

ADVERTISEMENT FOR REQUEST FOR PROPOSAL
COBB COUNTY PURCHASING DEPARTMENT

BID OPENING DATE: SEPTEMBER 9, 2010

Sealed proposals from qualified contractors will be receive before 12:00 NOON, September 9, 2010, in the Cobb County Purchasing Department, 1772 County Services Parkway, Marietta, GA 30008 for furnishing all labor. Materials, equipment, appliances, etc. pursuant to the plans, specifications, condition and addenda for:

SEALED BID # 10 -5520
REQUEST FOR PROPOSAL
HVAC SYSTEM IMPROVEMENTS PROJECT
COBB COUNTY CENTRAL LIBRARY
266 ROSWELL STREET
MARIETTA, GEORGIA 30060
COBB COUNTY PROPERTY MANAGEMENT DEPARTMENT

PRE-PROPOSAL MEETING: AUGUST 24, 2010 @ 9:00 A.M.
COBB COUNTY PROPERTY MANAGEMENT MEETING ROOM
57 WADDELL STREET
MARIETTA, GEORGIA 30060

No bids will be accepted after the 12:00 noon deadline.

Proposals are opened at 2:00 p.m. at Cobb County Purchasing Department, 1772 County Services Parkway, 2nd Floor, Bid/Meeting Room, Marietta, GA 30008.

All contractors wishing to submit proposals for this work must submit a qualification statement form (in the proposal package) to be considered. Proposals must be accompanied by bid security in the amount not less than five percent (5%) of the base bid. Performance Bond and Labor and Material Payment Bond, or other security instruments as allowed by law each in the amount equal to 100% of the contract sum will be required of the successful bidder. Bonds must be written by a surety company licensed to do business in the State of Georgia, have a "Best's" rating of "A" or better, appear on the current U.S. Treasury Department list of sureties that are acceptable on bonds for the federal government (circular 570), and have recommended bonds limits equal to or in excess of those required for this project; otherwise acceptable to the owner.

No proposal may be withdrawn for a period of ninety (90) days after date of bid opening, unless otherwise specified in the bid documents. Cobb County will consider the competency and responsibility of bidders in making the award. Cobb County reserves the right to reject any and all proposals, to waive informalities and technicalities, to reject portions of the proposals, and to award contracts in a manner consistent with the County and the laws governing the State of Georgia.

This solicitation and any addenda are available for download in PDF format on the Cobb County purchasing website. www.purchasing.cobbcountyga.gov

To request a copy of the proposal documents, **FAX** the following information to the Purchasing Department @ 770-528-1154 or **e-mail** requests to purchasing@cobbcounty.org:

Company name, contact name, company address, phone number and fax number.

Please reference the proposal number and the title of the proposal in the request

Advertise: AUGUST 13, 20, 27, 2010
SEPTEMBER 3, 2010

BIDDING INSTRUCTIONS – TERMS AND CONDITIONS

1. PREPARATION OF BID:

- (A) Bidders are expected to examine the drawings, specifications, schedules, and all instructions. Failure to do so will be at the bidder's risk.
- (B) Each bidder shall furnish the information required by the bid form. The bidder shall sign and print or type his/her name where designated. The person signing the bid must initial erasures or other changes.
- (C) Unit price for each quotation shall be shown and such price shall include packing unless otherwise specified, along with a total and grand total where applicable. In case of discrepancy between a unit price and extended price, the unit price will be presumed correct.
- (D) Where not otherwise specified, bidders must definitely state DATE OF DELIVERY.

2. EXPLANATION TO BIDDERS:

Any explanation desired by a bidder regarding the meaning or interpretation of Invitation to Bids, Request for Proposals or Qualifications, drawings, specifications, etc., must be in writing. All questions must be received within seven (7) business days prior to the bid opening date for a response to be generated by the County to all bidders in the form of an addendum. If any statement in the bidding documents, specifications, etc., appears ambiguous to the bidder, the bidder is specifically instructed to make a written request to the Purchasing Department, unless otherwise outlined in the specifications. Any information given to a prospective bidder concerning an Invitation for Bid will be furnished to all prospective bidders, as an addendum to the invitation, if such information is necessary to bidders in submitting bids on the invitation or if the lack of such information would be prejudicial to uninformed bidders. Receipt of the addendum by a bidder must be acknowledged on the bid or by letter received before the date and time specified for the bid opening. **ORAL EXPLANATION OR INSTRUCTIONS GIVEN BEFORE THE AWARD OF THE CONTRACT WILL NOT BE BINDING.**

3. SUBMISSION OF BIDS: FACSIMILE BIDS WILL NOT BE CONSIDERED.

- (A) Any Bid Package and modifications thereof shall be enclosed in a sealed envelope, addressed to the office specified in the Invitation to Bid, with the name and address of the bidder, the date and hour of bid opening, and name of bid. A bid reply label will be included in most bid packages stating the above referenced information. Any bid package NOT having bid information on outside of package could be opened as regular mail, and bid could be disqualified.
- (B) Samples of items, when required, must be submitted within the time specified, unless otherwise specified by the County, and at no expense to the County
- (C) An item offered must at least meet specifications called for and must be of quality which will adequately service the purpose and use for which it was intended.
- (D) Full identification of each item bid upon, including brand name, make, model, and catalog number, must be furnished according to the bid specifications if requested to identify exactly what the bidder is proposing. Supporting literature may be furnished to further substantiate the proposal.
- (E) The bidder represents that the article(s) to be furnished under this Invitation to Bid is (are) new and that the quality has not deteriorated so as to impair its usefulness.
- (F) Bids cannot be withdrawn or corrected after the bid opening (except reductions or changes by the successful bidder which would be beneficial or advantageous to the County). The County as deemed necessary may reject changes.
- (G) Cobb County is exempt from Federal Excise Tax and Georgia Sales Tax.
- (H) Cobb County does not accept conditional bids.

4. DEFAULT:

The Award as a result of bids received under this invitation may be in part based on the delivery factor. Accordingly, should delivery fail to be performed within the time specified by the bidder, the bid may then be declared in default of the contract. In such event, the County may then proceed to purchase in the open market the items from another source.

5. F.O.B. POINT:

Unless otherwise stated in the Invitation to Bid and any resulting contract, all articles will be F.O.B. Destination. This means delivered, unloaded, and placed in the designated place.

6. AWARD OF CONTRACT:

The Contract will be awarded to the responsible bidder whose bid will be the most advantageous to the County, price, and other factors considered. The County will make the determination. The County reserves the right at any time to reject any and all bids, to waive informalities and technicalities, to award portions of the bid, and to award contracts consistent with the County and the laws governing the State of Georgia. Normal payment terms are net thirty (30) days after receipt of invoice by the Finance Department.



COBB COUNTY
PURCHASING DEPARTMENT
1772 County Services Parkway
Marietta, Georgia 30008-4012
(770) 528-8400/FAX (770) 528-1154
www.cobbcounty.org

IMPORTANT NOTICE – PLEASE READ CAREFULLY!!

All vendors are required to submit the ORIGINAL AND AT LEAST one (1) duplicated copy of any bid submitted to Cobb County. Please refer to your bid specifications to determine if more than one (1) copy is required. Non-submission of a duplicate copy may disqualify your bid/proposal.

A “**SEALED BID LABEL**” has been enclosed to affix to your bid. This label ***MUST*** be affixed to the outside of the envelope or package, **even if it is a “NO BID” response**. Failure to attach the label may result in your bid being opened in error or not being routed to the proper location for consideration. No bid will be accepted after the date and time specified. **IT IS THE VENDOR’S RESPONSIBILITY TO ENSURE THAT EACH BID HAS BEEN RECEIVED IN A TIMELY MANNER.**

BIDS MUST BE RECEIVED BEFORE 12:00 (NOON) ON BID OPENING DAY

Bids must be received at the Cobb County Purchasing Department. **Any bids received later than 12:00 (noon) will not be accepted.** The County accepts no responsibility for delays in the mail. Bids are to be mailed or hand delivered to:

COBB COUNTY PURCHASING DEPARTMENT
1772 COUNTY SERVICES PARKWAY
MARIETTA, GA 30008-4012

Bids will be opened at 2:00 P.M. in the Cobb County Purchasing Department, 1772 County Services Parkway, 2nd Floor, Conference/Bid Room, Marietta, GA 30008.

Thank you in advance for your cooperation.

SEALED BID LABEL

SEALED BID ENCLOSED

DELIVER TO:
COBB COUNTY PURCHASING
1772 County Services Parkway
Marietta, GA 30008-4012

SEALED BID # 10-5520 DATE: September 9, 2010

BIDS MUST BE RECEIVED BEFORE 12:00 NOON

DESCRIPTION: Request for Proposal
HVAC System Improvements Project
Cobb County Central Library
266 Roswell Street
Marietta, Georgia 30060

PLEASE ATTACH LABEL TO OUTSIDE OF BID PACKAGE



Cobb County...Expect the Best!

REQUEST FOR PROPOSAL

**SEALED BID # 10 – 5520
HVAC SYSTEM IMPROVEMENTS PROJECT
COBB COUNTY CENTRAL LIBRARY
266 ROSWELL STREET
MARIETTA, GEORGIA 30060
COBB COUNTY PROPERTY MANAGEMENT DEPARTMENT**

BID OPENING DATE: SEPTEMBER 9, 2010

**PRE-PROPOSAL CONFERENCE: AUGUST 24, 2010 @ 9:00 A.M. (E.S.T.)
COBB COUNTY PROPERTY MANAGEMENT DEPARTMENT
57 WADDELL STREET
MARIETTA, GEORGIA 30060**

**BIDS ARE RECEIVED IN THE
COBB COUNTY PURCHASING DEPARTMENT
1772 COUNTY SERVICES PARKWAY
MARIETTA, GEORGIA 30008
BEFORE 12:00 (NOON) BY THE BID OPENING DATE**

**BIDS WILL BE OPENED IN THE COBB COUNTY PURCHASING DEPARTMENT
BID/MEETING ROOM AT 2:00 P.M.**

**VENDORS ARE REQUIRED TO SUBMIT THE ORIGINAL AND 3 COPY OF BID
(UNLESS OTHERWISE SPECIFIED IN BID SPECIFICATIONS)**

N.I.G.P. COMMODITY CODE: 91450

NAME: _____

ADDRESS: _____

REPRESENTATIVE: _____

PHONE: _____ FAX: _____

E-MAIL _____

NOTE: The Cobb County Purchasing Department will not be responsible for the accuracy or completeness of the content of any Cobb County Invitation to Bid or Request for Proposal or subsequent addenda thereto received from a source other than the Cobb County Purchasing Department.



Cobb County...Expect the Best!

"STATEMENT OF NO BID"

COBB COUNTY PURCHASING DEPARTMENT
1772 COUNTY SERVICES PARKWAY
MARIETTA, GA 30008

TO ALL PROSPECTIVE BIDDERS:

Because of the many requests to be placed on our vendors' list, we are continuously updating the list. While we want to include all bona fide vendors, we do not want to mail bids to those vendors who may no longer be interested in participating in our bidding process.

If you do not choose to respond to the attached Invitation to Bid/Request for Proposal, please fill out the form below indicating whether or not you want to be retained on our current vendor list.

Vendors who do not respond in any way (by either submitting a bid or by returning this form) over a period of one year may be removed from the current vendor list.

Vendors who do not wish to bid often return the entire bid package, sometimes at considerable postage expense. Returning the entire bid package is not necessary. Simply return this form.

Thank you for your cooperation.
Cobb County Purchasing Department

**"STATEMENT OF NO BID"
SEALED BID NUMBER 10-5520
REQUEST FOR PROPOSAL
HVAC SYSTEM IMPROVEMENTS PROJECT
COBB COUNTY CENTRAL LIBRARY
266 ROSWELL STREET
MARIETTA, GEORGIA 30060**

If you do not wish to respond to the attached Invitation to Bid/Request for Proposal, please complete this form and mail/fax to: **Cobb County Purchasing Department, Attention: Sealed Bid Department, 1772 County Services Parkway, Marietta, GA. Fax # 770-528-1154**

I do not wish to submit a bid/proposal on this solicitation.

I wish to be retained on the vendor list for this commodity or service: Yes _____ No _____

Please PRINT the following:

_____ Company _____ Representative

You are invited to list reasons for your decision not to bid: _____

COBB COUNTY REQUEST FOR COMPETITIVE SEALED PROPOSALS

**HVAC SYSTEM IMPROVEMENTS PROJECT
COBB COUNTY CENTRAL LIBRARY
266 ROSWELL STREET
MARIETTA, GEORGIA 30060**

BID NUMBER: 10-5520

COBB COUNTY REQUEST FOR COMPETITIVE SEALED PROPOSALS

**HVAC SYSTEM IMPROVEMENTS PROJECT
COBB COUNTY CENTRAL LIBRARY
266 ROSWELL STREET
MARIETTA, GEORGIA 30060**

SEALED BID NUMBER: #10-5520

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COBB COUNTY REQUEST FOR COMPETITIVE SEALED PROPOSALS

HVAC SYSTEM IMPROVEMENTS PROJECT COBB COUNTY CENTRAL LIBRARY 266 ROSWELL STREET MARIETTA, GEORGIA 30060

The Cobb County Board of Commissioners (Owner) is soliciting competitive sealed proposals from experienced firms for replacement of the **HVAC System for the Cobb County Central Library Building located 266 Roswell Street, Marietta, Georgia.** This Project includes equipment replacement, fitting and wiring of new equipment, and demolition of existing equipment. An award will be made to the responsible and responsive offeror whose proposal is determined to be the most advantageous to Cobb County. Proposals will be received until **12:00 noon, September 9, 2010** at the Cobb County Purchasing Department located at 1772 County Services Parkway, Marietta, Georgia 30008. Any proposal received after this time will not be opened. Proposals, timely received, will be opened at 2:00 PM (local time) on September 9, 2010 at the offices of the Cobb County Purchasing Department, 1772 County Services Parkway, Marietta, Georgia 30008. Request for Proposal packages, which include floor plans and elevation drawings describing the requested services as well as the relative importance of the evaluation factors will be available on the Cobb County Purchasing website: purchasing.cobbcountytga.gov.

The Cobb County Board of Commissioners reserves the right to reject all proposals, to waive technicalities and informalities, to reject portions of the proposals, and to award contracts in a manner consistent with the interest of Cobb County and the laws of the State of Georgia.

All proposals shall be accompanied by a bid bond in the amount not less than five percent (5%) of the cost proposal. No proposal shall be considered if a proper bid bond or other authorized security has not been submitted. The successful offeror will be required to furnish a satisfactory performance bond and labor and materials payment bond, on forms provided by Owner.

No offeror may withdraw its proposal and must honor its proposal for 90 days after the actual date of the opening thereof.

I. Introduction

During the competitive sealed proposal process, proposals received will be opened in a manner so as to avoid disclosure of contents to competing offerors and during any process of discussion, the County will not disclose the contents of proposals to competing offerors.

Each firm is to prepare its proposal according to the RFP format, i.e., by section and paragraph of this RFP. Cobb County reserves the right to reject any proposal not submitted within the required time frame; reject any incomplete proposal submitted; contact client references; require further information; and/or require interviews/presentations from any responding firm. All costs related to the preparation, submittal, and/or presentation of a proposal are the responsibility of the offeror and will not be assumed in full or in part by Cobb County. All proposals shall be accompanied by a bid bond in the amount not less than five percent (5%) of the cost proposal. No proposal shall be considered if a proper bid bond or other authorized security has not been submitted.

Written inquiries regarding this RFP may be addressed to:
Cobb County Purchasing Department
1772 County Services Parkway
Marietta, Georgia 30008
Fax: 770-528-1154
Email: purchasing@cobbcounty.org

Written responses to all written inquiries received by 5:00 p.m., Tuesday, August 31, 2010 will issued in the form of an addendum.

**Submit an original and three (3) copies of this RFP to:
Cobb County Purchasing Department
1772 County Services Parkway
Marietta, Georgia 30008**

Proposals must be submitted before **12:00 noon, September 9, 2010.** Proposals must be received in a sealed envelope or container. Place the Project name, BID number, and opening date on the submitting envelope or container. Proposals will be opened on this same date at 2:00 pm at the Cobb Purchasing Department.

A pre-proposal Conference will be held on Tuesday, August 24, 2010 at 9:00am at the Cobb County Property Management Meeting Room located at 57 Waddell Street in Marietta, Georgia. All firms intending to respond to this Request for Proposals are strongly urged to attend.

II. Background

Cobb County intends to replace the HVAC mechanical equipment at its Central Library location. This equipment will be replaced during while normal building operations are being conducted. This invitation is for the permitting and complete construction management to finish the project. Basis for the design are the attached floorplans and specifications already prepared. These plans will be available to all proposers.

Cobb County will be the Owner and primary occupant of the Project. The Owners' tentative schedule for this project is; select Contractor by Sept 20, 2010; issue Notice to Award by Sept 29, 2010; order long lead time equipment; begin construction by Jan 3, 2011 and complete project by March of 2011

Cobb County has received funding provided by the American Reinvestment and Recovery Act of 2009 (ARRA) under an Energy Efficiency and Conservation Block Grant (EECBG) administered by the U.S. Dept. of Energy for performing energy efficiency retrofits of county facilities.

All contracts and work associated with this project are subject to the terms and conditions of the American Reinvestment and Recovery Act of 2009 (ARRA) and the Energy Efficiency and Conservation Block Grant (EECBG) awarded to the County through which funding for this project is provided. The County's "Special Terms and Conditions of the ARRA and EECBG" are included incorporated in the RFP (Attachment B) and shall be incorporated in the Design/Build contract. Bidders may also view the EECBG grant award and associated terms and conditions by viewing the EECBG link on <http://purchasing.cobbcountyga.gov/> to further familiarize themselves with the requirements of the grant.

1. Included in these conditions are requirements that all iron, steel, and manufactured goods used in the project be produced in the United States unless a waiver of the requirements is approved by the Department of Energy per section 1605 of the ARRA (Part 2, II-C of Attachment B).

Bidders should be particularly diligent in ensuring conformity with the Buy American requirements specified, and ensure components and manufactured products they price and offer for inclusion in this project are made in the United States. Products manufactured in countries outside the United States, regardless of whether the country of origin is a member of any Free Trade or similar economic agreement with the United States, are not permitted to be included in this project unless the Dept. of Energy has issued a specific exclusion. As of the issuance of this ITB, the Owner is unaware of any exclusions issued for products anticipated to be included in this project.

2. Under the conditions of the funding grant, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character as determined by the U.S. Dept. of Labor Wage Determination applicable on the bid issuance date for the construction type and work location. **For this project, General Decision Number: GA100255 dated 7/9/2010 GA255, is applicable. The applicable wage rates are included in this bid as Attachment B-2.**

III. Scope of Services

The following is a listing of some of the representative services to be provided by the selected Contractor. The full scope of services will be defined within the contract executed with Cobb County.

A. Construction Phase

1. Maintain on-site staff during any construction activities.
2. Establish and maintain coordinating procedures.
3. Develop and maintain a detailed schedule (CPM) including delivery, approvals, inspection, testing, construction, and occupancy.
4. Prepare and submit change order documentation for approval of the Engineer and the County.
5. Maintain a system for review and approval of shop drawings.
6. Maintain quality control and ensure conformity to plans.
7. Obtain all Third Party Special Inspections as required by permitting authority.
8. Provide cost control through progress payment review and verifications according to the approved schedule and contract amounts.
9. Obtain Certificate of Occupancy and other relevant documents for Owner to use facility.
10. Develop as-built drawings and deliver to Engineer for inclusion into a CADD disk to be submitted to Cobb County for maintenance and operations use.
11. Coordinate post-completion activities, including the assembly of guarantees, manuals, closeout documents, training, and the Owner's final acceptance.
12. Prepare and provide documentation to confirm compliance with ARRA and EECBG requirements per attached Exhibit A.

B. Warranty Phase

1. Coordinate and monitor the resolution of remaining "punch-list" items.
2. Coordinate, monitor, and resolve all warranty issues to the satisfaction of the County during the one-year general warranty period and as extended.

All Local, County, State, and Federal Codes and regulations must be followed, with particular emphasis on Building Codes, Life Safety Codes, and the Americans with Disabilities Act. Once all contract documents are executed, between the County and the successful offeror, the successful offeror will be required to deliver the services required by this RFP. Cobb County must first approve any change in or substitution of project team members, including any consultant, in writing.

IV. Selection Criteria

The Competitive Sealed Proposals will be evaluated based on the information presented in the proposal package. The Owner may conduct such investigations or interviews, as it deems necessary to assist in the evaluation of any proposal submitted and to establish to Cobb County's satisfaction the responsiveness to the RFP, responsibility, qualifications, and financial status of any offeror.

The selection may be based solely on the evaluation of the information presented in the proposal package. Firms submitting proposals should not assume that the Owner will elect to pursue any discussion or interviews of the proposals.

Financial/Responsiveness/Cost Criteria 100 Points
Review the completeness of proposal form, bond, and assessment of financial information and company qualifications. 40 Points

The construction cost proposal amount and project schedule 60 Points

The RFP should be prepared per the following Sections as well as a one-page letter of transmittal signed by an owner, officer, or authorized agent of the firm acknowledging and accepting the terms and conditions of this RFP and an executed Conflict of Interest Statement. An executed "Officer's Oath" on the form provided will be required of the successful offeror prior to commencing work. The officer shall file the oath whose duty it is to make the payment. If the contractor is a partnership, all of the partners and any officer, agent, or other person who may have represented or acted for them in bidding for procuring the contract shall also make the oath. If the contractor is a corporation, all officers, agents, or other persons who may have acted for or represented the corporation in bidding for or procuring the contract shall make the oath. If such oath is false, the contract shall be void, and all sums paid by the County on the contract may be recovered by appropriate action. The Contractor Immigration compliance form must be provided with bid documents.

Provide the following Qualifications and Information:

- A. **Firm or Firms' Information**
1. Firm local name, address, and telephone number
 2. Primary local contact person(s) and telephone number(s)
 3. Total number of firm's local full-time employees
 4. Year firm established
 5. Local firm's billings for the last three fiscal years
 6. Local firms' billing for the current fiscal year
 7. Listing and description of last 3 years of litigation involving the local firm
 8. Listing and description of all litigation history for the local firm including 2008
 9. Copy of the most recent 3 completed years of audited financial statements (Income Statement and Balance Sheet) for the local firm
 10. Offeror must provide a letter of commitment from Surety or sureties regarding bonding capacity and availability.
 11. Cost proposal amount
 12. List any OSHA violations within the past 3 years.
 13. State your Experience Modification Factor, for the past 3 years, as related to your Workman's Comp Rates.
 14. List the five most recent projects on which the firm was required to comply with Davis-Bacon Fair Labor Wage requirements. Include name of the project manager and client reference, including name and contact information.
 15. Provide the current, active DUNS number for the firm and the current CCR registration number (CAGE or NCAGE) if available. If not available, a statement of intent that the firm will register in CCR in a timely manner upon Owner notification of intent to award (Part 2, II-B-1 of Exhibit B).

V. SPECIAL TERMS AND CONDITIONS

MODIFICATION OR WITHDRAWAL OF PROPOSALS

A submitted proposal may be retrieved in person by an offeror or its authorized representative if, before the scheduled closing time for receipt of proposals, the identity of the persons requesting retrieval is established and that person signs a receipt for the proposal. If the proposal is retrieved for modification, the sealed proposal must be resubmitted prior to the scheduled closing time for receipt of proposals. If the proposal is not resubmitted, it will be considered as withdrawn.

MISTAKES; CORRECTIONS AND WITHDRAWAL OF PROPOSALS

After proposals are opened, if the low Offeror claims a serious and honest error in proposal preparation, and can support such claim with evidence satisfactory to the Owner, withdrawal of the proposal without forfeiture of the bid security will be permitted. As a condition of this release, the low Offeror will be prohibited from:

- 1) Subcontracting or furnishing labor or equipment on this project.
- 2) Bidding on any Cobb County System projects within ninety (90) days of release by Owner.

Any questions concerning this request for proposals should be directed in writing via letter or facsimile, no later than **5:00 p.m. on August 31, 2010**, to:

Cobb County Purchasing Department
1772 County Services Parkway
Marietta, GA 30008-4021
FAX: (770) 528-1154
E-mail: purchasing@cobbcounty.org

SITE EXAMINATION

The site of the proposed work is shown on the drawings. The Offeror, before making his proposal, shall examine the drawings, specifications and the site and shall make such examinations as may be necessary to thoroughly familiarize themselves with the nature and extent of the proposed construction and with all local conditions affecting the work. The Offeror shall also accept the premises in its present condition and carry out all work in accordance with the requirements of the specifications and as shown on the drawings. The Owner will not be responsible for Offeror's errors and misjudgment nor for failure to obtain any information on local conditions or general laws or regulations pertaining thereto. At the time of the opening of proposals, each Offeror will also be presumed to have read and to be thoroughly familiar with the drawings, Contract Documents (including all addenda), and the construction specifications. The failure or omission of any Offeror to examine any form, instrument, or document shall in no way relieve any Offeror from any obligation in respect to his proposal.

Notice of SPECIAL CONDITIONS;

See Attachment B for ARRA and EECBG requirements on project.

LAWS AND REGULATIONS; LICENSING

The Offeror's attention is directed to the fact that all applicable Federal and state

laws, county and municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

The State of Georgia has requirements for the licensing of contractors engaged in specific types of construction, including general contracting, electrical, plumbing, and underground utility work [re: OCGA § 43-14]. Any contractor (or subcontractor of any tier) performing regulated work on this project shall furnish proof of valid and current registration to the Owner. Similarly, the State requirements concerning local business licenses shall be met.

EXECUTION OF COMPETITIVE SEALED PROPOSALS

The Offeror, in signing his proposal on the whole or any portion of the work, shall conform to the following requirements:

1. Competitive Sealed Proposals, which are not signed by individuals providing said proposal shall have attached thereto a power of attorney evidencing authority to sign the proposal in the name of the person for whom it is signed.
2. Competitive Sealed Proposals, which are signed for a partnership shall be signed by all of the partners or by an attorney-in-fact. There should be attached to the proposal a power of attorney executed by the partners evidencing authority to sign the proposal.
3. Competitive Sealed Proposals, which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officer of the corporation manually written below the corporate name following the wording "By _____." The corporate seal shall also be affixed to the proposal.

NON-COLLUSION AFFIDAVIT

The Georgia statute concerning public works construction contracting requires that any person who procures such work by bidding or proposal shall make an oath in writing that he/she has not prevented or attempted to prevent competition in such bidding [OCGA § 36-91-21(d),(e)]. If the Design/Builder is a partnership, all of the partners and any officer, agent, or other person who may have represented or acted for them in bidding for or procuring the contract shall make the oath and complete the Affidavit. If the Design/Builder is a corporation, all officers, agents, or other persons who may have acted for or represented the corporation in bidding for or procuring the contract shall make the oath and complete the Affidavit. If such oath is false, the Contract shall be void, and all sums paid by the County on the Contract may be recovered by appropriate action.

CONTRACT PERFORMANCE BOND AND PAYMENT BOND

The Contractor will be required to furnish a contract performance bond and a payment bond executed by a surety company on bond forms provided by the Owner. (samples attached). This company must be listed in the latest issue of U.S. Treasury Circular 570, registered, and duly authorized to do business in the State of Georgia. The bond must be signed (or countersigned) by a local agent, each in an amount that is at least equal to one-hundred percent (100%) of the Contract Price, as security for the faithful performance of this contract and as security for the payment of all

persons performing labor and furnishing material in connection with the Contract. Utilize your current budget for the project for bond amount. The bond amount will be adjusted to the final price once it is agreed upon.

The surety shall be acceptable to the Owner and the bond shall be executed on the form attached. In case of default on the part of the Contractor, all expenses incident to ascertaining and collecting losses under the bond, including both engineering and legal services, shall lie against the bond.

The Contractor will be required to provide the Owner a one-year guarantee covering workmanship and materials of the project. The contract performance bond shall remain in force for one year from date of project acceptance by the Owner. The cost of this bond shall be paid by the Contractor.

INSURANCE PROOF OF COVERAGE

Contractor shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property that may arise from or in connection with performance of the Work hereunder by the Contractor, his agents, representatives, employees, or subcontractors.

A. MINIMUM LIMITS OF INSURANCE

Contractor shall maintain limits no less than:

1. General Liability: \$1,000,000 combined single limit per occurrence for comprehensive coverage including bodily injury, personal injury and property damage for premises/operations, products/completed operations, contractual liability, independent contractors, broad-from property damage, and underground, explosion and collapse hazard.
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage including all owned, hired, and non-owned.
3. Workers' Compensation and Employers Liability: Workers' Compensation limits as required by the Labor code of the State of Georgia and Employers Liability of \$100,000 per accident.
4. Umbrella Liability: \$5,000,000 combined single limits per occurrence.
5. Builders Risk Insurance, if applicable: All Risk coverage on any buildings, structure of work and material in an amount equal to 100 per cent of the value of the contract. Coverage is to cover Cobb County interest and Cobb County shall be named as Loss Payee.

B. DEDUCTIBLES AND SELF-INSURED RETENTION

Any deductibles or self-insurance retentions must be declared to and approved by the Owner. At the option of the Owner, either: The insurer shall reduce or eliminate such

deductibles or self-insured retentions as respects the Owner, its officers officials, and employees; or the Contractor shall procure a bond guaranteeing payment of losses related to investigations, claim administration and defense expenses.

C. OTHER INSURANCE PROVISIONS

1. General Liability, Automobile Liability, and Umbrella Liability Coverages

The Owner and its officers, officials, employees and volunteers are to be covered as additional insureds as respects: liability arising out of activities performed by or on behalf of the Contractor.

Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Owner and its officers, officials employees or volunteers.

The Contractor is responsible for insuring its own property and equipment.

2. Workers' Compensation and Employers Liability Coverage. The insurer shall agree to waive all rights of subrogation against the Owner and its officers, officials, employees and volunteers for losses arising from the work performed by the Contractor for the Owner.

3. All Coverages: Each insurance policy required by this clause shall be endorsed to state that coverage shall not be changed, cancelled, suspended, terminated or non-renewed except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to Cobb County of said change of coverage, cancellation, suspension, termination / or non-renewal.

D. ACCEPTABILITY.

Insurance is to be placed with insurers with a Best's rating of no less than A: VII, or otherwise acceptable to the Owner.

E. VERIFICATION OF COVERAGE.

Contractor shall furnish the Owner with certificates of insurance and with original endorsements effecting coverage required by this clause. These certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be received and approved by the Owner before any work commences. The Owner reserves the right to require complete, certified copies of all required insurance policies at any time.

F. SUBCONTRACTORS

Subcontractor means one not in the employment of the Contractor who is performing all or part of the services under this Agreement under a separate contract with the Contractor.

Contractor shall include all subcontractors as insured under its insurance or shall ensure subcontractors have met the insurance requirements of this agreement. Owner may request evidence of subcontractor's insurance.

Contractor is responsible for having all subcontractors comply with all terms and conditions of the Invitation to Bid.

G. WAIVER OF SUBROGATION

Vendor shall require all insurance policies in any way related to the work and secured and maintained by Vendor to include clauses stating each underwriter shall waive all rights of recovery, under subrogation or otherwise, against Customer. Vendor shall require of subcontractors, by appropriate written agreements, similar waivers each in favor of all parties enumerated in this section.

AWARD OF CONTRACT

The Offeror to whom the Contract is being awarded will be required to execute the agreement and obtain the performance bond, payment bond and provide insurance certificates acceptable to the Owner within twenty-one calendar days from the date when the notice of award is issued to the Offeror. Bond amount will be based on the cost of the projects proposal. In case of failure of the Offeror to execute the agreement or provide insurance or meet bonding requirements, the Owner may consider the Offeror in default, in which case the bid security accompanying the proposal shall become payable to the Owner.

OWNERSHIP OF PROPOSAL DOCUMENTATION

Upon receipt of the Proposal by the Owner, the Proposal and all included documentation shall become the property of the Owner, without compensation to the Offeror, for disposition or usage by the Owner at its discretion. The Owner assumes no responsibility or obligation to firms providing proposals and will make no payment for any costs associated with the preparation or submission of proposals. All work, including but not limited to planning, programming, cost estimates and summaries, plans, specifications and other materials prepared by or for the firms proposing to the Owner under this Invitation for Proposals shall become the property of the Owner

Conflict of Interest Statement

As a duly authorized representative of the firm _____

I, _____ with the title _____ certify

that to the best of my knowledge no circumstances exist that will cause a conflict of interest in performing services for Cobb County Government, that no employee of Cobb County, nor any public agency official or employee affected by this Request for Proposals has any pecuniary interest in the business of this firm, associates or consultants of this firm, or the firm's parent firm, subsidiary, or other legal entity of which this firm is a part, and that no person associated with or employed by this firm has any interest that would conflict in any way, manner or degree with the performance of services for Cobb County Government.

Date: _____

Company Name: _____

Authorized Representative Name: _____

Title: _____

Signature: _____

Officer's Oath

As a duly authorized representative of the firm involved in the bidding for or procuring the contract _____

I, _____ with the title _____ certify that I did not prevent or attempt to prevent competition in such proposals by any means whatsoever. Nor did I prevent or endeavor to prevent anyone from making a proposal therefore by any means whatsoever, or induce another to withdraw a proposal for the work.

Date: _____

Company Name: _____

Authorized Representative Name: _____

Title: _____

Signature: _____

Cobb County General Instructions for Proposers, Terms and Conditions

I. Preparation of Proposals

Each proposer shall examine the drawings, specifications, schedule and all instructions. Failure to do so will be at the proposer's risk, as the proposer will be held accountable for their proposal response.

Each proposer shall furnish all information required by the proposal form or document. Each proposer shall sign the proposal and print or type his or her name on the schedule. The person signing the proposal must initial erasures or other changes. An authorized agent of the company must sign proposals.

Requests for Proposals (RFP) issued by Cobb County are advertised on the Cobb County Internet site (www.purchasing.cobbcountyga.gov) and every Friday in the Cobb County legal organ, the Marietta Daily Journal.

II. Delivery

Each proposer should state time of proposed delivery of goods or services. Words such as "immediate", "as soon as possible", etc. shall not be used. The known earliest date or the minimum number of calendar days required after receipt of order (delivery A.R.O.) shall be stated (if calendar days are used, include Saturday, Sunday and holidays in the number).

III. Explanation to Proposers

Any explanation desired by a proposer regarding the meaning or interpretation of the Request for Proposal, drawings, specifications, etc. must be received by **5:00 pm on Tuesday, August 31, 2010** in order for a reply to reach all proposers before the close of the bid. Any information concerning an RFP will be furnished to all prospective proposers as an addendum to the invitation if such information is necessary or if the lack of such information would be prejudicial to uninformed proposers.

The written proposal documents supersede any verbal or written communication between parties. Addenda are posted on the Purchasing web site: www.purchasing.cobbcountyga.gov. Receipt of addenda should be acknowledged in the submitted proposal. It is the proposer's ultimate responsibility to ensure that they have all applicable addenda prior to bid submittal.

IV. Submission of Proposals

Proposals shall be enclosed in a sealed package, addressed to the Cobb County Purchasing Department with the name and address of the proposer, the date and hour of opening, and the request for proposal number on the face of the package. Telegraphic/faxed proposals will not be considered. Any addenda should be enclosed in the sealed envelopes as well.

Unsigned proposals will not be considered.

Cobb County is exempt from federal excise tax and Georgia sales tax with regards to goods and services purchased directly by Cobb County. Suppliers and contractors are responsible for federal excise tax and sales tax, including taxes for materials incorporated in county construction projects. Suppliers and contractors should contact the State of Georgia Sales Tax Division for additional information.

Except as otherwise provided by law, information submitted by a proposer in the proposal process shall be subject to disclosure after proposal award in accordance with the Georgia Open Records Act. Proprietary information must be identified. Entire proposals may not be deemed proprietary.

V. Withdraw Proposal Due To Error

The proposer shall give notice in writing of his claim of right to withdraw his proposal without penalty due to an error within two (2) business days (48 hours) after the conclusion of the proposal opening. Proposals may be withdrawn from consideration if the price was substantially lower than the other proposals due solely to a mistake therein, provided the proposal was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the proposal, which unintentional arithmetic or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the proposal sought to be withdrawn. The proposer's original work papers shall be the sole acceptable evidence of error and mistake if he elects to withdraw his proposal. If a proposal is withdrawn under the authority of this provision, the lowest remaining responsive proposal shall be deemed to be low proposal. Proposal withdrawal is not automatically granted and will be allowed solely at the discretion of Cobb County.

No proposer who is permitted to withdraw a proposal shall, for compensation, supply any material or labor or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn proposal was submitted.

VI. F.O.B. Point

Unless otherwise stated in the request for proposal and any resulting contract, or unless qualified by the proposer, items shall be shipped F.O.B. Destination. The seller shall retain title for the risk of transportation, including the filing for loss or damages. The invoice covering the items is not payable until the items are delivered and the contract of carriage has been completed. Unless the F.O.B. clause states otherwise, the seller assumes transportation and related charges either by payment or allowance.

VII. Patent Indemnity

The contractor guarantees to hold the County, its agents, officers or employees harmless from liability of any nature or kind for use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, articles or appliances furnished or used in the performance of the contract, for which the contractor is not the patentee, assignee or licensee.

VIII. Award

Award will be made to the highest scoring responsive and responsible proposer according to the criteria stated in the proposal documents. The County may make such investigations as it deems necessary to determine the ability of the proposer to perform, and the proposer shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any proposal if the evidence submitted by, or investigations of such proposer fails to satisfy the County that such proposer is properly qualified to carry out the obligations of the contract.

The County reserves the right to reject or accept any or all proposals and to waive technicalities, informalities and minor irregularities in the proposals received. The County reserves the right to make an award as deemed in its best interest which may include awarding a proposal to a single proposer or multiple proposers; or to award the whole proposal, only part of the proposal, or none of the proposal to single or multiple proposers, based on its sole discretion of its best interest.

Time payment discounts will be considered in arriving at net prices and in award of proposal.

IX. County Furnished Property

The County will furnish no material, labor or facilities unless so provided in the RFP.

X. Rejection of Proposals

Failure to observe any of the instructions or conditions in this request for proposal may constitute grounds for rejection of proposal.

XI. Contract

Each proposal is received with the understanding that the acceptance in writing by the County of the offer to furnish any or all of the commodities or services described therein shall constitute a contract between the proposer and the County which shall bind the proposer on his part to furnish and deliver the articles quoted at the prices stated in accordance with the conditions of said accepted proposal. The County, on its part, may order from such contractor, except for cause beyond reasonable control, and to pay for, at the agreed prices, all articles specified and delivered.

Upon receipt of a proposal containing a Cobb County “Sample Contract” as part of the requirements, it is understood that the proposer has reviewed the documents with the understanding that Cobb County requires that all agreements between the parties must be entered into via these documents. If any exceptions are taken to any part, each exception must be stated in detail and submitted as part of the proposal document. If no exceptions are stated, it is assumed that the proposer fully agrees to the “Sample Contract” in its entirety. The County reserves the right to make changes to the “Sample Contract”.

XII. Delivery Failures

Failure of a contractor to deliver within the time specified or within reasonable time as interpreted by the Purchasing Director, or failure to make replacements of rejected articles/services when so requested, immediately or as directed by the Purchasing Director, shall constitute authority for the Purchasing Director to purchase in the open market or rebid for articles/services of comparable grade to replace the articles/services rejected or not delivered. On all such purchases, the contractor shall reimburse the County within a reasonable time specified by the Purchasing Director for any expense incurred in excess of contract prices, or the County shall have the right to deduct such an amount from monies owed the defaulting contractor. Alternatively, the County may penalize the contractor one percent (1%) per day for a period of up to ten (10) days for each day that delivery or replacement is late. Should public necessity demand it, the County reserves the right to use or consume articles/services delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.

XIII. Non-Collusion

By submission of a proposal, the proposer certifies, under penalty of perjury, that to the best of its knowledge and belief:

- (a) The prices in the proposal have been arrived at independently without collusion, consultation, communications, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other vendor or with any competitor.
- (b) Unless otherwise required by law, the prices which have been quoted in the proposal have not been knowingly disclosed by the proposer prior to opening, directly or indirectly, to any other proposer or to any competitor
- (c) No attempt has been made, or will be made, by the proposer to induce any other person, partnership or corporation to submit or not to submit a proposal for the purpose of restricting competition.

Collusion and fraud in bid preparation shall be reported to the State of Georgia Attorney General and the United States Justice Department.

V. Conflict Of Interest, Etc.

By submission of a proposal, the proposer certifies, under penalty of perjury, that to the best of its knowledge and belief:

1. No circumstances exist which cause a Conflict of Interest in performing the services required by this RFP, and
2. That no employee of the County, nor any member thereof, nor any public agency or official affected by this RFP, has any pecuniary interest in the business of the responding firm or his sub-consultant(s) has any interest that would conflict in any manner or degree with the performance related to this RFP.

The responding firm also warrants that he and his sub-consultant(s) have not employed or retained any company or person other than a bona fide employee working solely for the responding firm or sub-consultant(s) to solicit or secure a contract agreement with Cobb County, as related to this RFP, and that he and his sub-consultant(s) have not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the responding firm or his sub-consultant(s) any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award of this Agreement.

For any breach or violation of this provision, the County shall have the right to terminate any related contract or agreement without liability and at its discretion to deduct from the price, or otherwise recover, the full amount of such fee, commission, percentage, gift, payment or consideration.

The successful responding firm shall require each of its sub-consultant(s) to sign a statement certifying to and agreeing to comply with the terms of the subsections above.

XV. Default

The contract may be cancelled or annulled by the Purchasing Director in whole or in part by written notice of default to the contractor upon non-performance or violation of any contract term. An award may be made to the next highest rated responsive and responsible proposer, or articles specified may be purchased on the open market similar to those terminated or the County may issue a new Request for Proposal. In any event, the defaulting contractor (or his surety) shall be liable to the County for costs to the County in excess of the defaulted contract prices; provided, however, that the contractor shall continue the performance of this contract to the extent not terminated under the provisions of this clause. Failure of the contractor to deliver materials or services within the time stipulated on its proposal, unless extended in writing by the Purchasing Director, shall constitute contract default.

XVI. Disputes

Except as otherwise provided in the contract documents, any dispute concerning a question of fact arising under the contract which is not disposed of shall be decided after a hearing by the Purchasing Director who shall reduce his/her decision to writing and

mail or otherwise furnish a copy thereof to the contractor. The decision of the Purchasing Director shall be final and binding, however, the contractor shall have the right to appeal said decision to a court of competent jurisdiction.

XVII. Substitutions

Proposers offering and quoting on substitutions or who are deviating from the attached specifications shall list such deviations on a separate sheet to be submitted with their proposal. The absence of such a substitution list shall indicate that the proposer has taken no exception to the specifications contained therein.

XVIII. Ineligible Proposers

The County may choose not to accept the proposal of one who is in default on the payment of taxes, licenses or other monies owed to the County. Failure to respond three (3) consecutive times for any given commodity may result in removal from the list under that commodity.

XIX. General Information

Sealed proposals, with original signatures, will be accepted by the County Purchasing Department at the time, place, and date specified. One (1) original and three (3) copies of the proposal must be submitted, complete with a cover letter signed by an official within the organization who has authority over project negotiation.

These proposals must be in accordance with the purposes, conditions, and instructions provided in this RFP. The Cobb County Board of Commissioners assumes no responsibility for proposals received after the submission time, whether due to mail delays or any other reason. Proposals received after the submission time will be filed unopened and considered non-responsive.

As previously stated under IV, unsigned proposals will not be considered.

Cobb County reserves the right to retain all proposals submitted, and to use any idea in any proposal regardless of whether that proposal is selected. All work performed by the successful respondent shall be performed in compliance with the Americans With Disabilities Act.

XXI. Uniformity of Proposal

To facilitate comparative analysis and evaluation of proposals it is desired that a uniform format be employed in structuring each proposal. The respondent's degree of compliance with the requirements of the RFP will be a factor in the subsequent point-based evaluation of the proposal. Proposals with major deviations or omissions may not be considered for detailed study. Proposals will become part of the contract with Cobb County should they be selected under the RFP.

XXII. Request Additional Information

Inquiries that must be answered in regards to the Proposal procedures or technical matters shall be submitted in writing to:

Cobb County Purchasing Division
1772 County Services Parkway
Marietta, Georgia 30008-4021
Fax: (770) 528-1154
Email: purchasing@cobbcounty.org

Correspondence should be submitted only to the designated individual. All inquiries must be in writing. Cobb County will not orally or telephonically address any question or clarification regarding specifications or procedures. Cobb County is not bound by any oral representations, clarifications, or changes made to the written specification by County employees, unless such clarification or change is provided to the respondent in written addendum from Cobb County.

XXIII. Firm Prices

Prices quoted by proposal shall be firm and best prices. Prices quoted must be valid for a minimum of ninety (90) days from the date of bid opening.

XXIV. Proposal/Presentation Costs

The cost for developing a proposal will be borne by the respondent. Cobb County is not liable for any costs incurred by the respondent in preparation and/or presentation of proposals in response to this RFP or for travel and other costs related to this RFP.

XXV. Proposal Format

Presentation of the relevant information is at the discretion of the respondent; however, the proposal must address all items identified in Section Titled, Proposal Requirements. To assist in the evaluation of proposals resulting from the RFP, it is recommended that each proposal be written in a concise and forthright manner and that unnecessary marketing statement and materials be avoided.

XXVI. Indemnification/Hold Harmless

By submission of a proposal, the selected responding firm agrees to indemnify Cobb County to the fullest extent permitted by law, protect, defend, indemnify and hold harmless Cobb County, its officers, officials, employees and volunteers from and against all claims, actions, liabilities, losses (including economic losses), or costs arising out of any actual or alleged a) bodily injury, sickness, disease, or death; or injury to or destruction of tangible property including the loss of use resulting there from; or any other damage or loss arising out of or resulting claims resulting in whole or part from any actual or alleged act or omission of the responding firm, sub-consultant, anyone directly or indirectly employed by any of them; or anyone for whose acts any of them may be

liable in the performance of work; b) violation of any law, statute, ordinance, governmental administrative order, rule, regulation, or infringements of patent rights or other intellectual property rights by the responding firm in the performance of work; or c) liens, claims or actions made by the responding firm or other party performing the work, as approved by Cobb County.

The indemnification obligations herein shall not be limited to any limitation on the amount, type of damages, compensation, or benefits payable by or for the responding firm or its sub-consultant(s), as approved by the County, under workers' compensation acts, disability benefit acts, other employee benefit acts, or any statutory bar or insurance.

XXVII. Proposal Evaluation

The Evaluation process will address current requirements and consider possible future operation and maintenance needs. Both objective and subjective rationale will be involved in the decision process.

1. Evaluation Responsibility

A selection committee will coordinate the review of all proposals and will submit a recommendation to the County Manager and Board of Commissioners.

2. Presentations

During the evaluation process, the members of the selection committee may require that responding firms conduct a presentation. If required, these presentations will be scheduled in advance and limited in time. Location of the presentations will be pre-arranged.

3. Evaluation Criteria

The County will use a specific set of criteria for the qualitative evaluation of competitive proposals. The structure of the evaluation will be to assign points to each response in a number of categories. A non-response to a specific category will result in no points being awarded for that category. Final rankings will be based on a combination of price and qualitative factors.

All proposal requirements must be met, or capable of being met by the responding firm or the proposal will be disqualified as non-responsive. It is extremely important that project schedules are met. Only those firms or teams with the necessary resources and a commitment to complete all project work on schedule should submit a Proposal.

XXVIII. Multi-Year Contract Provisions

The successful respondent will be required to enter into a contract containing the provisions as required by Georgia law pertaining to multi-year contracts. The following is a sample of the provision and will be adjusted as to the term or as to the length of the contract.

This contract shall terminate absolutely and without further obligation on the part of Cobb County at the close of the calendar year in which it was executed, and at the close of each succeeding calendar year for which it may be renewed as provided in O.C.G.A.

Section 36-60-13. The contract shall automatically renew for each of the remaining calendar years provided for in the contract, unless positive action is taken by Cobb County to terminate such contract, and the nature of such action shall be written notice provided to the consulting firm within sixty (60) days before the end of the initial year of the contract or each succeeding remaining calendar year.

This contract shall terminate immediately and absolutely at such time as appropriated and otherwise unobligated funds are no longer available to satisfy the obligations of Cobb County under this contract.

XXIX. Proposal Requirements

The respondents must demonstrate competence and experience in the area of expertise outlined in this Request for Proposal.

If required, respondents must demonstrate competence and experience in public speaking and graphic presentations for the purpose of conveying project information to large and diverse community groups. Respondents should also be able to demonstrate the ability to build consensus among public and private interest groups related to this project.

XXX. Cover Letter/Executive Summary

Respondents shall provide a cover letter or letter of transmittal to briefly summarize the company's interest and relevant qualifications for the project. This letter shall not exceed two (2) pages, and shall be signed by an agent of the responding firm who is authorized to negotiate the details of the proposed services.

XXXI. Project Team

Respondents shall provide an organizational chart for the proposed project team, as well as the relevant background and experience for every proposed team member.

XXXII. Special Terms And Conditions

Should these General Terms and Conditions be in conflict with any attached Special Terms and Conditions, the Special Terms and Conditions will control.

Compliance with Georgia Security and Immigration Compliance Act (Effective 7/1/10, Supersedes All Prior Versions)

BACKGROUND

Pursuant to the “Georgia Security and Immigration Compliance Act,” Cobb County cannot enter into a contract for the physical performance of services unless the contractor registers and participates in the federal work authorization program to verify information of all newly hired employees or subcontractors. Neither may any contractor or subcontractor enter a contract with the county in connection with the physical performance of services unless the contractor and/or subcontractor registers and participates in the federal work authorization program to verify information of all new employees. O.C.G.A. § 13-10-91.

Before any bid for the physical performance of services is considered, the bid must include a signed, notarized affidavit from the contractor attesting to the following: (1) the affiant has registered with and is authorized to use the federal work authorization program; (2) the user ID number and date of authorization for the affiant; and (3) the affiant is using and will continue to use the federal work authorization program throughout the contract period. O.C.G.A. § 13-10-91 (b) (1). Affidavits shall be maintained for five years from the date of receipt. O.C.G.A. § 13-10-91 (b) (1).

Upon contracting with a new subcontractor, a contractor or subcontractor shall, as a condition of the contract or subcontract, provide Cobb County with notice of the identity of any and all subsequent subcontractors hired or contracted by that contractor or subcontractor within five (5) business days of entering into a contract or agreement for hire with any subcontractor. Such notice shall include an affidavit including the subcontractor’s name, address, user ID number, and date of authorization to use the federal work authorization program. O.C.G.A. § 13-10-91 (b) (3).

Based upon the County’s experience and desire for full compliance, no work may be commenced by any subsequent subcontractor prior to notice being received by the County that the subcontractor (regardless of tier) is in compliance with the law and the attached Procedures & Requirements, including the preparation and submission of the Contractor (or Subcontractor) Affidavit & Agreement AND the Immigration Compliance Certificate PRIOR to the commencement of any work.

DEFINITIONS

Affidavit – a written statement made or taken under oath before an officer of the court or a notary public or other person who duly has been authorized so to act.

Affiant – the person who makes and subscribes to a statement made under oath (affidavit).

Physical Performance of Services – the building, altering, repairing, improving, or demolishing of any public structure or building or other public improvements of any kind to public real property, including the construction, reconstruction, or maintenance of all or part of a public road; or any other performance of labor for a public employer under a contract or other bidding process.

PROCEDURES & REQUIREMENTS

1. **Bid Documents:** Bid documents should contain information regarding the contract language and contractual requirements described below.
2. **Responsive Bid Documents:** Responsive bid documents must include a signed, notarized affidavit from the contractor in the form attached. **If the affidavit is not submitted at the time of the bid, the applicant will be disqualified.**

This affidavit must be signed, notarized and submitted with any bid requiring the performance of physical services. If the affidavit is not submitted at the time of the bid, bid will be determined non-responsive and will be disqualified.

3. Contract Language & Contractual Requirements: Affirmative language shall be contained in agreements for the performance of services to cover all statutory and County requirements; such language shall require:
- (a) That affidavits in the form attached to these “Procedures & Requirements” be executed from a contractor (and any subcontractors, regardless of tier) and notarized, showing compliance with the requirements of O.C.G.A. § 13-10-91 and that such be made part of the contract and/or subcontracts;
 - (b) That the contractor (and any subcontractors, regardless of tier) fully comply with the requirements for completing and submitting the “Immigration Compliance Certification” and that such certification be received by the County prior to the commencement of any work under the contract or subcontract;
 - (c) That the contractor (or any subcontractor, regardless of tier) notify the County within five (5) business days of entering into a contract or other agreement for hire with any subcontractor(s), regardless of tier;
 - (d) That the contractor be responsible for obtaining and providing to the County the “Subcontractor Affidavit & Agreement” and “Immigration Compliance Certification” attached to and required under these “Procedures & Requirements” from each subcontractor, regardless of tier, employed or retained for work under the contract prior to the commencement of any work under the contract or any subcontract;
 - (e) That Cobb County, Georgia, reserves the right to dismiss, or require the dismissal of, any contractor or subcontractor for failing to provide the required affidavit or certification and/or for failure to comply with the statutory requirements of O.C.G.A. § 13-10-91 and/or for providing false or misleading information upon the required affidavit(s) or certification(s);
 - (f) That any contractor and/or subcontractor retaining any other subcontractor to perform services under the contract provide legal notice to any subcontractor of the requirements of Cobb County for immigration compliance and further provide notice that Cobb County, Georgia, reserves the right to dismiss, or require the dismissal of, any contractor or subcontractor for failing to provide the required affidavit or certification and/or for failure to comply with the statutory requirements of O.C.G.A. § 13-10-91 and/or for providing false or misleading information upon the required affidavit(s) or certification(s);
 - (g) That failure to comply with any of the requirements and procedures of the County (i.e., failure to timely supply required affidavits or compliance certification documents; failure to utilize federal work authorization procedures; failure to permit or facilitate audits or reviews of records by County or State officials upon request; and/or failure to continue to meet any of the statutory or County obligations during the life of the contract) shall constitute a material breach of the agreement and shall entitle the County to dismiss any general contractor or to require the dismissal of any subcontractor or sub/subcontractor (irrespective of tier) for failing to fully comply with these requirements;
 - (h) That upon notice of a material breach of these provisions, the contractor (or subcontractor, regardless of tier) shall be entitled to cure the breach within ten (10) days and provide evidence of such cure. Should the breach not be cured, the County shall be entitled to all available remedies, including termination of the contract, the requirement that a subcontractor be dismissed from performing work under the contract, and any and all damages permissible by law.

4. Immigration Compliance Certification: Prior to commencing work under any contract for the physical performance of services, the contractor shall complete the “IMMIGRATION COMPLIANCE CERTIFICATION” form attached to these “Procedures & Requirements” and submit the same to the County.

Prior to allowing any other subcontractor to perform work under the contract, the contractor shall obtain a completed “IMMIGRATION COMPLIANCE CERTIFICATION” from each subcontractor (regardless of tier) and submit the same to the County.

FORM ATTACHMENTS:

1. CONTRACTOR AFFIDAVIT & AGREEMENT (EXHIBIT A);
2. SUBCONTRACTOR AFFIDAVIT & AGREEMENT (EXHIBIT A-1);
3. IMMIGRATION COMPLIANCE CERTIFICATION (EXHIBIT A-2).

**CONTRACTOR AFFIDAVIT & AGREEMENT
(EXHIBIT A)**

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is contracting with Cobb County, Georgia, has registered with, is authorized to use, and is participating in a federal work authorization program (an electronic verification of work authorization program operated by the U.S. Department of Homeland Security or any equivalent federal work authorization program operated by the U.S. Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA)). The undersigned contractor further attests that it will continue to use the federal work authorization program throughout the contract period.

The undersigned further agrees that should it employ or contract with any subcontractor(s) or should its subcontractor(s) employ other subcontractor(s) for the physical performance of services pursuant to the contract with Cobb County, Georgia, the contractor or subcontractor will:

- (1) Notify the County within five business days of entering into a contract or agreement for hire with any subcontractor(s);
- (2) Secure from any subcontractor(s) and/or their subcontractor(s) verification of compliance with O.C.G.A. § 13-10-91 on the attached Subcontractor Affidavit (EXHIBIT A) prior to the commencement of any work under the contract/agreement;
- (3) Secure from any subcontractor(s) and/or their subcontractor(s) a completed Immigration Compliance Certification (EXHIBIT A-1) prior to the commencement of any work under the contract/agreement;
- (4) Provide the subcontractor(s) with legal notice that Cobb County, Georgia, reserves the right to dismiss, or require the dismissal of, any contractor or subcontractor for failing to provide the affidavit and/or for failure to comply with the requirements referenced in the affidavit;
- (5) Maintain records of such compliance and provide a copy of each such verification to Cobb County, Georgia, at the time the subcontractor(s) is retained to perform such services or upon any request from Cobb County, Georgia; and
- (6) Maintain such records for a period of five (5) years.

EEV/Basic Pilot Program User ID Number

BY: _____
Authorized Officer or Agent
[Contractor Name]

Contractor Business Name

Printed Name

Date

SWORN AND SUBSCRIBED BEFORE ME
ON THIS THE ____ DAY OF _____, 201__

Notary Public Commission Expires: _____

This affidavit must be signed, notarized and submitted with any bid requiring the performance of physical services. If the affidavit is not submitted at the time of the bid, bid will be determined non-responsive and will be disqualified.

**SUBCONTRACTOR AFFIDAVIT & AGREEMENT
(EXHIBIT A-1)**

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of Cobb County, Georgia, has registered with, is authorized to use, and is participating in a federal work authorization program (an electronic verification of work authorization program operated by the U.S. Department of Homeland Security or any equivalent federal work authorization program operated by the U.S. Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA)). The undersigned contractor further attests that it will continue to use the federal work authorization program throughout the contract period.

The undersigned further agrees that should it employ or contract with any subcontractor(s) or should its subcontractor(s) employ other subcontractor(s) for the physical performance of services pursuant to the contract with Cobb County, Georgia, the undersigned subcontractor will:

- (1) Notify the County within five business days of entering into a contract or agreement for hire with any subcontractor(s);
- (2) Secure from any subcontractor(s) and/or their subcontractor(s) verification of compliance with O.C.G.A. § 13-10-91 on the attached Subcontractor Affidavit. (EXHIBIT B) prior to the commencement of any work under the contract/agreement;
- (3) Secure from any subcontractor(s) and/or their subcontractor(s) a completed Immigration Compliance Certification (EXHIBIT C) prior to the commencement of any work under the contract/agreement;
- (4) Provide the subcontractor(s) with legal notice that Cobb County, Georgia, reserves the right to dismiss, or require the dismissal of, any contractor or subcontractor for failing to provide the affidavit and/or for failure to comply with the requirements referenced in the affidavit; and
- (5) Maintain records of such compliance and provide a copy of each such verification to Cobb County, Georgia, at the time the subcontractor(s) is retained to perform such services or upon any request from Cobb County, Georgia; and
- (6) Maintain such records for a period of five (5) years.

EEV/Basic Pilot Program User ID Number

BY: Authorized Officer or Agent
[Subcontractor Name]

Subcontractor Business Name

Printed Name

Date

SWORN AND SUBSCRIBED BEFORE ME
ON THIS THE ____ DAY OF _____, 201_

Notary Public Commission Expires: _____

IMMIGRATION COMPLIANCE CERTIFICATION
(To be completed by Contractors and all Subcontractors)
(EXHIBIT A-2)

I certify to the Cobb County Board of Commissioners that the following employees will be assigned to:

(Project Name/Description)

I further certify to Cobb County, Georgia the following:

- The E-Verify program was used to verify the employment eligibility of each of the above-listed employees hired after the effective date of our contract to use the program;
- We have not received a Final Non-confirmation response from E-Verify for any of the employees listed.
- If we receive a Final Non-confirmation response from E-Verify for any of the employees listed above, we will immediately terminate that employee's involvement with the project.
- I have confirmed that we have an I-9 on file for every employee listed above and that to the best of my knowledge all the I-9's are accurate.
- To the best of my knowledge and belief, all of the employees on the above list are legally authorized to work in the United States.
- If any other employee is assigned to this Cobb County project, a certification will be provided for said employee prior to the employee commencing work on the project.

To the best of my knowledge and belief, the above certification is true, accurate and complete.

Sworn to by:

Contractor Name & Address:

Signature of Officer

Printed Name/Title

Date

SWORN AND SUBSCRIBED BEFORE ME
ON THIS THE ____ DAY OF _____, 201_

Notary Public
Commission Expires: _____

Disadvantaged Business Enterprises (DBE): The following provisions should be carefully read to determine applicability to your business.

Cobb County Government encourages the participation of all businesses in offering their services and/or products. The Cobb County Government has the goal to fairly and competitively procure the best product at the most reasonable cost.

A Disadvantaged Business Enterprise (DBE) is generally defined as a Female, Black American, Hispanic American and any other minority owned business. The Federal Government has long had program in place to ensure participation of DBE vendors and suppliers. The State of Georgia has established a similar program whereby DBE firms are defined, certified and made known. This effort is managed by the Georgia Department of Transportation (GDOT). More information can be obtained from GDOT web site:

1. <http://www.dot.state.ga.us/eoo-div/index.shtml>

The Cobb County Government addresses DBE business participation (frequency and dollar value) in the following ways:

1. Cobb County wishes to identify all DBE participation; both at the contractor and sub-contractor levels in the following ways.
 - a. DBE businesses are requested to identify such status at the time they register as a vendor.
 - b. DBE businesses are requested to identify themselves at the time they propose to do business. Please complete **EXHIBIT B** if applicable and return with bid submittal.
 - c. All businesses will receive with each Purchase Order an instruction sheet for use of the furnished *Cobb County Government DBE Participation Report*, **EXHIBIT C**. Businesses are requested to complete this report and submit it with each invoice for the time period billed.
2. Cobb County has established a Disadvantaged Business Enterprise Plan in accordance with the regulations of the U.S. Department of Transportation (U. S. Department of Transportation (US DOT), 49 CFR Part 26.) The Cobb County Department of Transportation is the lead agency for implementing the US DOT DBE Program for the County.

The Plan applies only to projects which are clearly indicated by the County.

**DISADVANTAGED BUSINESS ENTERPRISE (DBE) IDENTIFICATION
FORM**

A Disadvantaged Business Enterprise (DBE) is generally defined as a Female, Black American, Hispanic American and any other minority owned business. If your firm is classified as a Disadvantaged Business Enterprise (DBE), please complete this form and submit with bid response or send to:

Cobb County Purchasing Department
Attn: Mr. Rick Brun, Purchasing Director
1772 County Services Parkway
Marietta, GA 30008
Fax: 770-528-1154
Email: purchasing@cobbcounty.org

Name of Firm: _____

Address: _____

Telephone: _____

Fax: _____

Email: _____

MBE Certification Number: _____

Name of Organization Certification _____

<p>This information is acquired for informational purposes only and will have no bearing on the award unless otherwise stated</p>
--

Instructions for Completing
Disadvantaged Business Enterprise (DBE)
Participation Report

All Cobb County Government contractors or vendors are requested to complete a report descriptive of any DBE subcontractor involvement in work for which the government is making payment. If otherwise specified in an RFP or contract, additional reporting forms may be required as well.

The objective of this request is to assist in the identification of Disadvantaged Business Enterprise (DBE) business participation with the Cobb County Government and to quantify that participation.

The Cobb County Government does not administer a DBE Certification Program. The principle certification agency for the State of Georgia is the Georgia Department of Transportation. As a Contractor/Vendor you are not responsible for verification of any DBE Certification information of your subcontractor.

***** Instructions *****

1. Contractor/Vendor is furnished the one-page ***DBE Participation Report*** form with each Cobb County Government-issued Purchase Order.
2. Contractor/Vendor completes this form for each billing period and attaches it to the invoice to then be sent to the Cobb County Government.
3. Upon receipt of a Contractor/Vendor invoice, County staff should simply separate the completed DBE form and transmit to:

Cobb County Purchasing Department,
Attn.: DBE Report

A Disadvantaged Business Enterprise (DBE) is a firm that is under the control of someone in an ownership position (at least 51%) that:

1. Has membership in one or more of the following groups: Female, Black American, Hispanic American, Native American, Subcontinent Asian American and Asian-Pacific America. There may be other groups that may be eligible to be certified as DBE;
2. Is a U.S. citizen or lawfully admitted permanent resident of the U.S.;
3. Has a personal net worth which does not exceed \$750,000; and,
4. The business meets the Small Business Administration's size standard for a small business and does not exceed \$17.42 million in gross annual receipts;
5. The business is organized as a for-profit business.
6. The business may also be DBE eligible as a certified U.S. Small Business Administration 8(a) program.

**Cobb County Government Disadvantaged
Business Enterprise Participation Report**

→PLEASE keep this blank form to make copies for actual use as needed. Also, please
print or type in the form. ←

Submitted by: _____ Period Invoiced: _____
Name of Prime Contractor/Vendor **From/To:**

Cobb County Project Name: _____ Bid or P.O. Number: _____

Cobb County Department or Agency receiving service or product:

Description of Purchased Service/Product:

Full Contracted Amount: \$ _____

Payment amount requested at this time: \$ _____

1. Are YOU, the Prime Contractor or Vendor a DBE business?
 YES _____ NO _____

2. Please provide the following information for each subcontractor participating during
 this reporting period:

Subcontractor Business Name	Type Service or Product Supplied	Subcontractor Business/Conta ct Tel. Number	Actual Dollar Value of Subcontractor Participation this Reporting Period
			\$
			\$
			\$
			\$
			\$

Submitted by: _____
 Printed Name

Signature of Authorized Representative _____

Date : _____

Title or position: _____

**County Departments: Please send this completed form to the Cobb County Purchasing
 Department, ATTN: DBE Report**

COBB COUNTY PROPERTY MANAGEMENT
COBB COUNTY PROPERTY MANAGEMENT
57 WADDELL STREET, MARIETTA, GA 30060-1964
PAYMENT BOND

Bond Number: _____

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal, hereinafter called "**Contractor**", and _____, a corporation duly organized under the laws of the State of _____ listed in the latest issue of U.S. Treasury Circular 570, and registered in State of Georgia, as Surety, hereinafter called "**Surety**", are held and firmly bound unto Cobb County, Georgia, hereinafter called "**Owner**", in the sum of _____ (in words), (\$ _____) (in figures), for the payment of which sum, well and truly to be made, the **Contractor** and **Surety** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the **Contractor** has entered into a written contract dated _____, 20____ with the **Owner** for performance of _____ in accordance with drawings and/or specifications prepared by or for Cobb County which contract is by reference made a part of this bond by reference as if fully set forth herein, and is hereinafter referred to as the **Contract**.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if **Contractor** shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- A. A claimant is defined as an entity having a direct contract with the **Contractor** or with a Subcontractor of the **Contractor** for labor, material, or both, used or reasonably required for use in the performance of the Contract, "labor and material" being construed to include but not limited to that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
- B. The **Contractor** and **Surety** hereby jointly and severally agree with the **Owner** that every claimant as herein defined who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be due claimant, and have execution thereon. The **Owner** shall not be liable for the payment of any judgment costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant,

1. Unless claimant, other than one having a direct contract with the **Contractor**, shall have given written notice to any two of the following: the **Contractor**, the **Owner**, or the **Surety** above-named, within ninety (90) days after such claimant did or performed the last of the work of labor, or furnished the last of the materials for which said claim is made, stating with substantial specifics and accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the **Contractor**, **Owner** and/or **Surety**, at the addresses provided in the Contract or in this bond, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 2. After one (1) year from the completion of Contract and the acceptance by **Owner** of the work there under, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 3. Other than in a state court of competent jurisdiction in and or the county or of the state in which the project, or any part thereof, is situated.
- D. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by **Surety** of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such presented under and against this bond.
- E. PROVIDED FURTHER, that the said **Surety**, for value received hereby, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed there under or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this ____ day of _____, 20__.

Attest:

By: _____

Attest:

By: _____

Principal/Contractor (SEAL)

Signature

Typed Name

Title

Surety (SEAL)

Signature of Attorney-in-Fact

Typed Name of Attorney-in-Fact

(Bond must not be dated prior to date of Agreement)

PERFORMANCE BOND

Bond Number: _____

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned as Principal, hereinafter called "**Builder**", and _____, a corporation duly organized under the laws of the State of _____, listed in the latest issue of U.S. Treasury Circular 570, and registered in the State of Georgia, as Surety, hereinafter called "**Surety**", are held and firmly bound unto Cobb County, Georgia, hereinafter called "**Owner**", in the sum of _____ (in words), (\$ _____)(in figures), for payment of which sum, well and truly to be made, the **Builder** and **Surety** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the **Builder** has entered into a written contract dated _____, **20**_____ with **Owner** for the construction of _____ in accordance with drawings and/or specifications prepared by or for Cobb County which contract is made a part of this bond by reference as if set forth herein and is hereinafter referred to as the "**Contract**."

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if **Builder** shall promptly and faithfully perform said **Contract**, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

PROVIDED, FURTHER, that **Surety**, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed there under or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

Whenever **Builder** shall be, and declared by **Owner** to be in default under the Contract, the **Owner**, having performed **Owner's** obligations there under, the **Surety** may promptly remedy the default, or shall promptly:

1. Complete the **Contract** in accordance with its terms and conditions; or,
2. Obtain a bid or bids for completing the **Contract** in accordance with its terms, and conditions, and upon determination by the **Owner** and the **Surety** jointly of the responsible and responsive bidder, arrange for a contract between such bidder and **Owner**, and make available as work progresses (even though there should be default or a succession of defaults) under the contract or contracts of completion arranged under this paragraph sufficient funds to pay the cost of completion less the balance of the **Contract** price; but not exceeding, including other costs and damages for which the **Surety** may be liable hereunder, the amount set forth in the first paragraph hereof.
The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by **Owner** to **Builder** under the **Contract** and any amendments thereto, less the amount paid by **Owner** to **Builder**.

Any suit under this Bond must be instituted before the expiration of two (2) years from the date on which final payment under the **Contract** falls due. Notwithstanding the above, in the event of failure by the Builder to perform its obligations under said contract, the Owner may provide written notice of Builder's default to Surety at its address _____ and Surety shall cause to be paid within ten (10) days of receipt of Owner's notice such amount certified by Owner to be owing from Builder pursuant to the Contract.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the **Owner** named herein or the heirs, executors, administrators or successors of the **Owner**.

The **Surety** may only cancel this bond by first providing thirty (30) days written notice to **Owner** and Builder. Such cancellation shall not discharge the **Surety** from liability already accrued under this bond prior to the expiration of the thirty (30) day period.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original, this ____ day of _____, 20____.

Attest:

By: _____

Attest:

By: _____

Principal/Builder (SEAL)

Signature

Typed Name

President
Title

Surety (SEAL)

Signature of Attorney-in-Fact

Typed Name of Attorney-in-Fact

Attachment B

SPECIAL TERMS AND CONDITIONS OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA) AND THE ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG)

PART 1 GENERAL

This Section includes covers the Federal, State, and local provisions and requirements of the American Recovery and Reinvestment Act of 2009 (ARRA) and the Energy Efficiency and Block Grant (EECBG) program that constitute the funding sources for this project.

PART 2 SPECIAL TERMS AND CONDITIONS FOR ARRA and EECBG FUNDED PROJECTS

The following Special Terms and Conditions (ST&C-Bid) are incorporated in this bid and all resulting contracts and work orders. Submittal of a bid constitutes agreement by the Bidder to become familiar with and to comply with all terms and conditions in this section as well as elsewhere in bid and contract documents.

I. Compliance with ARRA and EECBG Funding and Contracting Requirements – General

A. Compliance Requirement by Bidders

This project is funded through an Energy Efficiency and Conservation Block Grant (EECBG) (Grant) provide under the American Recovery and Reinvestment Act of 2009 (ARRA), and is administered by the U.S. Department of Energy (DOE). Collectively, the terms and conditions of the EECBG and ARRA constitute the terms and conditions of the Grant.

1. Bidder Acknowledgement of Compliance

By submitting a bid, the Bidder hereby represents and warrants to and for the benefit of Cobb County and the United States Government that the Bidder agrees to:

- Familiarize themselves with, and comply with, all terms and conditions for ARRA and EECBG funded projects;
- Certify such compliance and provide documentation thereof upon request;
- Pass through these requirements to all subcontractors and, where applicable, to suppliers;
- Provide full and timely assistance upon request to Cobb County and other legal state and federal agencies and their designees as may be requested to demonstrate or confirm compliance with all bid and contract requirements and conditions.

2. Compliance Documents

The following documents specifying terms and conditions required for compliance with ARRA and EECBG are incorporated by reference:

- The American Recovery and Reinvestment Act of 2009
- 10 CFR 600 - all sections applicable to local governments. In particular, pay special attention to conditions in Subpart C – Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.
- National Policy Assurances (version current at time of bid publication)

- The “Special Terms and Conditions to Cobb County EECBG Grant DE-EE0000803/000” (Grant ST&C), a copy of which is available online at <http://purchasing.cobbcountyga.gov/>

Bidders are directed to pay particular attention to the following sections of documents referenced above:

- 10 CFR 600-236, Purchasing, with special attention to paragraph (i)
- Grant ST&C paragraph 25 – compliance with Buy American requirements of ARRA
- Grant ST&C paragraph 27 and 29 – compliance with Davis-Bacon requirements of ARRA
- Grant ST&C paragraph 22 – special provisions for ARRA funded work

B. Bidder Acknowledgement Regarding Compliance Failure

In addition to all other remedies available to the Owner in the Bid and Contract documents, Bidder acknowledges that failure to comply with all terms and conditions in the ARRA and EECBG may constitute justification for withholding payment for services and materials up to and including the full value of any project funds withheld by the government of the United States.

C. Flow down Requirement

Bidders must include all terms and conditions of this bid and all associated contracts in all subcontracts or awards resulting from this Bid as required by the referenced

D. Jobs Creation Reporting

Bidder agrees to provide information as requested by Owner to fulfill Owner’s responsibility to report jobs created with Grant funds.

E. Compliance with NEPA and Cobb County Waste Stream Management Plan

Cobb County has submitted a Waste Stream Management Plan to DOE as a condition of the EECBG. A copy of this plan is posted at <http://purchasing.cobbcountyga.gov/>. In addition to any other requirements contained or referenced in documents listed in section III-A herein, Bidder, by submitting a bid, indicates their familiarity with Cobb County’s Waste Stream Management Plan and agrees to adhere to the processes and procedures therein, and to provide documentation acceptable to the Owner of compliance.

II. Guidance and Emphasis Regarding ARRA and EECBG Funding and Contracting Requirements

Section I to these bid Special Terms and Conditions incorporates by reference the compliance requirements for this Bid and all subsequent contracts as required by the ARRA and EECBG grant conditions. The following discussion of selected compliance requirements is provided for emphasis, or for clarification or guidance on selected requirements. Should there be any conflict between these clarifications and the requirements of the source documents, the requirements of the source documents shall be applicable.

A. Access and Maintenance of Records

Bidder agrees that the terms Owner, County, or similar, as used in respect with requests made for records or documents necessary to ensure compliance with the ARRA and EECBG, shall include representatives of DOE, the US Inspector General, the US Comptroller General, their designees, or any other federal or state agencies and officials lawfully charged with ensuring compliance with the terms of this grant. Bidder agrees to respond to all such requests fully and in a timely manner so as not to delay Owner’s obligations for this grant.

Included in this obligation is compliance with the following grant conditions:

1. Information in Support of Recovery Act Reporting

Recipient may be required to submit backup documentation for expenditures of funds under the Recovery Act including such items as timecards and invoices. Recipient shall provide copies of backup documentation upon request by Owner.

2. Access to Records

With respect to funds made available as a result of this Bid, any representative of the Owner as defined herein is authorized:

(1) to examine any records of the contractor or grantee, any of its subcontractors or sub grantees, or any State or local agency administering such contract that pertain to, and involve transactions that relate to, the subcontract, subgrant, grant, or sub grant; and

(2) to interview any officer or employee of the contractor, grantee, sub grantee, or agency regarding such transactions.

3. Maintenance of Records

All records required for compliance with the expenditure of funds made available by the American Recovery and Reinvestment Act of 2009 shall be maintained and available for access as required for a minimum of three (3) years from date of final payment for work under this Contract and all other pending matters are closed, or longer should any of the applicable documents referenced in section III A above so require.

B. Contractor Registrations and Certification of Eligibility

Bidders acknowledge by submitting a bid that:

1. Registration in the Central Contractor Registration (CCR) and acceptance by the DOE of their status is a requirement for any contract award. Bidders must submit a current DUNS number with their bid, as well as either: (a) a current CCR registration number, or (b) in the absence of a CCR number, a certification that they will register in CCR in a timely manner upon Owner notification of intent to award, and that award may be withheld for failure to register or should they be rejected for work by any federal agency with authority to deny eligibility.

2. Neither the Contractor (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded DOE contracts or participate in DOE programs pursuant to 24 CFR Part 24; and

No part of this bid shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded DOE contracts or participate in DOE programs pursuant to 24 CFR Part 24.

C. Buy American – ARRA Section 1605

All goods and services to be provided through this Bid are being funded with monies made available by ARRA and such law contains provisions commonly known as "Buy American Requirements" that

requires all of the iron, steel, and manufactured goods used in the project be produced in the United States unless a waiver of the requirements is approved by the Department of Energy.

It is the responsibility of the Bidder to ensure the following: (a) full reviewed and understanding of the Buy American Requirements, (b) that all of the iron, steel, and manufactured goods used in the project will be and/or have been produced in the United States in a manner that complies with the Buy American Requirements, (c) that should Bidder anticipate and propose any non-compliant iron, steel, and manufactured goods, Bidder must note specific exceptions in their bid and provide reference to an existing DOE waiver if any, or justification as required in ARRA Section 1605 to apply for a waiver, and (d) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or, if applicable, assistance in submitting a Bidder requested waiver from this requirement as may be requested by Cobb County or other legal state or federal agency.

Bidders shall complete and submit the Owner provided Contractor and Supplier Certification Document(s) for themselves, and shall obtain and submit the same from any subcontractors and suppliers, in a timely manner upon request by the Owner. **(See Attachment B-1 to this section).**

Notwithstanding the waiver provisions allowed in the ARRA, a Bidder request for exceptions to Buy American Requirements shall be sufficient for Cobb County, at its sole discretion, to reject a bid as non-responsive.

D. Davis-Bacon Act and Contract Work Hours and Safety Standards Act

Compliance with the Davis-Bacon Act, the Contract Work Hours and Safety Standards Act, and the Copeland Act, all as stipulated in the Compliance Documents in section III-A herein, apply to this project.

Under the provisions of the Act, contractors or their subcontractors are to pay workers employed directly upon the site of the work no less than the locally prevailing wages and fringe benefits paid on projects of a similar character as determined by the U.S. Dept. of Labor Wage Determination applicable on the bid issuance date for the construction type and work location. **For this project, General Decision Number: GA100255 7/9/2010 GA255, is applicable. The applicable wage rates are included in this bid as Attachment B-2.**

By submitting a bid, the Bidder hereby represents and warrants to and for the benefit of Cobb County and the United States Government that (a) the contractor has reviewed and understands the requirements of the Davis-Bacon Act, the Contract Work Hours and Safety Standards Act, and the Copeland Act as they apply hereto, (b) has reviewed the applicable Wage Determination referenced herein, and (c) will fully conform with the applicable Wage Determination and all requirements applicable to this bid and resulting contract(s).

E. Protecting State and Local Government and Contractor Whistleblowers.

The requirements of Section 1553 of the ARRA specify protections, actions and remedies regarding treatment of any employee of state or local governments or their contractors or subcontractors for disclosing, including a disclosure made in the ordinary course of an employee's duties, information that the employee believes is evidence of gross management of an agency contract or grant relating to covered funds, a gross waste of covered funds, a substantial and specific danger to public health or safety related to the implementation or use of covered funds, an abuse of authority related to the implementation or use of covered funds, or violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.

All parties to this agreement shall be responsible for compliance with all requirements and conditions of Section 1553 of the ARRA.

Requirement to Post Notice of Rights and Remedies: Any employer receiving covered funds under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, shall post notice of the rights and remedies as required therein. (Refer to section 1553 of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, www.Recovery.gov, for specific requirements of this section and prescribed language for the notices.)

G. False Claims Act

Recipient and sub-recipients shall promptly refer to the DOE or other appropriate Inspector General any credible evidence that a principal, employee, agent, contractor, sub-grantee, subcontractor or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity or similar misconduct involving those funds.

H. National Policy Assurances

National Policy Assurances in effect on date of award as published at http://management.energy.gov/business_doe/1374.htm are incorporated in these Special Terms and Conditions by reference.

I. Small and Minority Business Enterprises

The Bidder agrees to ensure that small and minority firms, women's business enterprises, and labor surplus firms (DBE firms) have the maximum opportunity to participate in the performance of contracts and subcontracts whenever possible per paragraph (e) of 10 CFR 600-236. In this regard, all contractors shall take necessary and reasonable steps in accordance with 10 CFR 600-236 to ensure these firms have the maximum opportunity to compete for and perform contracts. Contractors shall not discriminate on the basis of race, color, national origin or sex.

Bidder agrees to provide documentation of all DBE firms, including itself, participating in this contract. Bidder further agrees, upon request of the Owner, to provide a list of any DBE firms that were contacted for participation in this contract.

END OF SECTION

Attachment B-1

Page 1

Manufacturer's Buy American Certification Compliance Statement

The Manufacturer (or designated manufacturer's representative) shall include this statement with all submittals for this project.

By this submittal, the Manufacturer hereby represents and warrants that all iron, steel, or manufactured goods represented in this submittal will be and/or have been produced in the United States in a manner that complies with the Buy American Requirements of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA), unless a waiver of the requirements is approved, and the Manufacturer will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support reporting requirements or a waiver of the Buy American Requirements, as may be requested by the Owner.

Project Name: _____

Signed: _____

By: _____

Print Name

Title: _____

Company: _____

Date: _____

Attachment B-1

Page 2

Contractor Buy American Certification Compliance Statement

The Contractor shall execute and submit this statement prior to contract award for this project.

I understand this project is funded in whole or in part using funds provided through the American Recovery and Reinvestment Act of 2009 (ARRA), and that performance on this project requires full compliance with the conditions of this Act.

I hereby represent and warrant that all iron, steel, or manufactured goods used in this project will be and/or have been produced in the United States in a manner that complies with the Buy American Requirements of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA), unless a waiver of the requirements is approved, and I will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support reporting requirements or a waiver of the Buy American Requirements, as may be requested by the Owner.

I agree to require the Manufacturer of all products used on this project submit a Manufacturer's Buy American Certification with all product submittals unless a waiver of the requirements is approved.

I shall maintain records at the job site or, if no contractor office is maintained at the job site, at the project office of the supervisor overseeing this project, documenting of compliance with these requirements, to provide copies of such documents available to the Owner upon request, and to provide complete documentation to the Owner at the conclusion of the project.

Project Name: _____

Signed: _____

By: _____

Print Name

Title: _____

Company: _____

Date: _____

Attachment B-2

General Decision Number: GA100255 07/09/2010 GA255

Superseded General Decision Number: GA20080255

State: Georgia

Construction Type: Building

County: Cobb County in Georgia.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Modification Number	Publication Date
0	03/12/2010
1	03/19/2010
2	04/02/2010
3	05/28/2010
4	07/09/2010

ASBE0048-001 04/01/2010

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 25.07	12.41

CARP0225-003 07/01/2008

	Rates	Fringes
CARPENTER (including form work; excluding drywall hanging and acoustical ceiling installation).....	\$ 21.45	6.35

CARP1263-001 07/01/2009

	Rates	Fringes
MILLWRIGHT.....	\$ 22.42	11.95

ELEC0613-014 03/01/2010

	Rates	Fringes
ELECTRICIAN (including installation of temperature controls for HVAC Systems).....	\$ 29.00	8.09

FOOTNOTES: Work on bar joists, walk logs, exposed steel and swinging scaffolds when the surface the worker stands or sits on exceeds twenty-five (25) feet above solid floor and the worker is subject to free fall: \$1.00 per hour additional. Work of a similar nature above fifty (50) feet: \$3.00 per hour additional.

Attachment B-2

ELEV0032-001 01/01/2010

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 33.98	20.035+a+b

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Vetern's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

ENGI0926-027 07/01/2009

	Rates	Fringes
Operating Engineers:		
Backhoe/Excavator, Hoist and Mechanic.....	\$ 23.74	9.03
Bulldozer, Compactor, Drill, Forklift, Loader, and Scraper.....	\$ 23.43	9.03
Crane and Boom.....	\$ 27.38	9.03
Oiler.....	\$ 20.21	9.03

FOOTNOTE: Paid Holidays - Labor Day and Christmas Day, if the worker has one year of continuous employment with the same contractor.

IRON0387-001 08/01/2009

	Rates	Fringes
IRONWORKER, STRUCTURAL.....	\$ 24.04	9.86

* PAIN0193-008 07/01/2010

	Rates	Fringes
DRYWALL FINISHER/TAPER.....	\$ 20.37	8.30

* PAIN0193-011 07/01/2010

	Rates	Fringes
PAINTER: Brush, Roller and Spray.....	\$ 20.37	8.30

PAIN1940-001 10/01/2009

	Rates	Fringes
--	-------	---------

Attachment B-2

IRONWORKER, REINFORCING.....	\$ 11.05	0.21
LABORER: Common or General.....	\$ 10.90	1.44
LABORER: Pipelayer.....	\$ 13.06	3.56
OPERATOR: Grader/Blade.....	\$ 9.00	0.24
OPERATOR: Roller.....	\$ 10.88	0.00
ROOFER (Excluding Metal Roof)....	\$ 10.00	0.00
TILE SETTER.....	\$ 15.00	0.00
TRUCK DRIVER.....	\$ 12.27	1.56
WATERPROOFER.....	\$ 10.50	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

--
In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

--
WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

Attachment B-2

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).
Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

BID FORM
Page 1 of 3

TO: COBB COUNTY BOARD OF COMMISSIONERS

THE UNDERSIGNED, having examined the project documents titled:

HVAC SYSTEM IMPROVEMENTS PROJECT
Cobb County Central Library
266 Roswell Street
Marietta, Georgia 30060

SEALED BID #10-5519

AND having visited the work site(s) and examined the conditions affecting the Work, HEREBY proposes and agrees to furnish all labor and materials, equipment, and appliances and to perform all operations necessary TO COMPLETE ALL WORK FOR ALL SERVICES AS REQUIRED BY THE PROJECT MANUAL, INCLUDING ANY ADDENDA, FOR THE SUMS STIPULATED BELOW

BOILER, CHILLER, AND COOLING TOWERS
BASE BID AMOUNT

_____ DOLLARS (\$ _____)

BID ALTERNATE #1 AMOUNT
REPLACE EXISTING ROOF TOP UNITS

_____ DOLLARS (\$ _____)

BID ALTERNATE #2 AMOUNT
VFD'S ON AHU'S

_____ DOLLARS (\$ _____)

The undersigned understands and agrees also to comply with and be bound by the entire contents of the Request for Bid including all Addenda.

Acknowledged: _____

The undersigned acknowledges receipt of Addenda numbers:

ADDENDUM NO.	_____	Acknowledged:	_____
ADDENDUM NO.	_____	Acknowledged:	_____
ADDENDUM NO.	_____	Acknowledged:	_____
ADDENDUM NO.	_____	Acknowledged:	_____
ADDENDUM NO.	_____	Acknowledged:	_____

CONTRACTOR'S QUALIFICATION STATEMENT

I. CONTRACTOR

Name of Contractor: _____

Address of Contractor: _____

Primary Contact Person: _____

Telephone Number: _____

Type of Business Entity: _____
(corporation, sole proprietorship, partnership, p.c.)

Contractor does _____ or does not _____ anticipate using subcontractor(s) in the performance of this Work.

Contractor Business Entity Principals:

Primary Owners (if other than C-Corporation): _____

President: _____

Secretary: _____

Business is organized under the Laws of the State of _____

Business Qualifies as a Woman Owned, Small Business, or DBE (Y/N): _____

If yes, list certifying authority: _____

II. BANK REFERENCE

Primary Bank: _____

Relationship officer responsible for account: _____

Telephone Number: _____

BID FORM
Page 3 of 3

III. REGISTRATION AS FEDERAL CONTRACTOR

Registration with DUNS is required for submittal of a Bid. Registry with the CCR and provision of a CAGE number is required prior to contracting.

Bidder DUNS Number: _____ Bidder CAGE Number: _____

If not currently registered and active with CCR, the undersigned hereby certifies they will register in a timely manner and provide Cobb County with their CCR CAGE number upon notification of intent to award work under this Bid. Initialed: _____

IV. BACKGROUND

Has Contractor ever done business under a different name? _____

If so, provide names: _____

Prior projects with Cobb County: _____

IV. REFERENCES

Contractor shall provide references separately as required in RFP documents.

V. COMPLIANCE DOCUMENTS

The undersigned hereby certifies the following bid submittals are included with this Bid Form. Failure to submit required submittals listed here may be used to reject the Contractor's Bid:

- ◆ Georgia Immigration Act Compliance Contractor Affidavit and Agreement
- ◆ Conflict of Interest Statement
- ◆ Officer's Oath
- ◆ Bid Pricing Form

BIDDER SIGNATURES

Bid dated this _____ day of _____ 2010

Bidder: _____

Signed: _____

Title: _____

Address: _____

END OF BID FORM

“SAMPLE” CONTRACT

Date:

OWNER: COBB COUNTY BOARD OF COMMISSIONERS ("Owner")
COBB COUNTY, GEORGIA
c/o Property Management Department
57 Waddell Street
Marietta, Georgia 30060-1940

CONTRACTOR: ("Contractor")

WORK: HVAC Improvements – Cobb County Central Library ("Work")
(General caption only)

PROJECT: **FEDERAL ENERGY GRANT – HVAC IMPROVEMENTS –**
COBB COUNTY CENTRAL LIBRARY
("Project")

ARCHITECT-ENGINEER: Marshall & Bollwerk Engineering, Inc. ("Engineer")

CONTRACT PRICE: ("Price")

MONTHLY BILLING DATE: To be received at the ("Monthly Billing Date")
Cobb County Property Management office by the 25th of each month.

RETAINED PERCENTAGE:10% ("Retained Percentage")

CHANGE ORDER COMBINED OVERHEAD AND PROFIT: ("Profit Percentage")
Combined Fifteen (15%) Percent

PAYMENT AND PERFORMANCE BONDS: Required XX Not Required

The above terms are incorporated by reference and are more fully explained below.)
Cobb County Board of Commissioners Owner, and Contractor, with offices at the addresses shown above, agrees for themselves, their successors, and assigns as follows:

1. WORK: Contractor shall perform and furnish all labor, supervision, services, materials, equipment, tools, scaffolds, hoisting, transportation, storage and all other things necessary to prosecute and complete the work identified and described in, or

which can be reasonably inferred from, Schedule A attached hereto (the "Work"). Contractor shall perform the Work in a good and workmanlike manner strictly in accordance with the Contract Documents, consisting of the plans, specifications (including, but not limited to, general, special, and supplemental conditions), addenda, and other documents identified in Schedule B attached hereto, and all subsequently and duly issued modifications thereto.

Contractor represents and agrees that it has carefully examined and understands the Contract Documents relevant to the Work; has adequately investigated the nature and conditions of the project site and locality; has familiarized itself with conditions affecting the difficulty of the Work and the condition of any equipment to be maintained and/or repaired; and has entered into this Contract based on its own examination, investigation and evaluation. Contractor is not in reliance upon any opinions or representations of Owner.

2. **PRICE:** Owner shall pay to Contractor for the satisfactory performance and completion of the Work and performance of all the duties, obligations and responsibilities of Contractor under this Contract, the sum set forth herein as the Price, subject only to additions and deductions as expressly provided in this Contract. To the extent that the Work is to be performed on a unit price basis, the Price shall be computed in accordance with the unit prices set forth in Schedule C, based on actual quantities determined in accordance with the Contract Documents and this Contract. The Price and all unit prices shown in Schedule C shall be deemed to include all costs of Contractor's performance of the Work as set forth in the Contract Documents, including, but not limited to, the costs of labor, supervision, services, materials, equipment, replacement parts/equipment, tools, scaffolds, hoisting, transportation, storage, insurance and taxes, and all overhead and profit.

3. **PROGRESS PAYMENTS:** Within ten (10) days after the date of transmission of this Contract to Contractor, Contractor shall submit to Owner for Owner's approval a detailed schedule showing a proper cost breakdown (with a proper share of associated overhead and profit) of the Price according to the various line items or parts, of the Work, for use only as a basis for verifying Contractor's applications for payment.

The Contractor shall submit an Application for Payment on the 25th of each month. The Contractor will provide, with the Payment Application, a line item breakdown of all previous costs to date plus the amount for application. The Owner will make payments to the Contractor within a reasonable period of time after receipt of the Payment Application equal to the value of the Completed Work and Stored Work as of the corresponding Monthly Billing Date, to the extent approved by Owner and Architect, and after deducting (a) all previous payments, (b) current retainage (to a maximum of 10 percent of each progress payment; provided, however, that, when 50 percent of the contract value including change orders and other additions to the Contract value provided for by the Contract Documents is due and the manner of completion of the Contract Work and its progress are reasonably satisfactory to the Owner's authorized Contract Representative, the Owner shall withhold no more retainage. If, after discontinuing the retention, the Owner's authorized Contract Representative determines that the Work is unsatisfactory or has fallen behind schedule, retention may be resumed at the previous level.), (c) all charges or back charges for services, materials, equipment, or other items furnished or otherwise chargeable to Contractor, and (d) withheld payments if the Owner determines there is unsatisfactory job progress, defective work, disputed work, actual or potential third party claims. Alternatively, any failure to make timely payments for labor or materials, damage to other entities connected with the project or reasonable evidence that the contract cannot be completed for the balance of the contract price. Payments that are not unreasonably delayed will bear no interest penalties.

The terms of this paragraph and the entire Contract Documents are intended to supersede all provisions of the Prompt Pay Act, O.C.G.A. 13-11-1 through 13-11-11.

Owner reserves the right to advance the date of any payment (including final payment) due or to become due under this Contract if, in its sole judgment, it becomes desirable to do so. The Owner shall not thereby incur any obligation to do so in the future or waive his right to strict compliance with the Contract terms.

Contractor shall not be entitled to any payment until this Contract has been properly executed and all documents and information to be furnished by Contractor have been supplied to Owner. If Owner has a dispute over a portion of the invoices, the undisputed portion will be paid.

4. **FINAL RETAINAGE PAYMENT:** At substantial completion of the Work and as the Owner's authorized Contract Representative determines the Work to be reasonably satisfactory, the Owner shall within 30 days after the last of the following to occur: (a) delivery of a final application for payment, (b) furnishing of evidence satisfactory to Owner that there are no

claims, obligations, or liens outstanding or unsatisfied for labor, services, materials, equipment, taxes, or other items performed, furnished or incurred in connection with the Work, (c) delivery of all guaranties, warranties, bonds, instruction manuals, performance charts, diagrams, as-built drawings and similar items required of Contractor or its suppliers or subcontractors and (d) delivery of a general release, in a form satisfactory to Owner, executed by Contractor running to and in favor of Owner, and such other parties as Owner may require; pay the retainage to the Contractor. If at that time there are any remaining incomplete minor items, an amount equal to 200 percent of the value of each item as determined by the Owner's authorized Contract Representative shall be withheld until such item or items are completed to the Owner's satisfaction.

5. PAYMENT CONDITIONS: Contractor will receive the payments made by Owner and Contractor will hold such payments as a trust fund to be applied first to the payment of laborers, suppliers, subcontractors, and others responsible for the Work for which such payments are made, including sufficient funds so that all taxes and insurance applicable thereto are also paid and shall comply with all laws applicable thereto.

Contractor shall, as often as requested by Owner, furnish such information, evidence and substantiation as Owner may require with respect to the extent and value of current progress and the nature and extent of all obligations incurred by Contractor in connection with the Work and all payments made by Contractor on account thereof. Contractor shall also furnish, as required by Owner in its sole discretion, such partial or final lien waivers or releases, as Owner deems necessary to ensure that Contractor has paid all persons furnishing any labor, material, or services in furtherance of any Work furnished hereunder. If required by Owner, the furnishing of such lien waivers and releases shall be a condition precedent to any payment hereunder. Nothing herein shall constitute any requirement that Owner exercise its discretionary option to require such releases and waivers. Moreover, no prior failure of Owner to require such releases and waivers shall limit Owner's right to require them subsequently.

Owner reserves the right to withhold, as a reserve and without limiting its other rights and remedies, an amount sufficient: (a) to defend, satisfy and discharge any asserted claim that Contractor (or anyone providing any of the Work hereunder) has failed to make payment for labor, services, materials, equipment, taxes, or other items or obligations furnished or incurred in connection with the Work. Or has caused damage to the Work or to any other work on the Project; (b) to complete the Work if it appears that funds remaining in the Contract, including retainage and exclusive of back charges, are insufficient to complete the Work; (c) to reimburse Owner for any back charges incurred as a result of any act or omission by Contractor hereunder; (d) to protect Owner from the possible consequences of any other breach or default by Contractor hereunder; or (e) to secure Owner with respect to any breach or default by Contractor or its affiliates, parent company and subsidiaries under any other agreement. Payment hereunder shall not be evidence of the proper performance or progress of the Work and no payment shall be construed to be acceptance of defective, faulty, or improper work or materials.

6. TIME: Time is of the essence. Therefore, Contractor shall: (a) submit, with its proposed schedule, information showing the time required to prepare and approve shop drawings, to fabricate and deliver materials and equipment, and to install the Work; (b) order (for manufacture or purchase and delivery) all materials required for performance of the Work as soon as possible in order to avoid delays caused by strikes, transportation or unavailability; (c) furnish Owner within thirty (30) days a list of major materials and equipment required for the Work, showing the name, address and telephone number of the supplier and the date on which such material and equipment is expected to be delivered to the Project site; (d) furnish Owner, upon issuance, a copy of each major purchase order and subcontract (with price information deleted); (e) cause a qualified home office supervisory representative (while Contractor has forces at the Project site and for two weeks prior thereto) to attend weekly progress meetings; and (f) notify Owner immediately by telephone and confirm in writing within ninety-six (96) hours. If the Contractor finds that, any item cannot be delivered as required to maintain Owner's progress schedule. Contractor also agrees to be bound by such modifications to the Project schedule as are discussed at the weekly job progress meetings and are contained in the minutes of those meetings unless written objection is made by Contractor within seventy-two (72) hours of the occurrence of such meeting.

7. EXTENSIONS OF TIME: Should Contractor, without any fault or neglect on its own part, be delayed in the completion of the Work by the fault or neglect of Owner, Contractor, as its sole remedy, shall be entitled to a reasonable extension of time only. Should Contractor, without any fault or neglect on its own part, be delayed in the completion of the Work by an act of God or such other cause beyond the control of the Contractor, Contractor shall be entitled to a reasonable extension of time to be determined in accordance with this Contract and the Contract Documents. In no event shall Contractor be entitled to compensation or damages for any delay in the commencement, prosecution, or completion of the Work or for any

schedule adjustments resulting therefrom.

Notwithstanding anything, to the contrary in the Contract Documents or this Contract, Contractor shall not be entitled to an extension of time unless a written notice of delay shall have been delivered to Owner within ninety-six (96) hours after commencement of the claimed delay.

8. CHANGE ORDERS: Without notice to any surety and without invalidating this Contract, Owner may from time to time, solicit an offer by written order to Contractor to make changes in the Work under the Contract Documents.

Upon request of Owner, and in a timely manner, Contractor shall submit a written offer and proposal for any applicable Price and time adjustment attributable to the changed Work, detailed as Owner may require, supported, and conforming to the requirements of the Contract Documents.

Where a change is issued pursuant to a change required by the Owner, the Price shall be adjusted by the net amount of any direct savings and direct cost plus Profit Percentage, attributable to the Change Order, and the time for performance of the Work may be adjusted according to the Contract Documents, subject, however, in each case to the following limitations: (a) where the Work affected by Change Order is the subject of unit prices under Exhibit C, the Price adjustment shall be limited to the amounts obtained by applying such unit prices to the actual increase or decrease in the quantity of units due to the change, and (b) the amount allowable for all overhead and profit shall be limited to the product obtained by multiplying the Profit Percentage by the net amount of the Contractor's direct savings and direct cost.

As used in this contract, Contractor's direct savings and direct cost shall mean and be limited to the actual amount of the following: cost of materials, including sales tax and cost of delivery; cost of labor, including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; bond premiums if and to the extent actually increased; and actual rent not greater than the rent charged in the locale, or reasonable value of Contractor-owned equipment and machinery.

If the parties are able to agree upon the amount of the Price adjustment and the extent of any time adjustment, such adjustment shall be set forth and memorialized in a Change Order, which shall be accepted by Contractor. If the parties are unable to agree upon such adjustments, Owner may elect to issue the Change Order to Contractor directing such work to be performed by Contractor, and any adjustments to Price or time shall be subject to ultimate determination in accordance with this contract; and Contractor shall, nonetheless, proceed immediately with the changed Work. Contractor shall keep a detailed account of the direct savings and direct cost due to the changed Work separately from its other accounting records and shall make such records available to the Owner at Owner's request. Failure to keep adequate and separate cost records of the changed Work, and to furnish same to Owner upon its request, shall constitute an acceptance on Contractor's part of the Owner's determination of the direct savings and direct cost of such changed Work. In no event shall Contractor proceed with changed Work without a Change Order issued pursuant to this paragraph 8 and Owner shall not be liable for any additional costs incurred or delays encountered in the performance of such changed Work without such a written Change Order.

9. NOTICES: All Written notices provided for in this contract or in the Contract Documents shall be deemed given if delivered personally to a responsible representative of the party, sent by telegram, fax with fax acknowledgment, or by regular mail to the party at its address specified herein. Either party may from time to time, by notice to the other as herein provided, designate a different address to which notices to it should be sent.

10. BONDS: If so indicated on page 1 hereof, Contractor shall furnish, within ten (10) days of date of transmission of this contract to Contractor, which is included in the Price, a performance bond and a payment bond, each in an amount equal to the Price, on standard AIA A311 forms and Contractor agrees to notify its surety or sureties of increases in the Price and to take such action as is required to have the penal amount of the bonds furnished pursuant to this paragraph increased correspondingly.

11. INSURANCE: Contractors shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with performance of the work hereunder by the Contractor, his agents, representatives, employees, or subcontractors. The cost of such insurance shall be included in the Contractor's bid

A. MINIMUM LIMITS OF INSURANCE

Contractor shall maintain limits no less than:

1. General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury, and property damage including products/completed operations coverage.
2. Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage, when applicable.
3. Workers' Compensation and Employers Liability: Workers' Compensation limits as required by the Labor code of the State of Georgia and Employers Liability limits of \$100,000 per accident.
4. Owner's and Contractor's Protective Liability: \$1,000,000 combined single limit per occurrence for bodily injury and property damage.

B. DEDUCTIBLES AND SELF-INSURED RETENTION

Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: The insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees, and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

C. OTHER INSURANCE PROVISIONS

1. General Liability and Automobile Coverages
 - a. The County, its officers, officials, employees and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; Premises owned, occupied or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the County, its officers, officials, employees, or volunteers.
 - b. The Contractor's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
 - c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the County, its officers, officials, employees, or volunteers.
 - d. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
2. Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the County, its officers, officials, employees, and volunteers for losses arising from the work performed by the Contractor for the County.
3. All coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended,

voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given the County.

D. ACCEPTABILITY

Insurance is to be placed with insurers with a Best's rating of no less than A:VII, or otherwise acceptable to County.

E. VERIFICATION OF COVERAGE

Contractor shall furnish the County with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be received and approved by the County before work commences. The County reserves the right to require complete, certified copies of all required insurance policies at any time.

F. SUBCONTRACTORS

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

12. INDEMNITY: To the full extent permitted by law, Contractor agrees to defend, indemnify and save harmless Owner, and their agents, servants and employees, from and against any claim, cost, expense, or liability (including legal fees, including but not limited to attorney's fees), attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of property (including loss of use thereof), caused by, arising out of, resulting from, or occurring in connection with the performance of the Work by Contractor, its subcontractors and suppliers, or their agents, servants, or employees, whether or not caused in part by the active or passive negligence or other fault of a party indemnified hereunder,

to the extent allowed by law; provided. However, Contractor's duty hereunder shall not arise if such injury, sickness, disease, death, damage, or destruction is caused by the sole negligence of a party indemnified hereunder. Contractor's obligation hereunder shall not be limited by the provisions of any worker's compensation or similar act. Contractor hereby agrees that One Hundred Dollars and No/Cents (\$100.00) of the Price constitutes the separate consideration for Contractor's indemnity hereunder. Such amount shall be deemed paid out of the first application for payment paid hereunder.

Should any person or entity assert a claim or institute a suit, action, or proceeding against Owner involving the manner or sufficiency of the performance of the Work, Contractor shall upon request of Owner promptly assume the defense of such claim, suit, action or proceeding, at Contractor's expense, and Contractor shall indemnify and save harmless Owner as well as anyone to be defended, indemnified and held harmless by Owner and its or their agents, servants, and employees, from and against any liability, loss, damage, or expense arising out of or related to such claim, suit, action, or proceeding.

13. ASSIGNMENT: Contractor shall not assign this contract or any monies due or to become due hereunder without the prior written consent of Owner. No assignment by Contractor of any right hereunder shall be effective and any such attempt shall be null and void. No third party shall have any right to enforce any right of Contractor under this contract. If Owner gives written consent to an assignment of this contract, in whole or in part, Contractor shall not be relieved of its duties and obligations hereunder and shall be and remain fully responsible and liable for the acts and omissions of its assignees. Nothing herein shall prevent Contractor from engaging subcontractors to perform a portion of the Work hereunder. However, Contractor shall be and remain as fully responsible for all persons directly or indirectly employed by such subcontractors, as Contractor is for its own acts and omissions and those of its agents, servants, and employees. Additionally, nothing herein shall prevent any guarantor or surety of Contractor from enforcing any right hereunder after acknowledgment of its obligation as guarantor or surety. Any attempted enforcement of such rights in the absence of an express acknowledgment shall constitute an admission by any guarantor or surety of its obligations under its agreement of guarantee or suretyship.

14. **COMPLIANCE:** Contractor shall, at its own expense, obtain all necessary licenses and permits pertaining to the Work and comply with all statutes, ordinances, rules, regulations, and orders of any governmental or quasi-governmental authority having jurisdiction over the Work or the performance thereof, including, but not limited to, those relating to safety, wages, discrimination and equal employment opportunity. Contractor shall promptly correct any violations of such statutes, ordinances, rules, regulations and orders committed by Contractor, its agents, servants and employees; and Contractor shall receive and respond to, and shall defend, indemnify and save harmless Owner, as well as anyone to whom Owner is obligated, and their agents, servants and employees from and against any loss, liability, or expense arising from, any such violations and any citations, assessments, fines, or penalties resulting therefrom.

15. **SAFETY:** Contractor agrees that the prevention of accidents to persons engaged upon or in the vicinity of the Work is its responsibility. Contractor shall establish and implement safety measures, policies, and standards conforming to those required or recommended by governmental or quasi-governmental authorities having jurisdiction.

16. **CLEANING UP:** Contractor shall, at its own expense: (a) keep the premises at all times free from waste materials, packaging and other debris accumulated in connection with the Work by collecting and removing such debris from the job site on a daily or other basis requested by Owner; (b) at the completion of the Work in each area, sweep and otherwise make the Work in its immediate vicinity "broom-clean;" (c) remove all of its tools, equipment, scaffolds, temporary structures and surplus materials as directed by Owner at the completion of the Work; and (d) at final inspection clean and prepare the Work for acceptance by Owner. Contractor agrees to provide all cleaning and cleanup required under the Contract Documents pertaining to the

Work to the extent such requirements are in excess of those contained in this paragraph.

17. **TEMPORARY FACILITIES:** All temporary site facilities, such as storage, sheds, water, heat, light, power, toilets, hoists, elevators, scaffolding, cold weather protection, ventilating, pumps, watchman service, etc., required in performing the Work shall be furnished by Contractor. The contractor shall at all time keep all equipment, vehicles, construction materials, etc. clear of the drive area associated with the travel of emergency vehicles.

18. **QUALITY:** Contractor shall at all times provide first-quality, new materials (unless otherwise specified in the Contract Documents) and workmanship conforming to the Contract requirements. Contractor shall at all times provide proper facilities and an opportunity for the inspection of the Work by Architect and Owner and their representatives. Contractor shall, within forty-eight (48) hours after receiving written notice from Owner, proceed to take down and remove all portions of the Work which Owner shall have condemned as unsound, improper, or in any way failing to conform to the Contract Documents or this Contract and shall replace the same with proper and satisfactory Work and make good all work damaged or destroyed thereby. Owner's failure to discover or notify Contractor of defective or nonconforming Work at the time the Work, or any portion thereof, is performed or completed shall not relieve Contractor of full responsibility for replacement of the defective or nonconforming Work and all damages resulting therefrom.

19. **GUARANTEES:** Contractor warrants and guarantees the Work to the full extent provided for in and required by the Contract Documents. Without limiting the foregoing or any other liability or obligation with respect to the Work, Contractor shall, at its expense and by reason of its express warranty, make good any faulty, defective, or improper parts of the Work discovered within one year from the date of acceptance of the Project by the Architect and Owner or within such longer period as may be provided in the Contract Documents. Contractor warrants that all materials furnished hereunder meet the requirements of the Contract Documents and impliedly warrants that they are both merchantable and fit for the purposes for which they are to be used under the Contract Documents.

20. **SUBMITTALS:** Contractor shall immediately prepare or obtain and promptly submit to Owner shop and erection drawings, samples, product data, catalogue cuts, laboratory and inspection reports and engineering calculations, all as may be required by the Contract Documents or as may be necessary or appropriate to describe the details of the Work. Approval of drawings or other submittals by Owner or Architect shall not relieve Contractor of its obligation to perform the Work in strict accordance with the Contract Documents or its responsibility for proper matching of the Work to contiguous work.

21. LIENS: Contractor shall defend, indemnify and save harmless Owner from any lien or claim of lien filed or maintained by any laborer, materialman, subcontractor, or other person or entity directly or indirectly acting for, through, or under Contractor, against the Project or any part thereof or any interest therein or against any monies due or to become due from Owner to Contractor. Without limiting the foregoing, Contractor shall cause any such lien or claim of lien to be satisfied, removed, or discharged by bond, payment, or otherwise within such time as provided under the Contract Documents or ten (10) days from the date of receipt by the Owner, whichever is shorter.

22. PATENTS: Contractor shall defend, indemnify and save harmless Owner, from and against any claim, cost, expense, or liability (including attorneys' fees) arising out of or resulting from infringement or alleged infringement of any patent rights attributable to the Work.

23. LABOR: Contractor agrees that where its Work is stopped, delayed, or interfered with by strikes, slow-downs, or similar interruptions or disturbances (including cases where the Contractor's employees are engaged in a work-stoppage solely as a result of a labor dispute involving Owner or others and not in any manner involving Contractor,) Owner shall have the rights and remedies provided for herein. Contractor shall maintain and exercise control over all employees engaged in the performance of the Work, and Contractor shall, to the extent permitted by law, remove or cause to be removed from the Project any employee whose presence is detrimental to the orderly prosecution of the Work. Contractor shall take all necessary steps to restrain and enjoin any illegal picketing, demonstrating, violence, or similar activity against the Contractor at the Project.

24. DAMAGE: Owner shall not be liable or responsible for loss or damage to the equipment, tools, facilities, or other personal property owned, rented, or used by Contractor, or anyone employed by or through Contractor, in the performance of the Work; and Contractor shall maintain such insurance and take such protective action as Contractor deems desirable with respect to such property. Owner shall not be liable or responsible for any loss or damage to the Work, and Contractor shall be responsible for the correction or restoration of any such loss or damage to the Work, or to the work of Owner or any other contractor, resulting from the operations of Contractor, or its subcontractors, agents, servants, or employees hereunder. Contractor shall take all reasonable precautions to protect the Work from loss or damage prior to acceptance by Owner.

25. DEFAULT: Should Contractor at any time: (a) fail to supply the labor, materials, equipment, supervision and other things required of it in sufficient quantities and of required quality to perform the Work with the skill, conformity, promptness and diligence required hereunder; (b) cause interference, stoppage, or delay to the Project or any activity necessary to complete the Project; (c) become insolvent; or (d) fail in the performance or observance of any of the covenants, conditions, or other terms of this Contract, then in any such event, each of which shall constitute a default hereunder by Contractor, Owner shall, after giving Contractor notice of default and seventy-two (72) hours within which to cure, have the right to exercise any one or more of the following remedies:

(i) require that Contractor utilize, at its own expense, overtime labor (including Saturday and Sunday work) and additional shifts as necessary to overcome the consequences of any delay attributable to Contractor's default;

(ii) attempt to remedy the default by whatever means Owner may deem necessary or appropriate, including, but not limited to, correcting, furnishing, performing, or otherwise completing the Work, or any part thereof, by itself or through others (utilizing where appropriate any materials and equipment previously purchased for that purpose by Contractor) and deducting the cost thereof (plus an allowance for administrative burden equal to fifteen percent (15%) of such costs) from any monies due or to become due to Contractor hereunder;

(iii) after giving Contractor an additional seventy-two (72) hours notice (at any time following the expiration of the initial seventy-two (72) hour notice and curative period), terminate the Contract, without thereby waiving or releasing any rights or remedies against Contractor or its sureties, and by itself or through others take possession of the Work, and all materials, equipment, facilities, plant, tools, scaffolds and appliances of Contractor related to the Work, for purposes of completing the Work and securing to Owner the payment of its costs (plus an allowance for administrative burden equal to fifteen percent (15%) of such costs) and other damages under the Contract and for the breach thereof, it being intended that Owner shall, for the stated purposes, be the assignee of and have a security interest in the property described above to the extent located on the Project site; or

(iv) call upon the surety, if applicable, to perform in accordance with the performance bond.

(v) recover from Contractor all losses, damages, penalties and fines, whether actual or liquidated, direct or consequential (including without limitation any increase in Owner's cost of insurance resulting from Contractor's failure to maintain insurance coverages required hereunder), and all reasonable attorneys' fees suffered or incurred by Owner by reason of or as a result of Contractor's default.

After completion of the Work by the exercise of any one or more of the above remedies and acceptance of the Work by Owner, Owner shall promptly pay Contractor any undisbursed balance of the Price, if any. If the cost of completion of the Work plus the allowance for administrative burden, together with any other damages or losses sustained or incurred by Owner, shall exceed the undisbursed balance of the Price, Contractor and its guarantors, surety, or sureties shall pay the difference within fifteen (15) days of written demand from Owner.

The foregoing remedies shall be considered separate and cumulative and shall be in addition to every other remedy given hereunder or under the Contract Documents, or now or hereafter existing at law or in equity. Contractor's guarantors, surety, or sureties agree to be bound to Owner with respect to such remedies notwithstanding any provision of the bonds as described herein.

Except as limited by this Contract, Contractor shall have the rights and remedies available at law or in equity for a breach of this Contract by Owner. Any default shall be deemed waived unless Contractor shall have given Owner written notice thereof within five (5) days after the occurrence of such default. Contractor shall not be entitled to stop the Work or terminate this Contract on account of Owner's failure to pay an amount claimed due hereunder (including payment for claimed changed Work) so long as Contractor shall not have adequately substantiated the amount due or so long as a good faith dispute exists as to the amount due. Contractor shall not be entitled to stop the Work on account of a default by Owner unless such default shall have continued for more than ten (10) days after Owner's receipt of written notice of such default from Contractor, specifying in detail the nature of the default and the steps necessary to cure the claimed default.

Contractor shall not be entitled to terminate this Contract except for a substantial and material breach by Owner which shall have continued, uncured, for at least an additional thirty (30) days after (a) Contractor shall have stopped working in accordance with this paragraph and (b) Owner shall have received thirty (30) days written notice of Contractor's intention to terminate this Contract.

Should any termination for default under paragraph 25 (iii) be determined to be invalid, improper or wrongful, such termination shall be deemed to have been a termination for convenience as provided in paragraph 27 below.

26. DISPUTES: If a dispute should arise between Owner and Contractor under or related to the Contract, or the breach thereof, then either party may seek redress of its grievances as to such disputes at law or in equity or by arbitration if both parties agree after default or breach to arbitrate. The award rendered by arbitrators shall not be final or binding. Contractor agrees to continue to perform its Work despite the existence of disputes. The existence of a dispute shall not be grounds for any failure to perform by Contractor nor limit the right of Owner to proceed, in good faith, to remedy any default by Contractor.

27. EARLY TERMINATION: Should this Contract be terminated based on default, Contractor shall assign all purchase orders and subcontracts to Owner if Owner, in its sole discretion, requests such assignments. Contractor agrees to incorporate such provisions in its agreements with suppliers and subcontractors to effectuate this provision. Nothing herein shall create any duty on the part of Owner to accept the assignment of any purchase order or subcontract hereunder.

Further, in its sole discretion and without notice to any guarantors, surety, or sureties, Owner may terminate this Contract for its convenience upon the giving of written notice to Contractor. In no event shall Contractor be entitled to consequential damages or loss of profits on portions of the Work not yet performed. If terminated for convenience, Contractor shall be entitled to be paid all costs of all Work provided hereunder including reasonable and necessary costs of termination, as determined in accordance with the method set forth in paragraph 8 above, together with the Profit Percentage attributable to the costs so determined. Payment shall be made in accordance with and subject to the requirements of paragraph 4.

28. SETOFF: If Contractor is, or hereafter begins, performing any other work for Owner other than the Work under this Contract and the unpaid balance of the Price becomes insufficient to complete such Work or compensate Owner for any damages or deficiencies by the Contractor in the performance of the other work, Contractor hereby consents and agrees to allow Owner, in its sole discretion and judgment, to setoff any of Owner's claims against any funds due, or which may become due, Contractor under any other agreement with Owner, or any contract on any other project. No refusal or failure of Owner to

exercise its rights hereunder shall constitute the basis of any right or claim against Owner.

29. MISCELLANEOUS: (a) All matters relating to the validity, performance, or interpretation of this Contract shall be governed by the laws of the State of Georgia, performance, or interpretation, as the case may be, of the Contract. This Contract is entered into in Cobb County and all services under this Contract are capable of being performed and are to be performed in Cobb County, Georgia. Therefore, the parties agree that Cobb County is the proper venue for the resolution of any disputes.

(b) This Contract, including the documents incorporated herein by reference, embodies the entire agreement of the parties and supersedes all prior negotiations, agreements, and understandings related to the subject matter hereof.

(c) This Contract may not be changed in any way except as herein provided or by a writing signed by a duly authorized officer or agent of each party. No requirement of this Contract may be waived except in writing signed by a duly authorized officer of the waiving party.

(d) The provisions of this Contract and the Contract Documents are intended to supplement and complement each other. If, however, any provision of this Contract irreconcilably conflicts with a provision of the Contract Documents, the provision imposing the greater duty on the Contractor shall govern. In case a provision of this Contract is held to be invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions shall not be affected.

(e) Where the context requires, neuter terms used herein shall include the masculine and feminine, and singular terms shall include the plural, and vice versa.

IN WITNESS WHEREOF, the parties have duly executed this Contract as of the date first above written.

COBB COUNTY BOARD OF COMMISSIONERS, COBB COUNTY, GEORGIA

By: _____

Date: _____

Title: _____

By: _____

Date: _____

Contractor

Title: _____

CONTRACTOR CHECK ONE: Corporation Partnership/Joint Venture Individual

LICENSING: By executing this Contract, Contractor affirms that it holds the following contractor license(s) applicable to the Work as required by the State of Georgia:

License No(s): _____ License Classification(s): _____ Expiration Date: _____

FEDERAL EMPLOYER

ID #: _____

BUSINESS LICENSE # _____

SCHEDULE A - WORK: Pursuant to paragraph 1 of this Contract, Contractor shall prosecute and complete the following Work:

The contractor shall complete all work per the Contract Documents and Drawings.

Contractor acknowledges that this is an occupied public building, and as such, certain precautions will be required of the contractor in regards to noise and dust control and safety of the public and staff. All work shall be coordinated through the Project Manager.

SCHEDULE B - CONTRACT DOCUMENTS: The Contract Documents referred to in paragraph 1 and elsewhere in this Contract consist of the Contract and the following:

Project Manual: dated 8/ /

Titled: Federal Energy Grant – HVAC Improvements – Cobb County Central Library

Contractor’s proposal: dated X, 2010

SCHEDULE C - SUPPLEMENTAL PRICE SCHEDULE:

UNIT PRICES: Pursuant to paragraphs 2 and 8 of this Contract, the following unit prices shall be used in determining the Price and any adjustments thereto, without limitation unless expressly provided herein: N/A

ALLOWANCES: The price specified on page 1 of the Contract includes the following allowances for the parts of the Work specified below, to be furnished by Contractor in accordance with the Contract Documents: N/A

SCHEDULE D - PERFORMANCE SCHEDULE: Pursuant to paragraph 6 of this Contract and without limiting the provisions thereof, Contractor shall perform the Work according to the following specific schedule, and as the same may be revised from time to time by Owner:

Time is of the essence is repeated for emphasis.

Contractor to complete all work within one hundred and twenty days (120) calendar days from Owner’s “Notice to Proceed”. Should the Contractor fail to substantially complete the work under this contract per the specified schedule, he shall pay Owner liquidated damages \$500.00 per calendar day for each consecutive calendar day until project is complete; which sum is agreed upon as a reasonable and proper measure of damages which owner will sustain per diem by failure of Contractor to complete work within time as stipulated; it being recognized by Owner and Contractor that the injury to Owner which could result from a failure of Contractor to complete on schedule is uncertain and cannot be computed exactly. In no way shall costs for liquidated damages be construed as a penalty on the Contractor. Contractor shall not be entitled to any compensation should he finish early.

Initials: _____



BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____
_____ as Principal, and _____ as Surety, are hereby held and firmly
bound unto _____ as the OWNER, in the penal sum of
\$_____ for payment of which, well and truly made, we hereby jointly and
severally bind ourselves, successors and assigns.

Signed this _____ day of _____, 20_____. The Principal has submitted to ____
_____ a certain BID, attached hereto and hereby made a part hereof
to enter into a contract in writing for the _____
_____.

NOW, THEREFORE,

- (a) If said BID shall be rejected or
- (b) If said BID shall be accepted and the principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID), and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The surety, for value received, hereby stipulates and agree that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

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

Principal (L.S.)

Surety Seal

By: _____ Seal

APPLICATION AND CERTIFICATE FOR PAYMENT

PAGE _____ OF _____

TO (OWNER):

PROJECT:

APPLICATION NO:

Distribution to:

- OWNER
- PROFESSIONAL
- BUILDER
-
-

FROM (BUILDER):

VIA (PROFESSIONAL):

PERIOD END DATE:

PROFESSIONAL'S

PROJECT NO:

CONTRACT FOR:

CONTRACT DATE:

BUILDER'S APPLICATION FOR PAYMENT

Application is made for Payment, as shown below, in connection the Contract. Continuation Sheet is attached.

CHANGE ORDER SUMMARY		ADDITION	DEDUCTIONS
Previously approved Change Orders			
TOTAL			
Approved this Month			
Number	Date Approved		
TOTALS			
Net change by Change Orders			

1. ORIGINAL CONTRACT SUM \$ _____
2. Net change by Change Orders \$ _____
3. CONTRACT SUM TO DATE (Line 1 + 2) \$ _____
4. TOTAL COMPLETED & STORED TO DATE \$ _____
(Column G)
5. RETAINAGE:
 - a. _____% of Completed Work \$ _____
(Column D + E)
 - b. _____% of Stored Material \$ _____
(Column F)
 Total Retainage (Line 5a + 5b or Total in Column 1) \$ _____
6. TOTAL EARNED LESS RETAINAGE \$ _____
(Line 4 less Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \$ _____
8. CURRENT PAYMENT DUE \$ _____
9. BALANCE REMAINING TO COMPLETE, PLUS RETAINAGE \$ _____
(Line 3 less Line 6)

The undersigned Builder certifies that to the best of the Builder's knowledge, information and belief the Work covered by this Application for Payment has been completed in full accordance and compliance with the Contract Documents, that Builder has paid all subcontractors and materialmen all amounts due them for which the Contractor has received payment from the Owner, and that payment shown herein is now due.

BUILDER:

State of: _____ County of: _____
 Subscribed and sworn to before me this _____ day of _____, 20____
 Notary Public:
 My Commission expires: _____

By: _____ Date: _____

PROFESSIONAL'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on review of this application, including data, information, and schedules submitted by the Builder, together with inspection of the Work, the Professional certifies to the Owner that to the best of the Professional's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Builder is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED.....\$ _____
 (Attach explanation if amount certified differs from the amount applied for.)
 PROFESSIONAL:

By: _____ Date: _____
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Builder named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Builder under this Contract.



CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: Federal Energy Grant –
HVAC Improvements –
Cobb County Central Library
Cobb County, Georgia

CONTRACT DATE:

OWNER: **Cobb County Board of Commissioners**
100 Cherokee Street
Marietta, Georgia 30060

CONTRACTOR:

DATE OF ISSUANCE:

The Work performed under this Contract has been reviewed and found, to the Owner’s best knowledge, information and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

The issuance date of Substantial Completion is also the date of commencement of applicable warranties required by the Contract Documents.

A list of items to be completed or corrected is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

OWNER
Cobb County Board of Commissioners
100 Cherokee Street
Marietta, Georgia 30060

CONTRACTOR

By: _____

By: _____

Date: _____

Date: _____



CERTIFICATE OF FINAL COMPLETION

CERTIFICATE OF FINAL COMPLETION

Distribution to:

Construction Department	<input type="checkbox"/>	Architect/Engineer	<input type="checkbox"/>
Owners	<input type="checkbox"/>	Contractor	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

PROJECT: Federal Energy Grant -
HVAC Improvements –
Cobb County Central Library

CONTRACT DATE: _____

To: Cobb County Board of Commissioners
100 Cherokee Street
Marietta, Georgia 30060

CONTRACTOR: _____

CONTRACT FOR: _____

ARCHITECT/ENGINEER: _____

DATE OF COMMENCEMENT: _____

SUBSTANTIAL COMPLETION DATE: _____

DATE OF FINAL COMPLETION

The Work performed under this contract has been inspected and found to be finally complete. The Date of Final Completion of the Project is hereby established as _____ [Date].

Failure to identify incomplete work items or requirements of Contract Documents prior to issuance of the Certificate does not alter the responsibility of the contractor to comply with all provisions of Contract Documents.

 [Contractor] [By] [Date]

Based on our inspection and to the best of our knowledge, information and belief, the Work has been completed in accordance with the terms and conditions of the Contract Document and we recommend acceptance of the Work by the Owners.

 [General Contractor – Construction] [By] [Date]

 [Professional or Architect/Engineer] [By] [Date]

 [Property Management] [By] [Date]

Except as provided in the Contract Documents attached hereto, the Owner/Using Department accepts the Project as finally complete and accepts responsibility for security, maintenance, heat, utilities, damage to the Work, and insurance, that has not been previously transferred from the Contractor.

 [Owner] [By] [Date]



CONSTRUCTION CHANGE DIRECTIVE _____

Contract Date:

Change Directive Date:

Owner: Cobb County Board of Commissioners

Contractor:

Project: Federal Energy Grant – HVAC Improvements – Cobb County Central Library

The Contractor is directed and authorized to perform the work as described below:

[description here]

1. By this Change Directive the proposed adjustment to the Contract Sum is:
 Lump Sum (increase) (decrease)..... \$

2. The Contract Time is to (be adjusted) (remain unchanged). The adjustment, if any, is
 (an increase of ____ days) (a decrease of ____ days).

The Contractor understands and agrees that this contract document is authorization to proceed with the work described above and that the Contract Agreement will be finalized by a formal change order at a later date.

THIS DOCUMENT IS NOT VALID UNLESS SIGNED BY THE OWNER, PROFESSIONAL, AND GENERAL CONTRACTOR

PROFESSIONAL	GENERAL CONTRACTOR	OWNER
Marshall & Bollwerk Engineering, Inc. 950 North Point Pkwy. – Suite 375 Alpharetta, Georgia 30005		COBB COUNTY BOARD OF COMMISSIONERS 100 Cherokee Street Marietta, Georgia 30060
Name/Title:	Name/Title:	Name/Title:
Signature:	Signature:	Signature:
Date:	Date:	Date:



Contract Date: _____

SUPPLEMENTAL AGREEMENT

SA Date: _____

Owner: Cobb County Board of Commissioners

Builder:

Project: Federal Energy Grant – HVAC Improvements – Cobb County Central Library

This Supplemental Agreement amends the contract dated _____. The signature of the Builder indicates his agreement herewith, including any adjustments in the Contract Sum or Contract Time. This price and payment constitutes full and final compensation for all costs in connection with the incidental to this Supplemental Agreement. The signature of the Builder also indicates his agreement that this price and payment constitutes full and final satisfaction of all claims of the Builder, which he has or may have for adjustment of the contract Sum or Contract Time through the date of this Supplemental Agreement. Pursuant to the terms of the above reference Contract, Builder is directed to make the following changes in the Work:

Item #1: \$

Item #2 \$

Original Contract Amount.....\$

Previous Supplemental Agreement Total Amount.....\$

Contract Sum Prior to this Supplemental Agreement.....\$

By this Supplemental Agreement the proposed adjustment to the Contract Sum is: Lump Sum (increase) (decrease) of\$

New Contract Amount.....\$

The Contract Time is to (be adjusted) (remain unchanged). The adjustment, if any, is (an increase of days) (a decrease of days)

ACCEPTED – *The above prices and specifications of this Supplemental Agreement are satisfactory and are hereby accepted. All work to be performed under same terms and conditions as specified in original contract unless before or herein modified.*

THIS DOCUMENT IS NOT VALID UNLESS SIGNED BY THE OWNER, PROFESSIONAL, AND BUILDER

PROFESSIONAL	BUILDER	OWNER
Marshall & Bollwerk Engineering, Inc. 950 North Point Pkwy. – Suite 375 Alpharetta, Georgia 30005		COBB COUNTY BOARD OF COMMISSIONERS 100 Cherokee Street Marietta, Georgia 30060
Name/Title:	Name/Title:	Name/Title:
Signature:	Signature:	Signature:
Date:	Date:	Date:



**FINAL CLOSEOUT
SUPPLEMENTAL AGREEMENT NUMBER _____**

Contract Date:

SA Date:

Owner: Cobb County Board of Commissioners

Builder:

Project: Federal Energy Grant – HVAC Improvements – Cobb County Central Library

This Supplemental Agreement amends the contract dated _____. The signature of the Builder indicates his agreement herewith, including any adjustments in the Contract Sum or Contract Time. This price and payment constitutes full and final compensation for all costs in connection with the incidental to this Supplemental Agreement. The signature of the Builder also indicates his agreement that this price and payment constitutes full and final satisfaction of all claims of the Builder, which he has or may have for adjustment of the contract Sum or Contract Time through entire project. Pursuant to the terms of the above reference Contract, Builder is directed to make the following changes in the Work:

Item #1: _____ \$

Item #2: _____ \$

Original Contract Amount \$

Previous Supplemental Agreements Total Amount \$

Contract Sum Prior to this Supplemental Agreement \$

By this Supplemental Agreement the proposed adjustment to the Contract Sum is:

Lump Sum (increase) (decrease) of \$

New Contract Amount \$

The Contract Time is to (be adjusted) (remain unchanged). The adjustment, if any, is (an increase of days) (a decrease of days)

ACCEPTED – *The above prices and specifications of this Supplemental Agreement are satisfactory and are hereby accepted. All work to be performed under same terms and conditions as specified in original contract unless before or herein modified.*

THIS DOCUMENT IS NOT VALID UNLESS SIGNED BY THE OWNER, PROFESSIONAL, AND BUILDER

PROFESSIONAL	BUILDER	OWNER
Marshall & Bollwerk Engineering, Inc. 950 North Point Pkwy. – Suite 375 Alpharetta, Georgia 30005		COBB COUNTY BOARD OF COMMISSIONERS 100 Cherokee Street Marietta, Georgia 30060
Name/Title:	Name/Title:	Name/Title:
Signature:	Signature:	Signature:
Date:	Date:	Date:

SECTION 00 8200
LIQUIDATED DAMAGES

PART 1 GENERAL

1.01 DESCRIPTION: The Contractor shall achieve Substantial Completion and Final Completion not later than the dates shown on the Notice to Proceed.

1.02 ACHIEVEMENT OF COMPLETION

- A. Should the Contractor neglect, fail or refuse to achieve Substantial Completion of the Work on the project by not later than 12:00 midnight, on the date stated in the Notice to Proceed, or as revised by Change Order, he shall pay to the Owner as liquidated damages the amount shown below per calendar day for each day that he is in default after the stipulated date: **\$500.00** per calendar day.
- B. Should the Contractor neglect, fail or refuse to achieve Final Completion of the Work on the project by not later than 12:00 midnight on the date stated in the Notice to Proceed, or as revised by Change Order, no part of the sum retained to insure the completion of the contract will be paid to the Contractor until the work is completed and the Contractor shall pay to the Owner as liquidated damages the amount shown below per calendar day for each day that he is in default after the stipulated date: **\$ 250.00** per calendar day.
- C. If both the Substantial Completion and Final Completion dates have not been achieved, liquidated damages for default on the Substantial Completion and the Final Completion dates shall be added and shall be: **\$ 750.00** per calendar day until Substantial Completion is achieved; after which, the amount for failure to achieve Final Completion will continue to be paid as liquidated damages to the Owner until Final Completion.

1.03 If by Addendum, Alternate or Change Order the provisions for liquidated damages are deleted, completion time remains as proposed and is the essence of the Contract and in lieu thereof, the Owner has a right to pursue the collection of actual damages under existing State statutes and/or law.

END OF SECTION

SECTION 00851**INDEX TO DRAWINGS**

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18	<u>SHEETS TOTAL</u>	

END OF SECTION

SECTION 01 3000 SUBMITTALS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Submittals: General term including samples, shop drawings and product data, as applicable and as defined by the General Conditions.
- B. General Provisions:
 - 1. Provisions in this section are mandatory procedures for review, approval and submitting samples, shop drawings and product data in accordance with the General Conditions.
 - 2. Submittals which are received directly from sources other than through the General Contractor's office will be returned to the General Contractor "without action".
 - 3. Job delays occasioned by requirement of re-submission of samples, shop drawings and product data not in accord with Contract Documents and/or submittals sequenced contrary to the agreed schedule are Contractor's responsibility, and will not be considered valid justification for extension of contract time or increase in the contract sum.

1.02 SAMPLE PREPARATION

- A. Prepare samples in sizes, shape and finish in accord with provisions of individual specification sections.
- B. Samples are not to be confused with full size, on-the-site "Mock-Ups" called for in some specification sections.
- C. Samples shall be submitted for the Engineer's selection and approval in accordance with the Contractor's submittal schedule or sooner as needed to maintain construction progress. Approvals and color selections will not be made unilaterally where samples or selections of adjacent materials must be made for the purpose of aesthetics. Submit samples for adjacent and interrelated materials concurrently.
- D. The number of samples submitted shall be the number required by the Contractor, plus two (2) which will be retained by the Engineer and the Owner, unless otherwise indicated.

1.03 SHOP DRAWING PREPARATION

- A. Drawing shall conform to the following requirements:
 - 1. Number sheets consecutively.
 - 2. Indicate working and erection dimensions and relationships to adjacent work.
 - 3. Show arrangements and sectional views, where applicable.
 - 4. Indicate material, gauges, thicknesses, finishes and characteristics.
 - 5. Indicate anchoring and fastening details, including information for making connections to adjacent work.
 - 6. Provide drawings reproducible by normal blue printing; original and prints legible.
 - 7. Indicate working and erection dimensions and relationships to adjacent work. Concurrent submittals of different aspects of work may be required by the Architect as deemed necessary to demonstrate Contractor's ability to understand these relationships and coordinate the Work.
 - 8. Provide 6" x 6" clean space in the lower right hand area for entry of approval stamps.
 - 9. Cross-reference drawing details and specification paragraphs applicable to the submittal data.
 - 10. Do not use blue-colored stamps, ink or pencil on transparencies; "Blue" is not reproducible in blueprinting.
- B. Form: Submit one (1) legible sepia transparency and three (3) legible blue line prints of shop drawings.

1.04 PRODUCT DATA PREPARATION

- A. Include product manufacturer's standard printed material, dated, with product description and installation instructions indicated. Data not related to this project shall be deleted or marked "VOID" as applicable.
- B. Form: Number of copies submitted shall be the number required by Contractor plus two (2) which will be retained by the Owner, and Engineer (if applicable).
- C. Printed material shall be:
 - 1. Legible.
 - 2. Sized no larger than 8-1/2" x 11", suitable for opaque reproduction.
 - 3. Stamped (either on a clean-area space or the reverse side) with the Contractor's approval action.
- D. All submitted data shall bear the Contractor's approval action stamp plus his review notes, comments, and corrections as required.

1.05 CONTRACTOR'S REVIEW

- A. Review submittals and stamp with approval prior to submission to the Engineer; Contractor's stamp shall bear the Contractor's name, the word "Approved", the signed initials of the approving agent, and the date of his approval action. By so noting, the Contractor indicates that he has reviewed and approves the materials, equipment, quantities and dimensions represented by the particular submittal.
- B. Where work is indicated "By others", Contractor shall indicate responsibility for providing and coordinating such work.
- C. Submissions made without Contractor's approval indicated thereon will be returned without being reviewed for compliance with this requirement.
- D. Date each submittal and indicate name of Project, Engineer, Contractor, Sub-Contractor, as applicable, description or name of equipment, material or product and identify location at which it is to be used in the Work. Cross-reference to specific drawing and specification references.
- E. Accompany submittal with transmittal letter containing project name, Contractor's name, number of samples or drawings, titles and other pertinent data. Transmittal shall outline deviations, if any, in submittals from requirements of Contract Documents.

1.06 ENGINEER'S REVIEW AND APPROVAL

- A. Engineer's Review will be in accordance with the General Conditions.
- B. Engineer will return only the following submittal data to the Contractor for his further reproduction and distribution.
 - 1. Sepia and one (1) blueline print of shop drawings.
 - 2. Three (3) Copies of opaque product data.

1.07 RESUBMISSION

- A. Make corrections and changes indicated for unapproved submissions and resubmit in same manner as specified above, until Engineer's approval is obtained.
- B. In resubmission transmittal direct specific attention to revisions other than corrections requested by Engineer on previous submissions, if any.
- C. Contractor shall be responsible for bearing all costs associated with the review and approval process of resubmitted (and/or substituted) submittal data.

1.08 DISTRIBUTION

- A. Contractor is responsible for obtaining and distributing copies of submittals to his subcontractors and material suppliers after, as well as before, final approval. Prints of reviewed shop drawings shall be made from transparencies which carry the Engineer's appropriate stamp.
- B. Contractor shall maintain a file of approved submittals for duration of project, which shall be delivered to Owner as a part of project close-out documents.

- C. The Contractor shall maintain a file of all approved submittals, bearing the Stamp of the Engineer, at the project site. In the event the Engineer or Owner should question the installation of any aspect of the work requiring approved submittal data, the inability of the Superintendent to produce the required approved submittal data upon demand shall constitute cause for a "stop work" order to be issued on that particular questioned aspect of the work and all relevant appurtenant work. The cause shall be equal to the Contractor's not having received required approval of the submittal data. If so issued, such "stop orders" shall not be considered valid justification for extensions of contract time and/or claims for additional monetary compensation.

1.09 SCHEDULE OF SUBMITTALS

- A. The Contractor shall, within ten (10) calendar days following execution of the Contract, submit his proposed schedule of submittals to the Engineer for review.
- B. The purpose of the schedule is to:
1. Demonstrate that all submittals, shop drawings, data, samples and mock-ups required for the Work are addressed by the Contractor.
 2. Demonstrate consistency with the Contractor's proposed Construction Schedule.
 3. Assist the Engineer in scheduling timely review/approval action of submittals.
- C. The schedule shall contain the description of the submitted item, the proposed date of submittal and the proposed date of requested return by the Engineer.
- D. After the Engineer's receipt of the Contractor's submittal schedule, the Engineer and the Contractor shall jointly review the schedule and mutually agree to acceptability or necessary modifications.
- E. Contractor shall submit his final accepted schedule within five (5) calendar days after the date of the joint review.

END OF SECTION

SECTION 01 3100 CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.01 DESCRIPTION: This section covers provisions for construction schedules.

1.02 RELATED REQUIREMENTS

- A. Schedule of Values: General Conditions.
- B. Progress Meetings: General Conditions.
- C. Submittals: Section 01300 – Submittals.

1.03 GENERAL

- A. CPM Schedules: Contractor's working schedules used to plan, organize, and execute work; record and report actual performance, progress and cost; and demonstrates how Contractor plans to complete remaining work.
- B. Contractor's Responsibility: Nothing in these requirements shall be deemed to be usurpation of Contractor's authority and responsibility to plan and schedule work as he sees fit, subject to all other requirements of Contract Documents.

1.04 SCHEDULES

- A. Prepare in CPM form a Preliminary Schedule and an As-Planned Schedule.
- B. Preliminary Schedule: At time of Preconstruction Conference, submit preliminary schedule to Owner's project representative for Owner's review and comment.
 - 1. Reflect intended detailed sequence and duration of work activities for period commencing with Notice to Proceed and continuing through first ninety (90) calendar days.
 - 2. Schedule in sufficient detail to clearly portray work activities, including procurement and submittals sequence of activities, along with phasing, and milestones associated with this period. Sitework activities to be clearly distinguished from the building's activities.
 - 3. Schedule shall be consistent with As-Planned Schedule specified below.
 - 4. Schedule will be reviewed by Owner for acceptability of form and format only.
 - 5. Progress Payments: Submittal and acceptance of Preliminary Schedule is a prerequisite for Contractor's first progress payment.
- C. As-Planned Schedule: No later than thirty (30) calendar days after Notice to Proceed submit As-Planned CPM schedule to Owner's project representative for Owner's review and comment. Schedule will be reviewed by Owner for acceptability of form and format only. Submit eight (8) copies with one (1) copy on a CD for Owner's use.
 - 1. Schedule shall reflect intended detail of work activities for entire period of contract performance commencing with Notice to Proceed of work on-site and continuing through Contract Completion.
 - 2. Schedule in sufficient detail to clearly portray all work activities and entire cycle of submittal, approval, fabrication and delivery as related to significant items of design, material, and permanent equipment fixtures. Schedule to indicate separately sitework activities from building activities. With respect to the building, schedule should group interior activities distinctly from exterior shell and structural activities that are required to be completed prior to building being weather tight.
 - 3. Schedule shall be a fully detailed CPM Schedule and submitted in form of time network diagram(s) (plotted with early start dates).
 - 4. The Schedule shall reflect the number of normal bad weather days as stated for each month in the General Conditions.
 - 5. The Schedule shall reflect the project cost breakdown as submitted in the applications for payment including Change Orders as separate line items.
 - 6. Progress Payments:

- a. Initial acceptance of As-Planned Schedule and submittal of Schedule Updates shall be prerequisite for progress payments commencing with second progress payment after Notice to Proceed and continuing to Contract Completion.
 - b. The Contractor shall show on the complete CPM Schedule the work-in-place cost for each activity. The cumulative amount for all activities shall equal the total contract price. Overhead and profit shall be pro-rated on all activities for the entire project length.
- D. The Construction Schedule shall be available for review at the Construction Field Office at all times.

1.05 UPDATING AND REPORTING

- A. Schedule Updates: Update Schedule monthly based on actual progress. Reflect actual start and/or finish dates of activities along with percentage of completion for activities started and not yet complete.
- B. Monthly Status Reports: Submit Monthly Status Report to Owner's project representative and Owner. Summarize work performed during preceding month, indicate milestones achieved and update Schedule of Values. Include separate listing of activities which are causing delay to work progress. Include narrative to define problem areas, anticipate delays and impact on schedule. Report corrective action taken, or proposed, and its effect, including effect of changes on schedules of separate contractors. Include items which the Contractor perceives as being Owner or Architect delays to the timely completion of the project.
- C. Progress Meetings: Discuss progress of project in conjunction with CPM Schedule at progress meetings. Include:
 1. Actual completion dates for work items completed since last meeting.
 2. Actual start dates for work items started since last meeting.
 3. Estimating remaining durations for work items in progress.
 4. Estimated start dates for work items scheduled to start before next meeting.
 5. Changes in durations of work items.
 6. Identification of current and most critical paths to required completion dates.
 7. Discussion on narrative report (See B. above).
 8. Submission of weekly "Look Ahead" report and statement indicating what achievements are anticipated prior to the next meeting.
 9. Discussion on procurement schedules, material and equipment fabrication and/or shipping updates.
- D. Work Progress:
 1. Should any activity fail to be completed with fifteen (15) days after indicated schedule date, Contractor shall expedite completion of activity by whatever means Owner deems appropriate and necessary without additional compensation to Contractor.
 2. Should any activity be thirty (30) or more days behind schedule, Owner shall have the right to perform activity or have activity performed by whatever method Owner may deem appropriate. Costs incurred by Owner in this activity shall be deducted from Contract Price.
 3. It is expressly understood and agreed that failure by Owner to exercise option to expedite activity shall not be construed as precedent for any other activities or as waiver of Owner's rights to exercise his rights on subsequent occasions.
 4. Contract Extensions: Float time is not time for exclusive benefit of either Owner or Contractor.
 - a. Extensions of time for contract performance as specified in contract will be granted only to the extent that equitable time adjustments to affected work items exceed total float time along affected paths of accepted computer printout report in effect at that time and are in accordance with General and Supplementary Conditions.
 - b. Slippage of work items will not be basis for time extension to contract unless and until such slipped work items are resolved in accordance with General and Supplementary Conditions.

1.06 SUMITTALS

- A. Submit updated schedules monthly concurrent with pay application, accurately depicting progress to first day of each month.
- B. Submit on reproducible transparency for Architect's review.
- C. Distribute reviewed schedules to:
 - 1. The Owner.
 - 2. The job site file.
 - 3. The sub-contractors.
 - 4. The Architect.

END OF SECTION

SECTION 01 6000 PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Substitutions for products specified shall be allowed only under the conditions stated in this section.

1.02 SUBSTITUTIONS/PRIOR APPROVALS

- A. If it is desired to use products different from those indicated in the Contract Documents, the party requesting the substitution shall make written application as described herein. The burden of proving equality of proposed substitutions rests on the party making the request for substitution.
1. Requests for substitution shall reach the Engineer not less than ten (10) days prior to the date for opening of bids. Requests received by the Engineer after this date will not be considered.

1.03 SUBMITTALS

- A. Submit a separate request for each substitution. Support each request with:
1. Date of request.
 2. Name of party proposing substitution.
 3. Project name.
 4. Specification reference.
 5. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents.
 - a. Product identification, including manufacturer's name and address.
 - b. Manufacturer's literature, identify:
 - 1) Product description.
 - 2) Reference standards.
 - 3) Performance and test data.
 - 4) Manufacturer's recommendations for use and installation.
 - 5) Samples, as applicable.
 - 6) Name and address of similar projects on which product has been used, and date of each installation.
 6. Itemized comparison of the proposed substitution with product specified, list all variations.
 7. Data relating to changes in construction schedule.
 8. Any effect of substitution on separate contracts.
 9. List of changes required in other work or products.
 10. Designation of required license fees or royalties.
 11. Designation of availability of maintenance services, sources of replacement materials.
- B. If a proposed substitution is approved by the Engineer, an addendum will be issued to prospective bidders not less than five (5) days prior to the date set for opening bids. If a substitution does not appear in an addendum it shall mean that the Engineer has not approved the product and the successful bidder shall be responsible for furnishing materials and products in accordance with the Contract Documents. Following the receipt of bids, no further requests for substitution of products or materials will be considered.

1.04 CONTRACTOR'S REPRESENTATION

- A. In connection with the use of any substitute item approved by the Engineer it shall be the General Contractor's responsibility to see that such items meet all space requirements, and that any alterations to connecting items necessitated by use of the alternate items are properly made at no increase in cost to the Owner, and that all items are in compliance with the

specification requirements. Contractor shall waive all claims for additional costs caused by substitutions which may subsequently become apparent.

END OF SECTION

SECTION 01 6500
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Maintain at Project Site for Owner, one (1) record copy of:
 - 1. Drawings.
 - 2. Project Manual/Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to Contract.
 - 5. Field Orders or written instructions.
 - 6. Approved and Approved As Noted Shop Drawings, Product Data and Samples.
 - 7. Field Test Records.
 - 8. The updated Construction Schedule.
- B. Make Record Documents available to Architect.
- C. Submit final Record Documents with Closeout Documents.

1.02 QUALITY ASSURANCE

- A. Make entries within twenty-four (24) hours after receipt of information except note dimensional corrections and new dimensional data immediately upon determination.
- B. Do not permit record sets to be used for any other purpose.

1.03 RECORD DOCUMENTS

- A. Field Record Drawings: One complete set of Drawings upon which all changes to Work are recorded daily with colored pencil to provide accurate, factual information relative to Work as constructed, both visible and concealed. Entries shall be made on line prints provided by Architect with each sheet bearing rubber stamp impression reading "Record Drawings".
 - 1. Identify entry by "cloud" type circle around affected Work. Initial and date each entry.
 - 2. Record the following:
 - a. Horizontal location and elevation of underground portions of Work.
 - b. Location, size and arrangement of concealed mechanical and electrical portions of Work, including conduit, piping, valves, ductwork, outlets, and equipment.
 - c. Location, size and arrangement of exposed mechanical and electrical portions of Work.
 - d. Changes and corrections to dimensions.
 - e. Changes to materials, products, equipment and finishes.
 - f. Changes and deviations in Work from that indicated in Contract Documents.
 - g. Identify equipment, valves, piping, conduit, fixtures and devices using symbols and designations corresponding to those used in Contract Documents.
- B. Field Record Specifications: One complete set of Project Manual/Specifications within which changes to materials, products, equipment, and systems are recorded; also, note which specified manufacturer was used. Make corrections with colored pencil and mark the Manual "Record Specifications" on outside back binding.
- C. Final Record Specifications: Either Field Record Specifications volume or new set of Specifications bearing all changes transferred from Field Record Specifications.

END OF SECTION

SECTION 01 7000 CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 DEFINITIONS

- A. Closeout is hereby defined to include the general requirements near the end of the Contract Time, in preparation for final acceptance, final payment, normal termination of the Contract, occupancy by the Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in the sections of Division 1 through 26. The time of closeout is recognized to be directly related to "Substantial Completion", and therefore may be either a single time period for the entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates.

After the Contractor receives an executed copy of a Certificate of Substantial Completion of the project, he shall prepare, assemble and transmit the documents, brochures and drawings herein required in one package.

1.02 CERTIFICATION OF SUBSTANTIAL COMPLETION: Prior to requesting Engineer's inspection for certification of Substantial Completion (for either the entire work or portions thereof), complete the following and list all known exceptions in the request:

- A. Submit last progress-payment request, with sworn statement showing 100 percent completion of the work, complete with associated releases, consents and supports.
- B. Advise Owner of pending insurance change-over requirements.
- C. Obtain and submit operating certificates, final inspection/test certificates, and similar releases enabling Owner's full and unrestricted use of the work and access to services and utilities.
- D. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
- E. Make final change-over of locks and transmit keys to Owner, and advise Owner's personnel to change-over in security provisions.
- F. Complete start-up testing of systems and instructions of Owner's operating/maintenance personnel.
- G. Touch-up and otherwise repair and restore marred exposed finishes.
- I. Valve Tag Schedules: Furnish two (2) copies of schedules with the Close-Out Documents and mount one additional copy, framed under glass, in mechanical room.

1.03 CERTIFICATION OF FINAL ACCEPTANCE: Prior to requesting Engineer's final inspection for certification of final acceptance and final payment, as required by the General Conditions, complete the following and list known exceptions (if any) in request:

- A. Submit final payment request with final releases and supports not previously submitted and accepted.
- B. Submit record drawings, maintenance manuals, and similar final record information.
- C. Submit record documents, special guarantees, warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
- D. Submit copy of Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.
- E. Complete the final cleaning

1.04 SUBMITTALS

- A. General: Specific requirements for submittal documents are indicated in individual Sections of these Specifications. The general requirements are indicated in this Section.
- B. Warranties:

1. Warranty-Contractor and Subcontractors: Reference is hereby made to the General Conditions in which the one (1) year warranty of the General Contractor and each subcontractor (the subcontractor's warranty shall be made to the General Contractor, not the Owner) is required to be submitted, unless a warranty for a longer period of time is specified for certain Sections of the Work in Divisions 2 through 26, in which case the longer period shall govern. (Submit on forms attached in triplicate.)
 2. The words "Warranty" and "Guarantee" as used anywhere in the text of the Contract Documents shall be interchangeable and synonymous meaning "a legally binding guarantee".
 3. Specific warranties do not diminish implied warranties, and shall not deprive the Owner of actions, rights and remedies otherwise available to him for the General Contractor's failure to fulfill requirements of the Contract Documents. Periods of warranties shall not be interpreted as limitations on the time in which the Owner can pursue actions, rights or remedies.
 4. Coincidental product warranties which are in conflict with the requirements of the Contract Documents will be rejected.
 5. Warranties for items beyond the one (1) year limit: Refer to individual Sections for requirements. (Submit on Form attached.)
 6. All warranties shall commence on the Date of Substantial Completion.
 7. All warranties shall cover all costs for necessary material and labor to promptly replace or restore the failing unit of work and other work damaged from its failure.
- C. Statutory and Non-Influence Affidavits (General Contractor and Subcontractor): Before final acceptance of the Work, the General Contractor shall furnish Statutory and Non-Influence Affidavits on the forms attached.
- D. Inspection Reports: Secure and submit to the Owner, through the Engineer, a certification from the local governmental agency or agencies that the construction has been inspected as required by laws or ordinances and that the building is acceptable for occupancy. (Certificate of Occupancy)
- E. Certificate of Substantial Completion and Certificate of Completion (Final):
1. A Certificate of Substantial Completion on AIA Form No. G704, for the project will be prepared by the Engineer for the purpose of establishing a date when the project is substantially complete, identification of a punch list and terminating actual damages or liquidated damages. Submit a Certificate of Completion (Final) on final inspection of the project verifying that punch list items are complete and all closing documents are in order, as shown by the accompanying project close-out check off list, and that all final payments are in order and establishing a date of final acceptance.
- F. Record Documents and As-Built Record Drawings: (Refer to Section 01650). Submit three (3) copies of each.
- G. Maintenance Manuals: Organize maintenance and operating manual information into suitable sets of manageable sizes, and bind into individual binders identified and indexed (thumb-tabbed); examples: Air Conditioning Equipment Maintenance. Include emergency instructions, spare part listing, warranties, guarantees, wiring diagrams, recommended "turn-around" cycles, inspection procedures, shop drawings, product data, and similar applicable information. Bind each manual of each set in a heavy duty 3-ring vinyl-covered binder and include pocket folders for folded sheet information. Legibly mark identification on both the front and spine of each binder. **SUBMIT THREE (3) COPIES OF EACH.**
- I. Contractor shall video all Systems Training Sessions with Owner's personnel and provide a DVD copy to the Engineer as part of Close-Out Documents required.
- J. Advise Owner fifteen (15) calendar days prior to utility cut-off dates.

PART 2 PRODUCTS – There are no products in this Section.

PART 3 EXECUTION

3.01 CLOSEOUT PROCEDURES

- A. General Maintenance Instructions: Prior to requesting Engineer's inspection for certification of Substantial Completion, arrange for each installer of work requiring maintenance (by the Owner) or operation, to meet with the Owner's personnel, in the Engineer's presence, at the project site, to provide basic instructions needed for proper operation and maintenance of the entire Work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, and similar shut-down, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, and similar operations. Review maintenance and operations in relation with applicable guarantees, warranties, agreements to maintain, bonds, and similar continuing commitments. **Contractor shall video all systems training sessions and provide a DVD copy to the Owner as part of the Close-Out Documents.**
- B. Listing of Instructions: See "Acknowledgment of Instruction" form at the end of this section. Fill out one form for each of the items, and submit in **TRIPLICATE** with Close-Out Documents. Specifically, but not necessarily by way of limitation, provide instruction to Owner's personnel on the following categories of Work:
1. Fans
 2. HVAC Controls
 3. Motor Starters
 4. Fire Dampers

3.02 FINAL CLEANING

- A. General: Special cleaning for specific units of work is specified in the Sections of Division 2 through 26.
- B. Provide final cleaning of the Work, at the time indicated, consisting of cleaning each surface or unit of work to the normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturers instructions for cleaning operations. The following are examples, but not by way of limitation, of the cleaning levels required:
1. Remove labels which are not required as permanent labels.
 2. Clean exposed exterior and interior hard-surfaced finishes, including metals, masonry, concrete, painted surfaces, plastics, tile, wood, special coatings, and similar surfaces, to a dirt free condition, free of dust, stains, films and similar noticeable distracting substances. Except as otherwise indicated, avoid the disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
 3. Wipe surfaces of mechanical and electrical equipment clean, including equipment in addition to that specified in Division 23 and 26; remove excess lubrication and other substances.
 4. Remove debris and surface dust from limited-access spaces including roofs, plenums shafts, equipment vaults, attics and similar spaces.
 5. Clean concrete floors in non-occupied spaces broom clean.
 6. Vacuum clean carpeted surfaces and similar soft surfaces.
 7. Clean light fixtures and lamps so as to function with full efficiency.
 8. Clean project site (yard and grounds), including landscape, development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, petro-chemical spills and other foreign deposits. Rake grounds clean of all debris that accumulated as a result of the construction.
- C. Time of Final Cleaning: Following Engineer's certification of "Substantial Completion", and immediately before his "Final Acceptance" inspection.
- D. Removal of Protection:
1. Except as otherwise indicated or requested by the Engineer, remove temporary protection devices and facilities which were installed during the course of the work to protect

previously completed work or hazardous conditions during the remainder of the construction period.

- E. **Compliances:** Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at the site, or bury debris or excess materials on the Owner's property, or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from the site and dispose of in a lawful manner satisfactory to the governing agency's solid waste disposal ordinance. Where extra materials of value remaining after completion of the associated work have become the Owner's property, dispose of these to Owner's best advantage as directed.
- F. **CONTINUING INSPECTIONS:** Except as otherwise required by special guarantees, warranties, agreements to maintain, workmanship bonds, and similar continuing commitments, comply with the Owner's requests to participate in inspections at the end of each time period of such continuing commitments. Participate in the general inspection(s) of the work approximately one year beyond the date(s) of Substantial Completion.

PART 4 - CHECK OFF LIST AND FORMS**PROJECT CLOSEOUT**
CHECK-OFF LIST

DOCUMENT	NO. OF COPIES	DATE RECEIVED
1. Contractors Warranty	4	
2. Subcontractors' Warranty and List of Subcontractors' Contact Information	4	
3. Special Extended Warranties beyond 1 year	4	
4. Statutory Affidavit	4	
5. Certificate of Occupancy	4	
6. As-Built Drawings and Record Documents (including RFI's and Addenda)	4	
7. Submittals, Shop Drawings, and Samples	4	
8. Maintenance Manuals & Equipment Brochures		
Air Conditioning Equipment	4	
Electrical Equipment	4	
Test and Balance Reports	4	
Wiring and Controls	4	
Diagrams for Equipment	4	
9. DVD/CDR Video of Systems Training Sessions	4	
10. DVD/CDR Video of Sanitary Sewer System	4	
11. Owner's Maintenance		
Staff Instructions	4	
Maintenance Schedules for Equipment	4	
13. Schedule of valve tags, locations and function	4	
14. Punch List Items Completed	4	
15. Hazardous Materials Certificate	4	
17. Certificate of Substantial Completion*	4	
18. Consent of Surety to Final Payment, AIA G707	4	
19. Contractors Affidavit of Payment of Debts and Claims, AIA G706	4	
20. Certificate of Final Completion**	4	
21. Certificate of Final Payment to Contractor	4	

* Submit following Owner's acceptance of building for use.

** Hold all other documents and submit in a package when all requirements are complete.
(No exceptions; piecemeal submittals will be returned.)

I certify that, being familiar with the Contract Documents for this project, to the best of my knowledge, the items checked off herein above constitute all that are applicable to this project.

Contractor's Signature
(For Submitting to the Engineer)

Date Submitted to the Engineer

Engineer's Signature
(For Submitting to the Owner)

Date Submitted to the Owner

WARRANTY BY GENERAL CONTRACTOR

OWNER: _____ COBB COUNTY BOARD OF COMMISSIONERS _____

JOB NAME: _____ FEDERAL ENERGY GRANT – HVAC IMPROVEMENT –
COBB COUNTY CENTRAL LIBRARY _____

PROJECT NO.: _____

ADDRESS: _____ 266 ROSWELL STREET, MARIETTA, GA. 30060 _____

COUNTY OF: _____ COBB _____ **STATE OF:** _____ GEORGIA _____

DATE: _____

_____, as General Contractor on the above job do hereby guarantee that all work executed under the plans and Specifications will be free from defects of materials and/or workmanship for a period of: ____ YEAR(S)

* beginning on the date of Substantial Completion established by the Engineer and ending 365 calendar days thereafter,

and that all defects occurring within the warranty period shall be replaced or repaired at no cost to the Owner.

This guarantee covers all work as shown on the plans and specified in the Specifications and Contract Documents.

Nothing in the above shall be deemed to imply that this guarantee shall apply to any work which has been abused or neglected by the Owner.

Legal Name of Contractor

By: _____

Title: _____

Notary Public

This _____ day of _____, 20____

WARRANTY
BY SUBCONTRACTOR
TO GENERAL CONTRACTOR

GENERAL CONTRACTOR: _____

SUBCONTRACTOR: _____

OWNER: _____ COBB COUNTY BOARD OF COMMISSIONERS _____

JOB NAME: _____ FEDERAL ENERGY GRANT – HVAC IMPROVEMENT –
COBB COUNTY CENTRAL LIBRARY _____

PROJECT NO.: _____

ADDRESS: _____ 266 ROSWELL STREET, MARIETTA, GA. 30060 _____

COUNTY OF: _____ COBB _____ **STATE OF:** _____ GEORGIA _____

DATE: _____

_____, as Subcontractor on the above job does hereby guarantee that all work executed under the plans and Specifications will be free from defects of materials and/or workmanship for a period of: ____ YEAR(S)

* beginning on the date of Substantial Completion established by the Engineer and ending 365 calendar days thereafter,

and that all defects occurring within the warranty period shall be replaced or repaired at no cost to the Owner.

This guarantee covers all work as shown on the plans and specified in the Specifications and Contract Documents for _____

Nothing in the above shall be deemed to imply that this guarantee shall apply to any work which has been abused or neglected by the Owner.

Legal Name of Subcontractor

By: _____

Title: _____

Notary Public

This _____ day of _____, 20____

My Commission Expires: _____, 20____

SPECIAL EXTENDED WARRANTY

OWNER: COBB COUNTY BOARD OF COMMISSIONERS

JOB NAME: FEDERAL ENERGY GRANT – HVAC IMPROVEMENT –
COBB COUNTY CENTRAL LIBRARY

PROJECT NO.: _____

ADDRESS: 266 ROSWELL STREET, MARIETTA, GA. 30060

COUNTY OF: COBB **STATE OF:** GEORGIA

DATE: _____

(Insert name of PRIME WARRANTOR above and circle appropriate source below)
as (SUPPLIER) (MANUFACTURER) (SUBCONTRACTOR) on the above referenced project for:

(Insert description of work or materials provided on the line above)
and the General Contractor (co-signed below) do hereby guarantee that the above executed under the
criteria of the Contract Drawings and Specifications will be free of defects in material and workmanship for
a period of: ____ YEAR(S)

* beginning on the date of Substantial Completion established by the Engineer and ending _____
years,

and that all defects occurring within the above warranty period shall be promptly replaced or repaired at no
cost to the Owner.

This warranty covers all work as shown on the Contract Drawings and Contract Specifications with warranty
criteria outlined in

Specification Section Paragraph

(Insert the Technical Specification Section and Paragraph requiring the warranty)

Nothing in the above shall be deemed to imply that this warranty shall apply to any work or materials which
has been abused or neglected by the Owner.

Legal name of Prime Warrantor

Legal name of General Contractor

By (Officer)

By (Officer)

Title

Title

Notary Public

This _____ day of _____, 20____

STATUTORY AFFIDAVIT

STATE OF GEORGIA, COUNTY OF _____ **COBB** _____

FROM: _____
(Contractor)

TO: COBB COUNTY BOARD OF COMMISSIONERS, Owner

RE: Contract entered into the _____ day of _____, 20____, between the above mentioned parties for the construction of

FEDERAL ENERGY GRANT – HVAC IMPROVEMENT – COBBCOUNTY CENTRAL LIBRARY

at _____

KNOW ALL MEN BY THESE PRESENTS:

1. The undersigned hereby certifies that all work required under the above contract has been performed in accordance with the terms thereof, that all materialmen, subcontractors, mechanics, and laborers have been paid and satisfied in full and that there are no outstanding claims of any character arising out of the performance of the contract which have not been paid and satisfied in full.
2. The undersigned further certifies that to the best of his knowledge and belief there are no unsatisfied claims for damages resulting from injury or death to any employees, subcontractors, or the public at large arising out of the performance of the contract, or any suits or claims for any other damage of any kind, nature, or description which might constitute a lien upon the property of the Owner.
3. The undersigned makes this affidavit as provided by law and for the purpose of receiving final payment in full settlement of all claims arising under or by virtue of the contract, and acceptance of such payment is acknowledged as a release of the Owner from any and all claims under or by virtue of the contract.

IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument the

_____ day of _____, 20_____.

Personally appeared before the undersigned, _____ and _____ who, after being duly sworn, depose(s) and say(s) that the facts stated in the above affidavit are true.

Notary Public

This _____ day of _____, 20_____

My Commission Expires: _____ County, GA

ACKNOWLEDGMENT OF INSTRUCTION

PROJECT NAME: FEDERAL ENERGY GRANT – HVAC IMPROVEMENT –
COBB COUNTY CENTRAL LIBRARY

PROJECT NO.: _____

CONTRACTOR NAME: _____

CONTRACTOR ADDRESS: _____

OWNER: COBB COUNTY BOARD OF COMMISSIONERS
100 CHEROKEE STREET
MARIETTA, GEORGIA 30060

By signature below, the Owner and the Contractor each acknowledge that the Contractor (and/or his representative) has satisfactorily instructed the Owner in the use, operation, and maintenance of:

FEDERAL ENERGY GRANT – HVAC IMPROVEMENT – COBB
COUNTY CENTRAL LIBRARY

DATE: _____

CONTRACTOR'S INSTRUCTING PERSONNEL: (All names legibly printed)

OWNER'S PERSONNEL INSTRUCTED: (All names legibly printed)

*See individual entries in paragraph 3.1.2 of this section and legibly enter here.

HAZARDOUS MATERIALS CERTIFICATE

CERTIFICATE OF GENERAL CONTRACTOR

OWNER: _____ COBB COUNTY BOARD OF COMMISSIONERS _____

PROJECT NAME: _____ FEDERAL ENERGY GRANT – HVAC IMPROVEMENT –
COBB COUNTY CENTRAL LIBRARY _____

ADDRESS: _____ 266 ROSWELL STREET, MARIETTA, GA. 30060 _____

COUNTY OF: _____ COBB _____ **STATE OF:** _____ GEORGIA _____

DATE: _____

_____, as General Contractor on the above job, does hereby certify that all materials, products and assemblies supplied and installed in this project and on the site are totally free of asbestos, PCB or other hazardous materials.

This certificate covers all materials required by the contract documents.

Nothing in the above shall be deemed to imply that this certificate shall apply to materials furnished by the Owner or installed by the Owner.

LEGAL NAME OF CONTRACTOR:

Legal Name of Contractor

By: _____

Title: _____

Notary Public

This _____ day of _____, 20____

My Commission Expires: _____

END OF SECTION

SECTION 01 7900 DEMONSTRATION AND TRAINING

PART 1 GENERAL

1.01 SUMMARY

- A. Demonstration of products and systems to be commissioned and where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
 - 1. All software-operated systems.
 - 2. HVAC systems and equipment.
 - 3. Items specified in individual product Sections.
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
 - 1. Weather-exposed or moisture protection products.
 - 2. Items specified in individual product Sections.

1.02 RELATED REQUIREMENTS

- A. Section 01 7000 – Contract Closeout: Operation and maintenance manuals.
- B. Section 23 0800 - Commissioning of HVAC: Additional requirements applicable to demonstration and training.
- C. Other Specification Sections: Additional requirements for demonstration and training.

1.03 SUBMITTALS

- A. See Section 01 3000 - Submittals, for submittal procedures.
 - 1. Make all submittals specified in this section, and elsewhere where indicated for commissioning purposes, directly to the Engineer.
 - 2. Submit one copy to the Engineer, not to be returned.
 - 3. Make commissioning submittals on time schedule specified by Commissioning Plan.
 - 4. Submittals indicated as "Draft" are intended for the use of the Engineer in preparation of overall Training Plan; submit in editable electronic format, Microsoft Word 2003 preferred.
- B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skill-level of attendees.
 - 1. Submit to Engineer for transmittal to Owner.
 - 2. Submit not less than two weeks prior to start of training.
 - 3. Revise and resubmit until acceptable.
 - 4. Provide an overall schedule showing all training sessions.
 - 5. Include at least the following for each training session:
 - a. Identification, date, time, and duration.
 - b. Description of products and/or systems to be covered.
 - c. Name of firm and person conducting training; include qualifications.
 - d. Intended audience, such as job description.
 - e. Objectives of training and suggested methods of ensuring adequate training.
 - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
 - g. Media to be used, such as slides, hand-outs, etc.
 - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
 - 1. Include applicable portion of O&M manuals.
 - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.

3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Training Reports:
 1. Identification of each training session, date, time, and duration.
 2. Sign-in sheet showing names and job titles of attendees.
 3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.
 4. Include Commissioning Authority's formal acceptance of training session.
- E. Video Recordings: Submit digital video recording of each training session for Owner's subsequent use.
 1. Format: DVD Disc.
 2. Label each disc and container with session identification and date.

1.04 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstrations conducted during Functional Testing need not be repeated unless Owner personnel training is specified.
- C. Demonstration may be combined with Owner personnel training if applicable.
- D. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
 1. Perform demonstrations not less than two weeks prior to Substantial Completion.
 2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- E. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
 1. Perform demonstrations not less than two weeks prior to Substantial Completion.

3.02 TRAINING - GENERAL

- A. Contractor will prepare the Training Plan based on draft plans submitted.
- B. Conduct training on-site unless otherwise indicated.
- C. Owner will provide classroom and seating at no cost to Contractor.
- D. Do not start training until Functional Testing is complete, unless otherwise specified or approved by the Commissioning Authority.
- E. Provide training in minimum two hour segments.
- F. The Engineer is responsible for determining that the training was satisfactorily completed and will provide approval forms.
- G. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to

conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.

- H. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
 - 1. The location of the O&M manuals and procedures for use and preservation; backup copies.
 - 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
 - 3. Typical uses of the O&M manuals.
- I. Product- and System-Specific Training:
 - 1. Review the applicable O&M manuals.
 - 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
 - 3. Review instructions for proper operation in all modes, including start-up, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
 - 4. Provide hands-on training on all operational modes possible and preventive maintenance.
 - 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
 - 6. Discuss common troubleshooting problems and solutions.
 - 7. Discuss any peculiarities of equipment installation or operation.
 - 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
 - 9. Review recommended tools and spare parts inventory suggestions of manufacturers.
 - 10. Review spare parts and tools required to be furnished by Contractor.
 - 11. Review spare parts suppliers and sources and procurement procedures.
- J. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

END OF SECTION

**SECTION 02 4100
DEMOLITION****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Building demolition.
- B. Selective demolition of built site elements.
- C. Selective demolition of building elements for alterations purposes.
- D. Abandonment and removal of existing utilities and utility structures.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Sequencing and staging requirements.
- C. Section 01 1000 - Summary: Description of items to be removed by Owner.
- D. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- E. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- F. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.
- G. Waste Stream Management Plan Energy Retrofit Projects, Cobb County, GA. DE-EE0000803.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2004.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Site Plan: Showing:
 - 1. Areas for temporary construction and field offices.
 - 2. Areas for temporary and permanent placement of removed materials.
- C. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
 - 2. Identify demolition firm and submit qualifications.
 - 3. Include a summary of safety procedures.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.05 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
 - 1. Minimum of 5 years of experience.

PART 2 PRODUCTS -- NOT USED**PART 3 EXECUTION****3.01 SCOPE**

- A. Remove portions of existing buildings in the following sequence:
 - 1. Building Chilled Water System (See Demolition Plans).

2. Building Heating Hot Water System (See Demolition Plans).
- B. Remove all curbs as indicated on drawings.
- C. Remove other items indicated, for recycling and demolition.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 1. Obtain required permits.
 2. Comply with applicable requirements of NFPA 241.
 3. Use of explosives is not permitted.
 4. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 5. Provide, erect, and maintain temporary barriers and security devices.
 6. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 7. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 8. Do not close or obstruct roadways or sidewalks without permit.
 9. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 10. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Protect existing structures and other elements that are not to be removed.
 1. Provide bracing and shoring.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.
- F. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- G. If hazardous materials are discovered during removal operations, stop work and notify Engineer and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- H. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
- I. Perform demolition in a manner that maximizes salvage and recycling of materials.
 1. Comply with requirements of Section 01 7419 - Waste Management.
 2. Dismantle existing construction and separate materials.
 3. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- J. Partial Removal of Curbs: Neatly saw cut at right angle to surface.

3.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Engineer before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
 - 2. Provide sound retardant partitions of construction indicated on drawings in locations indicated on drawings.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
- E. Services (Including but not limited to HVAC and Electrical): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. See Section 01 1000 for other limitations on outages and required notifications.
 - 4. Verify that abandoned services serve only abandoned facilities before removal.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Remove from site all materials not to be reused on site; comply with requirements of Waste Stream Management Plan Energy Retrofit Projects.
- C. Leave site in clean condition, ready for subsequent work.
- D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 03 3000 CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SUMMARY OF WORK

Section includes formwork, reinforcing, finishing, mixing and placing, and testing of Ready-mixed concrete.

1.02 CONCRETE CODE

In general, the recommendations of the Building Code Requirements for Reinforced Concrete, ACI Standard No. 318-95, shall be adhered to and considered standard procedure.

1.03 CONCRETE STANDARD

All concrete for this project shall be designed, formed, mixed, handled, protected, cured, tested and evaluated in accordance with the provisions of ACI Standard 301 except that the conditions in this section shall supersede contrary provisions therein.

1.04 RECORD DOCUMENTS

- A. Ready-mixed concrete shall be used for all cast-in-place concrete. Ready-mixed concrete suppliers shall each qualify under the requirements of ASTM specification C 94-86a entitled "Ready-Mixed Concrete". Ready-mixed concrete shall be mixed and transported as required by the same ASTM Specification, and delivery tickets shall be dated the time of leaving the plant and the time the truck is completely unloaded.
- B. Submit shop drawings in accordance with the requirements of the Submittals Section. Show size, type, and location of all reinforcing bars, bar supports, and forms. Drawings must bear the approval of the General Contractor. Drawings will not be reviewed without this approval.
- C. Submit mix designs for review.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Concrete materials and admixtures shall meet the following requirements:
 1. Portland Cement: ASTM Specification C 150-85a, Type 1 or III shall be used. One brand of cement shall be used for exposed work.
 2. Aggregate: ASTM C 33-86; ASTM C 330-85.
 3. Mix water shall be potable, free of salts or organic material.
 4. Air Entraining Admixtures: ASTM C 260-86. Provide entrained air of $5\% \pm 1\%$.
 5. Other Admixtures: Submit data for approval. No fly ash shall be used in exposed-to-view concrete.

2.02 ACCESORIES

Filler strips for expansion joints shall be polyethylene foam.

- A. Concrete Mixes:
 1. All Concrete:
 - a. 28-Day Strength: 3000 psi at interior 4" slabs, exterior curbs, gutters and sidewalks; 4000 psi at 6" interior slabs and all concrete pavement
 - b. Type: Normal Weight
 - c. Slump Range: $4" \pm 1"$
 - d. Weight: 135 pcf - 150 pcf
 - e. Air Entrained: $5\% \pm 1\%$

- B. Curing compound, if used, shall meet the requirements of ASTM C 309-81 for "Liquid Membrane-Foaming, Compounds for Curing Concrete", and shall be compatible with floor covering used. Approved manufactures: W.R. Meadows, Master Builders.
- C. Metal reinforcement: New billet steel of manufacture conforming to ASTM A 615-86, Grade 40 for bars #3 and smaller, and Grade 60 for all others.
- D. Accessories used in exposed concrete shall be galvanized. Footing and slab-on-ground reinforcements shall be supported on solid blocks of concrete, concrete brick, or similar concrete masonry.
- E. Wood forms: Square-edged boards of Southern Pine or Douglas Fir, or 3/4" form plywood.
- F. Galvanized steel key joints may be used at construction joints.
- G. Plastic membrane as specified in vapor retarder section.
- H. Surface patch and leveling material for slabs shall be "Sikatop III" by Sika Corporation, or equal.
- I. No fly-ash permitted in exposed-to-view concrete.
- J. No calcium chloride permitted in concrete.
- K. Welded Wire Fabric: Lap minimum 6 inches and wire together at both sides and end laps.
 - 1. 6" x 6" – W1.4 x W1.4 in all 4" thick interior slabs.
 - 2. 6" x 6" – W2.1 x W2.1 in all 6" thick slabs; interior and pavement.
 - 3. Welded plain cold-drawn steel wire fabric, ASTM A 185. Furnish in flat sheets. Do not furnish in rolls.

PART 3 EXECUTION

3.01 FORMS

- A. Forms: Construct to conform to the shape, lines, grades and dimensions indicated on the drawings. Make forms substantial and sufficiently tight to prevent leakage of mortar, and braced or tied together to maintain position and shape. Forms shall not deflect under the dead load weight of the liquid concrete of construction loads.
- B. Set forms to required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of the work and so forms can remain in place at least 24 hours after concrete placement.
- C. Check completed formwork for grade and alignment to the following tolerances:
 - 1. Top of Forms not more than 1/8" in 10' from indicated elevation.
 - 2. Vertical Face on longitudinal axis, not more than 1/4" in 10' from indicated alignment.
- D. Clean forms after each use, and coat with form release agent after each use and as often as required to ensure separation from concrete without damage.

3.02 FIELD QUALITY CONTROL

Testing of concrete materials, proposed mix design and of resulting concrete will be the duty of a Testing Agency and as specified in the Concrete Standard. The Testing Agency shall be selected and paid for by the Owner. The Testing Agency shall be paid by the contractor for any retests of previously failed tests. The Contractor shall be responsible for all cylinder preparation.

- A. Provide a stable, insulated storage box for storage of test cylinders for the first 24 hours after molding. Box shall be locked so that laboratory personnel and the Contractor's Superintendent shall be the only persons with access to its contents. The box shall be located in a permanent area, clear of the construction, providing work space for the Testing Agent.
- B. Slump Tests: Testing Lab to perform all concrete tests and have an employee on the site when concrete is being placed who is familiar with applicable ASTM Standards which govern the making of slump tests. Testing Lab's employee qualified to do so shall perform a slump test for each truck. Reject any concrete outside the specified slump range.
- C. Notify the Testing Agent 24 hours in advance of placing concrete to enable to Testing Agent to have a technician available for conducting tests and obtaining specimen.

- D. No more than one hour shall elapse from batching to placing of concrete.

3.03 PLACING CONCRETE

- A. Concrete shall be deposited so as to require as little rehandling as practical. Placing shall be continuous between transverse joints or in individual sections of the work. Vibrate concrete thoroughly along forms and expansion joints, and work carefully into corners and around reinforcement. Tamp and screed to a dense mass. If the temperature may be expected to fall below forty (40) degrees F within twenty-four (24) hours after concrete is placed, heat water and aggregates to bring the temperature of concrete mix to at least fifty (50) degrees F.
- B. Forms - All forms shall be free from warp, tight enough to prevent leakage of concrete, and substantial enough to maintain their shape and position without springing or settlement when concrete is placed or vibrated. Forms shall be staked, braced, and/or tied together securely. Forms shall be clean and those for surfaces to be exposed shall produce a smooth, even finish without fins or board marks. Set forms for slabs on ground at exact finished grade. Check for line and grade and correct as necessary immediately before concreting. Provide uniform bearing for such forms.
- C. Reinforcing bars shall be accurately placed, and securely supported and fastened to prevent movement during placement of concrete.
- D. Finished slab in Apparatus Room shall be covered with sand or plywood throughout construction until final cleanup is begun.

3.04 CONCRETE FINISHING

- A. After striking-off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust the floating to compare the surface and produce a uniform texture.
- B. After floating, test surface for trueness with a 10' straightedge. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.
- C. Work edges of slabs, gutters, back and top edge of curb and formed joints with an edging tool, and round to 1/2" radius, unless otherwise indicated. Eliminate any tool marks on concrete surface.
- D. After completion of floating and when excess moisture or surface sheen has disappeared, complete surface finishing, as follows:
 - 1. Broom finish, by drawing a fine-hair broom across concrete surface, perpendicular to line of traffic. Provide a fine line texture.
 - 2. On inclined slab surfaces, provide a coarse, non-slip finish by scoring surface with a stiff-bristled broom, perpendicular to line of traffic.
 - 3. Do not remove forms for 24 hours after concrete has been placed. After forms are removed, clean ends of joints and point-up any minor honeycombed areas. Remove and replace sections with major defects, as directed by Architect.

3.05 CURING CONCRETE

- A. Impervious membrane - Concrete shall be cured through the application of a polyethylene transparent, impervious membrane of a type approved by the Architect. The membrane shall be of such composition as not to react with the concrete nor alter its color. Apply the membrane immediately after free water has disappeared from the finished surface of the concrete. Apply the membrane to cover the surface with a uniform film, ample to seal the surface thoroughly and without marring the concrete finish. Keep workmen, equipment and materials off the membrane for three (3) days after applying.
- B. Cold weather protection - Whenever the air temperature may be expected to reach the freezing point, spread straw or other blanketing material to sufficient depth to keep concrete from freezing, or provide enclosure and a heating device capable of maintaining concrete

temperature of at least forty-five (45) degrees five (5) days. The Contractor shall be responsible for removing and replacing any concrete injured by freezing or frost.

3.06 CLEANUP

- A. All trash and surplus materials resulting from the work of this section shall be removed from the site. Any concrete, bituminous substances or other materials spilled on pavement, walks, or structures shall be completely removed.

3.07 REPAIRS AND PROTECTIONS

- A. Repair or replace broken or defective concrete.
- B. Drill test cores where directed by Architect when necessary to determine magnitude of cracks or defective areas caused by faulty materials or workmanship not in compliance with contract documents. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy resin grout.
- C. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement clean by removing surface stains and spillage of materials as they occur.
- D. Sweep concrete pavement and wash free of stains, discolorations, dirt and other foreign material just prior to final inspection.

END OF SECTION

**SECTION 09 9000
PAINTS & STAINS****PART 1 GENERAL****1.01 DESCRIPTION**

- A. Work described in this section includes:
 - 1. Touching up of shop applied prime coats.
 - 2. Preparation of surfaces to receive finishes.
 - 3. Painting, staining or otherwise finishing of all surfaces except as otherwise indicated.
 - 4. Finishing of field painted wood doors.
- B. Related work specified elsewhere:
 - 1. Shop applied primer coats.
 - 2. Piping identification.
 - 3. Pre-finished items.

1.02 SUBMITTALS

- A. Product Data:
 - 1. Submit complete list of products proposed for use at least 30 days prior to commencement of painting work. (Intent of Contractor to use products specified does not relieve him from responsibility of submitting product list).
 - 2. Indicate manufacturer, brand name, quality and type paint for each surface to be finished.
- B. Color Samples:
 - 1. Color charts: Submit two sets of color charts from paint manufacturers proposed for use, for color selections by Architect.
 - 2. Brush-out Samples:
 - a. Following color selections by Architect or issuance of color schedule, prepare actual brush-out samples of each paint, stain or finish actually required for use on the project.
 - b. Submit minimum 8"x10", brush-out samples in duplicate. Apply products in number of coats specified for actual work.
 - c. Provide brush-out samples on the following substrates:
 - 1) To simulate drywall, lumber, board products and metals for paint finish: Heavy Poster Board or Hardboard.
 - 2) To simulate wood for transparent finish provide sample(s) of : Actual species and grade specified.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to project site ready-mixed in original containers with labels intact; labels bearing manufacturer's name, paint type, color and recommended installation and reducing procedures. Paint material containers not displaying manufacturer's product identification will not be acceptable.
- B. Storage and handling:
 - 1. Store materials in a dry, well ventilated, covered location.
 - 2. Maintain neat, clean conditions in storage area; remove rags and waste materials at end of each day's work.
 - 3. Close containers at end of day's work. Leave not materials open.

1.04 JOB CONDITIONS

- A. Environmental requirements:
 - 1. Comply with manufacturer's recommendations as to environmental conditions under which materials may be applied.
 - 2. Apply no materials in spaces where dust is being generated.
 - 3. Do not apply paint to damp or wet substrates.

- B. Protection: Cover finished work of other trades and surfaces not being painted concurrently and prefinished items.
- C. Safety precautions:
 - 1. Provide temporary fire protection equipment in materials storage area.
 - 2. Prohibit smoking in storage area.

1.05 QUALITY ASSURANCE

- A. Primers, undercoat paint and finish coat paint materials shall be products of a single manufacturer unless otherwise specified.
- B. Applicator qualifications: Applicator shall be approved by paint manufacturer in writing. Approval shall indicate the following:
 - 1. Manufacturer has instructed applicator in the installation of specified material.
 - 2. Applicator has been engaged in satisfactory application of materials on project of similar scope for at least three years.
- C. Standard of Quality:
 - 1. Prior to production application of special coatings a "Standard of Quality" application shall be prepared for inspection and acceptance by the Architect. Said application shall be made on a representative area of the project with the approved coatings applied in accordance with this specification by the coatings applicator.
 - 2. A representative of the manufacturer of the special coatings shall be present at the job site to observe this application, inspect surfaces and conformance to specification.
 - 3. Upon completion of this sample application, a representative inspect and approve this area. Upon acceptance, by the Architect, said area shall become the "Standard of Quality" for subsequent coatings application, and the application contractor shall be responsible for maintaining the accepted quality throughout the subsequent application.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable manufacturers; subject to compliance with specified requirements:
 - 1. Benjamin Moore Co.
 - 2. Devoe and Reynolds Co., Inc.
 - 3. Duron Paint Co.
 - 4. The Glidden Company
 - 5. Porter Paint Co.
 - 6. PPG Industries
 - 7. Sherwin-Williams Co.

2.02 PAINTING MATERIALS

- A. Standard of Quality: Products specified herein are as manufactured by the listed companies, and shall be the basis for the standard of quality. Products of other acceptable manufacturers specified, similar in material, type and quality, may be acceptable for use subject to approval of specified product data submittal.
- B. Where products other than those of the manufacturer listed as the standard of quality are specified in Painting Schedule, such products have been selected to achieve specific results and substitutions will be allowed only in accordance with Product Options and Substitutions section.
- C. Miscellaneous Materials:
 - 1. Paint thinners and tints shall be products of same manufacturer as paints or approved by him for use with his products.
 - 2. Shellac, turpentine, patching compounds and similar materials required for execution of work shall be compatible with painting materials and surfaces applied.
- D. Paint and stain colors shall be scheduled with final approval based on brush-out sample submittal.

PART 3 EXECUTION

3.01 PREPARATION

- A. Surfaces to receive finishes shall be dry and free of debris, oils, dust or other deleterious materials.
- B. Treat mildewed surfaces with a solution of one quart hypochlorite bleach to a half cup of detergent to one gallon water. Rinse and allow to dry prior to painting.
- C. Lumber, Plywood and Veneered Wood Surfaces:
 - 1. Apply shellac, maximum two pounds cut to knots, pitch and resinous sapwood prior to application of the first coat of paint. For stained surfaces, treat knots, pitch, and resinous sapwood in accordance with stain manufacturer's recommendations.
 - 2. For surfaces to receive paint finish, fill nail holes, cracks, joints and defects with spackling compound. Apply after the first coat of paint.
 - 3. For surfaces to receive transparent finish, fill all nail holes, cracks and defects with wood filler matching finish color.
 - 4. Sand surfaces smooth using fine grit sandpaper. Dust to remove debris.
- D. Gypsum Drywall: Fill narrow, shallow cracks and small holes with patching compound. Allow to dry and sand smooth without raising nap of wallboard paper.
- E. Concrete:
 - 1. Fill cracks, holes and irregularities with cement grout.
 - 2. Remove laitance, oil, grease, dirt and debris from surfaces. Allow concrete to cure prior to paint application.
- F. Galvanized Metal: Wash with xylol to remove grease, oil and contaminants. Wipe dry with clean cloth.
- G. Aluminum:
 - 1. Sand or scrape to remove oxides.
 - 2. Wash with xylol to remove grease, oil and contaminants. Wipe dry with clean cloth.
- H. Ferrous Metals:
 - 1. Wire brush or sandpaper to remove rust and mill scale.
 - 2. Solvent clean with xylol to remove grease, oil and contaminants. Wipe dry with clean cloth.
- I. Wood Doors for Field Finishing:
 - 1. Sand wood surfaces using hand block or vibrator sander with 120 to 180 grit sandpaper to remove handling marks, scuffs, scratches, raised grain and effects of moisture exposure to provide smooth surface for finishing.
 - 2. Do not use steel wool on doors.
 - 3. Sand and finish with door laid in a horizontal position.
 - 4. Dust or vacuum surfaces to remove sanding debris, leaving doors in clean condition for finishing.

3.02 APPLICATION

- A. Apply paint only when moisture content of surfaces is within manufacturer's recommended limits. Apply paint materials using clean brushes, rollers or spraying equipment.
- B. Apply materials at rate recommended by the paint manufacturer for surface being painted, less ten percent for losses.
- C. Comply with manufacturer's recommendations for drying time between coats.
- D. Sand and dust between coats to remove visible defects when viewed from a distance of five feet.
- E. Finish coats shall be smooth, free of brush marks, streaks, laps or pile-up of paint, skipped or missed areas.
- F. Make edges of paint adjoining other materials or colors clean and sharp without overlapping.

- G. Primer coats may be omitted for surfaces specified to receive factory applied primer if primer is compatible with finish coats. If factory applied primer coats are not compatible with finish coats, substitute a bond coat or other surface preparation measures as recommended by paint manufacturer for specified finish coats at no additional cost to Owner.
- H. Where two-coat finish is specified, prime coat shall be tinted to approximate finish color.
- I. Where portion of finish on drywall partition is damaged or unacceptable, refinish entire surface of partition.
- J. Back-prime finish carpentry and millwork with material specified for prime coat, without runs on face. Finish cut edges prior to installation.
- K. Paint inside of ductwork flat black for entire area visible through ceiling openings. Paint underside of ductwork and other above-ceiling items flat black for entire area visible through ceiling openings.
- L. Seal tops and bottoms of interior doors with prime coat only; side edges shall be finished same as faces.
- M. Finish all edges of exterior doors same as faces.
- N. Paint exposed piping and ductwork in occupied areas same as adjacent wall surfaces.
- O. Paint exposed grilles and registers in public spaces.
- P. Paint handrails, guardrails, bollards and miscellaneous metal fabrication items exposed to view in the finished structure.
- Q. Remove and protect hardware, accessories, device plates, lighting fixtures, factory finished work and similar items, or provide in-place protection prior to painting adjacent surfaces. Upon completion of each space, carefully replace all removed items.
- R. Paint all roof penetrations.
- S. Spray Applications: Use only where not accessible or impractical to use roller and/or brush applications; coverage shall be equal to brush costs.

3.03 PAINTING SCHEDULE

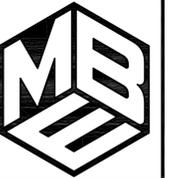
- A. Surfaces not requiring painting:
 - 1. Exterior brick masonry.
 - 2. Pre-finished surfaces and items.
 - 3. Concealed ductwork, conduit and piping, except as visible from completed spaces.
 - 4. Concrete, block or drywall surfaces concealed above finished ceilings.
- B. The quantities of coats specified are minimums. Contractor is responsible for application of any additional coats necessary to achieve required coverage and color uniformity.
- C. Exterior surfaces:
 - 1. Ferrous metals, *acrylic waterborne enamel*:
 - a. First coat: Porter – 296 Glyptex Rust Inhibitive Primer.
 - b. Second coat: Porter – 909 Advantage 900 Gloss.
 - c. Third coat: Porter – 909 Advantage 900 Gloss.
 - 2. Galvanized metals and aluminum, *acrylic waterborne enamel*:
 - a. First coat: Porter – 290 Galvanized Metal Primer. 296 Glyptex (for Aluminum).
 - b. Second coat: Porter – 909 Advantage 900 Gloss.
 - c. Third coat: Porter – 909 Advantage 900 Gloss.
- D. Interior surfaces:
 - 1. Concrete unit masonry, *acrylic waterborne semi-gloss enamel*:
 - a. First coat: Porter – 9203 Quick Fil.
 - b. Second coat: Porter – 909 Advantage 900 Gloss.
 - c. Third coat: Porter – 909 Advantage 900 Gloss.
 - 2. Concrete unit masonry, *waterborne acrylic epoxy* (See Finish Schedule in drawings)
 - a. First coat: Porter – BlocLoc WaterProofing Block Filler No. 222.

- b. Second coat: Porter – PorterGuard WB Acrylic Epoxy No. 9549G.
- c. Third coat: Porter – PorterGuard WB Acrylic Epoxy No. 9549G.
- 3. Gypsum drywall:
 - a. First coat: Glidden – Drywall Primer.
 - b. Second coat: Glidden – #5800 Latex Low Lustre.
 - c. Third coat: Glidden – #5800 Latex Low Lustre.
- 4. Ferrous metals, *alkyd semi-gloss*:
 - a. First coat: Porter – 296 Glyptex Rust Inhibitive Primer.
Porter – 286 Fast Dry Universal Primer.
 - b. Second coat: Porter – 129 Alkyd Satin Enamel.
 - c. Third coat: Porter – 129 Alkyd Satin Enamel.
- 5. Galvanized metals and aluminum, *alkyd semi-gloss*:
 - a. First coat: Porter – 290 Galvanized Metal Primer. 296 Glyptex (for Aluminum).
 - b. Second coat: Porter – 129 Alkyd Satin Enamel.
 - c. Third coat: Porter – 129 Alkyd Satin Enamel.

3.04 MAINTENANCE MATERIALS

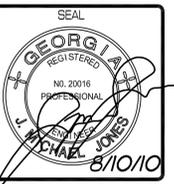
- A. Furnish minimum one gallon of each paint color and finish used on project for Owner's maintenance use.
- B. Properly identify each container with manufacturer, color name, product number, and color formula.
- C. Store materials at a location designated by the Owner.

END OF SECTION



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PROJECT NAME
HVAC IMPROVEMENTS - COBB COUNTY CENTRAL LIBRARY
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REVISIONS

DRAWING TITLE
ELECTRICAL DEMOLITION PLANS - PHASE 1

DRAWN BY
JMJ

CHECKED BY
ACM

DATE
08-11-10

SHEET
E101

OF 7

ELECTRICAL SYMBOLS LEGEND AND ABBREVIATIONS

DEMO/REMOVE	EXISTING TO REMAIN	NEW/RELOCATED	DESCRIPTION
			FLUORESCENT STRIP LIGHT FIXTURE, ALL FIXTURES ARE EXISTING.
			DUPLEX RECEPTACLE, 20A., 125V. MOUNT 18" A.F.F. U.N.O. SEE NOTES FOR POWER PLAN FOR ADDITIONAL INFORMATION. GFI = GROUND-FAULT CIRCUIT INTERRUPTER
			DUPLEX RECEPTACLE, MOUNT MOUNT 48" A.F.F. OR 6" ABOVE COUNTER GFI = GROUND-FAULT CIRCUIT INTERRUPTER
			QUADRUPLEX RECEPTACLE, 20A., 125V. MOUNT 18" A.F.F. U.N.O.
			JUNCTION BOX WALL OR SURFACE MOUNTED
			FUSED DISCONNECT SWITCH. DISCONNECT RATING AND FUSE SIZE GIVEN
			COMBINATION MOTOR STARTER DISCONNECT
			MOTOR CONTROLLER - VFD
			ELECTRIC MOTOR, HORSE POWER INDICATED F = FRACTIONAL
			SURFACE MOUNTED 480Y/277V, 3 PHASE, 4 WIRE PANELBOARD.
			SURFACE MOUNTED 208Y/120V, 3 PHASE, 4 WIRE PANELBOARD.
			CONDUIT OR CABLE CONCEALED IN WALL OR ABOVE CEILING.
			CONDUIT OR CABLE CONCEALED IN WALL OR BELOW ROOF.
			CONDUIT OR CABLE RUN EXPOSED.
			HOME RUN TO PANELBOARD. SEE NOTES ON DRAWINGS.
			FLEXIBLE CONDUIT.
			KEYED NOTE REFERENCE FOR RESPECTIVE ELECTRICAL DRAWING.

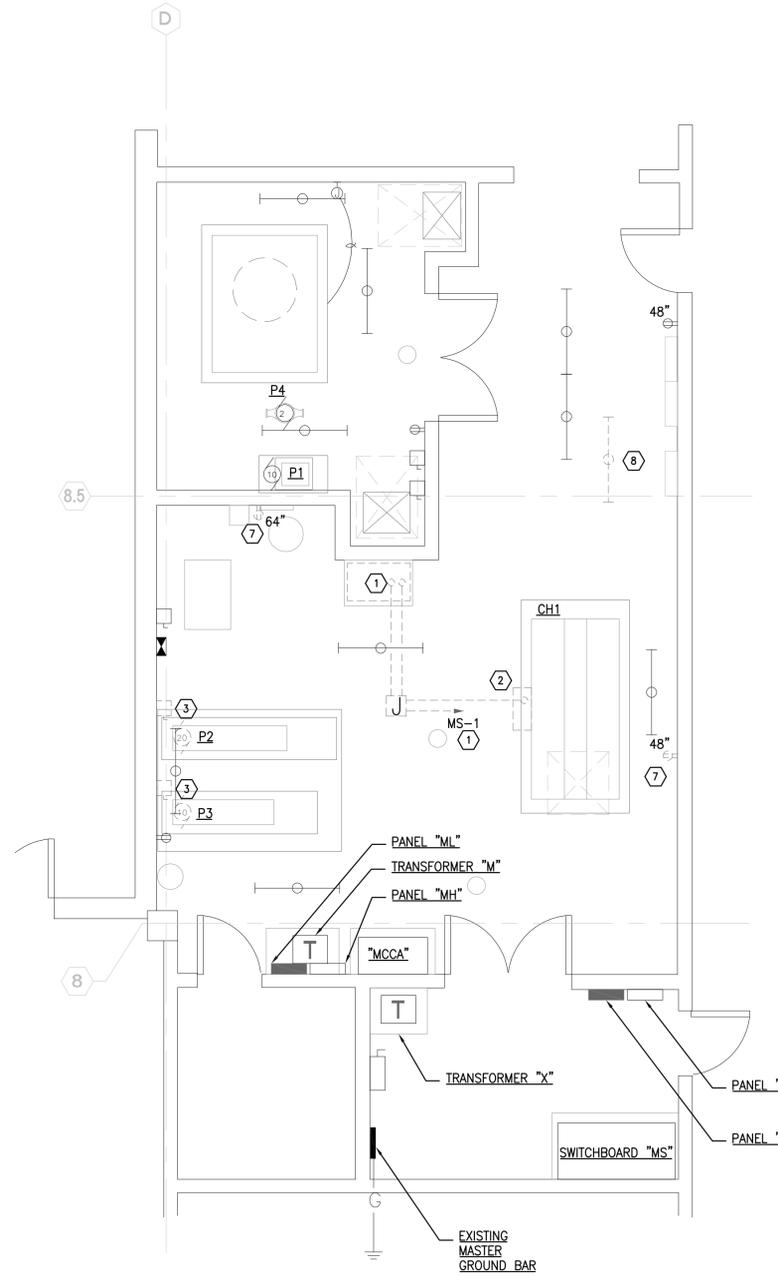
NOTE:
 MOUNTING HEIGHTS NOTED ARE TO CENTERLINE OF DEVICE SHOWN. U.N.O. MOUNTING HEIGHTS SHOWN ARE MAXIMUM/MINIMUM HANDICAPPED ACCESSIBILITY STANDARDS - THEY SHALL NOT BE ALTERED WITHOUT WRITTEN AUTHORIZATION.

ABBREVIATIONS

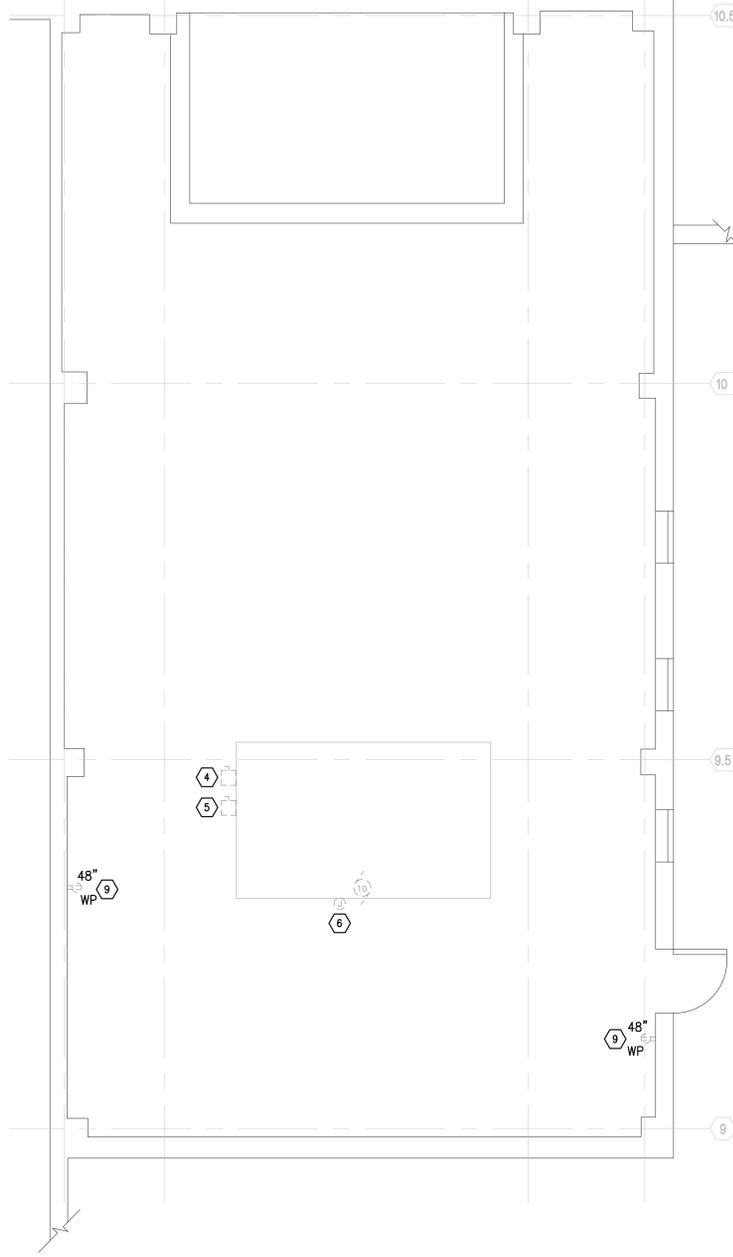
AFF	ABOVE FINISH FLOOR	AHJ	AUTHORITY HAVING JURISDICTION (FIRE MARSHAL, ELECTRICAL INSPECTOR, ETC.)
EG	ISOLATED GROUND	RTU	ROOF TOP UNIT
G	GROUND	VFD	VARIABLE FREQUENCY DRIVE
MLO	MAIN LUGS ONLY	WP	WEATHERPROOF
N.T.S.	NOT TO SCALE		
U.N.O.	UNLESS NOTED OTHERWISE		

- KEYED NOTES:**
- DISCONNECT & REMOVE POWER TO EXISTING CHILLER STARTER. REMOVE CONDUIT FROM J-BOX TO STARTER, J-BOX, & LOAD SIDE CONDUIT. REMOVE ALL CONDUCTORS BACK TO MAIN SWITCHBOARD, SEE E201 FOR NEW WORK.
 - DISCONNECT & REMOVE CONTROL POWER TO CHILLER. PROTECT FEEDER FOR CONNECTION TO CONTROL PANEL, SEE E201 FOR NEW WORK.
 - DISCONNECT & REMOVE DISCONNECT SWITCH & POWER FROM PUMP. REMOVE FEEDER CONDUCTORS BACK TO "MCCA", SEE E201 FOR NEW WORK.
 - DISCONNECT & REMOVE DISCONNECT SWITCH & POWER TO COOLING TOWER FAN MOTOR. REMOVE FEEDER BACK TO "MCC-A", SEE E201 FOR NEW WORK.
 - DISCONNECT & REMOVE DISCONNECT SWITCH & POWER TO COOLING TOWER BASIN HEATER. PROTECT FEEDER FOR CONNECTION TO BASIN HEATER, SEE E201 FOR NEW WORK.
 - DISCONNECT & REMOVE POWER TO COOLING TOWER PIPING HEAT TAPE. PROTECT JUNCTION BOX & FEEDERS FOR CONNECTION TO NEW HEAT TAPE, SEE E201 FOR NEW WORK.
 - DISCONNECT AND REMOVE EXISTING DUPLEX RECEPTACLE. SEE SHEET E201 FOR NEW RECEPTACLE REQUIREMENTS.
 - DISCONNECT AND REMOVE NON-WORKING 4' INDUSTRIAL STRIP FIXTURE AND TURN OVER TO THE OWNER.
 - DISCONNECT & REMOVE EXISTING DUPLEX RECEPTACLE, SEE E201 FOR NEW WORK.

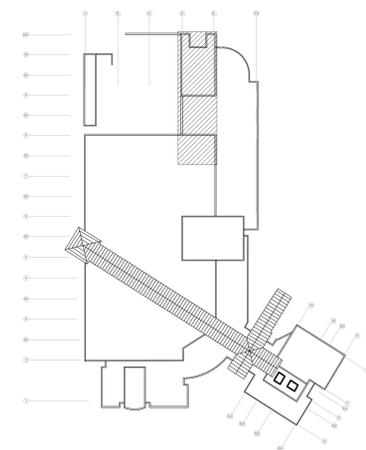
- GENERAL NOTES:**
- ALL WORK SHOWN ON THIS SHEET IS FOR THE PHASE 1 DEMOLITION OF THE CHILLED WATER SYSTEM.
 - THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY DEMOLITION.
 - THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.
 - SEE SHEET E300 FOR DEMOLITION REQUIREMENTS IN "MCC-A".



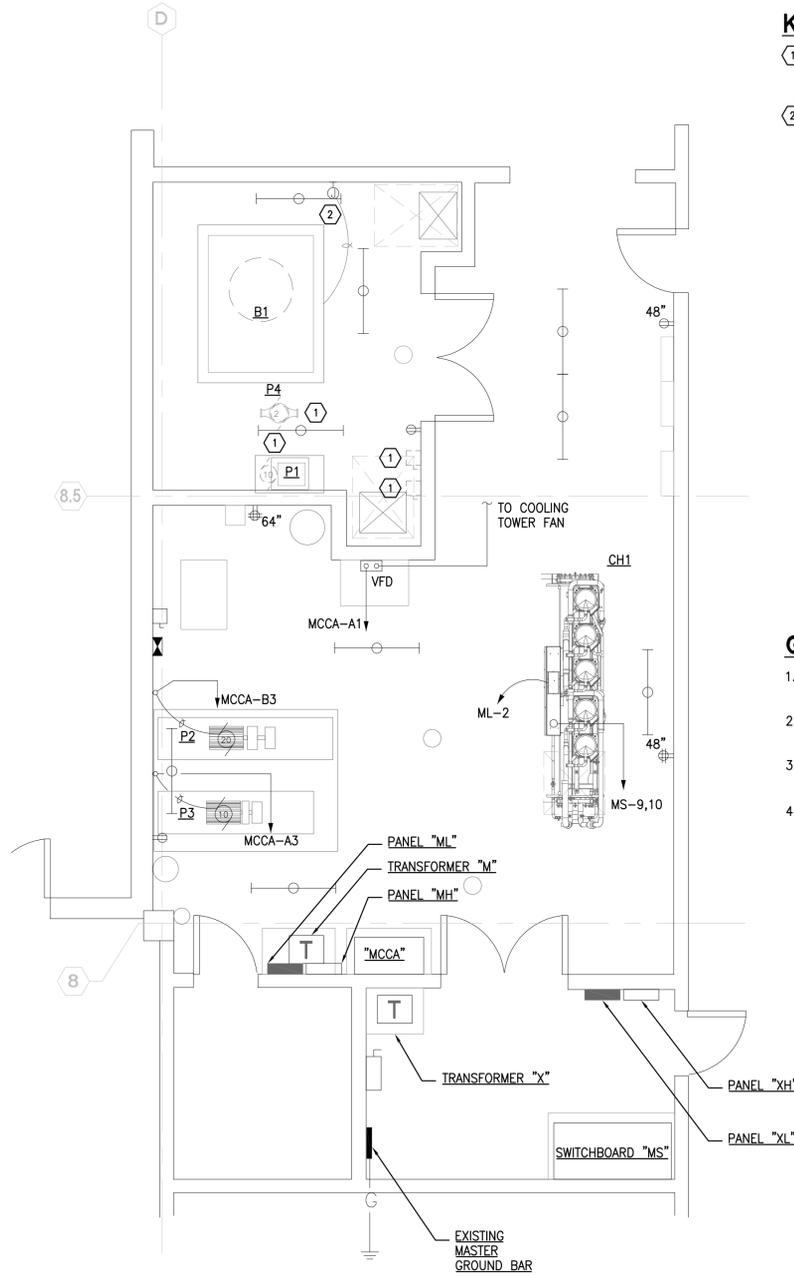
MECHANICAL & ELECTRICAL ROOM DEMO PLAN PHASE 1 - ELECTRICAL
 SCALE: 1/4"=1'-0"



COOLING TOWER DEMO PLAN PHASE 1 - ELECTRICAL
 SCALE: 1/4"=1'-0"



KEY PLAN:
 NOT TO SCALE



KEYED NOTES:

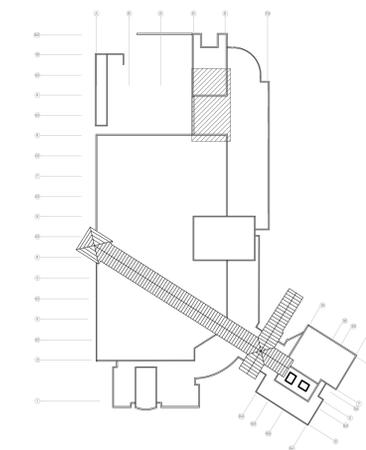
- ① DISCONNECT & REMOVE POWER FROM PUMP. REMOVE FEEDER CONDUCTORS BACK TO "MCCA". REMOVE DISCONNECT SWITCH AND STORE FOR REINSTALLATION. CONDUIT TO REMAIN FOR REUSE. SEE E202 FOR NEW WORK.
- ② DISCONNECT & REMOVE CONTROL POWER TO BOILER. PROTECT JUNCTION BOX & FEEDER FOR CONNECTION TO NEW BOILER, SEE E202 FOR NEW WORK.

GENERAL NOTES:

- 1. ALL WORK SHOWN ON THIS SHEET IS FOR THE PHASE 2 DEMOLITION OF THE HEATING HOT WATER SYSTEM.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY DEMOLITION.
- 3. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.
- 4. SEE SHEET E300 FOR DEMOLITION REQUIREMENTS IN "MCC-A".

MECHANICAL & ELECTRICAL ROOM DEMO PLAN PHASE 2 - ELECTRICAL

SCALE: 1/4"=1'-0"



KEY PLAN:
NOT TO SCALE



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ELECTRICAL DEMOLITION PLANS - PHASE 2

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DATE
08-11-10

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E102
OF 7



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REVISIONS

DRAWING TITLE
**ELECTRICAL NEW
WORK PLANS -
PHASE 1**

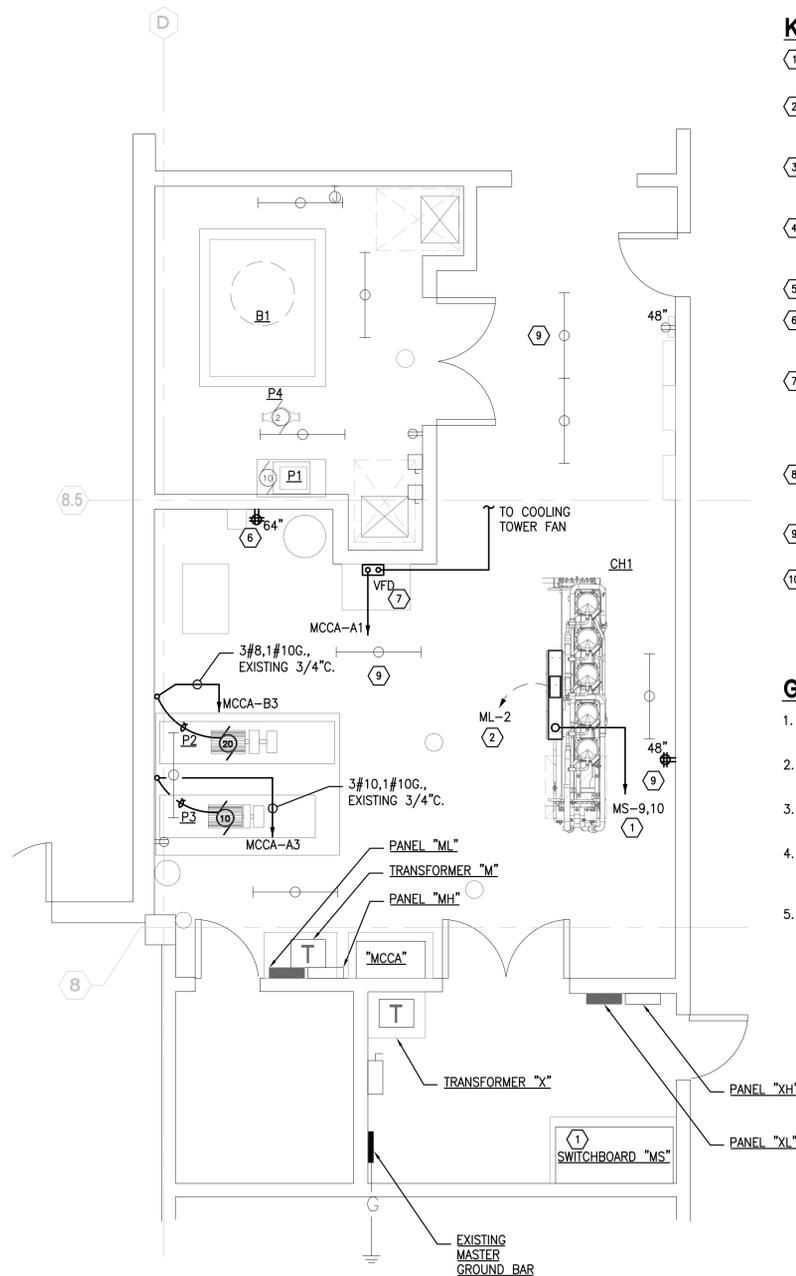
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CHECKED BY
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DATE
08-11-10

SHEET
E201

OF 7



**MECHANICAL & ELECTRICAL ROOM
NEW WORK PLAN - ELECTRICAL**

SCALE: 1/4"=1'-0"

NOTES:

THIS DETAIL ONLY

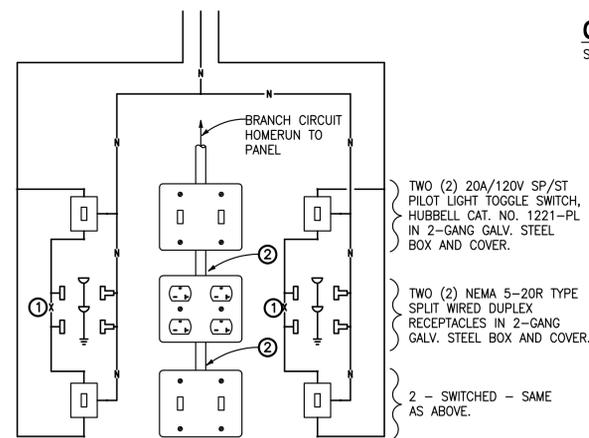
- ① BREAK OFF REMOVABLE JUMPERS SO THAT EACH HALF OF DUPLEX RECEPTACLES CAN BE SWITCHED INDEPENDENTLY OF EACH OTHER.
- ② 1/2" CONDUIT NIPPLE BETWEEN EACH BOX.

KEYED NOTES:

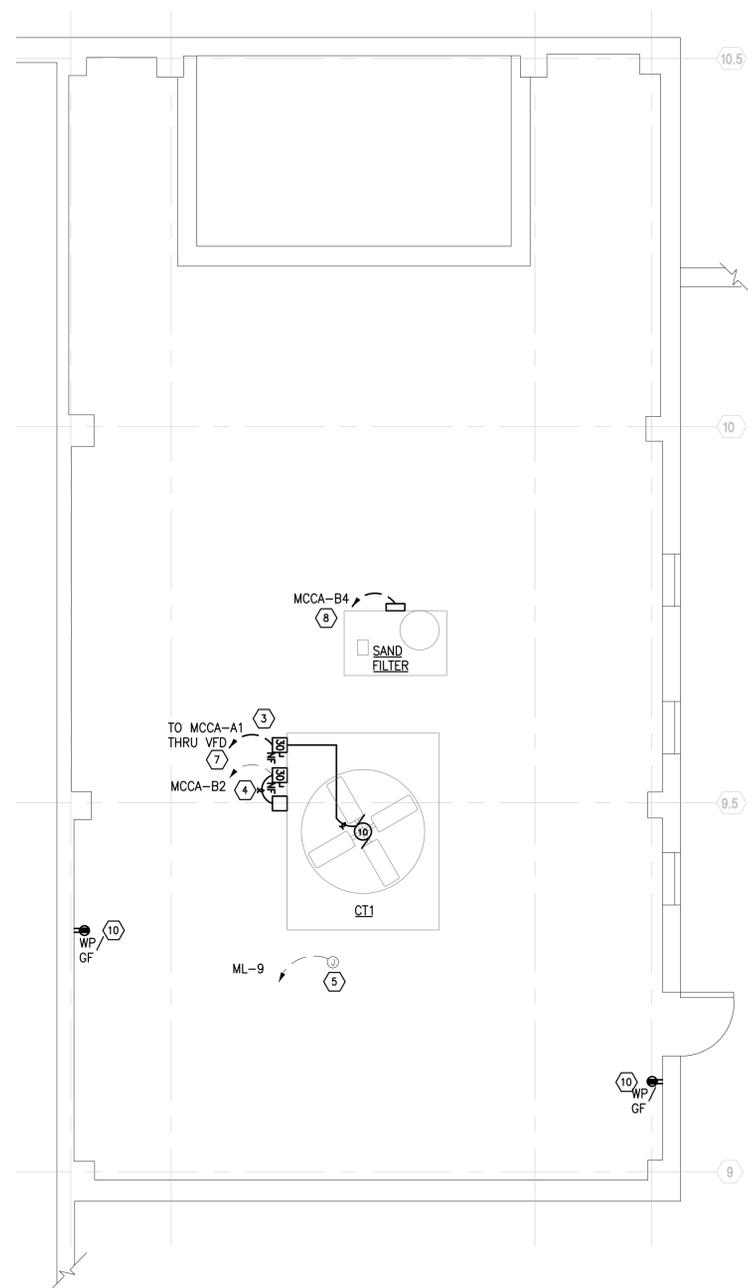
- ① CONNECT NEW CHILLER TO 2 NEW BREAKERS, 125A/3P MS-9 & 100A/3P MS-10. ROUTE NEW 6#1/0, 1#4G., IN EXISTING 3". TO CHILLER.
- ② CONNECT EXISTING CHILLER CONTROL POWER TO CHILLER CONTROL PANEL. PROVIDE NEW 2#12, 1#12G., 3/4". IF REQUIRED TO REACH NEW CONTROL PANEL.
- ③ PROVIDE NEW DISCONNECT SWITCH AND CONNECT TO NEW FEEDER FOR COOLING TOWER FAN. PROVIDE NEW CABLE & CONDUIT, PER NOTE 7 BELOW, FROM DISCONNECT SWITCH TO FAN.
- ④ PROVIDE NEW DISCONNECT SWITCH AND CONNECT TO EXISTING FEEDER FOR COOLING TOWER BASIN HEATER. PROVIDE NEW 3#12, 1#12G., 3/4" FROM DISCONNECT SWITCH TO HEATER CONTROLS.
- ⑤ PROVIDE POWER TO PIPING HEAT TRACE FROM EXISTING FEEDER.
- ⑥ REPLACE EXISTING RECEPTACLE w/ NEW QUAD RECEPTACLE AND FOUR SWITCHES PER "SPECIAL OUTLET" FOR CHEMICAL FEED PUMPS" DETAIL THIS SHEET. PROVIDE BOX EXTENSION IF REQUIRED TO INSTALL QUAD RECEPTACLES.
- ⑦ PROVIDE POWER TO COOLING TOWER FAN THRU VFD. PROVIDE INPUT POWER TO VFD w/ 3#10, 1#10G., 3/4". PROVIDE OUTPUT POWER FROM VFD TO COOLING TOWER w/ 3/10 w/ GROUND SHIELDED VFD CABLE IN 1". BASIS OF DESIGN IS BELDEN 29503 MULTI-CONDUCTOR 1000V UL FLEXIBLE MOTOR SUPPLY CABLE. ALSO SEE ONE LINE ON SHEET E300.
- ⑧ PROVIDE POWER TO SAND FILTER CONTROL PANEL w/ 3#12, 1#12G., 3/4". ROUTE NEW CONDUIT THRU EXISTING PITCH POCKET FOR COOLING TOWER FAN FEEDER AND RE-FILL PITCH POCKET.
- ⑨ CLEAN AND RELAMP ALL EXISTING LIGHT FIXTURES IN THIS AREA UNLESS NOTED OTHERWISE.
- ⑩ PROVIDE NEW GFI RECEPTACLE AND CODE COMPLIANT "WEATHERPROOF WHILE IN USE" COVER AT EXISTING RECEPTACLE LOCATION.

GENERAL NOTES:

- 1. ALL WORK SHOWN ON THIS SHEET IS PHASE 1 CONSTRUCTION OF THE REPLACEMENT OF THE CHILLED WATER SYSTEM.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY NEW WORK.
- 3. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.
- 4. FIELD LOCATE EQUIPMENT SUCH THAT THE EXISTING FEEDERS CAN BE RE-USED TO CONNECT TO NEW EQUIPMENT AS MUCH AS POSSIBLE. COORDINATE THE FINAL LOCATION OF THE EQUIPMENT WITH THE OWNER.
- 5. SEE SHEET E300 FOR ADDITIONAL INFORMATION ON WORK IN "MCC-A".



