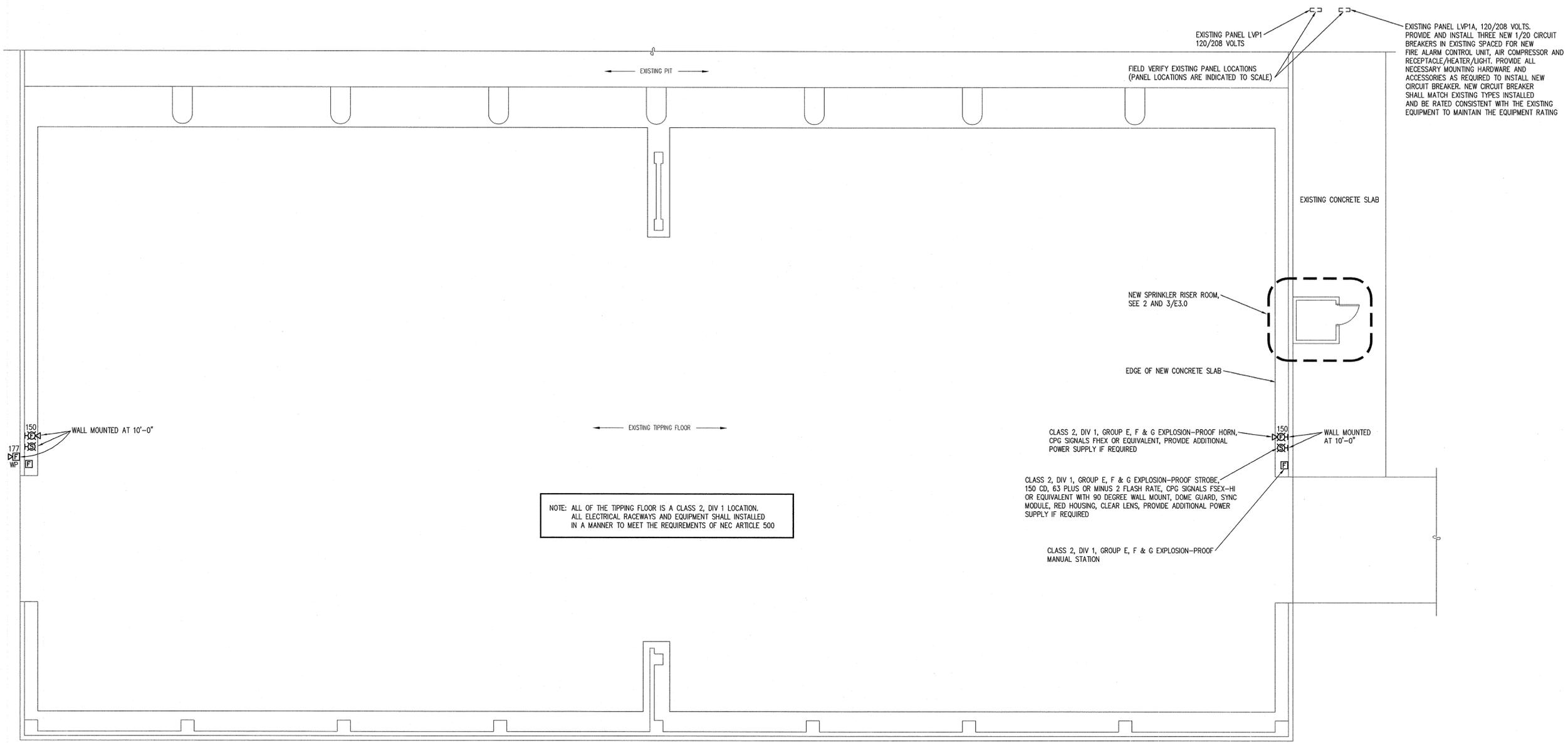


3 - New Sprinkler Riser Room Lighting Plan
Scale: 1/4" = 1'-0"

Fire Alarm Legend	
F	FIRE ALARM MANUAL STATION, 48" AFF
177 WP	WEATHERPROOF FIRE ALARM AURAL/VISUAL DEVICE, "177" INDICATES CANDELLA RATING
H	HEAT DETECTOR, CEILING MOUNTED
I	FIRE ALARM ISOLATION MODULE
C	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
VSS	FIRE PROTECTION SYSTEM TAMPER SWITCH
FAS	FIRE PROTECTION SYSTEM FLOW SWITCH
PS	FIRE PROTECTION SYSTEM PRESSURE SWITCH



NOTES: FUNCTIONAL FIRE ALARM RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT INDICATED.
4 - Functional Fire Alarm Riser Diagram
Not to Scale



1 - Existing Tipping Building Fire Alarm Plan
Scale: 1/8" = 1'-0"

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New Hanover County Recycling
Fire Alarm System
Wilmington, North Carolina

Existing Tipping Building Fire Alarm Plans and
Functional Fire Alarm Riser Diagram

Job No.:	15006
Drawn:	WPJ
Designed:	RDM
Checked:	RDM

Drawing No:
E3.0

Revision: