

**TOWN OF GLASTONBURY  
PROCUREMENT NOTICE  
REQUEST FOR PROPOSAL  
PROVIDE AND INSTALL VARIABLE FREQUENCY DRIVES AT  
VARIOUS SCHOOLS  
TOWN OF GLASTONBURY  
RPGL-2010- 28**

The Town of Glastonbury will be accepting proposals from qualified individuals or firms to provide and install Variable Frequency Drives and appropriate enclosures on existing roof top units at Smith Middle located at 216 Addison Road, Glastonbury, CT and Glastonbury High School, 330 Hubbard St, Glastonbury, CT. This includes providing 5 units and installing 11 units currently owned by the Glastonbury Board of Education. The purpose of the project is to better control the RTUs and support retro commissioning activities. Proposals shall provide technical data for components to be provided, pricing proposals, and other data necessary in order to determine the best value.

There will be a **MANDATORY PRE-PROPOSAL MEETING** held at SMITH MIDDLE SCHOOL, GLASTONBURY, CT. 06033 on **December 30, 2009 at 9:00 AM.** Attendance is mandatory.

Proposals must be submitted to the Purchasing Agent no later than **January 13, 2010 at 11:00 AM.**

**LATE PROPOSALS WILL NOT BE CONSIDERED. COPIES OF THE PROPOSAL ARE AVAILABLE ON THE TOWN'S WEBSITE AT [www.glastonbury-ct.gov](http://www.glastonbury-ct.gov).**

Mary F. Visone  
Purchasing Agent

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- Attachment A – Selected Plan Pages
- Attachment B - Town of Glastonbury Response Page
- Attachment C – Statement of Non-Collusion

**SECTION I – GENERAL INFORMATION**

**Background** – The Smith Middle School was constructed in approximately 2000. The building is served by numerous Roof Top Units for heating and air conditioning. As part of a retro commissioning project, various units will require the installation of variable frequency drives. The Board of Education has recently purchased a selection of Honeywell drives of various sizes. The project will require the vendor to provide and install 5 additional units of various sizes. Some VFDs may require NEMA enclosures rated for exterior applications. The proposer will identify units that require enclosures. Glastonbury High School was constructed in various stages, most recently being renovated in 2005.

**General Intent** - It is the general intent to install the on hand units and provide and install the remainder. The installation shall include all required electrical work and enclosures. Control wiring and programming are not part of this work and will be completed by the Town's control system integrator. The Proposers will be required to become familiar with the features of the Retro Commissioning project to ensure compatibility with the overall project

**Existing Facility** –Building plans are provided as Attachment A.

**SECTION II – CONSIDERATIONS AND RESTRICTIONS**

- The selected vendor will be required to obtain a building permit for the work awarded. The fee for the building permit will be \$0.18 per \$1000 due the State. Local building permit fees will not be required.
- The successful respondent shall ensure the system will comply with all applicable codes. The building will be available for work immediately however, work schedules and locations will need to be coordinated on a daily basis with the School Administration and Facilities Department. Hours available for work will be from 7:00 AM to 5:00 PM, Monday through Friday, holidays excepted. Work on weekends and evenings may be scheduled, as necessary. After hours or weekend/holiday work may be necessary to complete the work in order to minimize disruption to educational and community use programs.
- The proposed system shall take into account ease of maintenance of the units and subsequent control work.
- Vendors may propose more than one alternative to satisfy the Town's requirement. For each alternative proposed the following information shall be provided, at a minimum:
  - Proposal to perform the work.
  - Technical data for each of the components proposed for installation including layout, configuration, wiring size and type, make, model, HP rating, size, and quantities of components to be provided, enclosures, if necessary, and any other data necessary to evaluate the applicability of the system.
  - Complete scope of work included in the proposal and any work not included in the proposal but required to make the system fully functional in conjunction with the control work.
  - A schedule indicating major milestones for installation of the VFDs and enclosures, if required, removal of existing components, operational testing, and operations and maintenance training of Town staff.

- Warranties provided.
  - Any premium costs associated with work outside of normal work hours that is not included in the basic price proposal.
  - Copies of applicable contractor's licenses.
  - Names and phone numbers of references for similar work performed.
- All drawings, reports, data, and other documents prepared by the Vendor according to this Agreement shall be submitted to the Town for its review and approval. Resulting work products of the Vendor pursuant to this solicitation shall become property of the Town of Glastonbury.
  - No such approval shall in any way be construed to relieve the Vendor of responsibility for technical adequacy or operate as a waiver of any of the Town's rights under this Agreement. The Vendor shall remain liable to the Town according to applicable laws and practices for all damages to the Town caused by the Vendor's negligent performance of any of the services furnished under this Agreement.
  - The Vendor shall conduct regular meetings with the Town, and other appropriate parties, at a location established by the Town to review progress. The Vendor will provide written notes of each meeting to all attending parties before the next meeting.
  - Consideration will be given to the ability to install the units and enclosures where necessary, the associated cost, and the time required to provide and install the units.
  - Units proposed shall also be able to be serviced by a third party vendor without any proprietary restrictions.
  - **The Town shall not be obligated to accept any proposal and the Town shall reserve the sole right to determine the appropriateness of any proposal for this work.**

### **SECTION III - SUBMISSION OF PROPOSAL**

#### ***MINIMUM REQUIREMENTS***

- Vendor shall be licensed by the State of Connecticut to perform the work required and involved.
- Vendor shall have an assigned project manager to oversee this work and act as liaison to the Town.
- Vendor shall demonstrate sufficient staff resources to perform the work.
- Vendor shall have demonstrated experience designing and installing similar systems within the past five (5) years.

#### ***TERM OF SERVICE***

The selected firm will be expected to commence services within 15 days of contract execution or on such other schedule as may be agreed to with the Town. The Town anticipates allocating up to 2 months of overall time for the project described herein including data collection,

meetings, consultant preparation, etc. The Town of Glastonbury reserves the right to cancel this proposal process at any time should any of the following conditions exist:

- Funds are not appropriated to allow continuance of this contract.
- The Town, through changes in its requirements or method of operation, no longer has a need for this service.
- The Town is not satisfied with the level of services provided under the contract or the contractor fails to comply with any of the terms and conditions outlined in the contract.

***SITE INSPECTION***

A **mandatory site inspection** is scheduled for **December 30, 2009 at 9:00 AM** at the site at 216 Addison Road, Glastonbury, CT 06033.

***PROPOSAL INSTRUCTIONS***

- By submitting a proposal, you represent that you have thoroughly examined and become familiar with the Scope of Services outlined in this RFP and you are capable of performing the work to achieve the Town's objectives.
- All firms are required to submit a **clearly marked** original and seven (7) copies of their proposal to Mary F. Visone, Purchasing Agent, 2155 Main Street, Glastonbury, CT by the date and time listed in the proposal response page. All proposals will be opened publicly and recorded as received. Respondents may be present at the opening; however, there will be no public reading of Proposals. Proposals received later than the time and date specified will not be considered. The proposal must be submitted in a sealed envelope or package and the outside shall be clearly marked as follows:

**SEALED REQUEST FOR PROPOSAL  
PROCUREMENT NOTICE  
PROVIDE AND INSTALL VARIABLE FREQUENCY DRIVES-VARIOUS SCHOOLS  
RPGL-2010-28  
JANUARY 13, 2010  
11:00 AM**

- All respondents are required to submit the information detailed below. **Responses shall be organized and presented in the order listed below to assist the Town in reviewing and rating proposals.** Responses should be presented in appropriate detail to thoroughly respond to the requirements and expected services described herein.
  1. Table of Contents, to include clear identification of the material provided by section and number.
  2. A letter of transmittal indicating the firm's interest in providing the service and any other information that would assist the Town in making a selection. This letter must be signed by a person legally authorized to bind the firm to a contract.
  3. Name and telephone number of person(s) to be contacted for further information or clarification.

4. Copy of State of Connecticut license to perform the work required and involved.
5. Name and qualifications of assigned project manager and a list of staff members who would be involved with the project, including their assigned roles and a description of their background and experience.
6. A background statement including a description of relevant experience of the firm/individual submitting the proposal.
7. For each alternative proposed the following information:
  - a. Price to perform the work.
  - b. Technical data for each of the system(s) and components proposed for installation including layout, configuration, make, model, HP rating, size, and quantities of components to be provided, and any other data necessary to evaluate the applicability of the system. Proposer shall determine where enclosures for the VFD units will be necessary and provide in proposal.
  - c. Complete scope of work included in the proposal and any work not included in the proposal but required to make the units fully functional.
  - d. A schedule indicating major milestones for installation of new system, removal of existing components, operational testing, and operations and maintenance training of Town staff.
  - e. Warranties provided.
  - f. Any premium costs associated with work outside of normal work hours that is not included in the basic price proposal.
  - g. Copies of applicable contractor's licenses.
  - h. Names and phone numbers of references for similar work performed.
8. Respondent shall provide a list of 3-5 references and examples of previous similar projects successfully completed within the last five years with the contact name, address and telephone number of the owners' representative in each project.
9. A concluding statement as to why the respondent is best qualified to meet the needs of the Town.
10. Proposal Response Form completed including labor and material cost for each item.
11. Description of any exceptions taken to this RFP. If any proposal involves any exception from the stated requirements and specifications, they must be clearly noted as exceptions and attached to the proposal.
12. Respondent is required to review the Town of Glastonbury Code of Ethics adopted July 8, 2003 and effective August 1, 2003. Respondent shall acknowledge that they have reviewed the document in the area provided on the attached Ethics Acknowledgement form included on **ATTACHMENT B**. The selected respondent will also be required to complete and sign a Consultant Acknowledgement Form prior to award. The Code of Ethics and the Consultant Acknowledgment Form can be accessed at the Town of Glastonbury website at [www.glastonbury-ct.gov](http://www.glastonbury-ct.gov). Upon entering the website click on "Business," then "Doing Business with the Town," then "Bids and Quotes" which will bring you to the links for the Code of Ethics and the

Consultant Acknowledgement Form. If the respondent does not have access to the internet, a copy of these documents can be obtained through the Purchasing Department at the address listed within this proposal.

13. Statement of Non-Collusion (**ATTACHMENT C**).

14. **Non Resident Contractors (IF APPLICABLE)**

The Town is required to report names of nonresident (out of state) Contractors to the State of Connecticut, Department of Revenue Services (DRS) to ensure that Employment Taxes and other applicable taxes are being paid by Contractors. **Upon award, all nonresident contractors must furnish a five percent (5%) sales tax guarantee bond (state form AU-766), or a cash bond for 5% of the total contract price (state form AU-72) to DRS even though this project is exempt from most sales and use taxes.**

See State Notice to Nonresident Contractors SN 2005(12). If the above bond is not provided the Town is required to withhold 5% from Contractor's payments and forward it to the State DRS.

Contractor must promptly furnish to the Town a copy of the **Certificate of Compliance** issued by the State DRS.

15. Any technical questions regarding this RFP shall be made in writing and directed to Mr. David Sacchitella, Building Superintendent, at (860) 652-7706 or via e-mail at [Dave.Sacchitella@glastonbury-ct.gov](mailto:Dave.Sacchitella@glastonbury-ct.gov). Administrative questions should be directed to Mary F. Visone, Purchasing Agent at (860) 652-7588. All questions, answers, and/or addenda, as applicable, will be posted on the Town's website at [www.glastonbury-ct.gov](http://www.glastonbury-ct.gov) (Upon entering the website click on Bids & RFPs). **It is the respondent's responsibility to check the website for addenda prior to submission of any proposal.**

**Note:** Responses to requests for more specific contract information than is contained in the RFQ shall be limited to information that is available to all offerors and that is necessary to complete this process. The request must be received at least five (5) business days prior to the advertised response deadline.

16. The Town of Glastonbury is dedicated to waste reduction and the practice of using and promoting the use of recycled and environmentally preferable products. Respondents are encouraged to submit RFP responses that are printed double-sided (except for the signed proposal page) on recycled paper, and to use paper dividers to organize the RFP for review. All proposal pages should be secured with a binder clip, staple or elastic band, and shall not be submitted in plastic binders or covers, nor shall the proposal contain any plastic inserts or pages. We appreciate your efforts towards a greener environment.
- Failure to include any of the above-referenced items in the submitted PROPOSAL may be grounds for disqualifying said proposal.

***EVALUATION CRITERIA***

- The Town of Glastonbury shall select the responsible and responsive Proposal which is determined by the Town to be the best suited, most advantageous, and provides the best value to the Town on the basis of the criteria and evaluation factors included in this Request for Proposal. Initial cost is one factor in the award decision. The Town expressly reserves the right to negotiate with the selected Proposer prior to an award of any contract pursuant to this RFP. Best value shall be determined by consideration of some or all of the following factors as deemed appropriate by the Town.
  - The qualifications and experience of the vendor and its designated account representative. Successful performance of similar work on other accounts including applicable license to perform the work.
  - Completeness of the proposal and adequacy of the information provided.
  - Scope of Work/Technical Solution/Approach to Project: Types, capabilities, efficiency, applicability, ease of operation and maintenance, warranties, etc. of system and components proposed.
  - Schedule.
  - Total Cost/Overall Value: Initial price to provide and install including any premium costs not included in base proposal
  - The number, scope, and significance of conditions or exceptions attached or contained in the proposal.
  - Satisfactory reference evaluations.



**SELECTION PROCESS**

- This request for proposals does not commit the Town of Glastonbury to award a contract or to pay any costs incurred in the preparation of a proposal to this request. All proposals submitted in response to this request become the property of the Town of Glastonbury. The Town of Glastonbury reserves the right to accept or reject any or all proposals received as a result of this request, to negotiate with the selected respondents, the right to extend the contract for additional services, or to cancel in part or in its entirety the request for proposals, if it is in the best interests of the Town to do so.
- An Evaluation Committee, appointed by the Town Manager, will evaluate all proposals received for completeness and the respondent's ability to meet all requirements as outlined in this RFP.
- Following review and evaluation of proposals, the Town reserves the right to request certain additional information. Based on review and rating of proposals, if determined to be necessary, a short list of respondents may be invited to interview with the Town Selection Committee.
- Additional technical and/or cost information may be requested from any respondent by the evaluation committee prior to, during, or after the interview for clarification purposes, but in no way changes the original proposal submitted. Interviews are at the option of the evaluation committee and may or may not be conducted.
- Based on the results of the interview process, the Town will review the Scope of Services, proposed price, and other factors with the top-rated firm(s) and negotiate a specific agreement based on these discussions.
- The selected respondent will be issued a purchase order to perform the work.

**TIMELINE**

The Town intends to adhere to the schedule listed below as closely as possible, but reserves the right to modify the schedule in the best interest of the Town as required.

Publicize RFP	<b>December 21, 2009</b>
Mandatory Pre-proposal Meeting	<b>December 30, 2009 9:00A.M.</b>
RFP Due Date	<b>January 13 by 11:00 A.M.</b>
Shortlist of Submittals Received	<b>TBD, if necessary</b>
Interviews with Top Respondents	<b>TBD, if necessary</b>
Contract Effective Date	<b>TBD</b>

**INSURANCE**

The Consultant shall, at its own expense and cost, obtain and keep in force during the entire duration of the Project or Work the following insurance coverage covering the Consultant and all of its agents, employees and sub-contractors and other providers of services and shall name the Town and BOE, its employees and agents as an Additional Insured on a primary and non-contributory basis to the Consultant's Commercial General Liability and Automobile Liability policies. **These requirements shall be clearly stated in the remarks section on the Consultant's Certificate of Insurance.** Insurance shall be written with insurance carriers approved in the State of Connecticut and with a minimum Best's Rating of A-. In addition, all carriers are subject to approval by the Town. Minimum limits and requirements are stated below:

1) Worker's Compensation Insurance:

- Statutory Coverage
- Employer's Liability
- \$100,000 each accident/\$500,000 disease-policy limit/\$100,000 disease each employee

2) Commercial General Liability:

- Including Premises & Operations, Products and Completed Operations, Personal and Advertising Injury, Contractual Liability and Independent Contractors.
- Limits of Liability for Bodily Injury and Building Damage  
Each Occurrence \$1,000,000  
Aggregate \$2,000,000 (The Aggregate Limit shall apply separately to each job.)
- A Waiver of Subrogation shall be provided

3) Automobile Insurance:

- Including all owned, hired, borrowed and non-owned vehicles
- Limit of Liability for Bodily Injury and Property Damage:  
Per Accident \$1,000,000

4) Errors and Omissions Liability or Professional Services Liability Policy:  
\$1,000,000

- Provide Errors and Omissions Liability or Professional Services Liability Policy for a minimum Limit of Liability \$1,000,000 each occurrence or per claim. The Town, its employees and agents shall be named Additional Insured for this specific Project. The certificate shall specify that the Town and Board of Education shall receive 30 days advance written notice of cancellation or non-renewal specific to this Project.
- The Consultant agrees to maintain continuous professional liability coverage for the entire duration of this Project, and shall provide for an Extended Reporting Period in which to report claims for seven (7) years following the conclusion of the Project.

The Consultant shall provide a Certificate of Insurance as "evidence" of General Liability, Auto Liability including all owned, hired, borrowed and non-owned vehicles, statutory Worker's Compensation and Employer's Liability and Professional Services Liability coverage.

The Consultant shall direct its Insurer to provide a Certificate of Insurance to the Town before any work is performed. The Certificate shall specify that the Town shall receive 30 days advance written notice of cancellation or non-renewal. The Certificate shall evidence all required coverage including the Additional Insured and Waiver of Subrogation. The Consultant shall provide the Town copies of any such policies upon request.

### ***INDEMNIFICATION***

To the fullest extent permitted by law, the Consultant shall indemnify and hold harmless the Town and the Board of Education and their respective consultants, agents, and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, attorneys and other professionals and court and arbitration costs) to the extent arising out of or resulting from the performance of the Consultant's work, provided that such claim, damage, loss or expense is caused in whole or in part by any negligent act or omission by the Consultant, or breach of its obligations herein or by any person or organization directly or indirectly employed or engaged by the Consultant to perform or furnish either of the services, or anyone for whose acts the Consultant may be liable.

As to any and all claims against the Town or any of its consultants, agents or employees by any employee of Consultant, by any person or organization directly or indirectly employed by Consultant to perform or furnish any of the work, or by anyone for whose acts Consultant may be liable, the indemnification obligation stated herein shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Consultant under worker's or workman's compensation acts, disability benefit acts or other employee benefit acts.

The above insurance requirements are the Town's general requirements. Insurance requirements with the awarded respondent are subject to final negotiations.



**ATTACHMENT A**

**See attached plans/sketches:**

- **Division 16 Electrical Scope w/ pictures**
  - **Sketches of Smith Middle School**
  - **Sketches of Glastonbury High School**
- **List of VFD by required by location and type**
  - **School Year Calendar**
  - **BoE Contractor Compliance Form**
- **Product information on Honeywell VFDs**

# Glastonbury Schools

## VFD Installation For Middle & High School

### **ELECTRICAL SCOPE OF WORK - DIVISION # 16 POWER WIRING**

Provide all material, labor and equipment to perform the work described below and make complete, safe, and functional systems.

Complete the pricing breakout schedule (attached), for all portions of the work.

#### **General Specifications**

1. Provide all material, labor, tools and equipment required to perform the work described below and make complete, safe, and functional systems. This work shall include, but not be limited to core drilling, cutting, fire-stopping, patching, and painting to match existing conditions. All Honeywell VFDs will be provided by Glastonbury Schools. The Electrical Contractor will be mounting, installing and wiring the (480V) drives only. VFD start-up shall be by Honeywell. All VFDs are assumed to have internal fused main power connections and bypass contactors.
2. If VFDs are to be installed in the main electrical compartment of the RTU (in place of the existing fan fuses, contactors and heater over-loads) then the Electrical Contractor shall remove the unused components and mount VFDs. The existing main electrical disconnect switch on the RTU shall feed both drives.
3. If VFDs are to be installed in a weather-proof NEMA 3R enclosure and mounted outside on the RTU next to the main electrical disconnect switch, the Electrical Contractor shall furnish the enclosures and provide material and labor to mount them. A 1/2" conduit hole shall be installed inside the enclosure allowing supply air from the RTU to bleed into the panel and holes on the bottom shall vent out. This will help to condition the air inside of the enclosure for the VFDs.
4. The Electrical Contractor shall pay for all permits and inspections required by controlling authority if applicable and all work shall be installed in accordance with state, local and national codes.
5. The Electrical Contractor shall warrant their workmanship and materials for a period of one year from the date of acceptance by Glastonbury Schools. Manufacturer's VFD warranties shall be turned over to the Glastonbury Schools upon completion of the project.

## **VFD Installation and Wiring for the Middle School for all Rooftop Units**

### **RTU-2 & RTU-3 Large & Small Gymnasium (5 HP VFDs / Supply & Return Fan)**

Electrical Contractor shall investigate the feasibility of mounting the VFDs in the main electrical compartment of the RTU in place of the existing fan fuses, contactors and heater over-loads. If there is not enough space in the compartment then the VFDs shall be installed in a weather-proof NEMA 3R enclosure and mounted outside on the RTU next to the main electrical disconnect switch. Main 480V power from the RTU disconnect shall feed both drives for the supply and return fans. This will be typical for RTU-2 & RTU-3.

### **RTU-7 & RTU-8 Auditorium Units (10 HP Supply VFD / 5 HP Return VFD)**

Electrical Contractor shall investigate the feasibility of mounting the VFDs in the main electrical compartment of the RTU in place of the existing fan fuses, contactors and heater over-loads. If there is not enough space in the compartment then the VFDs shall be installed in a weather-proof NEMA 3R enclosure and mounted outside on the RTU next to the main electrical disconnect switch. Main 480V power from the RTU disconnect shall feed both drives for the supply and return fans. This will be typical for RTU-7 & RTU-8.

### **RTU-6 Cafeteria Unit (15 HP Supply VFD / 7.5 HP Return VFD)**

Electrical Contractor shall install the VFDs inside the existing main electrical enclosure mounted on the outside of the RTU. The existing fan fuses, contactors and heater over-loads for the supply and return fans shall be removed and the VFDs will be installed in-place. A 1/2" conduit hole shall be installed inside the enclosure allowing supply air from the RTU to bleed into the panel and holes on the bottom shall vent out. This will help to condition the air inside of the enclosure for the VFDs.

### **RTU-1 Media Center Unit (20 HP VFD / 10 HP Return VFD)**

Electrical Contractor shall install the VFDs in a new weather-proof NEMA 3R enclosure and mounted outside on the RTU next to the main electrical disconnect switch. Main 480V power from the RTU disconnect shall feed both drives for the supply and return fans. Also provide venting for the panel as described above.

## **VFD Installation and Wiring for the High School**

### **Cafeteria Unit (20 HP VFD / 7.5 HP Return VFD) RTU D-4 on Alerton System**

Electrical Contractor shall investigate the feasibility of mounting the VFDs in the main electrical compartment of the RTU in place of the existing fan fuses, contactors and heater over-loads. If there is not enough space in the electrical compartment then the Electrical Contractor and Glastonbury Schools shall determine where best to mount the drives. If the VFDs are installed in a weather-proof NEMA 3R enclosure and mounted outside on the RTU then adequate ventilation and tempering shall be considered.

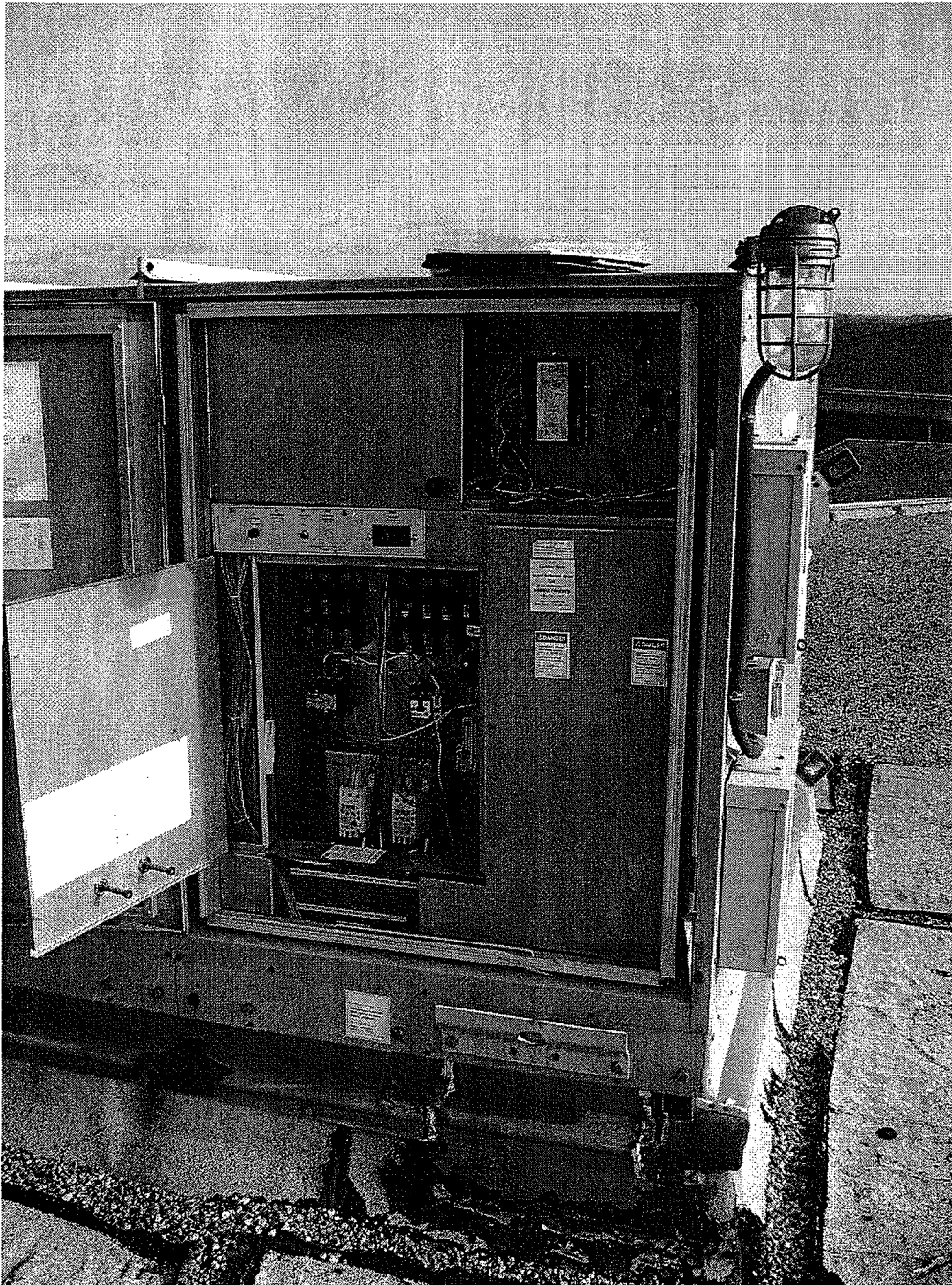
### **AHU E-1 Auditorium (20 HP VFD) & AHU E-2 Band / Choral (10 HP VFD)**

Electrical Contractor shall mount and install the VFDs next to the existing AHU starters located on the wall of the mechanical room. Main 480V power from the existing starters shall feed the drives. The Electrical Contractor shall remove the existing starters and provide a new disconnect switch in place.



## Typical RTU VFD Installations For Glastonbury Schools

### Typical RTU Electrical Compartment (RTU-7 Auditorium)

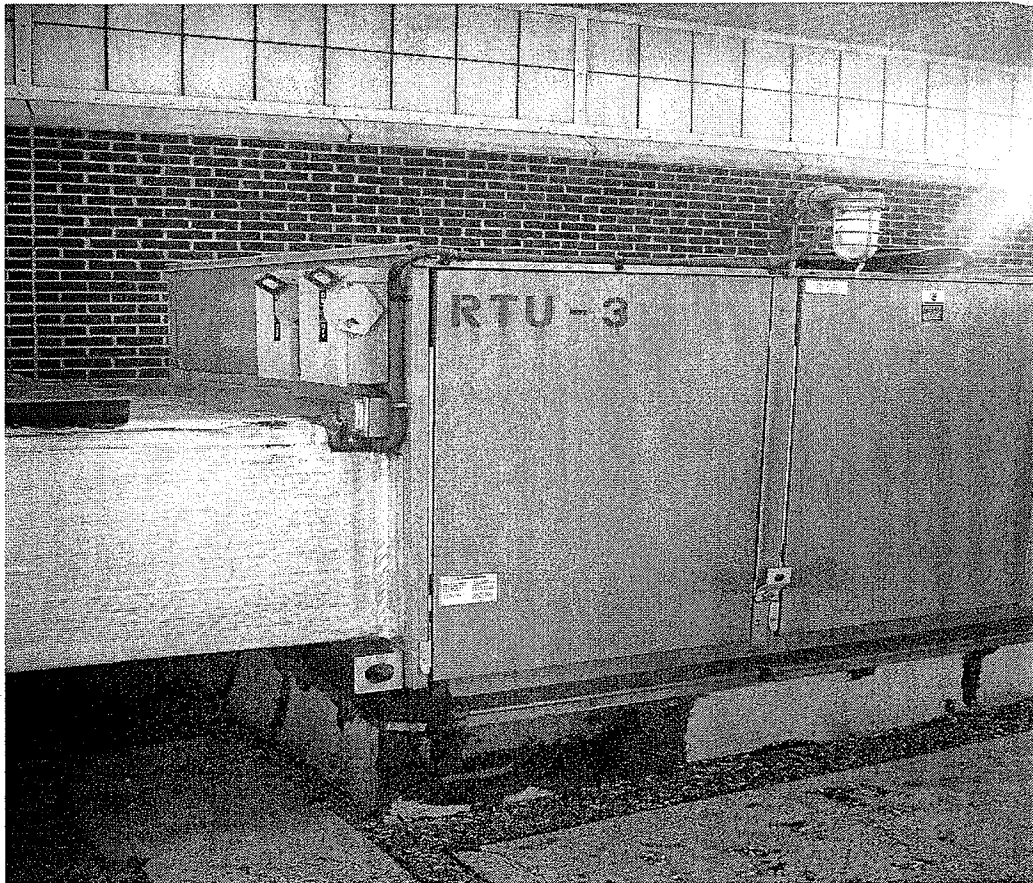
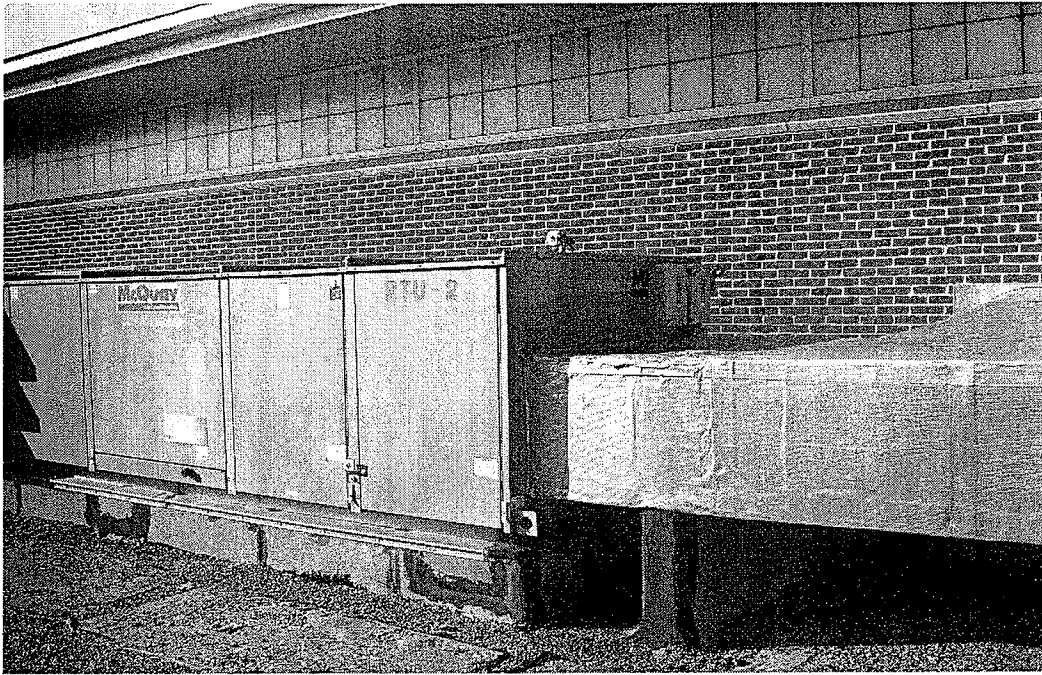


**Typical RTU with Disconnect Switch Location**

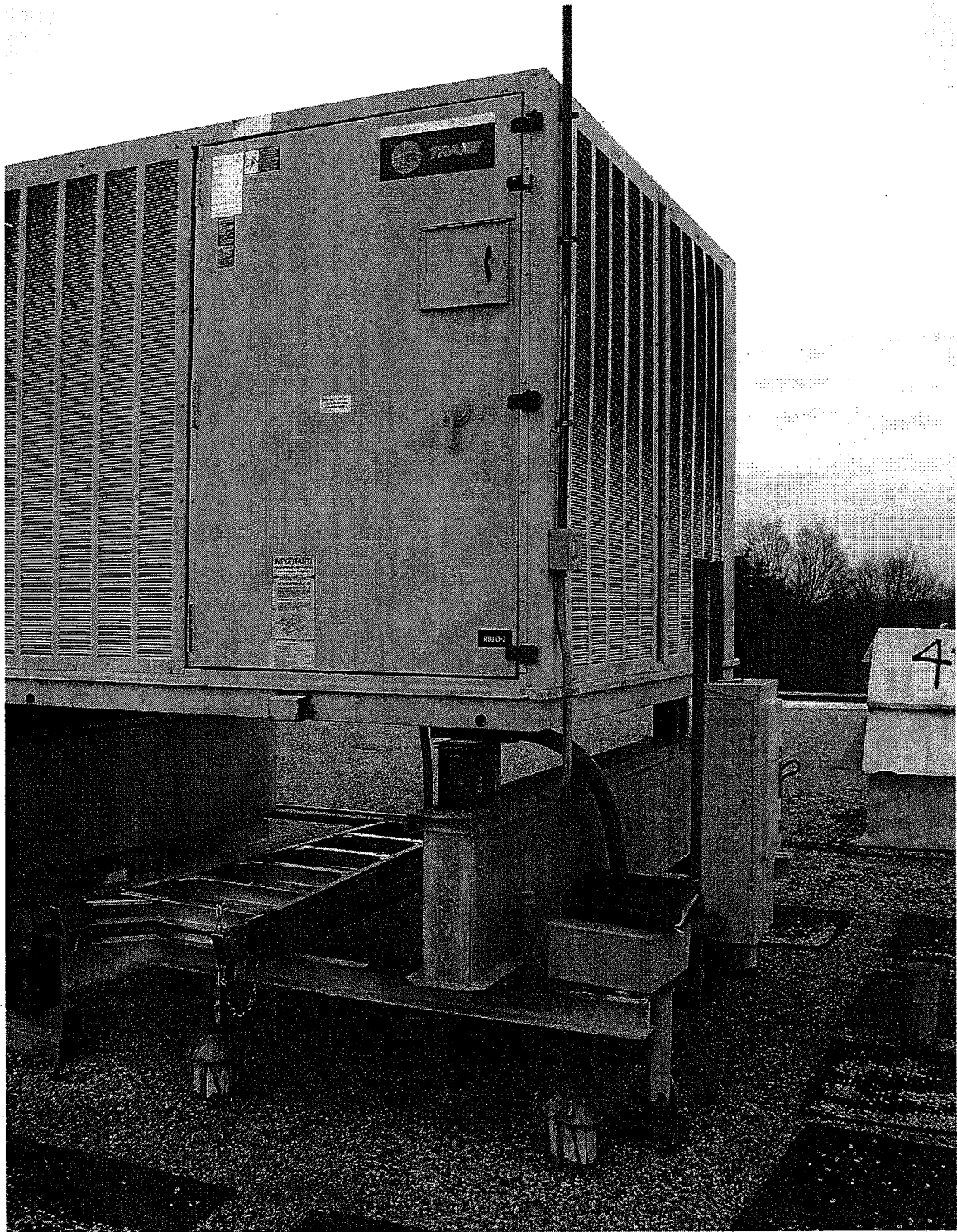
**Top Disconnect is the Main Feed. One below is For HW Pump in RTU.**