"SPECIAL" OUTLET FOR CHEMICAL FEED PUMPS
NOT TO SCALE



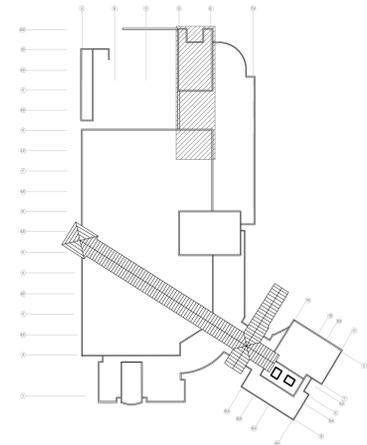
COOLING TOWER NEW WORK PLAN - ELECTRICAL

SCALE: 1/4"=1'-0"

WIRING SIZE CHART

CONTRACTOR SHALL PROVIDE WIRING FOR 120 V. CIRCUITS (LINE TO NEUTRAL) OF SIZES BELOW DEPENDING UPON CIRCUIT LENGTH BELOW:

< 100 FT	#12 AWG (CU)
100-160 FT	#10 AWG (CU)
160-250 FT	#8 AWG (CU)



KEY PLAN:
NOT TO SCALE



MARSHALL & BOLLWERK ENGINEERING, INC.
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PROJECT NAME

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REVISIONS

DRAWING TITLE

**ELECTRICAL NEW
 WORK PLANS -
 PHASE 2**

DRAWN BY

JMJ

CHECKED BY

ACM

DATE

08-11-10

SHEET

E202

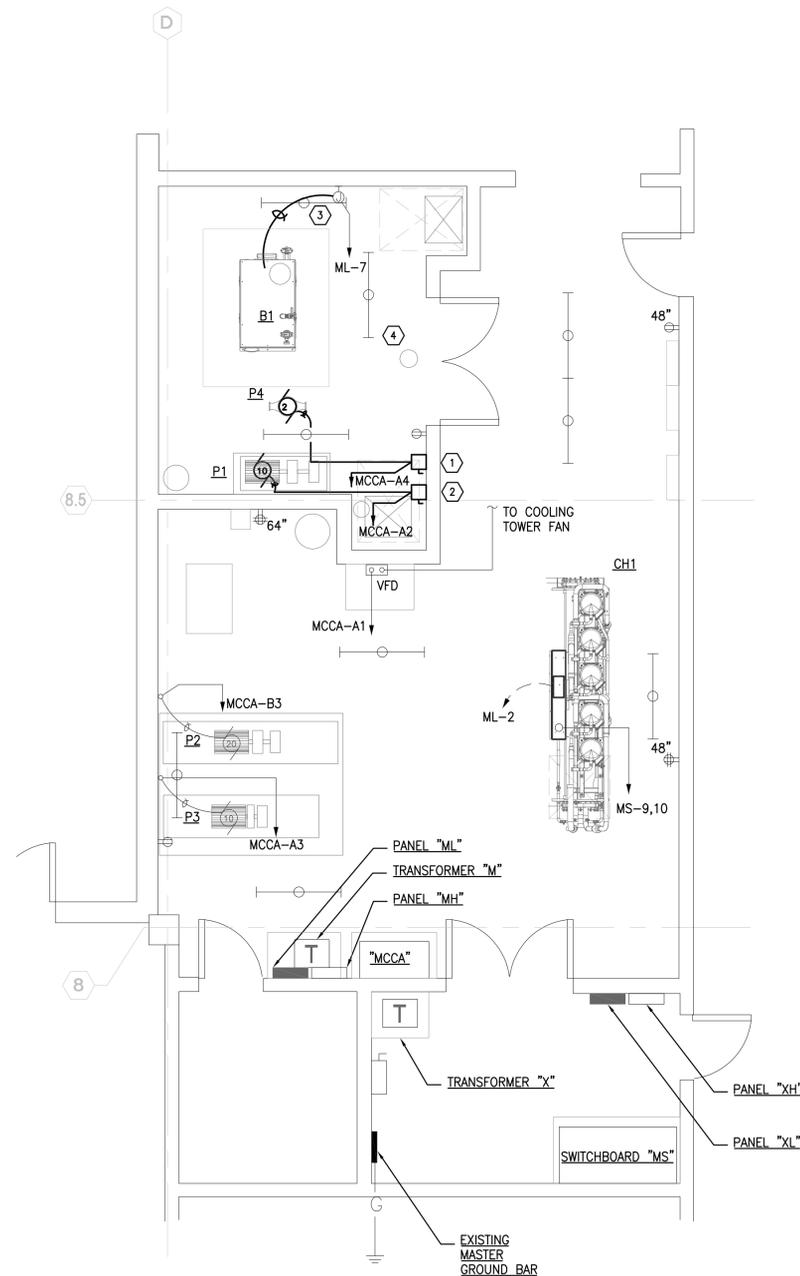
OF 7

KEYED NOTES:

- ① PROVIDE NEW 3#12, 1#12G., IN EXISTING 3/4" C. FEEDER TO NEW PUMP "P4". PROVIDE NEW 3#12, 1#12G., 3/4" LIQUIDTIGHT FLEX FOR CONNECTION TO PUMP. RE-INSTALL SERVICE DISCONNECT SWITCH BELOW ORIGINAL LOCATION MOUNTED AT 54" AFF.
- ② PROVIDE NEW 3#10, 1#10G., IN EXISTING 3/4" C. FEEDER TO NEW PUMP "P1". PROVIDE NEW 3#10, 1#10G., 3/4" LIQUIDTIGHT FLEX FOR CONNECTION TO PUMP. RE-INSTALL SERVICE DISCONNECT SWITCH BELOW ORIGINAL LOCATION MOUNTED AT 54" AFF.
- ③ CONNECT EXISTING BOILER CONTROL POWER TO NEW BOILER w/ 2#12, 1#12G., 1/2" FLEX.
- ④ CLEAN AND RELAMP ALL EXISTING LIGHT FIXTURES IN THIS AREA UNLESS NOTED OTHERWISE.

GENERAL NOTES:

1. ALL WORK SHOWN ON THIS SHEET IS PHASE 2 CONSTRUCTION OF THE REPLACEMENT OF THE HEATING HOT WATER SYSTEM.
2. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY NEW WORK.
3. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.
4. FIELD LOCATE EQUIPMENT SUCH THAT THE EXISTING FEEDERS CAN BE RE-USED TO CONNECT TO NEW EQUIPMENT AS MUCH AS POSSIBLE. COORDINATE THE FINAL LOCATION OF THE EQUIPMENT WITH THE OWNER.
5. SEE SHEET E300 FOR ADDITIONAL INFORMATION ON WORK IN "MCC-A".



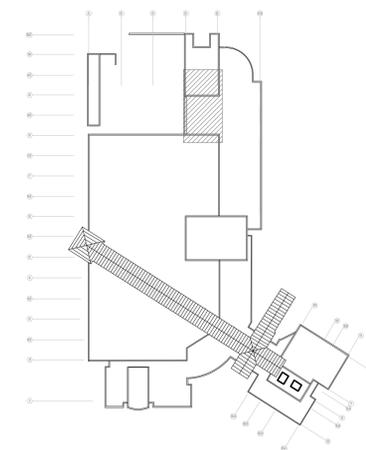
**MECHANICAL & ELECTRICAL ROOM
 NEW WORK PLAN - ELECTRICAL**

SCALE: 1/4"=1'-0"

WIRING SIZE CHART

CONTRACTOR SHALL PROVIDE WIRING FOR 120 V. CIRCUITS (LINE TO NEUTRAL) OF SIZES BELOW DEPENDING UPON CIRCUIT LENGTH BELOW:

< 100 FT	#12 AWG (CU)
100-160 FT	#10 AWG (CU)
160-250 FT	#8 AWG (CU)



KEY PLAN:
 NOT TO SCALE



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REVISIONS

NO.	DESCRIPTION

DRAWING TITLE

**ELECTRICAL
DEMOLITION & NEW
WORK PLANS -
ALTERNATE #1**

DRAWN BY

JMJ

CHECKED BY

ACM

DATE
08-11-10

SHEET

E203

OF 7



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



ROOF NEW WORK PLAN - ELECTRICAL
SCALE: 1/4"=1'-0"

KEYED NOTES:

- ① DISCONNECT & REMOVE POWER FROM EXISTING RTU. PROTECT FEEDER FOR CONNECTION TO NEW UNIT.
- ② NEW NEMA 3R FUSED DISCONNECT SWITCH FURNISHED w/ UNIT. CONNECT TO EXISTING FEEDER.
- ③ EXISTING MAINTENANCE RECEPTACLE TO REMAIN. PROVIDE NEW CODE COMPLIANT "WEATHER PROOF WHILE IN USE" COVER.
- ④ PANEL "BM" IS LOCATED IN ELECTRICAL CLOSET "B" BELOW. FIELD VERIFY EXACT LOCATION PRIOR TO THE START OF WORK.

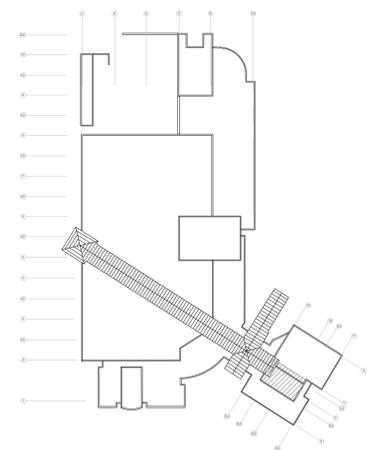
GENERAL NOTES:

- 1. ALL WORK INDICATED ON THIS SHEET IS PART OF ALTERNATE #1.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY DEMOLITION.
- 3. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.

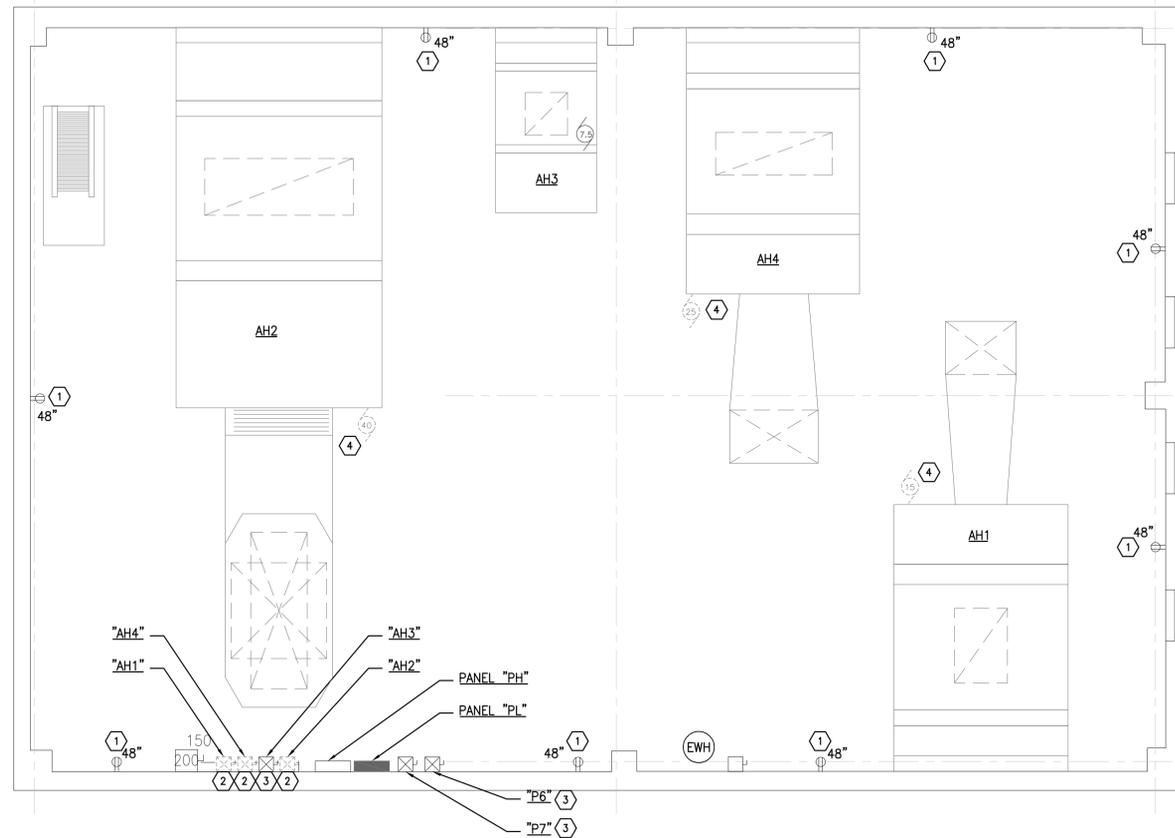
WIRING SIZE CHART

CONTRACTOR SHALL PROVIDE WIRING FOR 120 V. CIRCUITS (LINE TO NEUTRAL) OF SIZES BELOW DEPENDING UPON CIRCUIT LENGTH BELOW:

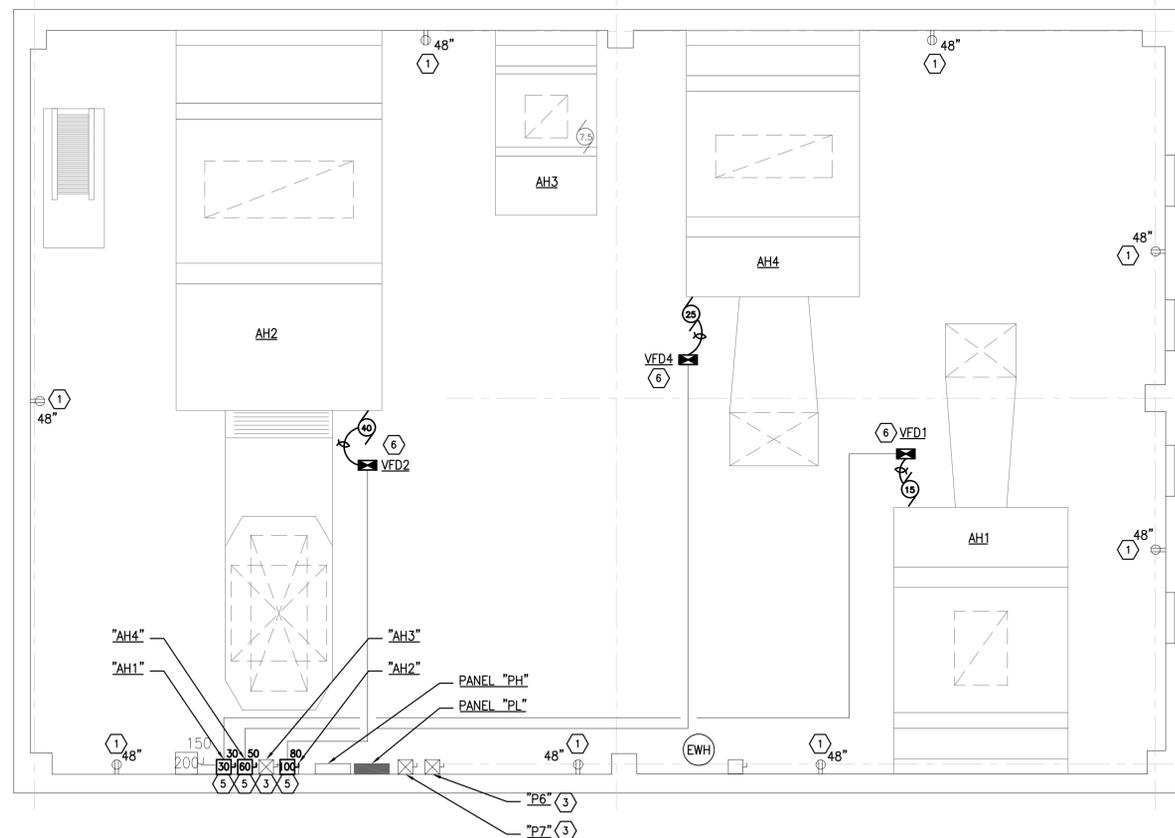
< 100 FT	#12 AWG (CU)
100-160 FT	#10 AWG (CU)
160-250 FT	#8 AWG (CU)



KEY PLAN:
NOT TO SCALE



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



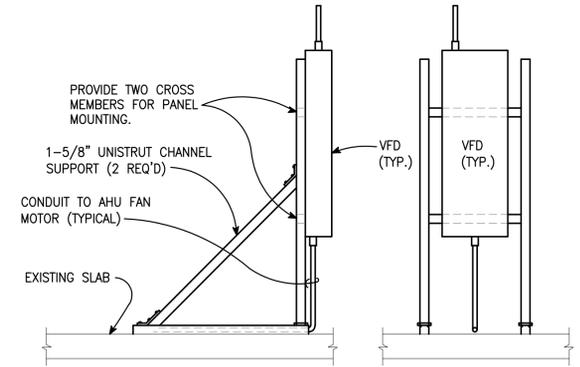
PENTHOUSE NEW WORK PLAN - ELECTRICAL
SCALE: 1/4"=1'-0"

KEYED NOTES:

- ① EXISTING RECEPTACLE TO REMAIN, TYPICAL.
- ② EXISTING COMBINATION DISCONNECT/STARTER TO BE REMOVED. DISCONNECT AND REMOVE POWER AND UNIT. PROTECT CONDUCTORS FOR CONNECTION TO NEW DISCONNECT SWITCH & VFD. ALSO SEE KEY NOTES 5 & 6 BELOW.
- ③ EXISTING COMBINATION DISCONNECT/STARTER TO REMAIN.
- ④ DISCONNECT POWER TO EXISTING MOTOR.
- ⑤ PROVIDE NEW FUSIBLE DISCONNECT SWITCH LOCATED WHERE OLD STARTER WAS REMOVED. CONNECT TO EXISTING CONDUCTORS. IF REQUIRED FOR FEEDERS TO REACH TERMINALS PROVIDE NEW TAP CONDUCTORS FROM TROUGH AND SHIFT DISCONNECT SWITCH UP.
- ⑥ PROVIDE NEW VFD MOUNTED TO FLOOR MOUNTED STRUT RACK, SEE DETAIL THIS SHEET. INTERCEPT EXISTING FEEDER AND CONNECT TO LINE SIDE OF VFD. PROVIDE NEW FEEDER FROM LOAD SIDE OF VFD TO NEW FAN MOTOR IN LIQUIDTIGHT FLEX CONDUIT MATCH CONDUIT & WIRE SIZE OF EXISTING FEEDER.

GENERAL NOTES:

- 1. ALL WORK INDICATED ON THIS SHEET IS PART OF ALTERNATE #2.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY DEMOLITION.
- 3. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.
- 4. FIELD LOCATE VFD'S SUCH THAT THE EXISTING FEEDERS REACH THE LINE SIDE CONNECTIONS ON THE VFD. COORDINATE THE FINAL LOCATION OF THE VFD'S WITH THE OWNER.
- 5. SEE SHEET E300 FOR TYPICAL POWER & CONTROL DIAGRAM FOR VFD'S.

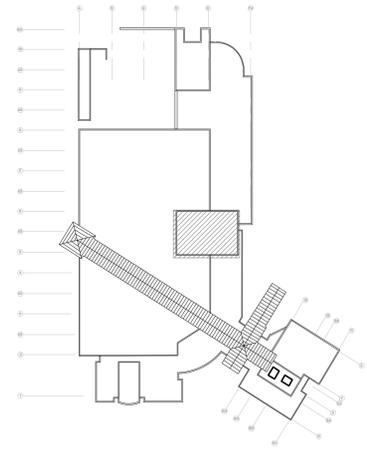


MOUNTING DETAIL FOR VFD's
SCALE: NONE

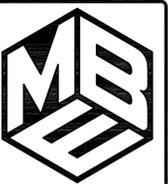
WIRING SIZE CHART

CONTRACTOR SHALL PROVIDE WIRING FOR 120 V. CIRCUITS (LINE TO NEUTRAL) OF SIZES BELOW DEPENDING UPON CIRCUIT LENGTH BELOW:

< 100 FT	#12 AWG (CU)
100-160 FT	#10 AWG (CU)
160-250 FT	#8 AWG (CU)

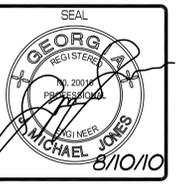


KEY PLAN:
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PROJECT NAME

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REVISIONS

DRAWING TITLE
ELECTRICAL PENTHOUSE DEMOLITION & NEW WORK PLANS - ALTERNATE #2

DRAWN BY
JMJ

CHECKED BY
ACM

DATE
08-11-10

SHEET
E204
OF 7



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PROJECT NAME

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REVISIONS

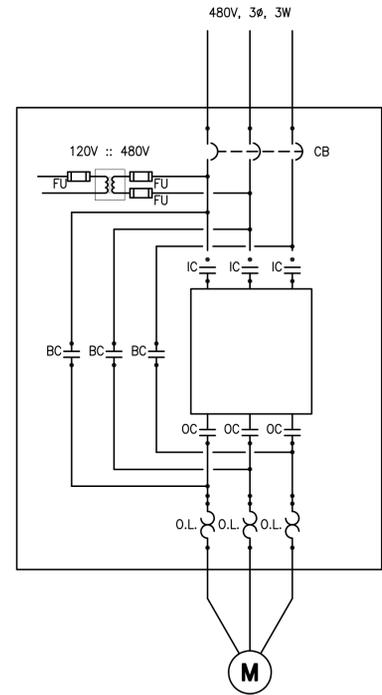
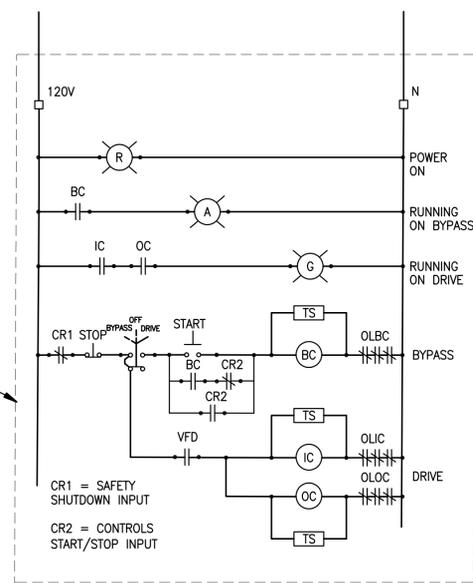
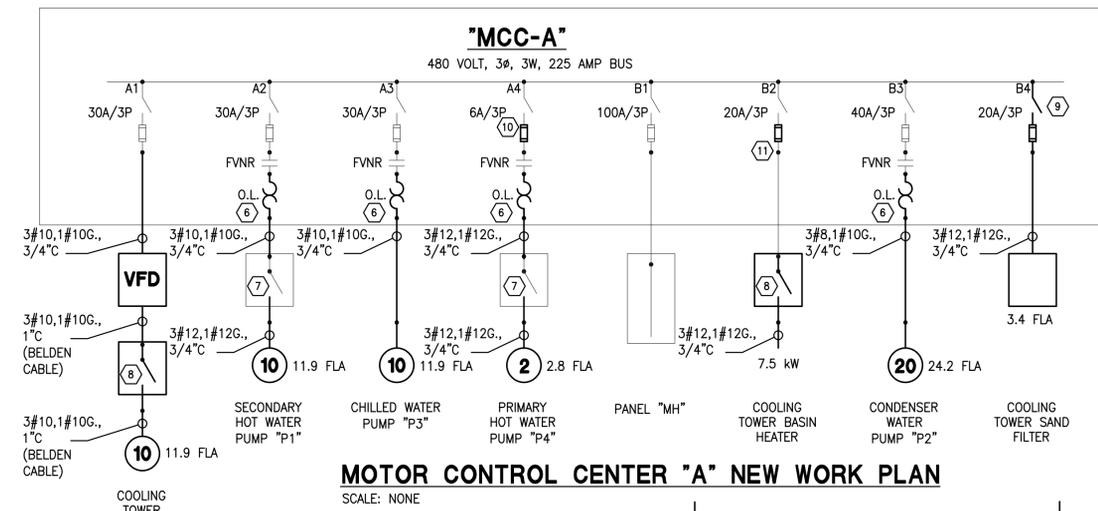
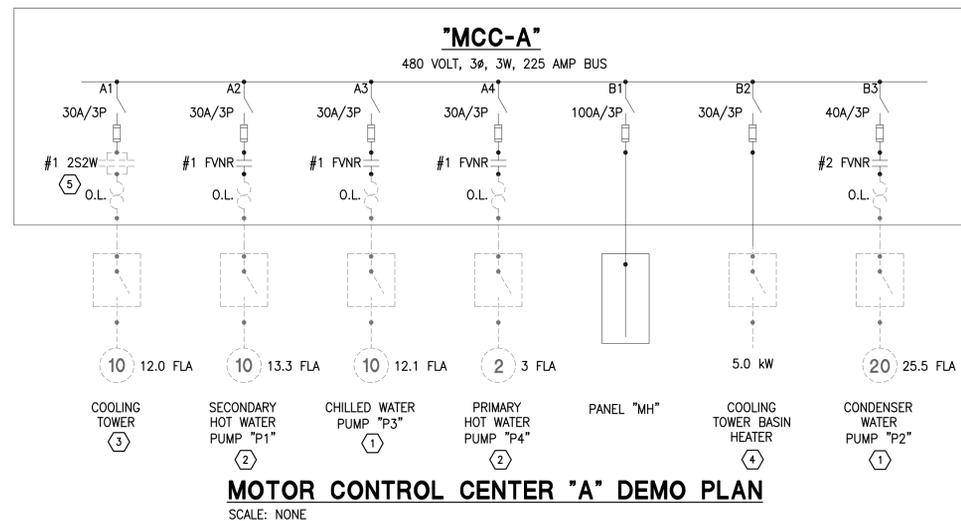
DRAWING TITLE
ELECTRICAL ONE-LINE AND CONTROL DIAGRAMS

DRAWN BY
JMJ

CHECKED BY
ACM

DATE
08-11-10

SHEET
E300
 OF 7



KEYED NOTES:

- DISCONNECT & REMOVE DISCONNECT SWITCH, MOTOR OVERLOADS, & POWER FROM PUMP. REMOVE FEEDER CONDUCTORS BACK TO "MCCA", ALSO SEE NEW WORK ONE-LINE THIS SHEET.
- DISCONNECT & REMOVE POWER FROM PUMP, REMOVE FEEDER CONDUCTORS BACK TO "MCCA", & REMOVE MOTOR OVERLOADS. REMOVE DISCONNECT SWITCH AND STORE FOR REINSTALLATION. ALSO SEE NEW WORK ONE-LINE THIS SHEET.
- DISCONNECT & REMOVE DISCONNECT SWITCH & POWER TO COOLING TOWER FAN MOTOR. PROTECT FEEDER FOR CONNECTION TO NEW FAN, ALSO SEE NEW WORK ONE-LINE THIS SHEET.
- DISCONNECT & REMOVE DISCONNECT SWITCH & POWER TO COOLING TOWER BASIN HEATER. PROTECT FEEDER FOR CONNECTION TO BASIN HEATER, ALSO SEE NEW WORK ONE-LINE THIS SHEET.
- DISCONNECT & REMOVE MOTOR STARTER AND CONTROLS FOR COOLING TOWER FAN MOTOR.
- PROVIDE NEW MOTOR OVERLOADS TO MATCH NEW PUMP MOTOR AND PULL NEW FEEDERS TO MOTOR. ALSO SEE SHEETS E201 & E202.
- RE-INSTALL EXISTING DISCONNECT SWITCH AS INDICATED ON SHEET E202.
- PROVIDE NEW 30A/600V/3P/NF NEMA 3R DISCONNECT SWITCH AT COOLING TOWER. ALSO SEE SHEET E201.
- PROVIDE A NEW BUCKET W/ A 20A/3P FUSED SWITCH TO SERVE COOLING TOWER SAND FILTER.
- PROVIDE NEW FUSES FOR PUMP "P4".
- PROVIDE NEW FUSES FOR COOLING TOWER BASIN HEATER.

GENERAL NOTES:

- THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING LOCATIONS AND CIRCUITS FEEDING EXISTING EQUIPMENT PRIOR TO THE START OF ANY DEMOLITION.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND THE OWNER TO SCHEDULE ANY OUTAGES IN ACCORDANCE WITH THE SPECIFICATIONS.
- SEE THE PLAN SHEETS AND SPECIFICATIONS FOR PHASING OF CONSTRUCTION.

LOAD CHANGE ON MAIN SWITCHBOARD "MS"
 NET CHANGE IN CONNECTED AMPS

EXISTING 3 PHASE LOADS TO BE REMOVED	
CHILLER	= (212.00) Amps
CHWP (P3)	= (12.10) Amps
CWP (P2)	= (25.50) Amps
COOLING TOWER FAN	= (12.00) Amps
COOLING TOWER BASIN HEATER	= (6.02) Amps
PHWP (P4)	= (3.00) Amps
SHWP (P1)	= (13.30) Amps
ADDED 3 PHASE LOADS	
CHILLER CIRCUIT 1	= 110.00 Amps
CHILLER CIRCUIT 2	= 76.00 Amps
CHWP (P3)	= 11.90 Amps
CWP (P2)	= 24.20 Amps
COOLING TOWER FAN	= 11.90 Amps
COOLING TOWER BASIN HEATER	= 9.03 Amps
COOLING TOWER SAND FILTER	= 3.40 Amps
PHWP (P4)	= 2.80 Amps
SHWP (P1)	= 11.90 Amps
NET CHANGE @ 480V ON MAIN SWITCHBOARD "MS"	= (22.79) Amps

NOTE:

- THE NEW MOTOR LOADS ARE BASED ON STANDARD DATA FOR PREMIUM EFFICIENCY MOTORS.

MECHANICAL NOTES:

GENERAL:

1. VERIFY SHALL MEAN CHECK CONDITIONS ON SITE AGAINST DRAWINGS AND SPECIFICATION AND ADJUST WORK TO MATCH EXISTING. OBTAIN RULING FROM OWNER ON ANY ITEMS REQUIRING CLARIFICATION
2. PROVIDE A COMPLETE FUNCTIONAL HVAC SYSTEM WITH ALL ACCESSORIES REQUIRED FOR PROPER OPERATION ALL IN ACCORDANCE WITH THE APPLICABLE STATE AND LOCAL AUTHORITY CODES, LAWS & ORDINANCES AND STATE AND LOCAL AUTHORITY ACCESSIBILITY LAWS AND ORDINANCES.
3. THE SYSTEMS SHALL BE FREE FROM ANY OBJECTIONABLE NOISES AND VIBRATIONS.
4. ALL MECHANICAL WORK & EQUIPMENT SHALL CONFORM TO THE CURRENT REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION. MECHANICAL WORK SHALL COMPLY WITH THE 2006 INTERNATIONAL MECHANICAL CODE, STATE & LOCAL AMENDMENTS, NFPA-54, NFPA-90A, SMACNA & ASHRAE GUIDELINES.
5. ALL ITEMS SHOWN TO BE DEMOLISHED SHALL BE DISPOSED OF IN ACCORDANCE WITH COBB COUNTY "WASTE STREAM MANAGEMENT PLAN - ENERGY RETROFIT PROJECTS DE-EE000803"
6. ALL CONTRACTORS & SUBCONTRACTORS SHALL COMPLY WITH "GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT & COBB COUNTY'S COMPLIANCE REQUIREMENTS."
7. ALL IRON, STEEL & MANUFACTURED GOODS USED IN THE PROJECT SHALL COMPLY WITH "BU AMERICAN REQUIREMENTS".
8. THE CONTRACTOR SHALL PREPARE DUCT CONSTRUCTION SHOP DRAWINGS, TO SCALE, (MIN. SCALE 1/4" =1 FT). SUBMIT TO THE OWNER FOR REVIEW PRIOR TO FABRICATION AND INSTALLATION. DUCT SHOP DRAWINGS SHALL BE UPDATED, DURING CONSTRUCTION, TO SHOW ANY CHANGES MADE DURING CONSTRUCTION AND SUBMITTED TO THE OWNER AT THE END OF THE PROJECT FOR "AS-BUILT" RECORD.
9. THE MECHANICAL (SUB)CONTRACTOR SHALL COORDINATE THE SPACE REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT AND DUCTWORK WITH THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING AND FABRICATION OF STRUCTURAL ELEMENTS, INCLUDING ROOF TRUSSES, TO SUIT THE PROPOSED ROUTING OF THE DUCTWORK AND LOCATION OF EQUIPMENT. PROVIDE ADEQUATE CLEARANCES AROUND, AND ACCESS TO, ALL EQUIPMENT FOR MAINTENANCE.
10. WALL, FLOOR OR CEILING SURFACES DISTURBED DURING THE COURSE OF THE MECHANICAL WORK SHALL BE REPAIRED TO MATCH NEW &/OR EXISTING SURROUNDING CONDITIONS.
11. COORDINATE THE INSTALLATION OF THE DUCTWORK, EQUIPMENT, PIPING, ETC., TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL & STRUCTURAL CONDITIONS. CUTTING OR ALTERING ANY STRUCTURAL MEMBER SHALL NOT BE PERMITTED.
12. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL SIZES, MATERIALS, TEMPERATURES AND PRESSURES BEFORE ORDERING OR FABRICATION OF ANY MATERIALS.
13. WHERE DUCT OR PIPE SECTION SIZE IS NOT INDICATED, IT SHALL BE THE SAME SIZE AS THE LAST SIZED UPSTREAM SECTION.
14. ALL PENETRATIONS THROUGH FIRE RATED FLOORS, CEILINGS, WALLS AND PARTITIONS SHALL BE FIRE STOPPED TO COMPLY WITH THE APPLICABLE EDITION, INCLUDING REVISIONS, OF THE STANDARD BUILDING CODE, STANDARD MECHANICAL CODE AND LOCAL FIRE MARSHALL REQUIREMENTS. FIRE STOP SYSTEM USED SHALL BE UL LISTED AND SHALL BE SUITABLE FOR THE PENETRATING AND PENETRATED MATERIALS. THE WORK SHALL BE INSPECTED AND CERTIFIED BY THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF OWN PERSONNEL EMPLOYED ON THIS PROJECT AND IN PARTICULAR WHEN WORKING IN CONFINED SPACES AND SHALL COMPLY WITH OSHA REQUIREMENTS.
16. SOLVENTS, PAINTS, ADHESIVES, SEALANTS AND OTHER MATERIALS THAT EMIT POLLUTANTS THAT COULD CAUSE IRRITATION OR HEALTH PROBLEMS FOR OCCUPANTS SHALL NOT BE USED UNLESS THE WORK IS DONE AFTER-HOURS AND ADEQUATE VENTILATION IS PROVIDED DURING CONSTRUCTION AND AS LONG AFTER WARDS AS REQUIRED TO KEEP THE POLLUTANTS WITHIN EPA/OSHA APPROVED LIMITS.
17. PIPING, CONDUITS, CABLES, ETC. SHALL BE RUN NEATLY, PARALLEL TO EXISTING AND NEW PIPING AND TO BUILDING WALLS, FLOOR.
18. PROVIDE TEMPORARY HEATING IN ALL AREAS WITH EXISTING SERVICES THAT MAY BE SUBJECT TO FREEZING.
19. THE SCHEDULED "BASIS OF DESIGN" IS INTENDED TO INDICATE THE PERFORMANCE REQUIRED FOR THE PARTICULAR ITEM OF EQUIPMENT. SUBSTITUTIONS WILL BE PERMITTED. SUBSTITUTIONS SHALL BE DEEMED TO INCLUDE ALL ASSOCIATED CHANGES TO BUILDING, STRUCTURE & OTHER SERVICES WITHOUT ANY ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT SUBSTITUTIONS SHALL FIT INTO THE SPACE AVAILABLE WITH PROVISIONS FOR PROPER ACCESS, MAINTENANCE, PARTS REPLACEMENT, WEIGHT ALLOWANCE & FOR COORDINATION WITH OTHER TRADES (INCLUDING ELECTRICAL, PLUMBING, STRUCTURAL AND ARCHITECTURAL).
20. MANUFACTURER CATALOG SHOP DRAWINGS SUBMITTED SHALL BE MARKED TO INDICATE PROJECT SPECIFIC INFORMATION, FULL MODEL NUMBERS; IDENTIFY AND HIGHLIGHT SCHEDULED ITEM CAPACITIES; HIGHLIGHT INCLUDED OPTIONS AND EDIT OUT THOSE THAT ARE NOT PROVIDED; CLEARLY IDENTIFY DEVIATIONS FROM SPECIFIED AND SCHEDULED CAPACITIES.
21. ALL EQUIPMENT PROVIDED SHALL BE COMMERCIALY AVAILABLE PRODUCTS SPECIFICALLY MADE FOR THE APPLICATION FOR WHICH IT IS INTENDED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION AND START-UP INSTRUCTIONS. PROVIDE WRITTEN CERTIFICATION FROM THE MANUFACTURER OR THEIR AUTHORIZED REPRESENTATIVE TO THIS EFFECT BEFORE FINAL INSPECTION FOR THE BOILERS, CLOSED CIRCUIT COOLER, PUMPS, WATER SOURCE HEAT PUMPS AND COMPLETE ATC SYSTEM AND THE FLUE DRAFT FAN AND ASSOCIATED PRESSURE CONTROLS.
22. A TECHNICIAN, FACTORY TRAINED AND CERTIFIED BY THE MANUFACTURER OF THE HVAC EQUIPMENT PROVIDED SHALL PERFORM PRE START-UP CHECKS AND SHALL SUBMIT A REPORT TO THE OWNER ON EACH ROOF TOP UNIT. THIS REPORT SHALL INCLUDE CERTIFICATION, IN WRITING, THAT EQUIPMENT IS CORRECTLY INSTALLED, INCLUDING PROPER DRAINAGE FROM DRAIN PANS AND SEALING OF ALL AIR LEAKS, ELECTRICAL CONNECTIONS AND TERMINALS TIGHTNESS, INDOOR FILTER ARE CLEAN, IN PLACE AND EASILY REPLACEABLE, FANS AND COMPRESSORS ROTATE CORRECTLY, ELECTRICAL AMP DRAWS SHALL BE RECORDED AND CERTIFIED WITHIN MANUFACTURERS RECOMMENDED LIMITS, REFRIGERANT SUCTION AND DISCHARGE PRESSURES FOR ALL CIRCUITS WITH STATEMENT THAT SYSTEMS ARE CORRECTLY CHARGED.

ELECTRICAL/CONTROLS:

23. THE CONTRACTOR SHALL VERIFY THE ELECTRICAL SUPPLY VOLTAGES AND PHASES ON THE ELECTRICAL PLANS AND ON SITE BEFORE ORDERING ANY ELECTRICALLY OPERATED EQUIPMENT. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE PROVIDED & INSTALLED WITH SUITABLY PROTECTED AND RATED DISCONNECT SWITCHES.
24. ALL WIRING IN THE CEILING PLENUM SHALL BE DONE PLENUM RATED CABLE OR RUN IN CONDUIT.
25. ALL CONTROL WIRING & TRANSFORMERS SHALL BE SUPPLIED UNDER THE MECHANICAL CONTRACT. ALL MECHANICAL CONTROLS SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR.

PIPING:

26. GAS PIPING: PIPE SHALL BE CODE APPROVED BLACK IRON, SCHEDULE 40, ASTM A120 OR A53, WITH THREADED JOINTS, AND A MINIMUM PRESSURE RATING OF 250 PSI. FITTINGS SHALL BE SCREWED END. PROVIDE A GAS COCK AT EACH PIECE OF GAS EQUIPMENT AND ONE MAIN SHUT-OFF GAS COCK AT THE GAS METER OR TAP IN THE EXISTING GAS LINE. COORDINATE LOCATION AND TYPE WITH THE LOCAL NATURAL GAS SUPPLY COMPANY. IN GENERAL, GAS PIPING SHALL BE EXPOSED IN ALL EQUIPMENT ROOMS, AND CONCEALED IN ALL FINISHED SPACES. WHERE GAS PIPING IS EXPOSED, IT SHALL BE RUN SO AS TO ALLOW MAXIMUM HEADROOM CONSISTENT WITH PROPER PITCH. NO PIPING SHALL CROSS BELOW THE HEAD OF ANY WINDOW OR DOOR.
27. ROUTE CONDENSATE FROM RTU'S TO DISCHARGE OVER AND INTO NEAREST ROOF DRAIN. THE CONDENSATE P-TRAP SHALL HAVE A REMOVABLE CAP (SEE DETAIL). SUPPORT PIPE AS SHOWN (SEE DETAIL) WITH SUPPORT HEIGHTS GRADED TO PROVIDE A TOTAL PITCH OF 6" FROM TRAP TO ROOF DRAIN. DO NOT DISCHARGE CONDENSATE ONTO THE ROOF.
28. CLOSED SYSTEMS WATER SYSTEM WATER TREATMENT - CHEMICALS: FLUSH AND CLEAN OUT ALL PIPING SYSTEMS PRIOR TO CONNECTING OF CONTROL VALVES AND HEAT TRANSFER EQUIPMENT. PROVIDE WATER TREATMENT PRODUCTS WHICH CONTAIN INHIBITORS THAT PERFORM THE FOLLOWING: A.) FORM A PROTECTIVE FILM TO PREVENT CORROSION AND SCALE FORMATION; B.) SCAVENGE OXYGEN AND PROTECT AGAINST SCALE; C.) REMAIN STABLE THROUGHOUT OPERATING TEMPERATURE RANGE, AND; D.) ARE COMPATIBLE WITH PUMP SEALS AND OTHER ELEMENTS IN THE SYSTEM. THE INHIBITOR SHALL BE AN EPA APPROVED PRODUCT OF A COMPANY SPECIALIZED IN WATER TREATMENT FOR HVAC SYSTEMS. APPLY VIA THE EXISTING DOSING TANK, CHEMICALS FOR THE TIME PERIOD AND IN THE CONCENTRATION RECOMMENDED BY THE WATER TREATMENT CHEMICALS MANUFACTURER FOR THIS PORTION OF THE WORK. PROVIDE A TEST KIT AND REAGENTS FOR DETERMINING PROPER WATER CONDITIONS AND DEMONSTRATE USE TO THE OWNER.

MISCELLANEOUS:

29. ELECTRIC HEATERS: ELECTRIC HEATERS SHALL HAVE THERMAL CUTOUPS FOR PRIMARY AND SECONDARY OVER-TEMPERATURE PROTECTION SHALL BE PROVIDED TO MEET UL AND NEC SAFETY REQUIREMENTS. INTEGRAL SAFETY CONTROLS SHALL BE FURNISHED BY THE MANUFACTURER.
30. ELECTRIC HEAT TRACING FOR PIPELINES: (ON EXTERNAL PIPING AND EQUIPMENT):
 - A. PROVIDE UL LISTED RAYCHEM XL-TRACE SELF-REGULATING HEATER FREEZE PROTECTION ON ALL EXTERNAL PIPING AND EQUIPMENT AS SPECIFIED BELOW. THE TRACE HEATERS SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND CONNECTED TO THE CIRCUIT(S) SHOWN ON THE ELECTRICAL DRAWINGS. THE HEATING CABLE SHALL BE SELECTED FOR 120 VOLTS WITHOUT THE USE OF TRANSFORMERS. (VERIFY VOLTAGE WITH ELECTRICAL CONTRACTOR.)
 - B. THE HEATING CABLE SHALL BE SIZED BY THE MANUFACTURER FOR -20°F AND SHALL BE A MINIMUM OF 5 WATTS PER FOOT UP TO AND INCLUDING 3" PIPE SIZE AND 8 WATTS PER FOOT ABOVE 3" PIPE SIZE.
 - C. THE HEAT TRACE TAPE SHALL BE PROVIDED COMPLETE WITH ALL FIELD APPLIED COMPONENTS RECOMMENDED BY THE MANUFACTURER, INCLUDING BUT NOT LIMITED TO, POWER CONNECTION KIT, END SEAL, TEES, SPLICES, GLASS CLOTH ADHESIVE TAPE, ETC. INSTALL STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 - D. THE TRACE HEATING SYSTEM SHALL BE CONTROLLED BY AN AMBIENT SENSING THERMOSTAT SET AT 40° WIRE DIRECTLY.
 - E. INSTALL THE HEATING CABLE ON PIPE AND FITTINGS, LINEARLY OR SPIRALED, AS PER THE MANUFACTURER'S INSTRUCTIONS AFTER PRESSURE TESTING OF THE PIPES LINES. SECURE HEATING CABLE WITH GLASS CLOTH ADHESIVE TAPE. APPLY "ELECTRIC TRACED" SIGNS ON THE OUTSIDE OF THE THERMAL INSULATION. TEST TRACE HEATING CABLE AFTER INSTALLATION, PRIOR TO INSULATING USING A 2500 VDC MEGGER. MINIMUM INSULATION RESISTANCE SHALL BE 20 TO 1000 MEGOHMS REGARDLESS OF LENGTH.
 - F. PROVIDE THE XL-TRACE FOR ALL EXTERNAL DOMESTIC PLUMBING, CHILLED AND HEATING HOT WATER LINES AND THE CHILLER EVAPORATOR BUNDLE (ELECTRIC HEAT TRACE FOR THE CHILLER EVAPORATOR SHALL BE PROVIDED INTEGRAL WITH THE CHILLER). EXTERNAL, INCLUDES ALL PIPING IN THE CRAWL SPACES UNDER THE LINK CORRIDORS AND ELSEWHERE EXPOSED TO AMBIENT CONDITIONS.
31. PROVIDE FLUES FOR ALL GAS FIRED APPLIANCES IN ACCORDANCE WITH NFPA 54, ASHRAE.

OWNERS MANUAL:

32. FOUR COPIES OF AN OWNERS MANUAL SHALL BE FORWARDED TO THE OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTABLE. OWNERS MANUAL SHALL INCLUDE AS MINIMUM:
 - a. DATA STATING EQUIPMENT SIZE AND ALL INSTALLED OPTIONS FOR EACH ITEM OF MECHANICAL EQUIPMENT PROVIDED.
 - b. COPIES OF THE INSTALLATION & PERFORMANCE REPORT BY THE REPRESENTATIVE OF THE ROOF TOP UNITS PROVIDED.
 - c. COPIES OF THE TEST & BALANCE REPORT. NOTATIONS OF CORRECTIVE ACTION SHALL BE INCLUDED.
 - d. COPIES OF THE MECHANICAL SUBCONTRACTOR'S FIRST YEAR INSTALLATION AND EQUIPMENT WARRANTIES. NOTATION SHALL BE INCLUDED TO SHOW THE EXPIRATION OF THE FIRST YEAR PARTS & LABOR GUARANTEE, & OF THE EXTENDED 4-YEAR COMPRESSOR (ONLY) WARRANTY.
 - e. OPERATION AND MAINTENANCE MANUALS FOR EACH ITEM OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT FOR EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED
 - f. NAMES AND ADDRESS OF AT LEAST ONE SERVICE AGENCY.
 - g. HVAC CONTROLS SYSTEMS MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS AND CONTROL SEQUENCE DIAGRAM. DESIRED OR FIELD DETERMINED SET POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR FOR DIGITAL CONTROL SYSTEMS, IN THE PROGRAMMING COMMENTS.