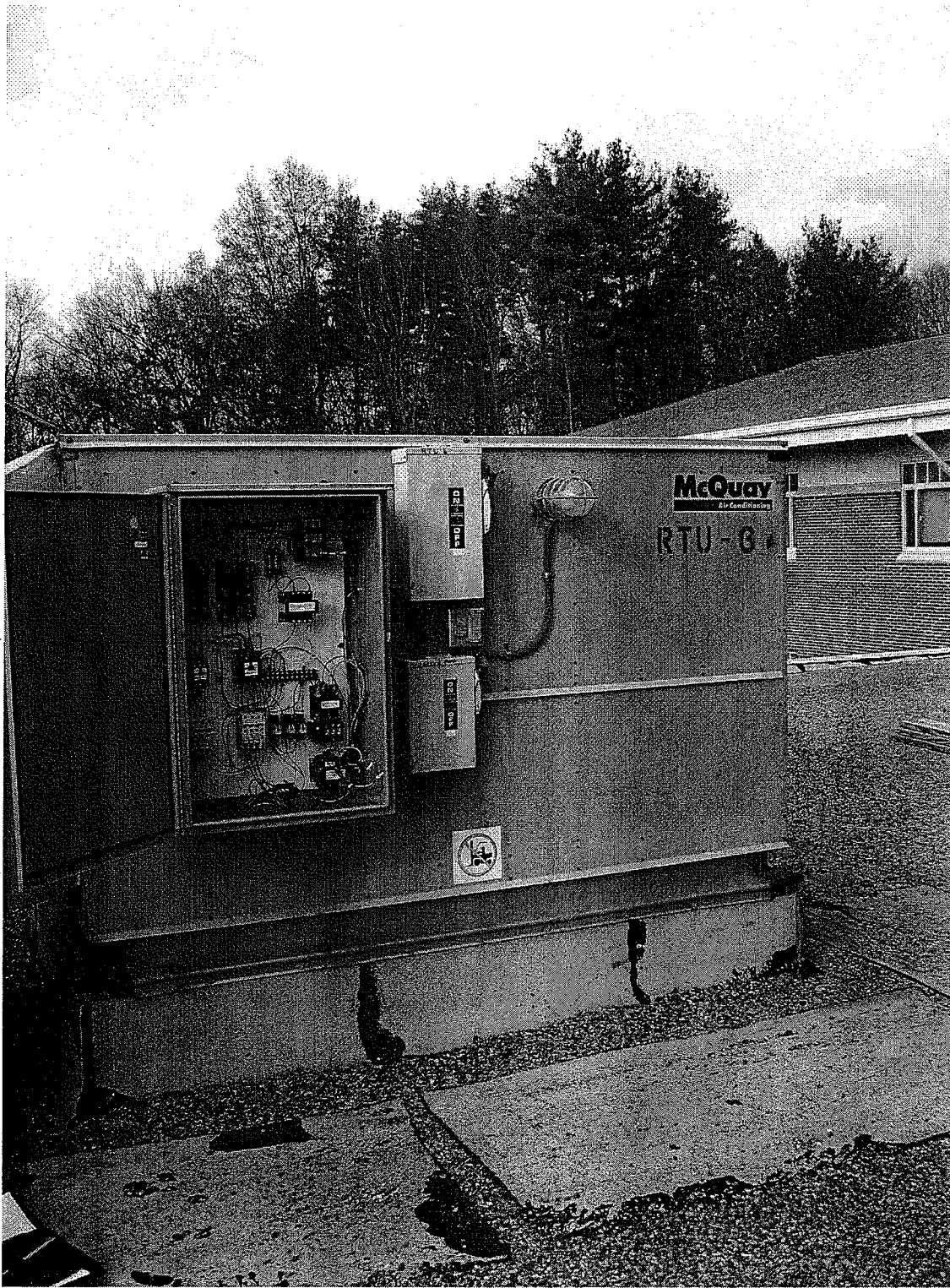
# Gymnasium Units Middle School



# High School Cafeteria Unit



Existing RTU Enclosure for Cafeteria Unit Middle School

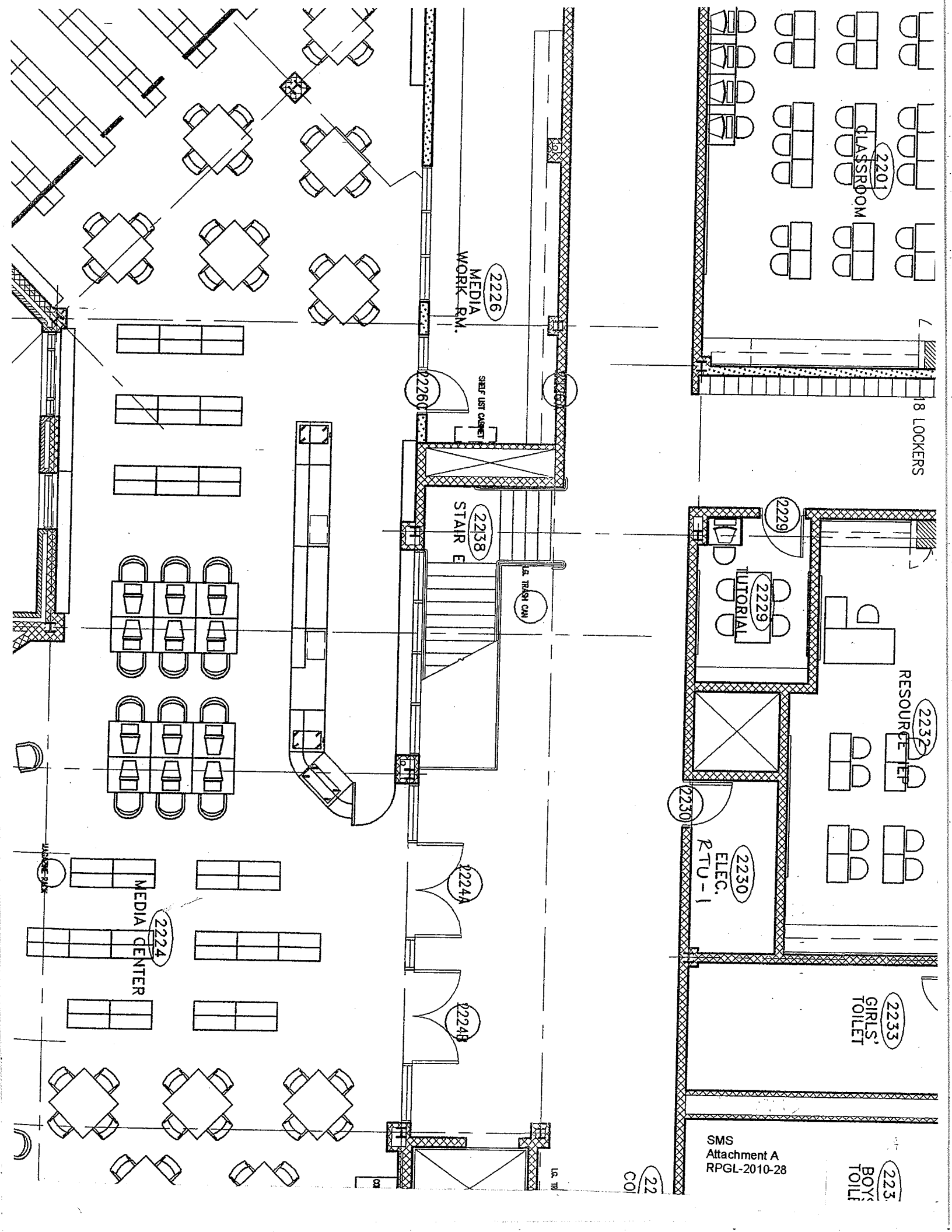












2201  
CLASSROOM

18 LOCKERS

2226  
MEDIA  
WORK R.M.

2226  
SHELF LIST CABINET

2238  
STAIR E

L.S. TRASH CAN

2229

2229  
TUTORIAL

2232  
RESOURCE

2230

2230  
ELEC.  
RTU-1

2233  
GIRLS'  
TOILET

223  
BOYS'  
TOILET

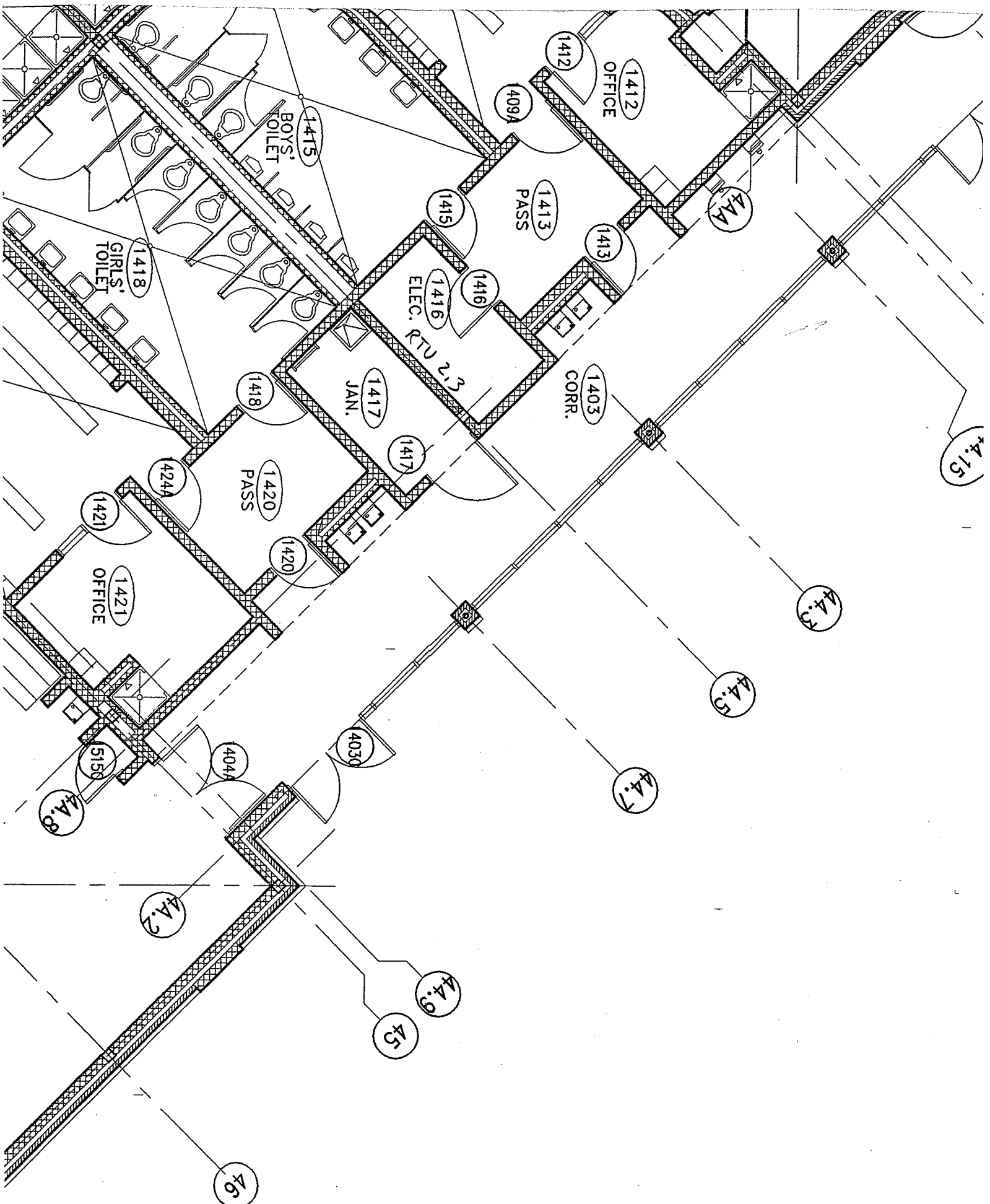
2224  
MEDIA CENTER

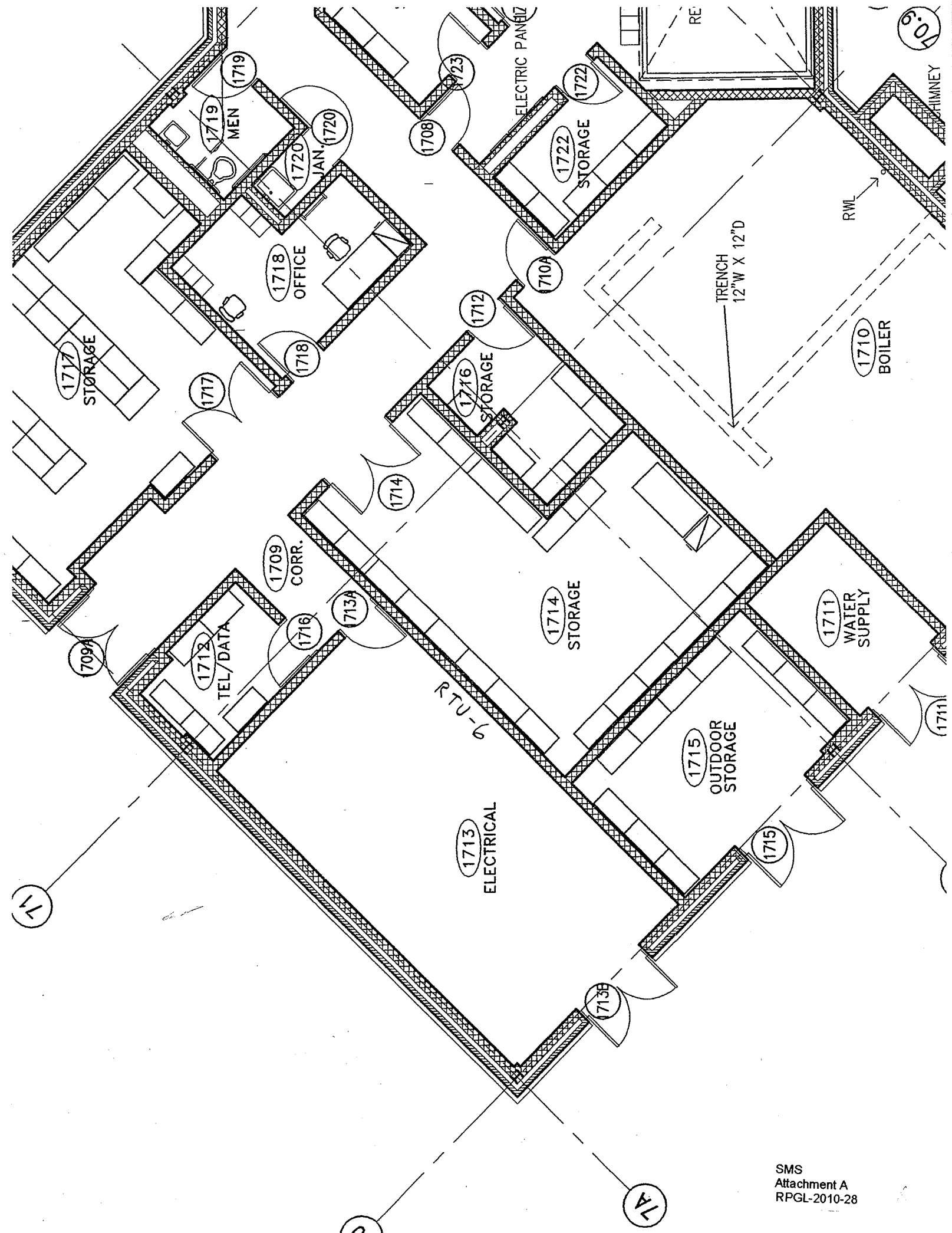
2224A

2224B

SMS  
Attachment A  
RPGL-2010-28

22  
CO

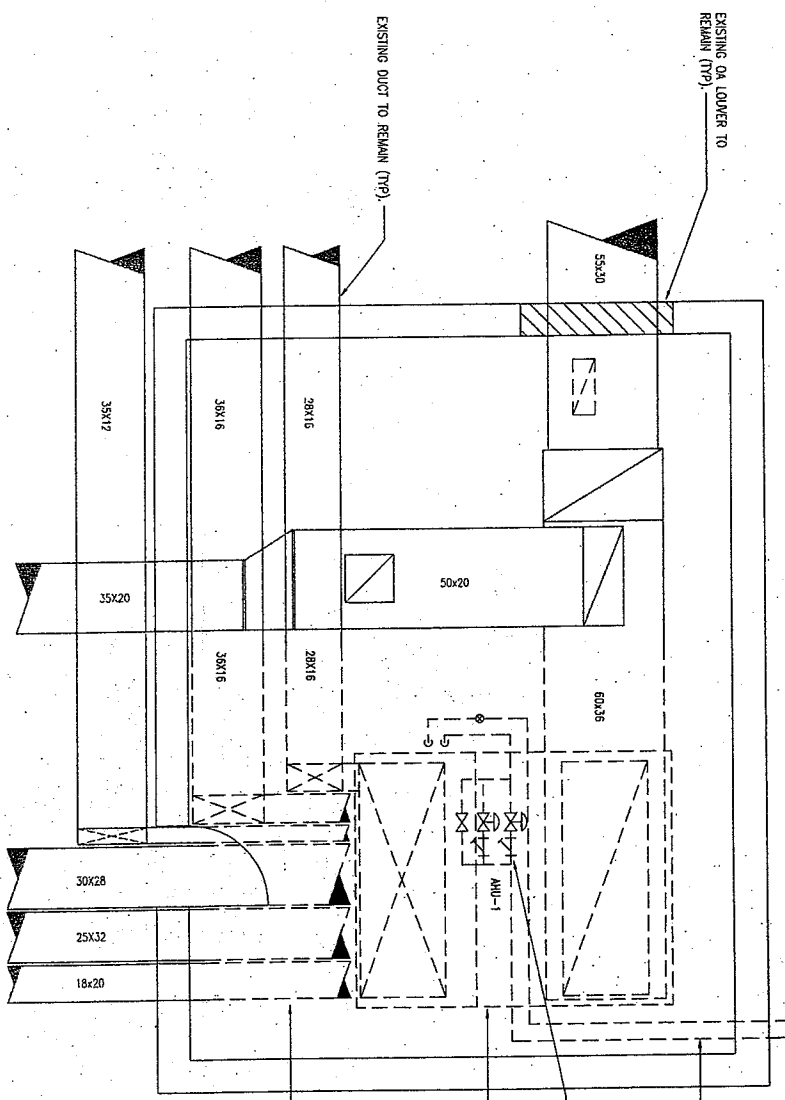






4. CONDENSATE PIPING  
5. PIPE HANGERS  
AHU1

1. OF  
2. OF  
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6. OF  
7. OF  
8. OF  
9. OF  
10. OF

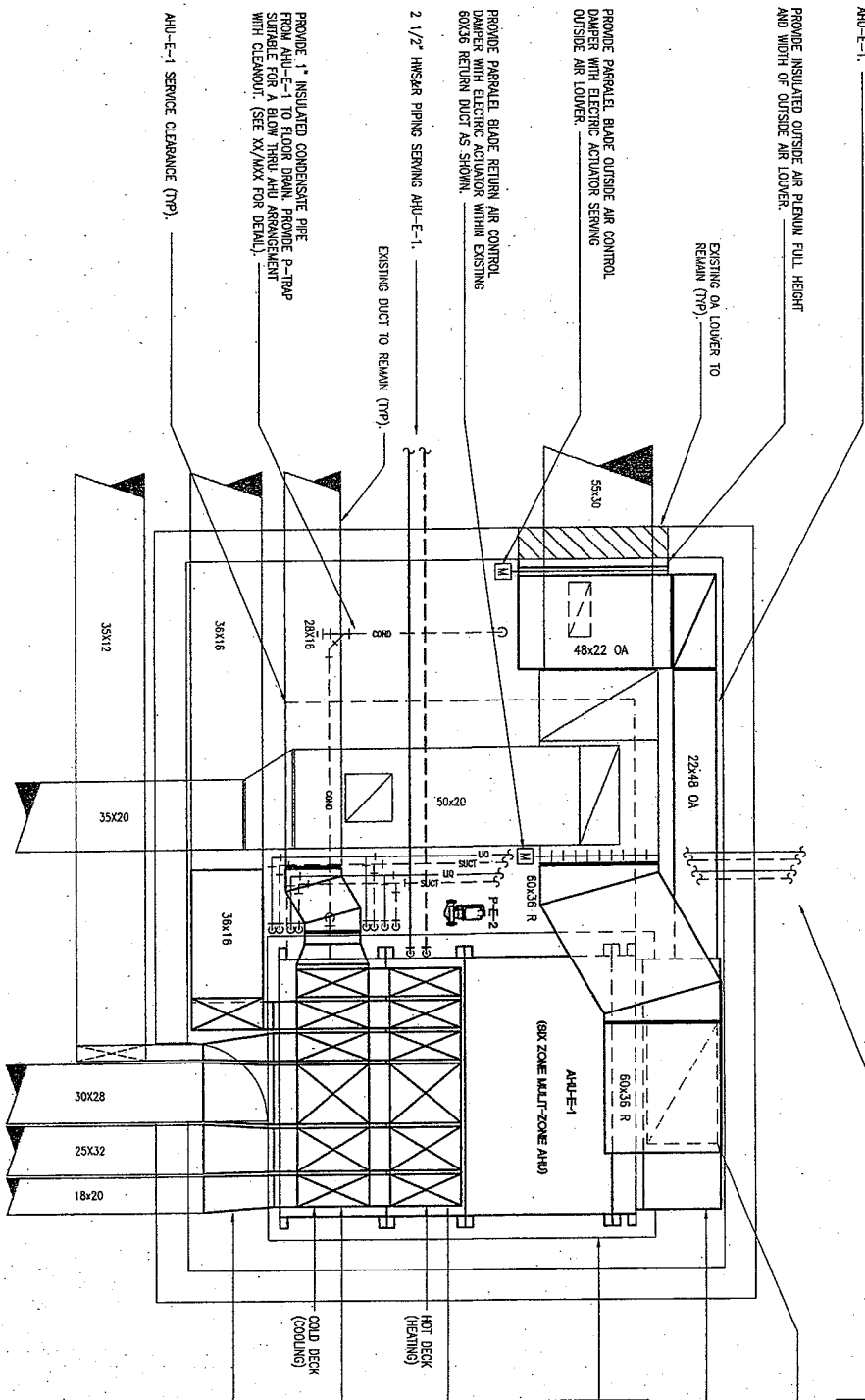


LINE/TYPE LEGEND	
—	EXISTING TO REMAIN
- - -	TO BE REMOVED

AREA "E" (STAGE) MECHANICAL ROOM - DEMOLITION PLAN  
SCALE: 1/4"=1'-0"

**NOTES:**

1. ALL DUCT CONNECTIONS TO AHU-E-1 SHALL BE MADE USING FLEXIBLE DUCT CONNECTIONS.
2. ALL PIPE CONNECTIONS TO AHU SHALL BE MADE USING FLEXIBLE PIPE CONNECTIONS APPROPRIATE FOR THE PIPE SERVICE.
3. ALL DUCTWORK WITHIN THE MECHANICAL ROOM SHALL BE INSULATED.
4. CONTRACTOR SHALL RE-INSULATE ANY EXISTING DUCTWORK WHICH HAS BEEN DISTURBED OR COMPROMISED AS A RESULT OF WORK ASSOCIATED WITH AHU-E-1.
5. ALL DUCTWORK AND PIPING (NEW & EXISTING) WITHIN THE MECHANICAL ROOM SHALL BE PROPERLY SEISMICALLY BE PROPERLY BRACED IN ACCORDANCE WITH SEISMIC SPECIFICATIONS AND DETAILS.
6. ACCESS TO MECHANICAL ROOM IS LIMITED. MECHANICAL CONTRACTOR SHALL VISIT SITE TO UNDERSTAND WORKING CONDITIONS. DUE TO ACCESS LIMITATIONS CONTRACTOR SHALL BREAK-DOWN AND RE-ASSEMBLE WITHIN MECHANICAL SPACE SHOWN.
7. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.



AREA "E" (STAGE) MECHANICAL ROOM - NEW WORK PLAN  
SCALE: 1/4"=1'-0"

**1. HOUSEKEEPING PAD**  
2. PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**2. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**3. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**4. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**5. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**6. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**7. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**8. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**9. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

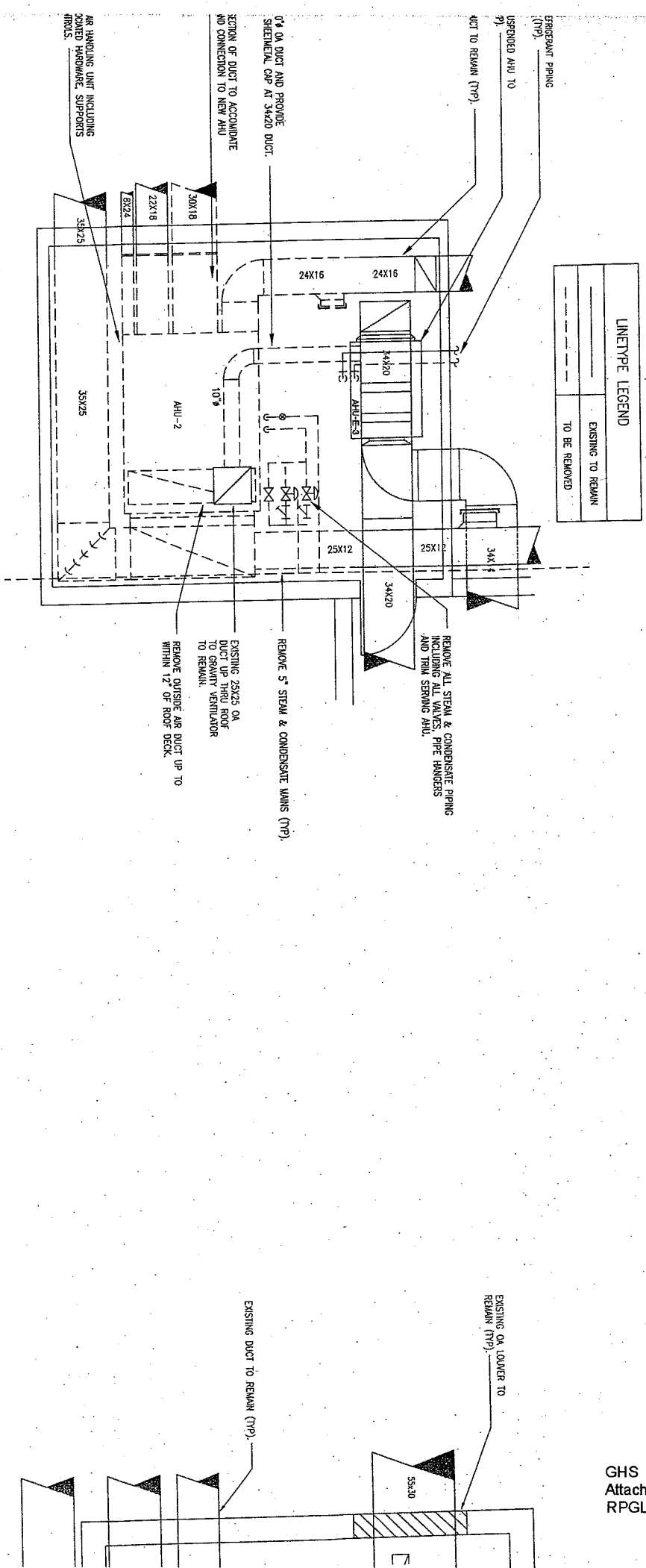
**10. HOUSEKEEPING PAD**  
PAD DIMENSIONS SHALL EXCEEDS PLUS 6" (ALL SIDES).  
PAD USING VIBRATION ISOLATORS LEGS AND RESTRAINTS IN ACCORDANCE WITH DETAILS.