ABBREVIATIONS:

- ADJ = ADJUSTABLE
- AFF = ABOVE FINISHED FLOOR
- AH = AIR HANDLING UNIT
- BFC = BELOW FINISHED CEILING
- BTUH = BRITISH THERMAL UNITS PER HOUR
- CA = COMBUSTION AIR
- CFM = CUBIC FEET PER MINUTE
- CWR = CONDENSER WATER RETURN
- CWS = CONDENSER WATER SUPPLY
- CHWR = CHILLED WATER RETURN
- CHWS = CHILLED WATER SUPPLY
- COP = COEFFICIENT OF PERFORMANCE
- DB = DRY BULB
- F = DEGREES FAHRENHEIT
- DIA = DIAMETER
- EA = EXHAUST AIR
- EER = ENERGY EFFICIENCY RATIO
- EF = EXHAUST FAN
- ESP = EXTERNAL STATIC PRESSURE
- EWT = ENTERING WATER TEMP.
- EWB = ELECTRIC WALL HEATER
- FLA = FULL LOAD AMPS
- GAL = GALLON
- GPM = GALLONS PER MINUTE
- HP = HORSEPOWER
- HWR = HEATING HOT WATER RETURN
- HWS = HEATING HOT WATER SUPPLY
- HZ = HERTZ
- LWT = LEAVING WATER TEMP
- MAX = MAXIMUM
- MBH = 1000 BTUH
- MCA = MINIMUM CIRCUIT AMPS
- MOCOP = MAXIMUM OVERCURRENT PROTECTION
- MVD = MANUAL VOLUME DAMPER
- OA = OUTDOOR AIR
- PH = PHASE
- RA = RETURN AIR
- RTU = ROOF TOP UNIT
- SA = SUPPLY AIR
- TAB = TEST AND BALANCE
- TDH = TOTAL DYNAMIC HEAD
- TYP = TYPICAL
- V = VOLTS
- VFD = VARIABLE FREQUENCY DRIVE
- W = WATTS
- WB = WET BULB
- Ø = PHASE OR DIAMETER

ADDITIONAL CONTROL POINTS:

THE EXISTING SIEMENS APOGEE CONTROL SYSTEM SHALL BE EXPANDED TO INCLUDE THE FOLLOWING CONTROL POINTS:

1. CHILLED WATER PUMP
 - A. START/STOP
 - B. PROOF OF RUNNING
2. CHILLED WATER TEMPERATURE (EXISTING POINTS)
 - A. SUPPLY
 - B. RETURN
3. CONDENSER WATER PUMP
 - A. START/STOP
 - B. PROOF OF RUNNING
4. CONDENSER WATER TEMPERATURE
 - A. SUPPLY
 - B. RETURN
5. PRIMARY HEATING HOT WATER PUMP
 - A. START/STOP
 - B. PROOF OF RUNNING
6. PRIMARY HEATING HOT WATER LOOP TEMP. (EXISTING POINTS, CONTRACTOR TO VERIFY)
 - A. SUPPLY
 - B. RETURN
7. SECONDARY HEATING HOT WATER PUMP
 - A. START/STOP
 - B. PROOF OF RUNNING
8. SECONDARY HEATING HOT WATER LOOP TEMP.
 - A. SUPPLY
 - B. RETURN
9. COOLING TOWER FAN VARIABLE FREQUENCY DRIVE
10. COOLING TOWER SUMP TEMP
11. CHILLER COMMUNICATION BUS
12. BOILER
 - A. TEMP RE-SET
 - B. ALARM
 - C. START/STOP
13. OUTSIDE AIR TEMPERATURE
14. RELATIVE HUMIDITY
15. ROOF TOP UNITS
16. 10% SPARE POINTS FOR FUTURE USE.

THE FOLLOWING POINTS ARE TO BE BID ALTERNATE:

1. VFD COMMUNICATION BUS
2. CHANGE FROM PNEUMATIC TO DDC CONTROLS FOR AIR HANDLING UNITS
3. POINTS AT EACH AIR HANDLING UNIT
 - A. OUTSIDE AIR TEMPERATURE
 - B. RETURN AIR TEMPERATURE
 - C. MIXED AIR TEMPERATURE
 - D. OUTSIDE AIR DAMPERS
 - E. CHILLED WATER VALVES
 - F. HEATING HOT WATER VALVES
 - G. START/STOP
 - H. ALARMS
 - I. VARIABLE FREQUENCY DRIVE SPEED
 - J. DUCT PRESSURE
 - K. SMOKE DAMPERS
 - L. CO2 MONITOR IN RA.

SYMBOL	MECHANICAL LEGEND
— CWS —	CONDENSER WATER SUPPLY PIPING
— CWR —	CONDENSER WATER RETURN PIPING
— CHWS —	CHILLED WATER SUPPLY PIPING
— CHWR —	CHILLED WATER RETURN PIPING
— HWS —	HEATING HOT WATER SUPPLY PIPING
— HWR —	HEATING HOT WATER RETURN PIPING
— G —	GAS PIPING
—	DRAIN PIPING
	MOTOR OPERATED 3-WAY VALVE
	SHUT-OFF VALVE
	GAS SHUT-OFF VALVE
	IN-LINE PUMP
	ITEM TO BE DEMOLISHED
	NEW-TO-EXISTING CONNECTION
	NEW STATIC PRESSURE SENSOR



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MECHANICAL NOTES, LEGEND & ABBREVIATIONS

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**BOILER, CHILLER & COOLING TOWER -
SEQUENCE OF OPERATIONS**

The system operates as follows (All suggested set points and settings are adjustable.):

Winter/Summer Mode

The average outside air temperature (OAT) is read every minute and calculated with a 10 minute sliding window. When the OAT rises above 62 degrees F, the building goes into Summer Mode. The building goes into Winter Mode when the OAT drops below 58 degrees F.

The hot water system consists of a boiler, primary pump, secondary pump, and by-pass valve. The unit is DDC controlled using electric actuation.

Winter Mode

The system shall energize the primary hot water pump. The secondary hot water pump shall be interlocked to the primary pump and monitored by the DDC system. Upon flow proof, the boiler shall be activated and shall maintain leaving water temperature based on the reset schedule. When the pump stops or OAT rises above 62 degrees F, the boiler shall be deactivated.

The reset schedule shall be set to maintain 90 degrees F leaving water temperature at 62 degrees F OAT and to reset for 180 degrees F leaving water temperature at 10 degrees F OAT.

The 3-way bypass valve shall modulate to maintain leaving water temperature as written on the reset schedule. On a call for more heat, the bypass valve shall modulate open to the primary loop and closed to the bypass. On a call for less heat, the bypass valve shall modulate closed to the primary loop and open to the bypass.

Entering water temperature to the boiler shall be monitored and software interlocked to override 3-way bypass valve to prevent boiler thermal shock. The initial setpoint shall be 150 degrees F or as recommended by the boiler manufacturer. When the temperature drops to 150 degrees F, the bypass valve shall modulate closed to the primary loop and open to the bypass.

The boiler shall function under control of its operating and safety controls at any time the primary water pump operates.

The chiller will be disabled in this mode.

The chilled and condenser water systems consist of a chiller, chilled water pump, condenser water pump, cooling tower with VFD, and by-pass valve. The unit is DDC controlled using electric actuation.

Summer Mode

The system shall energize the chill water pump if cooling for called from any air handling unit. Upon flow proof, the chiller shall start and operate under its internal control and safeties. The condenser water pump shall be controlled by the chiller and monitored by the DDC system. The cooling tower shall be deactivated when the condenser water pump stops.

The cooling tower system shall operate to maintain leaving tower water temperature setpoint. The cooling tower fan shall be activated when the leaving tower water temperature rises to 75 degrees F. At this time, the fan speed shall ramp up slowly to its minimum. Upon a rise in leaving tower water temperature, shall ramp up accordingly. The tower fan speed shall be at its maximum speed when leaving tower water temperature reads 80 degrees F. On a drop in water temperature to 77 degrees F, the variable frequency drive shall reduce fan speed. On a further drop in temperature to 72 degree F, the fan shall be deactivated. On a further drop in temperature to 70 degrees F, the bypass valve shall modulate open to the tower bypass. On a rise in water temperature above 70 degrees F, the bypass valve shall modulate closed to the tower bypass.

The boiler will be disabled in this mode.

Alarms

The system shall generate an alarm when the chiller is being called for and its supply chilled water temperature is 55 degrees F for more than 20 minutes.

The system shall generate an alarm when the boiler is being called for and its leaving water temperature is below 120 degrees F for more than 20 minutes.

**VAV AIR HANDLING UNIT -
SEQUENCE OF OPERATIONS**

The variable volume air handling unit consists of a mixed air section with outdoor air and return air dampers, pre-filter, chilled water cooling coil, hot water heating coil and supply fan with variable frequency drive. The unit is DDC controlled using electric actuation.

The air handling unit is scheduled for automatic operation on a time of day basis for Occupied and Unoccupied modes.

The air handling unit operates in Occupied, Unoccupied, and Safety modes as follows (All suggested set points and settings are adjustable.):

Occupied

The fan starts or continues to run and the unit is controlled as follows:

When the outside air dry bulb temperature is below the economizer changeover value, the heating coil valve, cooling coil valve and mixed air dampers modulate in sequence without overlap to maintain the supply air temperature set point with a low limit of 48 degrees F at the mixed air sensor. The mixing dampers ramp open slowly to minimize overshooting.

When the outside air dry bulb temperature is above the economizer changeover value, the mixing dampers are placed in the minimum outdoor air position. The heating coil valve and cooling coil valve modulate in sequence without overlap to maintain the supply air temperature set point.

Unoccupied (Normal Off)

The supply fan is off, the cooling coil valve and heating coil valve close and mixing dampers close to the outdoor air.

Static Pressure Control

The supply fan variable frequency drive modulates to maintain a constant duct static pressure of 1.5 inches of water as sensed at least two-thirds of the way downstream of the supply fan in the longest or most critical duct. Upon initial startup of the air handling system, the supply fan speed slowly ramps to the desired static pressure set point. Upon shutdown of the air handling system, the supply fan variable frequency drive stops and the speed signal goes to zero speed.

Safety

Discharge high static cutouts and smoke detectors in the supply and return air streams and supply fan VFD fault alarms de-energize the supply fan upon activation. When the OAT is less than 45 degrees F the heating coil valve modulates to maintain the mixed air temperature at 45 degrees F and the cooling coil valve opens. When the OAT is 45 degrees F or above, the heating coil valve and the cooling coil valve close. All other dampers and valves position to their normal position after the fan is de-energized.

A low temperature detector in the discharge of the heating coil de-energizes the supply and return fans when temperatures below 38 degrees F are sensed. The heating coil valve modulates to maintain the mixed air temperature at 45 degrees F and the cooling coil valve opens. All other dampers and valves position to their normal position after the fan is de-energized.

A current switch is installed on the load side of the supply fan VFD. The DDC system uses the switch to confirm the fan is in the desired state (i.e. on or off) and generates an alarm if status deviates from DDC start/stop control. The DDC system generates a VFD trouble alarm independent from the fan status.



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DRAWING TITLE
**MECHANICAL
DEMOLITION PLANS
PHASE 1.**

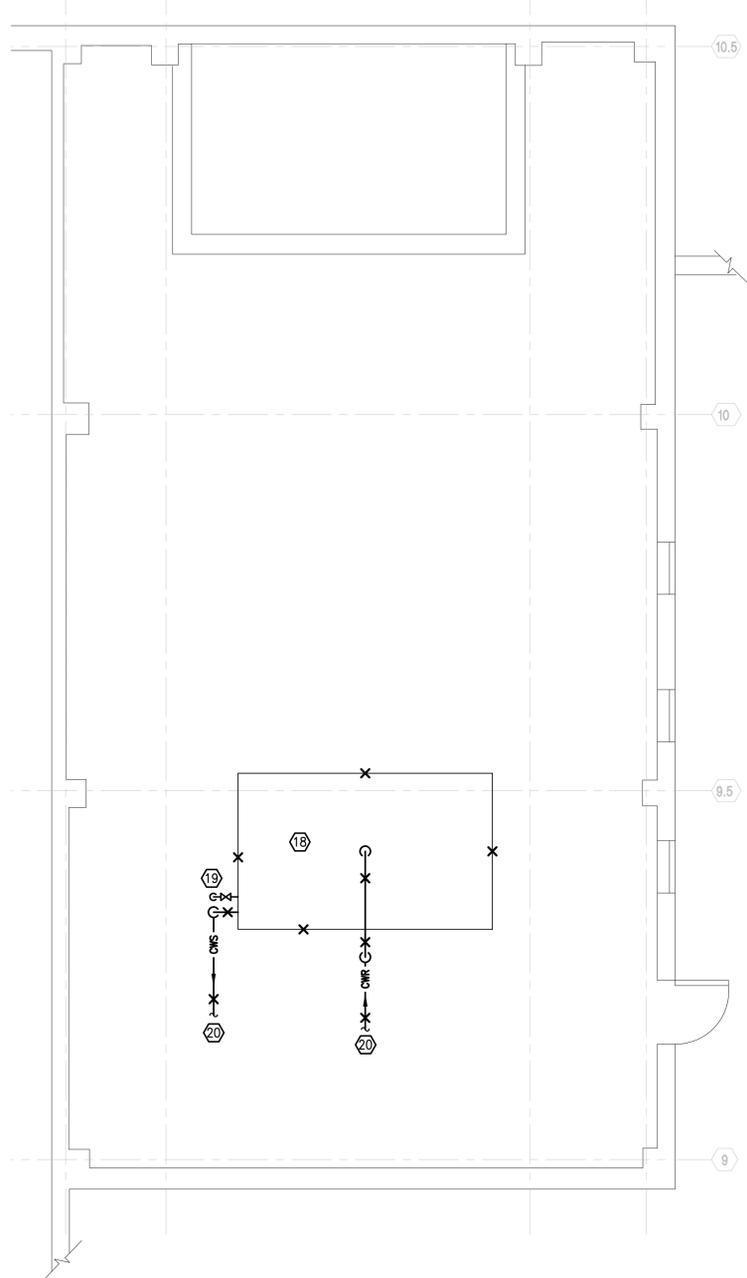
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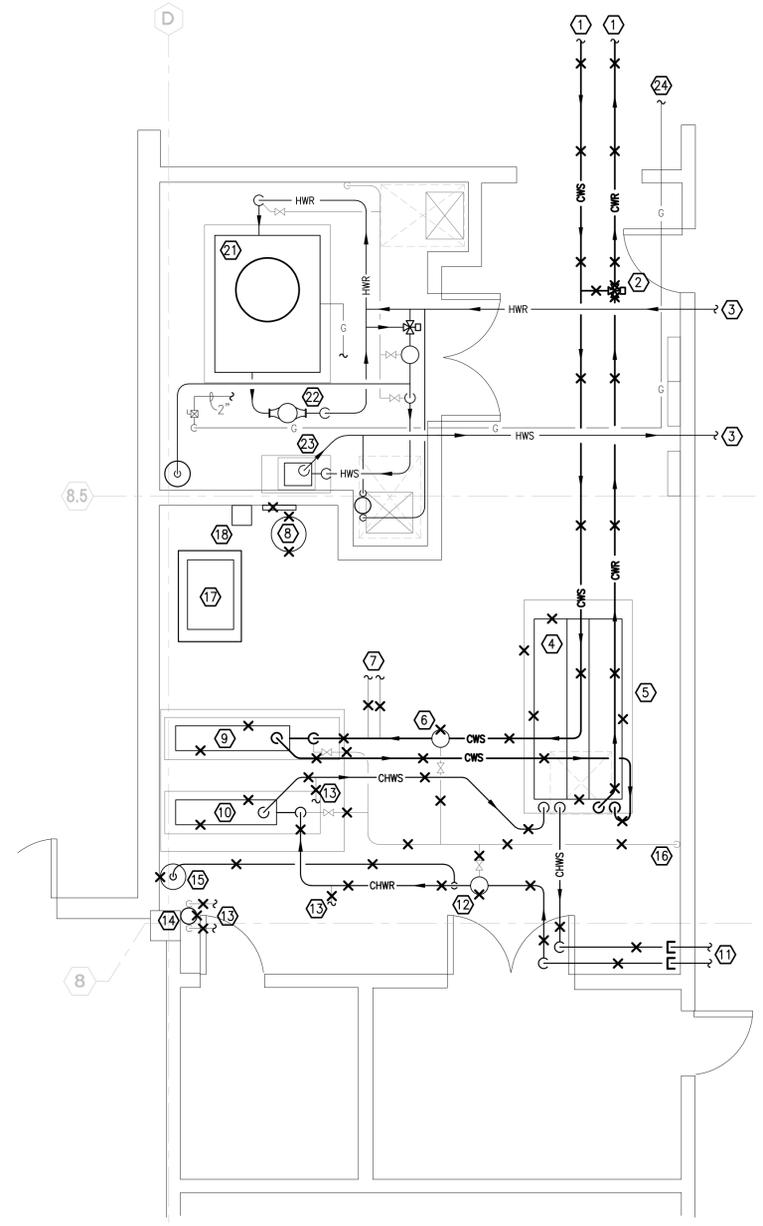
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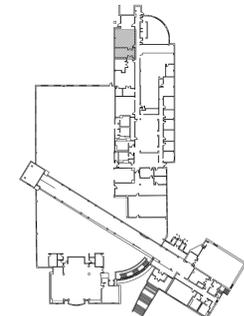
MECHANICAL ROOF DEMOLITION PLAN - PHASE 1:
SCALE: 1/4"=1'-0"

NUMBERED NOTES:

- ① EXISTING 6" CONDENSER WATER PIPING TO BE DEMOLISHED ALL THE WAY TO THE COOLING TOWER.(SUPPLY & RETURN)
- ② EXISTING MODULATING 3-WAY VALVE TO BE DEMOLISHED.
- ③ EXISTING 4" HEATING HOT WATER SUPPLY & RETURN PIPING.
- ④ EXISTING CHILLER TO BE DEMOLISHED
- ⑤ EXISTING CHILLER HOUSE KEEPING PAD TO BE DEMOLISHED
- ⑥ EXISTING BASKET STRAINER TO BE DEMOLISHED
- ⑦ EXISTING PIPING TO CONDENSER WATER CHEMICAL FEED TANK TO BE DEMOLISHED.
- ⑧ EXISTING CONDENSER WATER CHEMICAL FEED TANK & SYSTEM TO BE DEMOLISHED.
- ⑨ EXISTING CONDENSER WATER PUMP TO BE DEMOLISHED. HOUSE KEEPING PAD & VIBRATION ISOLATOR TO BE REUSED.
- ⑩ EXISTING CHILLED WATER PUMP TO BE DEMOLISHED. HOUSE KEEPING PAD & VIBRATION ISOLATOR TO BE REUSED.
- ⑪ EXISTING 5" CHILLED WATER SUPPLY & RETURN PIPING. DEMOLISH ALL CHILLED WATER PIPING IN MECHANICAL ROOM TO WITHIN 12" OF EXISTING MECHANICAL ROOM FOR FUTURE CONNECTION.
- ⑫ EXISTING AIR SEPERATOR TO BE DEMOLISHED
- ⑬ EXISTING PIPING TO CHILLED WATER CHEMICAL FEED TANK TO BE DEMOLISHED.
- ⑭ EXISTING CHILLED WATER CHEMICAL FEED TANK/SYSTEM TO BE DEMOLISHED.
- ⑮ EXISTING CHILLED WATER EXPANSION TANK TO BE DEMOLISHED.
- ⑯ EXISTING DRAIN LINE TO BE DEMOLISHED.
- ⑰ EXISTING AIR DRYER TO REMAIN
- ⑱ EXISTING COOLING TOWER TO BE DEMOLISHED. DEMOLISH COOLING TOWER SUPPORT.
- ⑲ EXISTING COOLING TOWER MAKE-UP WATER. DISCONNECT FROM COOLING TOWER & CAP.
- ⑳ EXISTING 6" CONDENSER WATER PIPES TO BE DEMOLISHED.
- ㉑ EXISTING BOILER
- ㉒ EXISTING PRIMARY HEATING HOT WATER PUMP
- ㉓ EXISTING SECONDARY HEATING HOT WATER PUMP
- ㉔ EXISTING 3" GAS LINE



MECHANICAL ROOM DEMOLITION PLAN - PHASE 1:
SCALE: 1/4"=1'-0"



KEY PLAN:
NOT TO SCALE



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MECHANICAL DEMOLITION PLANS PHASE 2 & ALTERNATE #1

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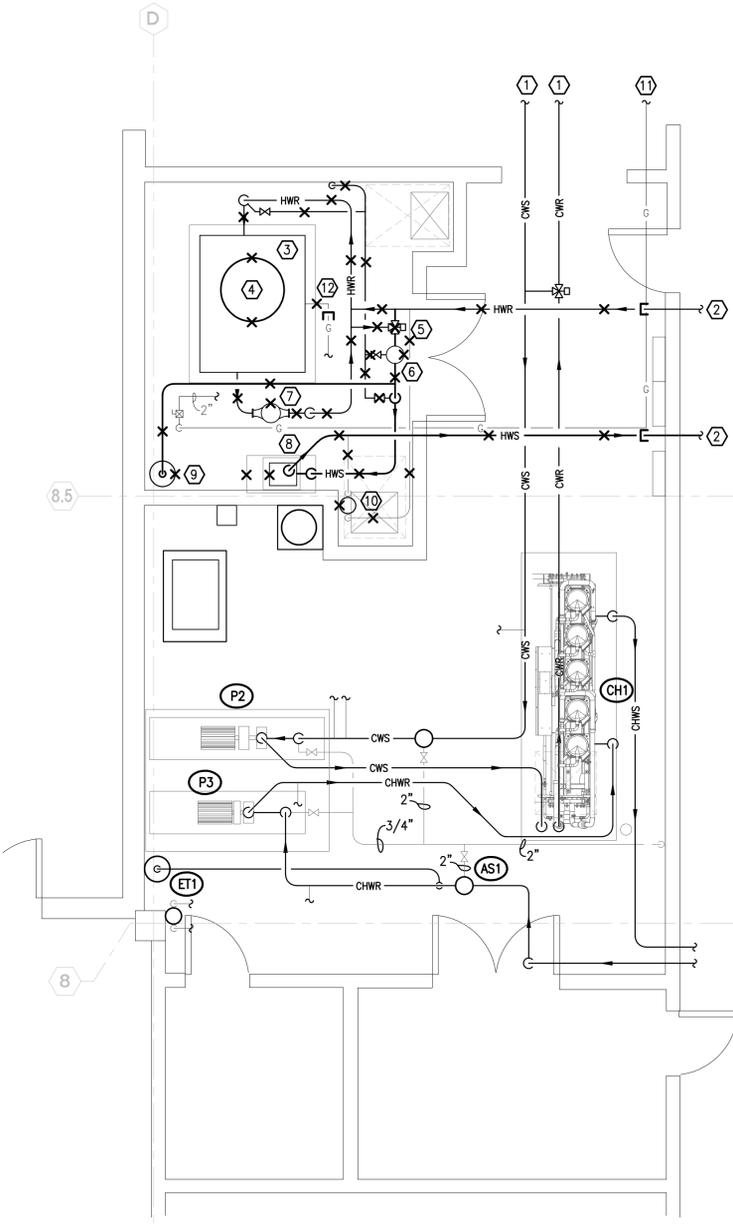
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PHASE 2 - NUMBERED NOTES:

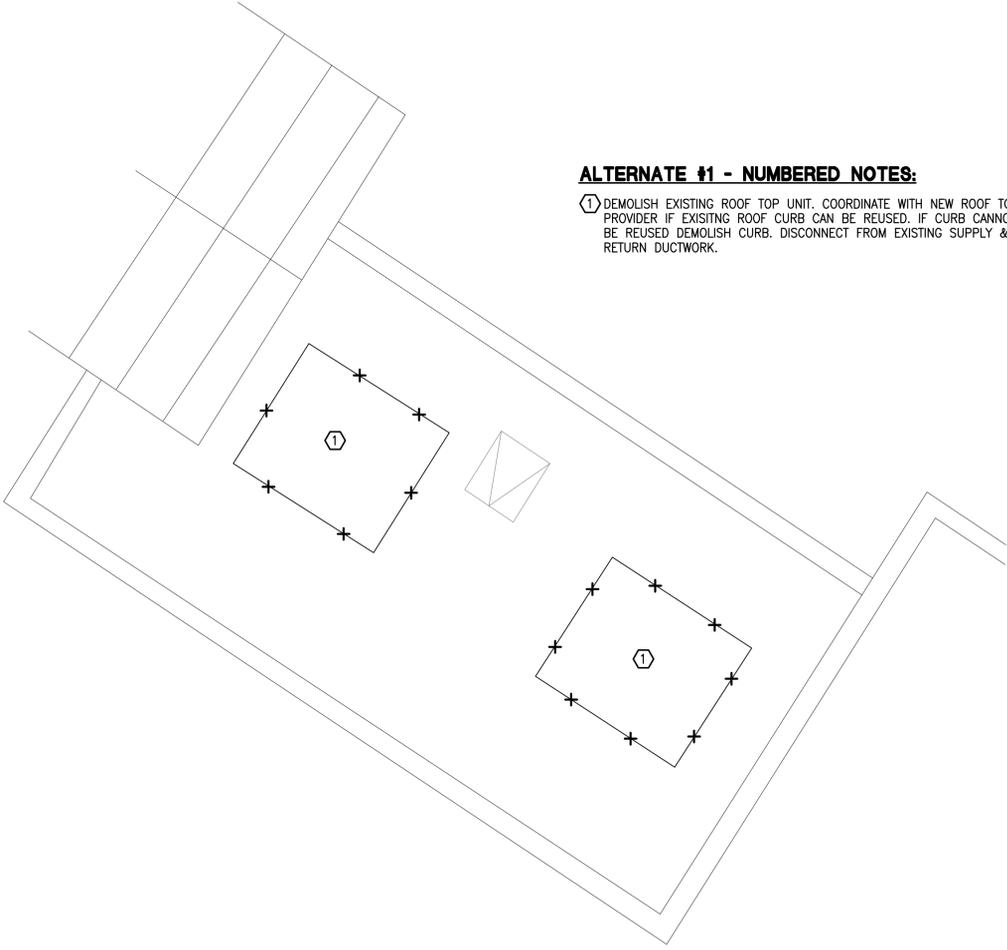
- ① EXISTING 6" CONDENSER WATER PIPING (INSTALLED DURING PHASE 1).
- ② EXISTING 4" HEATING HOT WATER SUPPLY & RETURN PIPING. DEMOLISH ALL HEATING HOT WATER PIPING IN MECHANICAL ROOM TO WITHIN 12" OF EXITING MECHANICAL ROOM FOR FUTURE CONNECTION.
- ③ DEMOLISH EXISTING BOILER. DISCONNECT EXISTING GAS PIPING & CAP FOR FUTURE CONNECTION.
- ④ DEMOLISH EXISTING BOILER FLUE. CAP ROOF PENETRATION IN INSULATE WITH MIN. R-19 INSULATION. SEE DETAIL ON M301.
- ⑤ DEMOLISH EXISTING 4" 3-WAY MIXING VALVE.
- ⑥ DEMOLISH EXISTING AIR SEPERATOR
- ⑦ DEMOLISH EXISTING PRIMARY HEATING HOT WATER PUMP
- ⑧ DEMOLISH EXISTING SECONDARY HEATING HOT WATER PUMP, VIBRATION ISOLATOR & HOUSE KEEPING PAD.
- ⑨ DEMOLISH EXISTING HEATING HOT WATER EXPANSION TANK.
- ⑩ DEMOLISH EXISTING HEATING HOT WATER CHEMICAL FEED SYSTEM.
- ⑪ EXISTING 3" GAS PIPE FROM GAS METER.
- ⑫ DISCONNECT GAS LINE FROM BOILER.

ALTERNATE #1 - NUMBERED NOTES:

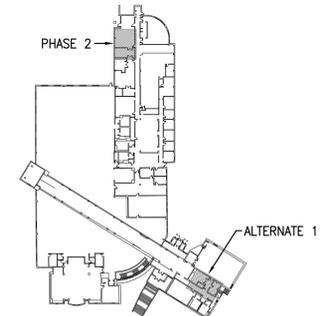
- ① DEMOLISH EXISTING ROOF TOP UNIT. COORDINATE WITH NEW ROOF TOP PROVIDER IF EXISTING ROOF CURB CAN BE REUSED. IF CURB CANNOT BE REUSED DEMOLISH CURB. DISCONNECT FROM EXISTING SUPPLY & RETURN DUCTWORK.



MECHANICAL ROOM DEMO PLAN - PHASE 2:
 SCALE: 1/4"=1'-0"



MECHANICAL ROOF DEMOLITION PLAN - ALTERNATE #1:
 SCALE: 1/4"=1'-0"



KEY PLAN:
 NOT TO SCALE



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- PHASE 1**

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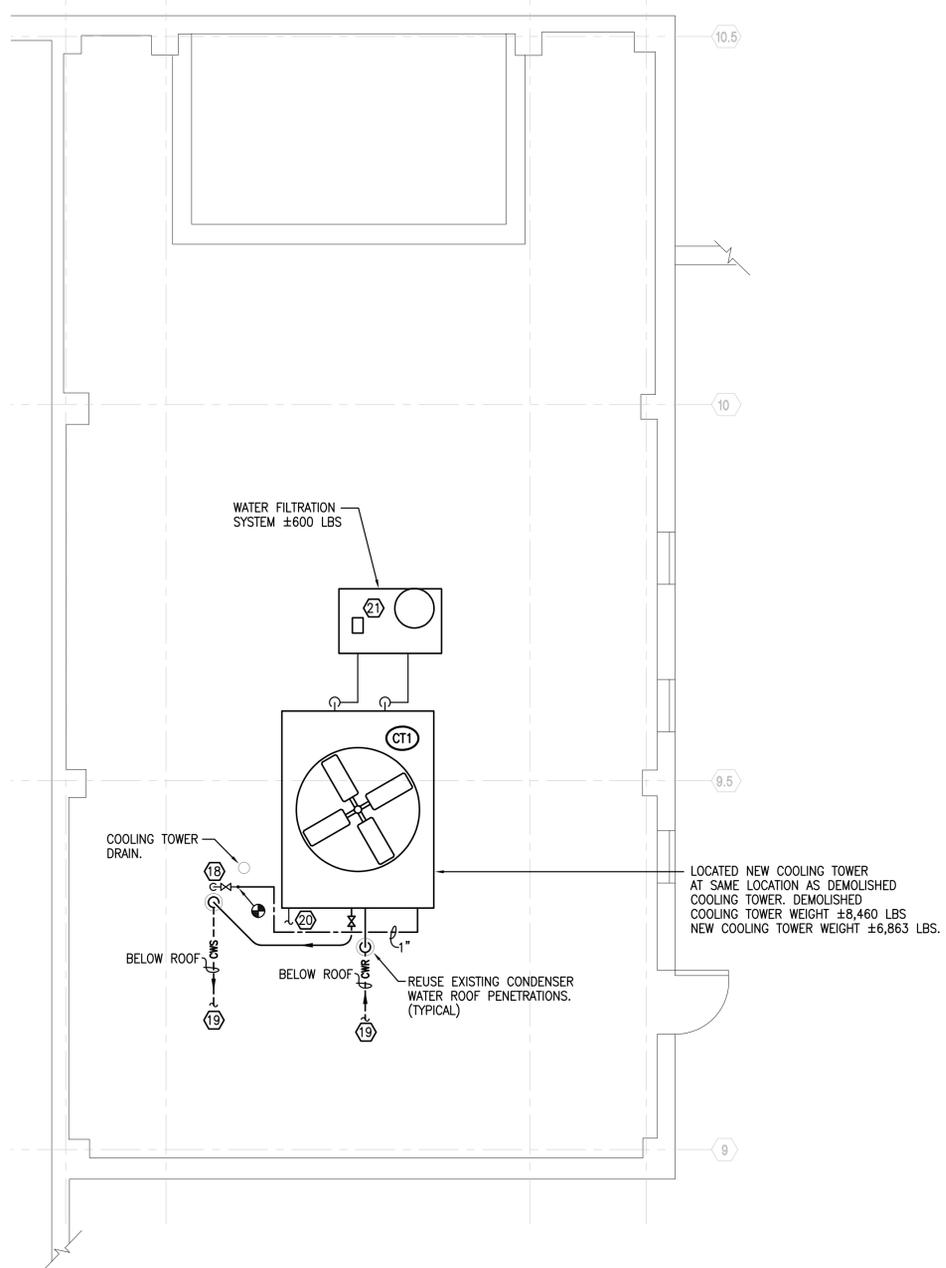
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OF

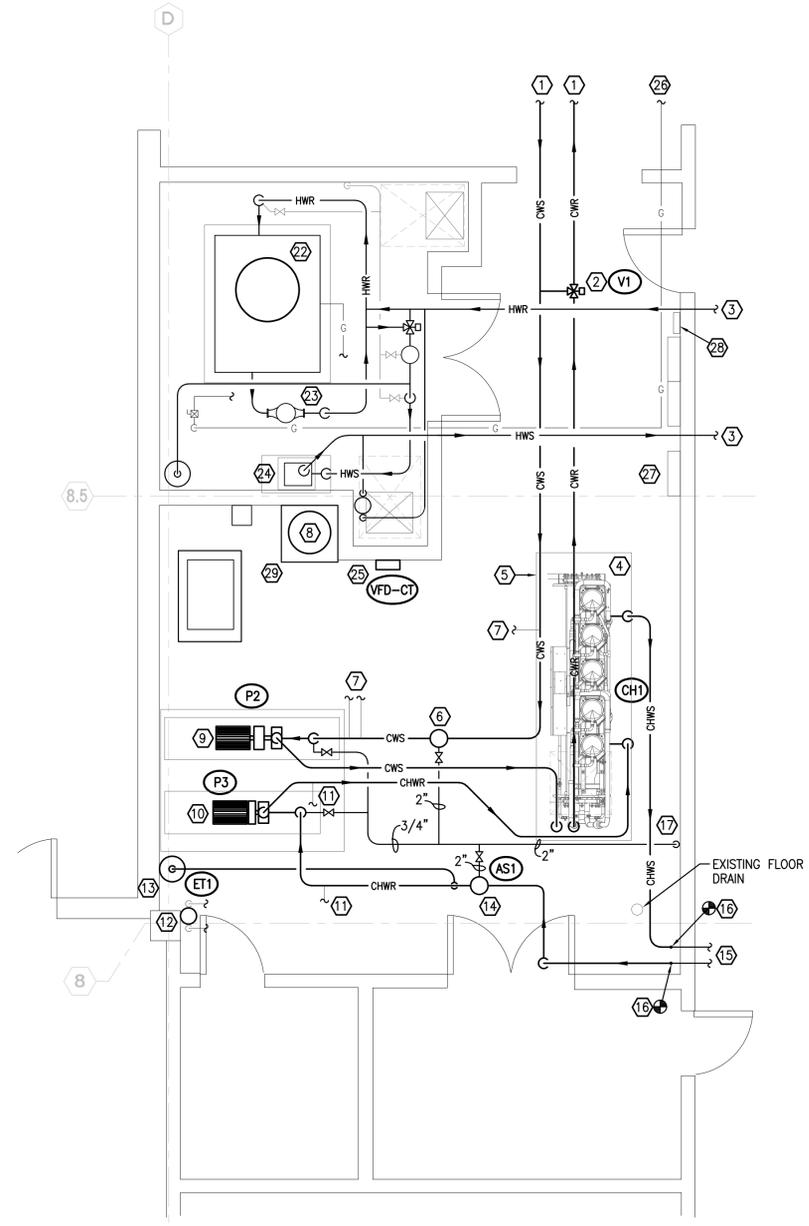
NUMBERED NOTES:

- 1) NEW 6" CONDENSER WATER PIPING TO COOLING TOWER (SUPPLY & RETURN).
- 2) NEW MODULATING 3-WAY VALVE
- 3) EXISTING 4" HEATING HOT WATER SUPPLY & RETURN PIPING.
- 4) NEW CHILLER. SEE CHILLER SCHEDULE
- 5) NEW HOUSE KEEPING PAD. SEE CONCRETE PAD DETAIL ON M401.
- 6) NEW BASKET STRAINER
- 7) NEW PIPING TO CONDENSER WATER CHEMICAL FEED TANK.
- 8) NEW CONDENSER WATER CHEMICAL FEED SYSTEM. SEE DETAIL ON M401.
- 9) NEW CONDENSER WATER PUMP. SEE PUMP SCHEDULE ON M301.
- 10) NEW CHILLED WATER PUMP. SEE PUMP SCHEDULE ON M301.
- 11) NEW PIPING TO CHILLED WATER CHEMICAL FEED TANK.
- 12) NEW CHILLED WATER CHEMICAL BYPASS FEEDER. SEE DETAIL ON M401.
- 13) NEW CHILLED WATER EXPANSION TANK. SEE DETAIL ON M401.
- 14) NEW AIR SEPERATOR. SEE DETAIL ON M401.
- 15) EXISTING 5" CHILLED WATER SUPPLY & RETURN PIPING.
- 16) CONNECT NEW 5" CHILLED WATER SUPPLY & RETURN PIPING TO EXISTING 5" CHILLED WATER SUPPLY & RETURN PIPING.
- 17) ROUTE 2" DRAIN LINE TO DISCHARGE INTO EXISTING FLOOR DRAIN.
- 18) EXISTING 1-1/2" MAKE-UP WATER LINE. CONNECT NEW 1" MAKE-UP TO COOLING TOWER. ALL EXPOSED WATER LINES TO BE HEAT TRACED. HEATING CABLE SHALL BE RAYCHEM XL-TRACE SIZED AT 5 WATTS/FOOT. HEAT CABLE SHALL BE 120 VOLT. INSTALL PER MANUFACTURERS INSTRUCTIONS.
- 19) NEW 6" CONDENSER WATER SUPPLY & RETURN PIPING. ALL EXPOSED CONDENSER WATER PIPING ON ROOF TO BE HEAT TRACED. HEATING CABLE SHALL BE RAYCHEM XL-TRACE SIZED AT 8 WATTS/FOOT. HEAT CABLE SHALL BE 120 VOLT. INSTALL PER MANUFACTURERS INSTRUCTIONS.
- 20) 2" DRAIN PIPE FROM COOLING TOWER. ROUTE TO DISCHARGE INTO COOLING TOWER DRAIN.
- 21) COOLING TOWER SAND FILTER SYSTEM
- 22) EXISTING BOILER
- 23) EXISTING PRIMARY HEATING HOT WATER PUMP
- 24) EXISTING SECONDARY HEATING HOT WATER PUMP
- 25) VARAIBLE FREQUENCY DRIVE FOR COOLING TOWER FAN. PROVIDED BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR.
- 26) EXISTING 3" GAS LINE.
- 27) EXISTING SIEMENS APOGEE CONTROL PANEL.
- 28) EXISTING MSA (CHILLGRAD LE) REFRIGERANT MONITOR. SERVICE & REPLACE SENSOR AS RECOMMENDED BY CHILLER MANUFACTURER.
- 29) 32x32 TERRAZZO MOP BASIN LESS DRAIN. ACORN MODEL: TSH-32. SECURE INPLACE AS RECOMMENDED BY MANUFACTURER.



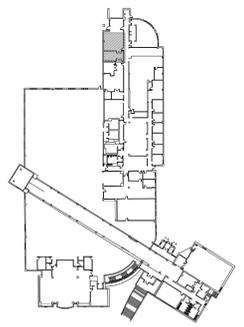
MECHANICAL ROOF NEW WORK PLAN (PHASE 1):

SCALE: 1/4"=1'-0"



MECHANICAL ROOM NEW WORK PLAN (PHASE 1):

SCALE: 1/4"=1'-0"



KEY PLAN:
NOT TO SCALE



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DRAWING TITLE
MECHANICAL DEMOLITION PLANS PHASE 2 & ALTERNATE #1.

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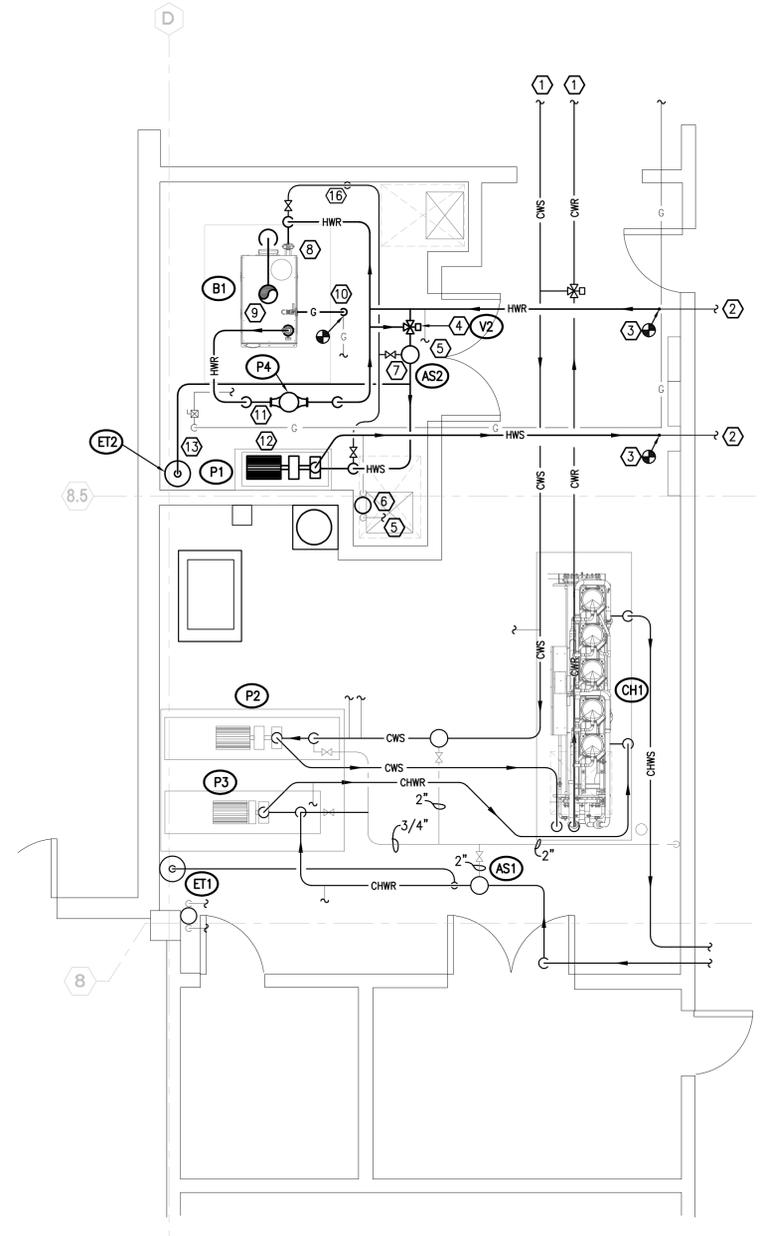
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ALTERNATE #1 - NUMBERED NOTES:

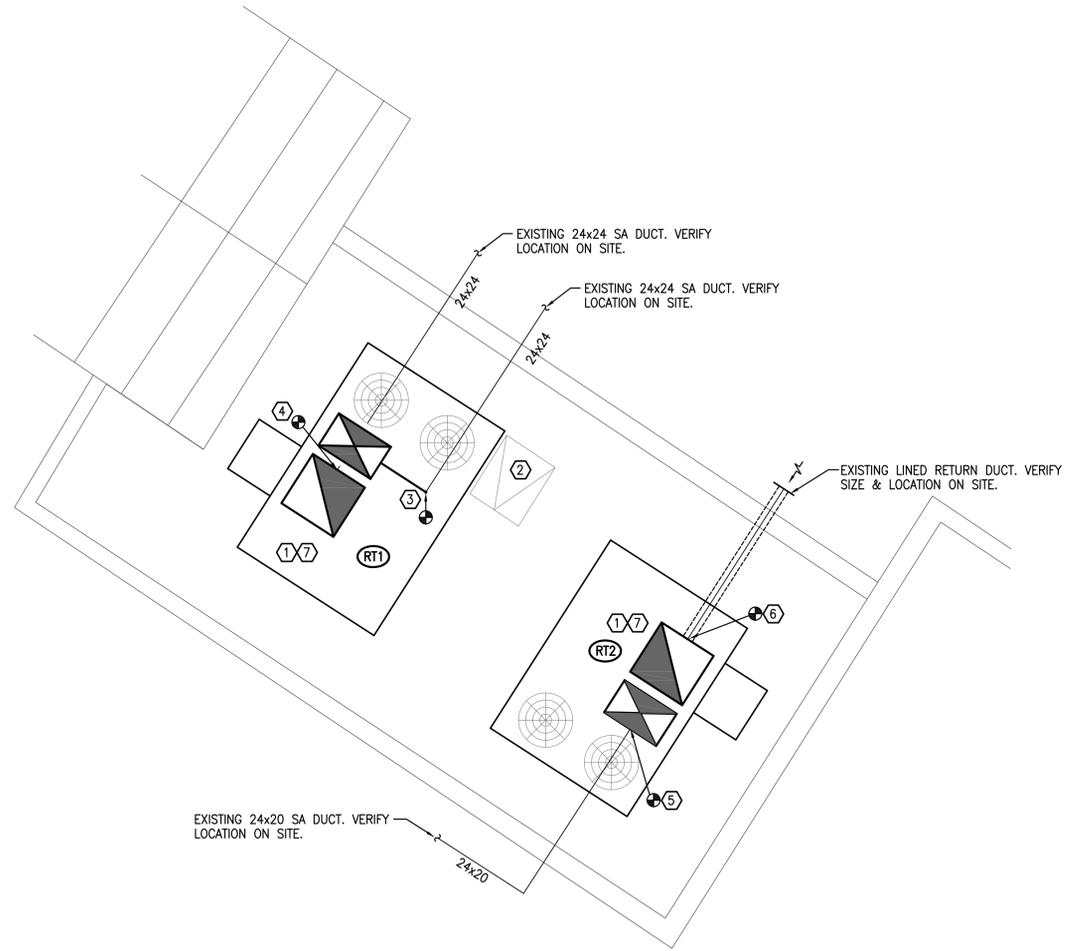
- 1 NEW ROOF TOP UNIT. SEE ROOF TOP UNIT SCHEDULE.
- 2 EXISTING ROOF HATCH. VERIFY LOCATION ON SITE.
- 3 CONNECT NEW 24x24 SA DUCT TO EXISTING 24x24 SUPPLY DUCT.
- 4 PROVIDE NEW RETURN DUCT FULL SIZE OF RETURN OPENING. CONNECT EXISTING 22x22 RA DUCT TO NEW RETURN DUCT.
- 5 PROVIDE NEW SUPPLY DUCT FULL SIZE OF SUPPLY OPENING. CONNECT EXISTING 24x20 SA DUCT TO NEW SUPPLY DUCT.
- 6 CONNECT EXISTING LINED RETURN PLENUM TO NEW ROOF TOP UNIT RETURN OPENING. PROVIDE TRANSITION AS REQUIRED.
- 7 CONNECT NEW ROOF TOP UNIT TO EXISTING TEMPERATURE CONTROLS SYSTEM.