**GENERAL NOTES FOR DUCTWORK:**

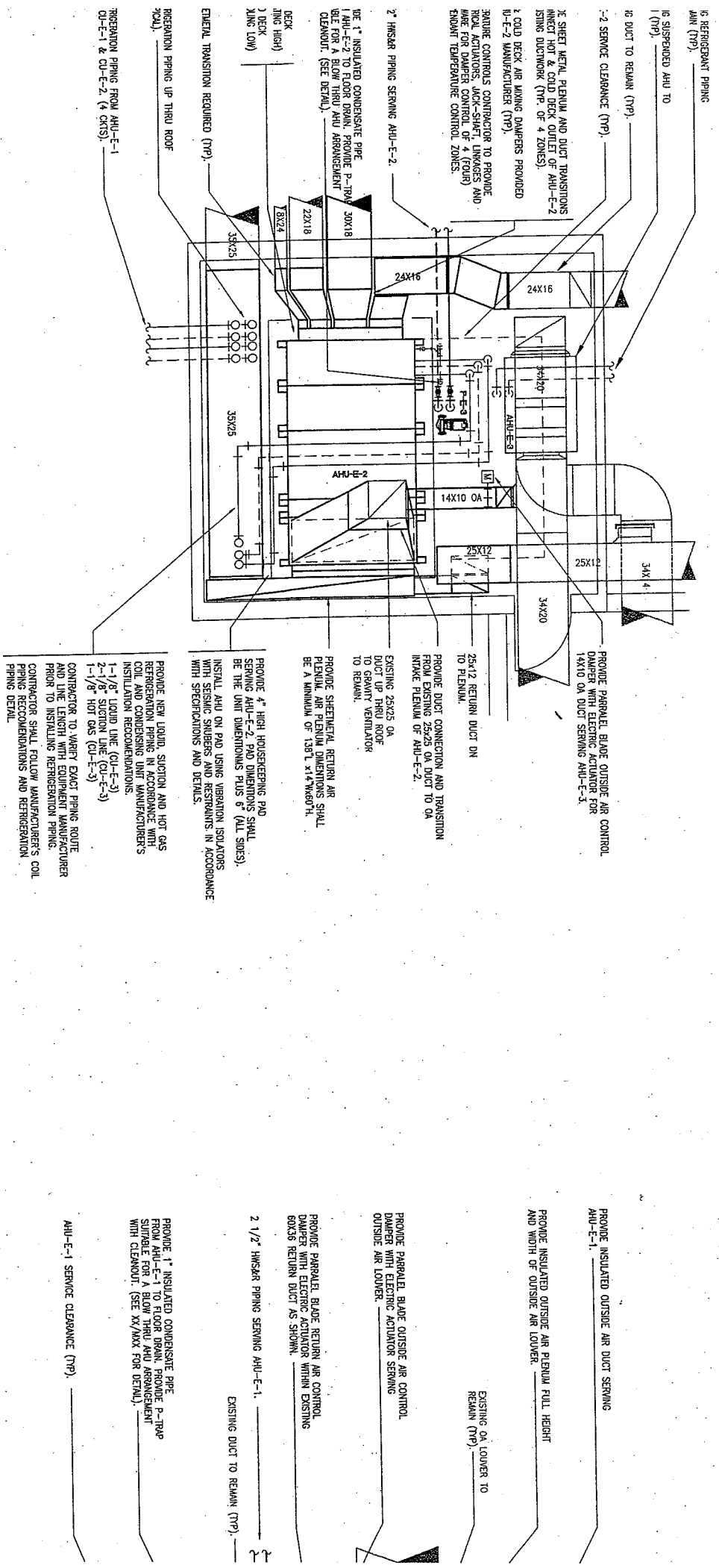
1. ALL DUCT CONNECTIONS TO EQUIPMENT SHALL BE FLEX CONNECTION TYPE. CONTRACTOR SHALL USE MAX. 5'-0" FLEX DUCT.
2. INSTALL UNITS WITH CLEARANCE FOR SERVICE.
3. REFER TO SMOG LIST ON SHEET W-0.00.
4. PROVIDE VOLUME DAMPERS WITH LOCKING QUADRANTS AT ALL TAKE-OFFS OWNERS IN DUCTS 12" AND MORE SHALL BE MULTIBLADDE TYPE.
5. DRAWINGS ARE DIAGRAMATIC AND SHOW GENERAL INTENT OF WORK, NOT EXACT EQUIPMENT LOCATION. ALL CONTRACTORS MUST COORDINATE EQUIPMENT LOCATION WITH OTHER TRADES BEFORE WORK BEGINS. BE COORDINATED WITH ARCHITECTURE AND STRUCTURAL PLANS.
6. THE LOCATION OF ALL DUCTSERS, REGISTERS AND GRILLES SHALL BE COORDINATED WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.
7. ALL DUCTWORK ELBOWS ARE TO BE FULL ROUNDS OR SQUARED WITH TURNING VANES.
8. ALL MATERIALS ABOVE CEILING SHALL BE PLAIN UNPAINTED.
9. PROVIDE SHEET METAL BOX PAINTED BLACK INSIDE FOR ALL RETURN REGISTERS OPENED TO THE FRESH AIR.
10. PROVIDE SHEET METAL BOX PAINTED BLACK INSIDE FOR ALL RETURN REGISTERS OPENED TO THE FRESH AIR.

**NOTE FOR SMOG LIST AND ABBREVIATIONS REFER TO SHEET W-0.00**

AREA 1



- NOTES**
1. ALL DUCT CONNECTIONS TO AHU-E-2 SHALL BE MADE USING FLEXIBLE DUCT CONNECTIONS.
  2. ALL PIPE CONNECTIONS TO AHU SHALL BE MADE USING FLEXIBLE PIPE CONNECTIONS APPROPRIATE FOR THE PIPE SERVICE.
  3. ALL DUCTWORK WITHIN THE MECHANICAL ROOM SHALL BE INSULATED.
  4. CONTRACTOR SHALL BE INSULATE ANY EXISTING DUCTWORK WHICH HAS BEEN DISTURBED OR COMPROMISED AS A RESULT OF WORK ASSOCIATED WITH AHU-E-2.
  5. ALL DUCTWORK AND PIPING NEW & EXISTING WITHIN THE MECHANICAL ROOM SHALL BE PROPERLY SEISMICALLY BRACED IN ACCORDANCE WITH SEISMIC SPECIFICATIONS AND DETAILS.
  6. ACCESS TO MECHANICAL ROOM IS LIMITED. MECHANICAL CONTRACTOR SHALL VISIT SITE TO UNDERSTAND CONTRACTOR SHALL BREAK-DOWN AHU AND RE-ASSEMBLE WITHIN MECHANICAL SPACE SHOWN.
  7. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

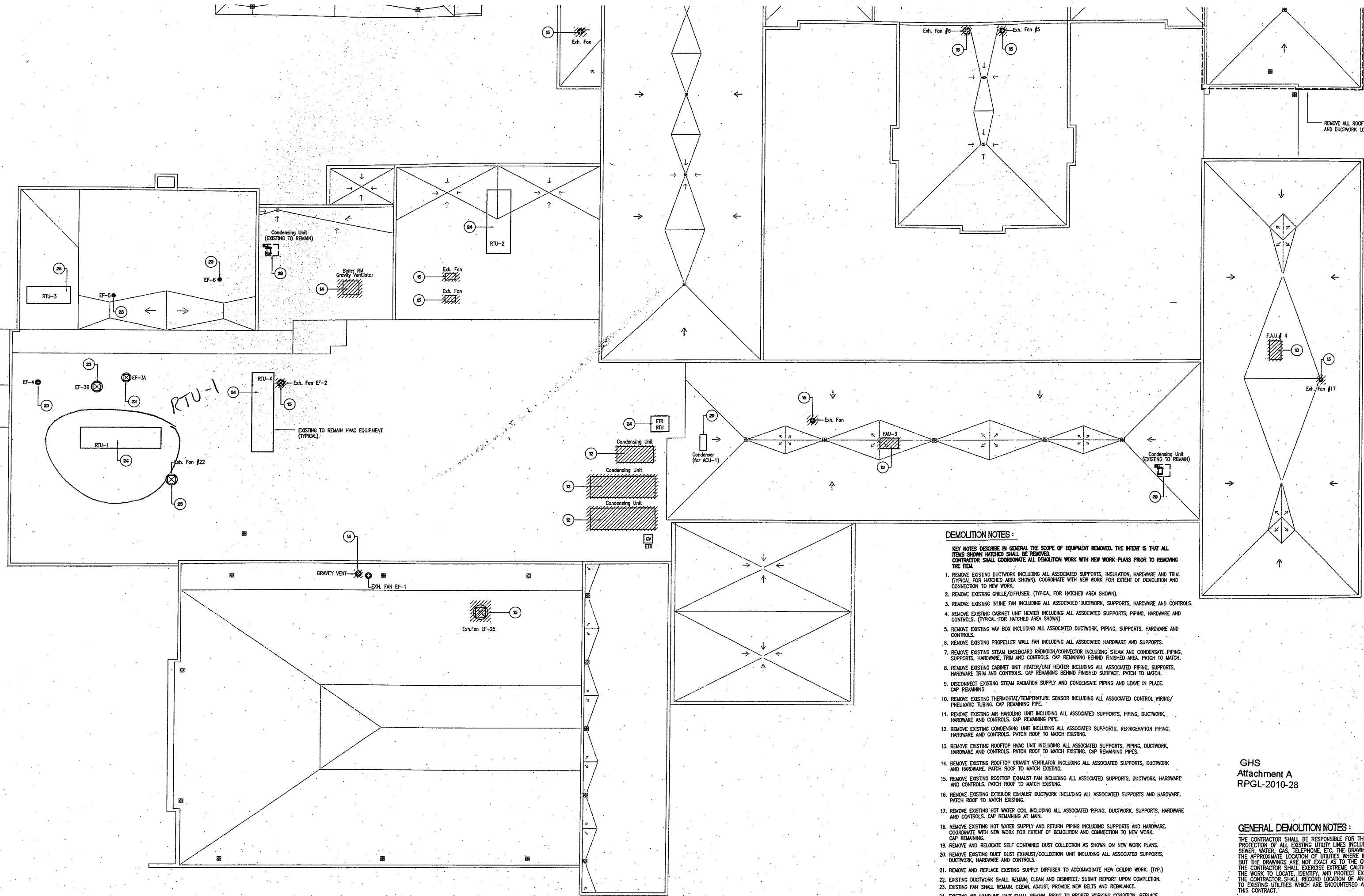


MECHANICAL ROOM E227 - NEW WORK PLAN  
SCALE: 1/4"=1'-0"

- GENERAL NOTES FOR PIPING:**
1. ALL HOT WATER PIPING ABOVE FLOOR SHALL RUN UNDER THE RADIATION COVER. COVER SHALL RUN WALL TO WALL AND AROUND COLUMNS. THERE SHALL BE NO EXPOSED PIPING.
  2. INSTALL PIPES IN SUCH A WAY THAT WILL ALLOW EAST ACCESS TO VALVES. IN GENERAL, PIPES SHALL RUN BELOW DUCTS.
  3. ALL BRANCH CONNECTIONS SHALL BE MADE FROM THE BOTTOM OR 45 DEG. FROM THE BOTTOM OF MAINS.
  4. PROVIDE AIR VENTS AT ALL HIGH POINTS AND AT RETURN SIDE OF RADIATION.
  5. INSTALL DRAIN VALVES WITH HOSE CONNECTION AT ALL LOW POINTS.
  6. PROVIDE HOSE END CAPS WITH CHAIN ON ALL DRAIN VALVES AND AIR VENTS.
  7. FINAL SENSOR/THERMOSTAT LOCATION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER.
  8. CONTRACTOR SHALL PROVIDE REFRIGERANT PIPING AND FITCH BOXES.
  9. CONDENSATE PIPING SHALL BE COPPER.
  10. DRAWINGS ARE DIAGRAMATIC AND SHOW GENERAL INTENT OF WORK BEGINS. ALL CONTRACTORS MUST COORDINATE WITH OTHER TRADES BEFORE WORK BEGINS.
  11. THERE SHALL BE NO EXPOSED PIPING. THE GENERAL CONTRACTOR SHALL PROVIDE TYPE AND LOCATION OF ALL PIPING. THE GENERAL CONTRACTOR SHALL PROVIDE TYPE AND LOCATION OF ALL PIPING. THE GENERAL CONTRACTOR SHALL PROVIDE TYPE AND LOCATION OF ALL PIPING.