PHASE 2 - NUMBERED NOTES:

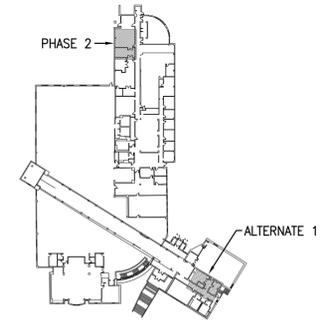
- 1 EXISTING 6" CONDENSER WATER PIPING (INSTALLED DURING PHASE 1).
- 2 EXISTING 4" HEATING HOT WATER SUPPLY & RETURN PIPING. DEMOLISH ALL HEATING HOT WATER PIPING IN MECHANICAL ROOM TO WITHIN 12" OF EXISTING MECHANICAL ROOM FOR FUTURE CONNECTION.
- 3 CONNECT NEW 4" HEATING HOT WATER SUPPLY & RETURN PIPING TO EXISTING 4" HEATING HOT WATER SUPPLY & RETURN PIPING.
- 4 NEW MODULATING 4" 3-WAY MIXING VALVE
- 5 BOILER CHEMICAL FEED PIPING
- 6 NEW BOILER CHEMICAL FEED SYSTEM.
- 7 NEW AIR SEPARATOR. SEE DETAIL ON M401.
- 8 NEW BOILER. SEE BOILER SCHEDULE ON M301.
- 9 10" TYPE IV VENT THRU CAPPED CURB FROM DEMOLISHED FLUE. SEE DETAIL ON M401.
- 10 CONNECT EXISTING 2" GAS PIPING TO NEW BOILER. EXISTING BOILER GAS CONSUMPTION WAS 2,500 MBH NEW BOILER GAS CONSUMPTION IS 2,500 MBH.
- 11 NEW PRIMARY HEATING HOT WATER PUMP.
- 12 NEW SECONDARY HEATING HOT WATER PUMP, VIBRATION ISOLATORS & HOUSE KEEPING PAD.
- 13 NEW HEATING HOT WATER EXPANSION TANK. SEE DETAIL ON M401.



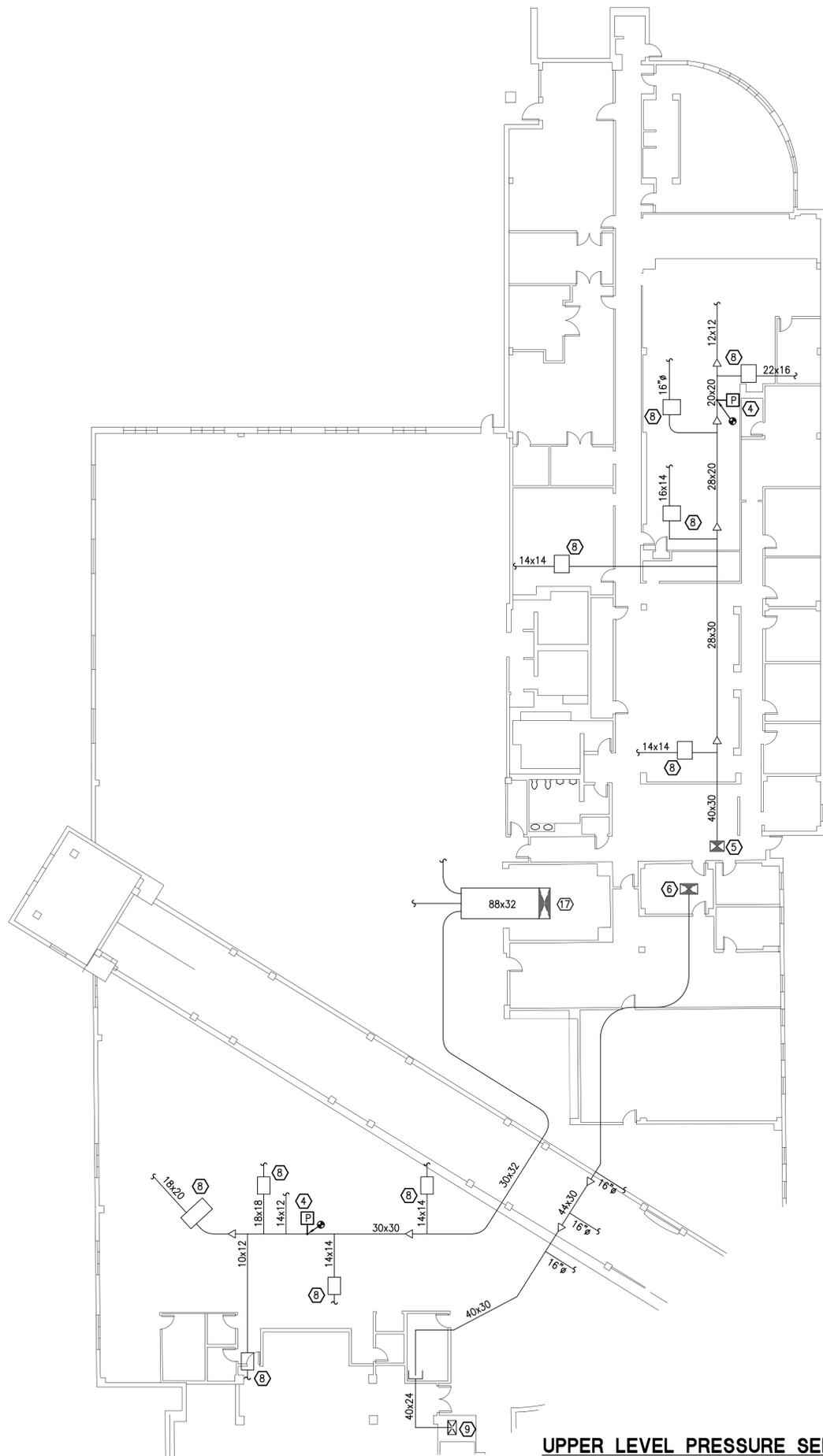
MECHANICAL ROOM NEW WORK PLAN - PHASE 2:
SCALE: 1/4"=1'-0"



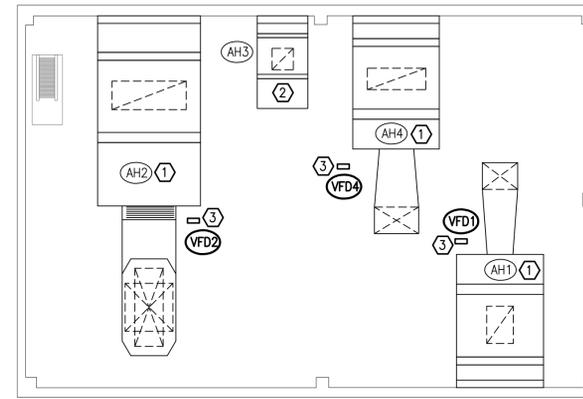
MECHANICAL ROOF NEW WORK PLAN - ALTERNATE #1:
SCALE: 1/4"=1'-0"



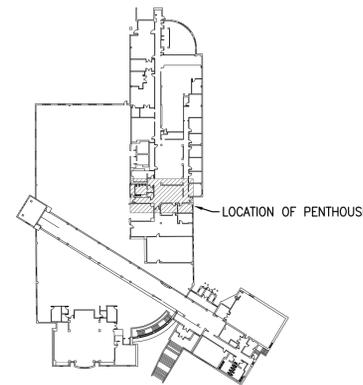
KEY PLAN:
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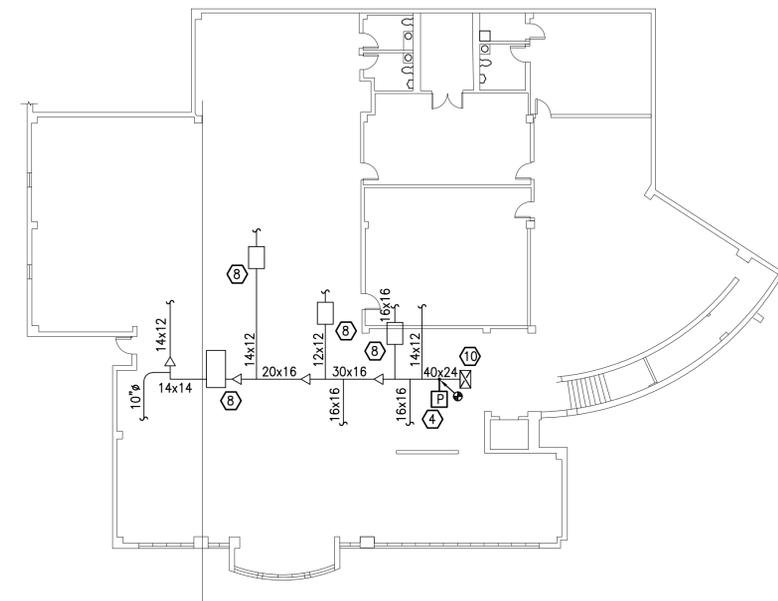
UPPER LEVEL PRESSURE SENSOR PLAN:
SCALE: 1/16"=1'-0"



PENTHOUSE RENOVATION PLAN:
SCALE: 1/8"=1'-0"



KEY PLAN:
NOT TO SCALE



LOWER LEVEL PRESSURE SENSOR PLAN:
SCALE: 1/16"=1'-0"

ALTERNATE #2 - NUMBERED NOTES:

- ① EXISTING AIR HANDLING UNIT. REMOVE FAN INLET VANES OR WELD TO 100% OPEN AS RECOMMENDED BY MANUFACTURER (YORK). PROVIDE NEW INVERTER DUTY MOTOR SEE SPECIFICATION SECTION 23 0513.
- ② EXISTING AIR HANDLING UNIT NO WORK.
- ③ NEW VARIABLE FREQUENCY DRIVE. PROVIDE BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR.
- ④ PRESSURE SENSOR. SEE CONTROL SPECIFICATIONS.
- ⑤ EXISTING 40x30 SA DUCT DOWN FROM AH1 IN PENTHOUSE.
- ⑥ EXISTING 50x30 SA DUCT DOWN FROM AH4 IN PENTHOUSE.
- ⑦ EXISTING 88x32 SA DUCT DOWN FROM AH2 IN PENTHOUSE.
- ⑧ EXISTING VAV OR PIU.
- ⑨ EXISTING 40x24 SA DUCT DOWN TO LOWER LEVEL.
- ⑩ EXISTING 40x24 SA DUCT FROM UPPER LEVEL.



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MECHANICAL PLANS - ALTERNATE #2

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ROOFTOP UNIT SCHEDULE (COOLING ONLY)

TAG	MODEL NO.	NOMINAL TONS	TOTAL CFM	O.A. CFM	FAN HP	E.S.P.	MBH TOT. COOL	MBH SEN. COOL	EER	WEIGHT (LB)	DIMENSIONS (LxWxH)	ELECTRICAL V/PH/Hz	MCA	MOCP	ACCESSORIES
RT1	J20ZFC00	20	6,400	1,600	7.5	1.75	266.2	174.7	10.0	2,688	137"x92"x49"	460/3/60	61.0	70	1,2,3,4,5
RT2	J15ZFC00	15	5,200	1,300	5.0	1.75	186.1	130.8	11.0	2,025	126"x92"x49"	460/3/60	43.5	50	1,2,3,4,5

NOTES:
 A. COOLING CAPACITY BASED ON 80°F, DB/67°F, WB INDOOR ENTERING AIR TEMPERATURE AND 95°F DB, ENTERING OUTDOOR TEMP.
 B. ESP DOES NOT INCLUDE COIL, CASING, OR FILTER LOSSES.

ACCESSORIES:
 1. PROVIDE WITH CURB ADAPTER, BELT DRIVE BLOWER & SINGLE POINT THRU CURB ELECTRICAL CONNECTION.
 2. 2" THROW AWAY FILTERS FOR COIL PROTECTION DURING INSTALLATION & NEW CLEAN 30/30 FILTERS PRIOR TO TEST & BALANCE.
 3. PROVIDE WITH VARIABLE SPEED DRIVE, ENTHALPY CONTROLLED ECONOMIZER, MANUAL OUTSIDE AIR DAMPER & UNIT MOUNTED DISCONNECT.
 4. CONNECT TO EXISTING DUCT STATIC PRESSURE & TEMPERATURE CONTROL SYSTEM.
 5. ROOF TOP UNIT SHALL COMPLY WITH THE "BUY AMERICAN ACT".

SELECTIONS ARE BASED ON PRODUCTS BY YORK
EQUAL PRODUCTS: LENNOX, RHEEM, TRANE & CARRIER ONLY.

CHILLER SCHEDULE

TAG	SERVICE	MODEL	WT. (LBS)	CAPACITY (TONS)	EER/ COP	EER NPLV	COP NPLV	EVAPORATOR				CONDENSER				ELECTRICAL			NOTES		
								EWI (°F)	LWT (°F)	FLOW (GPM)	PRESSURE DROP (FT)	WATER VOL. (GAL)	EWI (°F)	LWT (°F)	FLOW (GPM)	PRESSURE DROP (FT)	WATER VOL. (GAL)	VOLTAGE		MCA	MOCP
CH1	BUILDING	YCWLO177SE46	8,260	168.5	17.5/5.1	25.8	7.6	55.5	44.0	350	11.2	77.0	85.0	94.3	519.8	17.6	59.1	460/3/60	258	300	1,2

NOTES:
 1. PROVIDE WITH FACTORY SUPPLIED MULTIPLE POINT CIRCUIT BREAKER, EVAPORATOR FLOW SWITCH, SERVICE ISOLATION VALVES, HOT GAS BY-PASS, FACTORY MOUNTED SOUND REDUCTION & VIBRATION ISOLATION.
 2. CHILLER SHALL COMPLY WITH THE "BUY AMERICAN ACT".

SELECTIONS ARE BASED ON PRODUCTS BY YORK
EQUAL PRODUCTS: AS APPROVED BY ENGINEER

BOILER SCHEDULE

TAG	SERVICE	MODEL	FLOW (GPM)	MAX. PRESSURE DROP (FT)	GAS INPUT (MBH)	HEAT OUTPUT (MBH)	BOILER HP	EFFICIENCY	STAGES	ELECTRICAL	FLA	NOTES
B1	HTG. HOT WATER	MACH C-2500	205	12	2,500	2,375	71.9	±95%	20,40,60,80,100	120V, 1PH, 60 HZ	LESS THAN 17	1,2,3,4,5,6

NOTES:
 1. PROVIDE WITH INTEGRATED BOILER CONTROL (MCBA SERIES), MAIN GAS TRAIN, OPERATING THERMOSTAT (70°F - 195°F), HIGH LIMIT THERMOSTAT WITH MANUAL RESET (100°F - 210°F), HIGH EXHAUST PRESSURE SWITCH WITH MANUAL RESET, PROBE TYPE LOW WATER CUT-OFF WITH MANUAL RESET, DIFFERENTIAL PRESSURE AIR SWITCH, VARIABLE SPEED COMBUSTION BLOWER (1100 WATTS)
 2. PROVIDE WITH 3/4" 100 PSIG PRESSURE RELIEF VALVES
 3. INTERLOCK WITH P4. P4 SHALL RUN SHALL CONTINUE TO RUN 7 MINUTES (ADJ) AFTER BOILER IS DE-ENERGIZED.
 4. PROVIDE WITH OUTDOOR TEMPERATURE THERMOSTAT.
 5. PROVIDE WITH 10" NOM ID CATEGORY IV EXHAUST VENT (FLUE) & ROOF TERMINATION AS REQUIRED BY MANUFACTURER.
 6. CHILLER SHALL COMPLY WITH THE "BUY AMERICAN ACT".

SELECTIONS ARE BASED ON PRODUCTS BY: PATTERSON-KELLY (HARSCO)
EQUAL PRODUCTS: AS APPROVED BY ENGINEER

COOLING TOWER SCHEDULE

TAG	SERVICE	MODEL	OPERATING WEIGHT (LBS)	CAPACITY (TONS)	BASIN CAPACITY (GAL)	WATER FLOW (GPM)	INLET WATER TEMP (°F)	OUTLET WATER TEMP (°F)	WET BLUB TEMP (°F)	MOTOR HP	FAN QUANTITY	ELECTRICAL		NOTES
												VOLTAGE	FLA	
CT1	CHILLER	HRFG-709110	6863	184	425	525	95	85	78	10	1	460/3/60	15.5	1,2,3

NOTES:
 1. PROVIDE WITH VIBRATION CUT-OFF SWITCH, ELECTRIC WATER LEVEL CONTROL, 7.5 KW BASIN HEATER, MODEL FRS-24-X-A-460 WATER FILTRATION SYSTEM, SWEEPER JET NOZZLES & PIPING SYSTEM, ALUMINUM LADDER WITH GALVANIZED STEEL OSHA CAGE, NON SKID GALVANIZED STREET CATWALK WITH OSHA HANDRAIL
 2. PROVIDE WITH COOLING TOWER ROOF SUPPORT & ADDITIONAL MOTOR.
 3. COOLING TOWER SHALL COMPLY WITH THE "BUY AMERICAN ACT".

SELECTIONS ARE BASED ON PRODUCTS BY: REYSMA
EQUAL PRODUCTS: AS APPROVED BY ENGINEER

PUMP SCHEDULE

TAG	TYPE	SERVICE	GPM	RPM	CONNECTION (IN)	HP	V/PH/Hz	T.D.H (FEET)	MODEL	NOTES
P1	END SUCTION	HTG. HOT WATER SECONDARY	250	1760	3x2.5	10	460/3/60	75	F12510	1,2,3,4
P2	END SUCTION	CONDENSER WATER	525	1760	5x4	20	460/3/60	90	F14011	1,2,4
P3	END SUCTION	CHILLED WATER	350	1760	4x3	10	460/3/60	50	F13011	1,2,4
P4	INLINE	HTG. HOT WATER PRIMARY	205	1760	3x3	2	460/3/60	30	KV3007	1,2,4,5

NOTES:
 1. PROVIDE WITH END SUCTION FITTING & COMBINATION DISCHARGE VALVE.
 2. EXISTING STARTER TO BE REUSED.
 3. PROVIDE WITH NEW HOUSEKEEPING PAD AND VIBRATION ISOLATOR.
 4. PUMPS SHALL COMPLY WITH THE "BUY AMERICAN ACT".
 5. PROVIDE WITH PUMP STAND.

SELECTIONS ARE BASED ON PRODUCTS BY: TACO
EQUAL PRODUCTS: BELL & GOSSETT, GUNDFOS,

AIR SEPARATOR SCHEDULE

TAG	SERVICE	MODEL	FLOW (GPM)	PRESS DROP (PSI)	WEIGHT (LBS)	NOTES
AS1	CHILLED WATER	4905ADH	350	1.5	255	1
AS2	HEATING HOT WATER	4904ADH	250	2.0	140	1

NOTES:
 1. PROVIDE WITH TACO 409 AUTOMATIC AIR VENT
SELECTIONS ARE BASED ON PRODUCTS BY: TACO
EQUAL PRODUCTS: AS APPROVED BY ENGINEER

EXPANSION TANK SCHEDULE

TAG	SERVICE	MODEL	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	PRECHARGE (LBS)	WEIGHT (LBS)
ET1	CHILLED WATER	PAX-84	22	12	12	150
ET2	HEATING HOT WATER	PAX-300	79	43	12	300

SELECTIONS ARE BASED ON PRODUCTS BY: TACO
EQUAL PRODUCTS: AS APPROVED BY ENGINEER

VARIABLE FREQUENCY DRIVES

TAG	SERVICE	HP	VOLTAGE	FLA	MODEL	NOTES
VFD1	AH1	15	460/3/60	18.5	VSD	1,2,3
VFD2	AH2	40	460/3/60	46.0	VSD	1,2,3
VFD4	AH4	25	460/3/60	29.2	VSD	1,2,3
VFD-CT	CT1	10	460/3/60	12.0	VSD	1,2,3

NOTES:
 1. SEE SPECIFICATION SECTION 23 0514.
 2. PROVIDED BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR.
 3. PROVIDED BACNET MSTP.

SELECTIONS ARE BASED ON PRODUCTS BY: JOHNSON CONTROLS
EQUAL PRODUCTS: AS APPROVED BY ENGINEER

MOTOR OPERATED VALVE SCHEDULE

TAG	SERVICE	TYPE	FLOW (GPM)	MAX. PRESS DROP (FT)	ACTION	NOTES
V1	CONDENSER WATER	3-WAY	350	10	DIVERTING	1,2
V2	HEATING HOT WATER	3-WAY	250	10	MIXING	1,2

NOTES:
 1. PROVIDE WITH 24 VOLT OPERATION.
 2. SEE SEQUENCE OF OPERATIONS.
SELECTIONS ARE BASED ON PRODUCTS BY: TACO
EQUAL PRODUCTS: AS APPROVED BY ENGINEER



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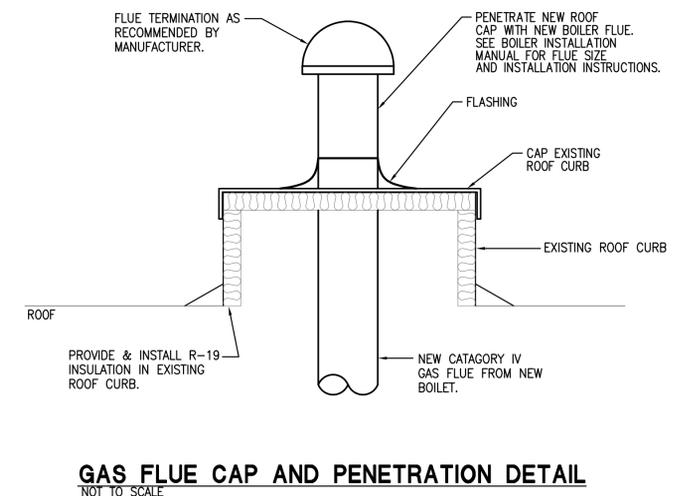
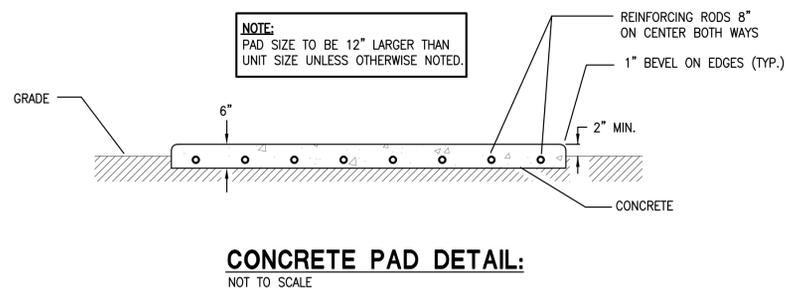
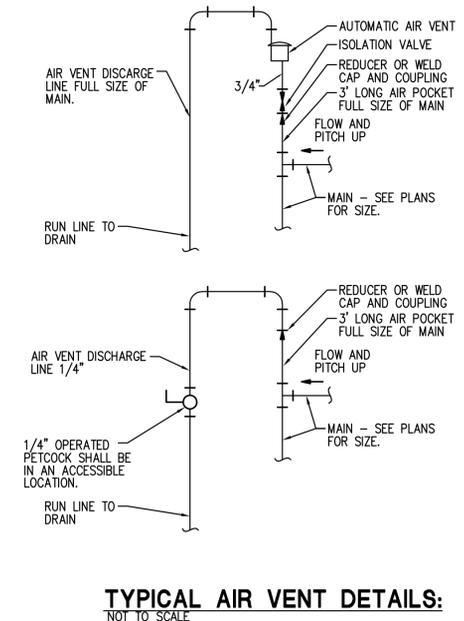
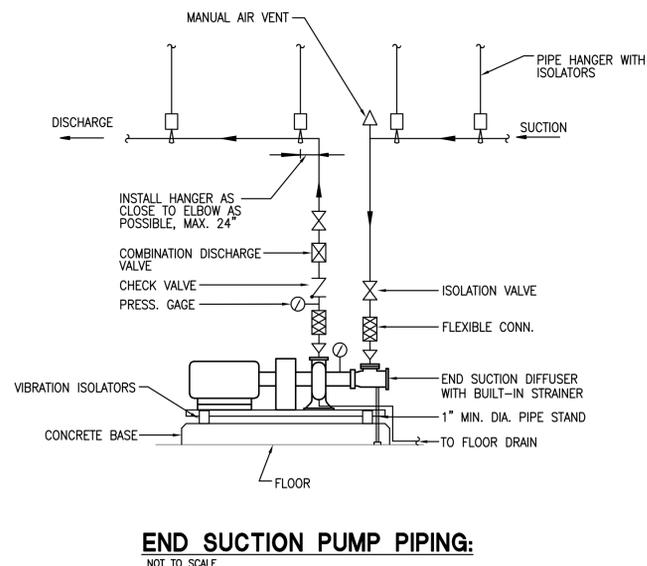
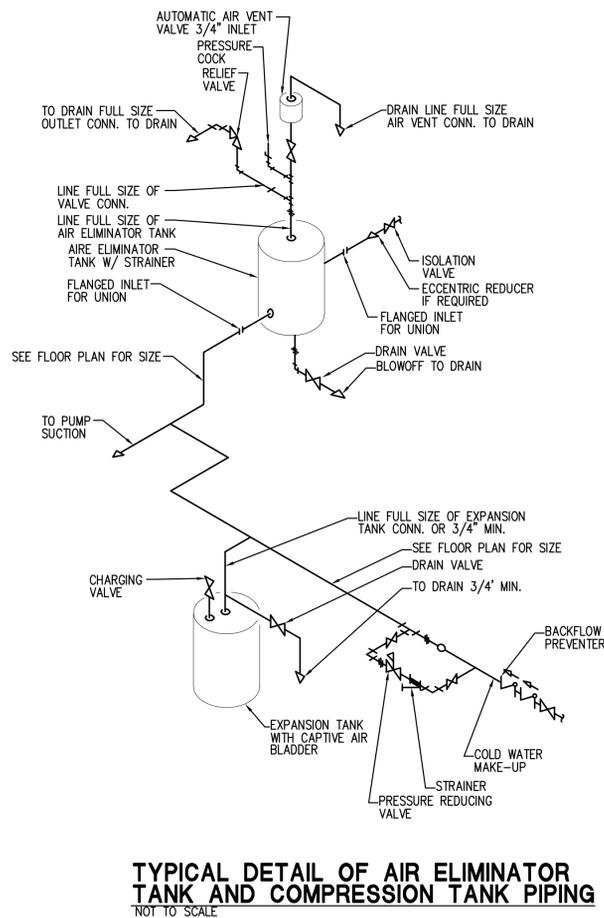
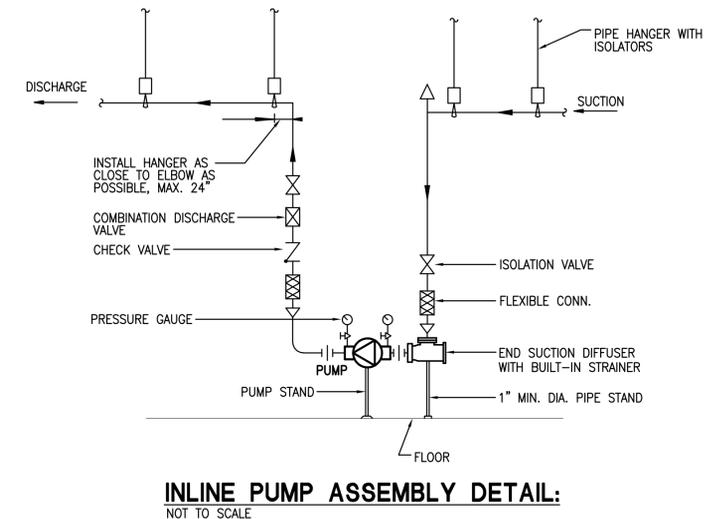
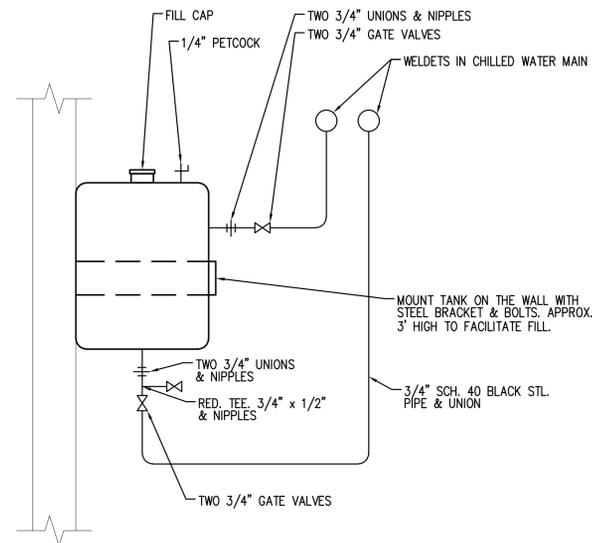
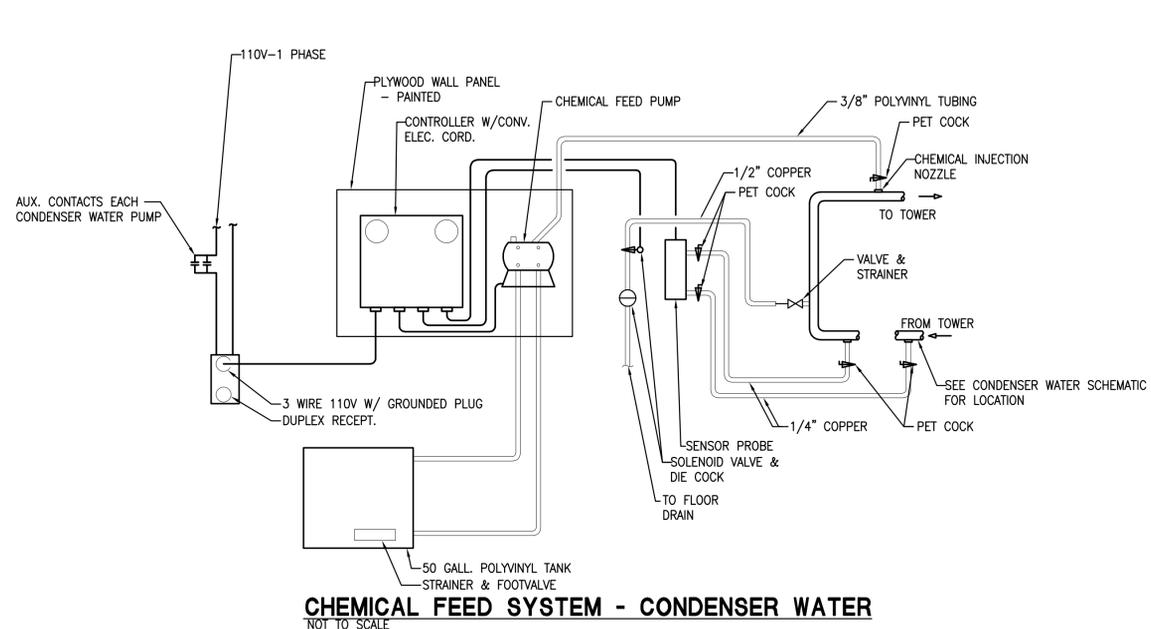
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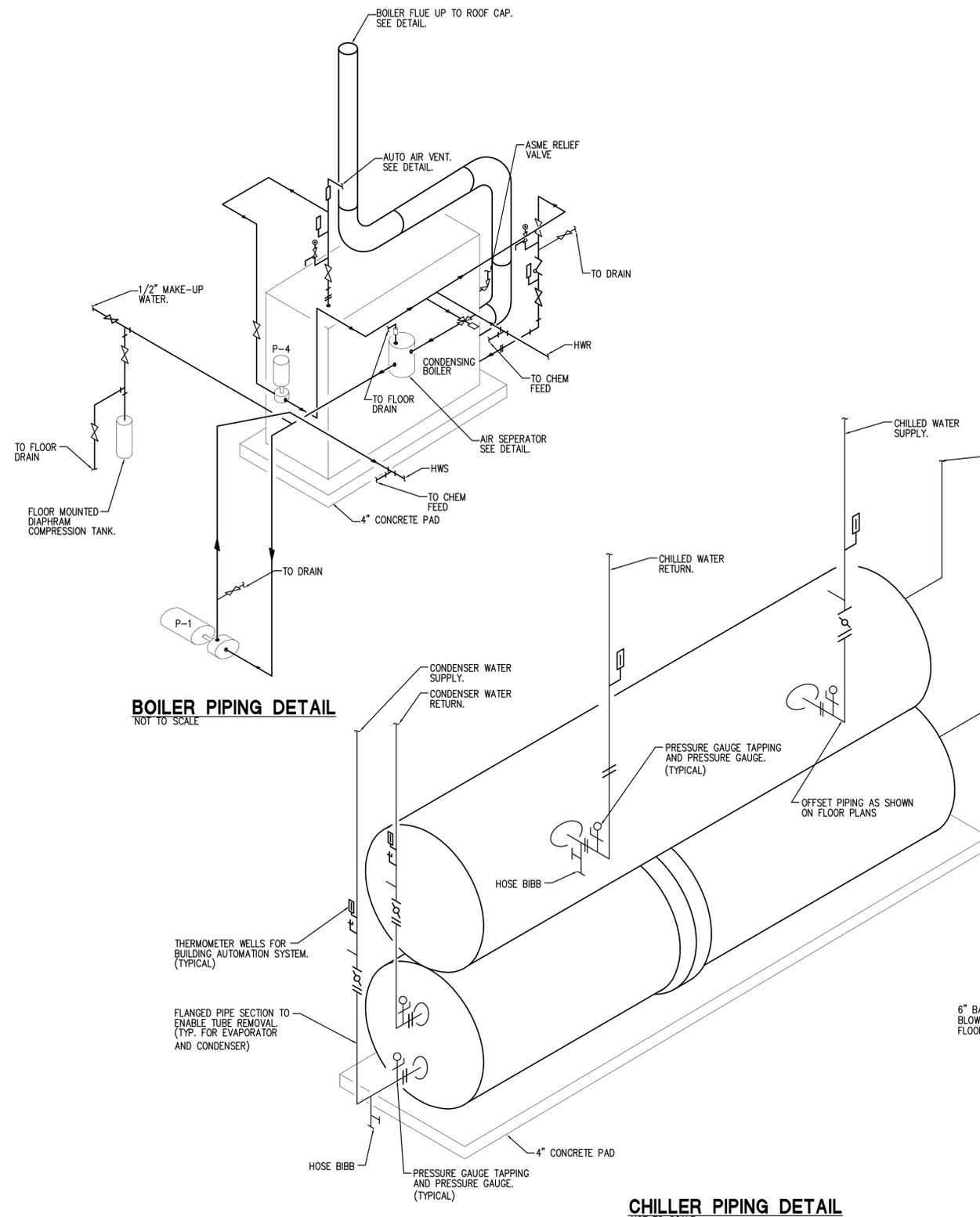
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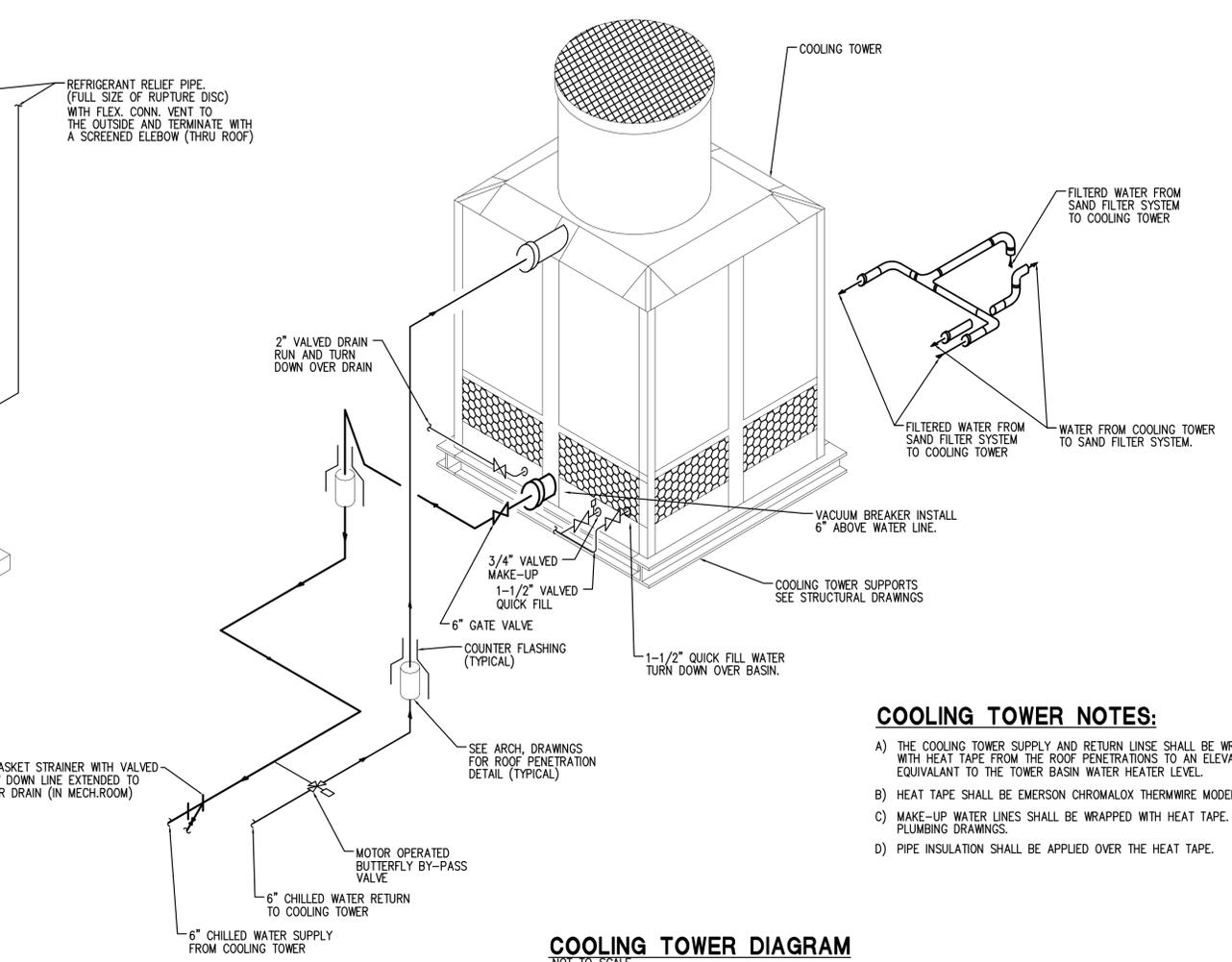
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BOILER PIPING DETAIL
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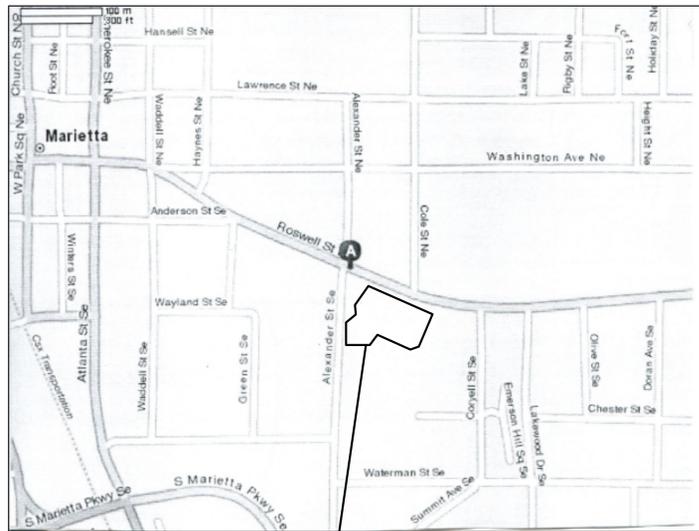
CHILLER PIPING DETAIL
NOT TO SCALE



COOLING TOWER DIAGRAM
NOT TO SCALE

COOLING TOWER NOTES:

- A) THE COOLING TOWER SUPPLY AND RETURN LINES SHALL BE WRAPPED WITH HEAT TAPE FROM THE ROOF PENETRATIONS TO AN ELEVATION EQUIVALENT TO THE TOWER BASIN WATER HEATER LEVEL.
- B) HEAT TAPE SHALL BE EMERSON CHROMALOX THERMWIRE MODEL TBTU-30S.
- C) MAKE-UP WATER LINES SHALL BE WRAPPED WITH HEAT TAPE. SEE PLUMBING DRAWINGS.
- D) PIPE INSULATION SHALL BE APPLIED OVER THE HEAT TAPE.



VICINITY & SITE LOCATION MAPS

INDEX OF DRAWINGS	
DWG #	DRAWING NAME
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E300	ELECTRICAL ONE-LINE AND CONTROL DIAGRAMS

SCOPE OF WORK:

PHASE 1

1. DEMOLISH AND REMOVE THE EXISTING CHILLER, COOLING TOWER, CHILLED WATER AND CONDENSER WATER PUMPS, CHILLED WATER & CONDENSER WATER PIPING (INCLUDING AIR SEPARATORS, VALVES, HANGERS, ETC.) IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
2. PROVIDE AND INSTALL NEW CHILLER, COOLING TOWER, CHILLED WATER & CONDENSER WATER PUMPS, CHILLED WATER & CONDENSER WATER PIPING (INCLUDING AIR SEPARATORS, VALVES, HANGERS, ETC.) IN ACCORDANCE WITH THE DRAWINGS & SPECIFICATIONS.
3. EXPAND EXISTING APOGEE CONTROL SYSTEM TO ADD ADDITIONAL CONTROL POINTS TO MONITOR NEW CHILLER, COOLING TOWER, ETC.
4. OPERATIONAL TEST AND CERTIFICATION TO MEET THE DESIGN SPECIFICATIONS.
5. ALL AREAS DISTURBED SHALL BE CLEANED AND RESTORED TO THE ORIGINAL ORDER. REMOVE ALL TOOLS AND WASTE.

PHASE 2

1. DEMOLISH AND REMOVE THE EXISTING BOILER, HEATING HOT WATER PUMPS, HEATING HOT WATER PIPING (INCLUDING GAS FLUE, AIR SEPARATOR, EXPANSION TANK, VALVES, HANGERS, ETC.) IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
2. PROVIDE AND INSTALL NEW BOILER, HEATING HOT WATER PUMPS, HEATING HOT WATER PIPING (INCLUDING EXPANSION TANK, GAS VENT, AIR SEPARATOR, VALVES, HANGERS, ETC.) IN ACCORDANCE WITH THE DRAWINGS & SPECIFICATIONS.
3. ADD CONTROL POINTS TO MONITOR NEW BOILER AND HEATING HOT WATER PUMPS.
4. OPERATIONAL TEST AND CERTIFICATION TO MEET THE DESIGN SPECIFICATIONS.
5. ALL AREAS DISTURBED SHALL BE CLEANED AND RESTORED TO THE ORIGINAL ORDER. REMOVE ALL TOOLS AND WASTE.

BID ALTERNATE #1

1. DEMOLISH AND REMOVE EXISTING ROOF TOP UNITS AND DISCONNECT FROM EXISTING CONTROL SYSTEMS.
2. PROVIDE AND INSTALL NEW ROOF TOP UNITS AND RECONNECT EXISTING SUPPLY AND RETURN DUCTWORK AND CONTROL SYSTEMS IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
3. OPERATIONAL TEST AND CERTIFICATION TO MEET THE DESIGN SPECIFICATIONS.
4. ALL AREAS DISTURBED SHALL BE CLEANED AND RESTORED TO THE ORIGINAL ORDER. REMOVE ALL TOOLS AND WASTE.

BID ALTERNATE #2

1. DEMOLISH AND REMOVE EXISTING FAN MOTORS FROM AH1, AH2 AND AH4. REMOVE OR WELD INPLACE FAN INLET VANES FOR AH1, AH2 & AH4 IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
2. PROVIDE AND INSTALL NEW FAN MOTORS AND VARIABLE FREQUENCY DRIVES (VFDs) AND ASSOCIATED ITEMS (DISCONNECT SWITCHES, PRESSURE SWITCHES, CONTROLS, ETC.) FOR AH1, AH2, AH4 IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
3. OPERATIONAL TEST AND CERTIFICATION TO MEET THE DESIGN SPECIFICATIONS.
4. ALL AREAS DISTURBED SHALL BE CLEANED AND RESTORED TO THE ORIGINAL ORDER. REMOVE ALL TOOLS AND WASTE.



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PROJECT NAME
**HVAC IMPROVEMENTS -
COBB COUNTY CENTRAL
LIBRARY**
266 ROSWELL ST.
MARIETTA, GA 30060

REVISIONS

DRAWING TITLE
PROJECT INFORMATION

DRAWN BY
MM

CHECKED BY
TB

DATE
08-11-10

SHEET
T001
OF