- GENERAL NOTES FOR DUCTWORK:**
1. ALL DUCT CONNECTIONS TO EQUIPMENT SHALL BE AED CONNECTION TYPE. CONTRACTOR SHALL USE MAX 5'-0" FLEX DUCT.
  2. INSTALL UNITS WITH CLEARANCE FOR SERVICE.
  3. REFER TO SYMBOL LIST ON SHEET M 0.00.
  4. PROVIDE VOLUME DAMPERS WITH LOCKING QUADRANTS AT ALL TAKE-OFFS. DAMPERS IN DUCTS 12" AND MORE SHALL BE MULTIBLADE TYPE.
  5. DRAWINGS ARE DIAGRAMATIC AND SHOW GENERAL INTENT OF WORK. NOT EXACT EQUIPMENT LOCATION. ALL CONTRACTORS MUST COORDINATE EQUIPMENT LOCATION WITH OTHER TRADES BEFORE WORK BEGINS. BE COORDINATED WITH ARCHITECTURAL AND STRUCTURAL ENGINEERS.
  6. THE SUPPLY AIR SYSTEM SHALL BE DESIGNED TO ENSURE ALL FOREIGN PARTICLES ARE FILTERED FROM THE FINAL CONNECTION TO THE SUPPLY DIFFUSERS.
  7. THE TOP IDENTIFICATION, REGISTERED AND GRILLES SHALL BE COORDINATED WITH THE ARCHITECTURAL REGISTERED CEILING PLANS.
  8. ALL DUCTWORK ELBOWS ARE TO BE FULL RADIUS OR SQUARED WITH TURNING VANES.
  9. ALL MATERIALS ABOVE CEILING SHALL BE PLENUM RATED.
  10. PROVIDE SHEET METAL BOX PAINTED BLACK INSIDE FOR ALL RETURN REGISTERS OPENED TO THE PLENUM CEILING.

**NOTE**  
FOR SYMBOL LIST AND  
ARRANGEMENTS REFER TO  
SHEET M 0.00



**DEMOLITION NOTES :**

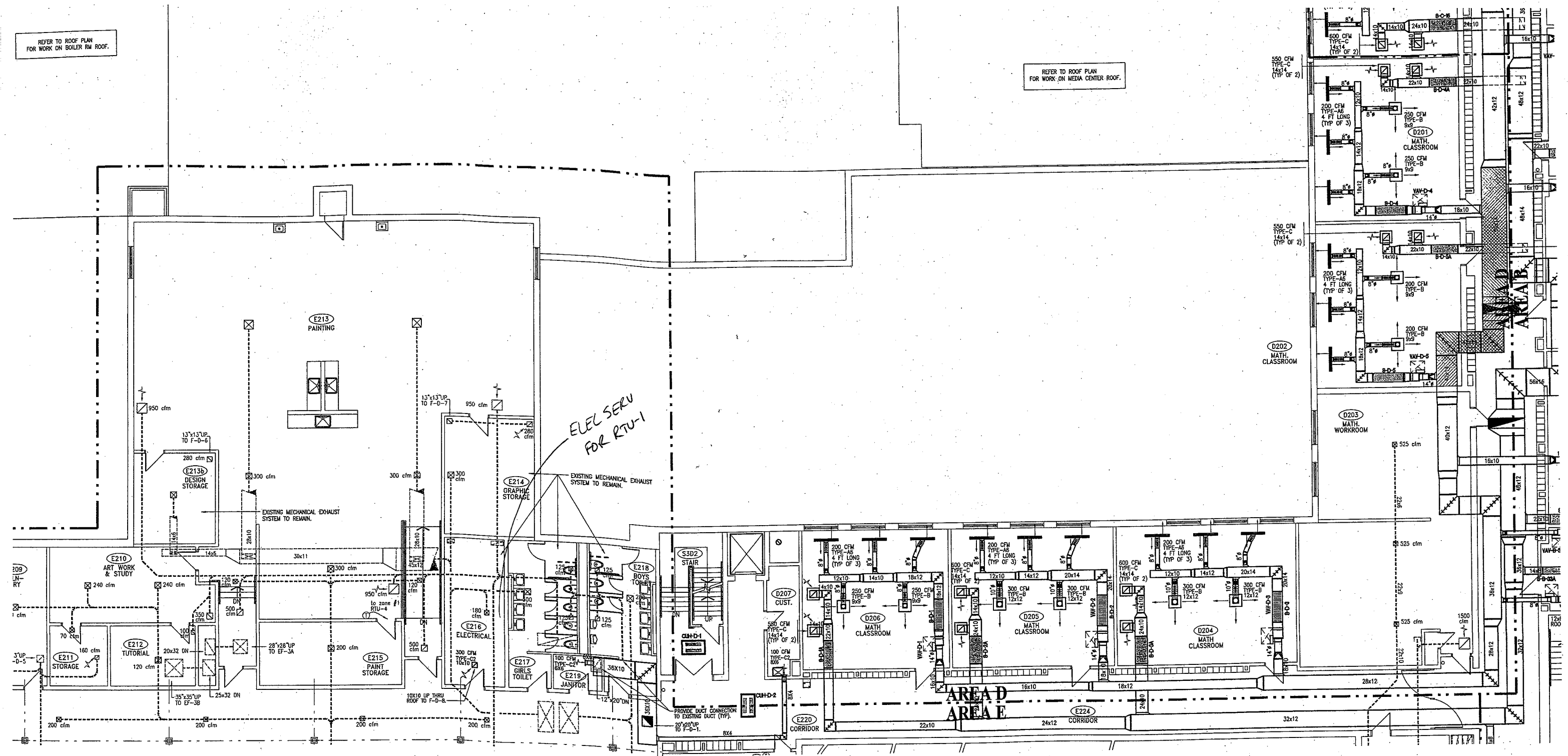
- KEY NOTES DESCRIBE IN GENERAL THE SCOPE OF EQUIPMENT REMOVED. THE INTENT IS THAT ALL ITEMS SHOWN HATCHED SHALL BE REMOVED. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITH NEW WORK PLANS PRIOR TO REMOVING THE ITEM.
1. REMOVE EXISTING DUCTWORK INCLUDING ALL ASSOCIATED SUPPORTS, INSULATION, HARDWARE AND TRIM. (TYPICAL FOR HATCHED AREA SHOWN). COORDINATE WITH NEW WORK FOR EXTENT OF DEMOLITION AND CONNECTION TO NEW WORK.
  2. REMOVE EXISTING GRILLE/DIFFUSER. (TYPICAL FOR HATCHED AREA SHOWN).
  3. REMOVE EXISTING INLINE FAN INCLUDING ALL ASSOCIATED DUCTWORK, SUPPORTS, HARDWARE AND CONTROLS.
  4. REMOVE EXISTING CABINET UNIT HEATER INCLUDING ALL ASSOCIATED SUPPORTS, PIPING, HARDWARE AND CONTROLS. (TYPICAL FOR HATCHED AREA SHOWN)
  5. REMOVE EXISTING VAV BOX INCLUDING ALL ASSOCIATED DUCTWORK, PIPING, SUPPORTS, HARDWARE AND CONTROLS.
  6. REMOVE EXISTING PROPELLER WALL FAN INCLUDING ALL ASSOCIATED HARDWARE AND SUPPORTS.
  7. REMOVE EXISTING STEAM BASEBOARD RADIATION/CONNECTOR INCLUDING STEAM AND CONDENSATE PIPING, SUPPORTS, HARDWARE, TRIM AND CONTROLS. CAP REMAINING BEHIND FINISHED AREA. PATCH TO MATCH.
  8. REMOVE EXISTING CABINET UNIT HEATER/UNIT HEATER INCLUDING ALL ASSOCIATED PIPING, SUPPORTS, HARDWARE TRIM AND CONTROLS. CAP REMAINING BEHIND FINISHED SURFACE. PATCH TO MATCH.
  9. DISCONNECT EXISTING STEAM RADIATION SUPPLY AND CONDENSATE PIPING AND LEAVE IN PLACE. CAP REMAINING.
  10. REMOVE EXISTING THERMOSTAT/TEMPERATURE SENSOR INCLUDING ALL ASSOCIATED CONTROL WIRING/PNEUMATIC TUBING. CAP REMAINING PIPE.
  11. REMOVE EXISTING AIR HANDLING UNIT INCLUDING ALL ASSOCIATED SUPPORTS, PIPING, DUCTWORK, HARDWARE AND CONTROLS. CAP REMAINING PIPE.
  12. REMOVE EXISTING CONDENSING UNIT INCLUDING ALL ASSOCIATED SUPPORTS, REFRIGERATION PIPING, HARDWARE AND CONTROLS. PATCH ROOF TO MATCH EXISTING.
  13. REMOVE EXISTING ROOFTOP HVAC UNIT INCLUDING ALL ASSOCIATED SUPPORTS, PIPING, DUCTWORK, HARDWARE AND CONTROLS. PATCH ROOF TO MATCH EXISTING. CAP REMAINING PIPES.
  14. REMOVE EXISTING ROOFTOP GRAVITY VENTILATOR INCLUDING ALL ASSOCIATED SUPPORTS, DUCTWORK AND HARDWARE. PATCH ROOF TO MATCH EXISTING.
  15. REMOVE EXISTING ROOFTOP EXHAUST FAN INCLUDING ALL ASSOCIATED SUPPORTS, DUCTWORK, HARDWARE AND CONTROLS. PATCH ROOF TO MATCH EXISTING.
  16. REMOVE EXISTING EXTERIOR EXHAUST DUCTWORK INCLUDING ALL ASSOCIATED SUPPORTS AND HARDWARE. PATCH ROOF TO MATCH EXISTING.
  17. REMOVE EXISTING HOT WATER COIL INCLUDING ALL ASSOCIATED PIPING, DUCTWORK, SUPPORTS, HARDWARE AND CONTROLS. CAP REMAINING AT MAIN.
  18. REMOVE EXISTING HOT WATER SUPPLY AND RETURN PIPING INCLUDING SUPPORTS AND HARDWARE. COORDINATE WITH NEW WORK FOR EXTENT OF DEMOLITION AND CONNECTION TO NEW WORK. CAP REMAINING.
  19. REMOVE AND RELOCATE SELF CONTAINED DUST COLLECTION AS SHOWN ON NEW WORK PLANS.
  20. REMOVE EXISTING DUCT DUST EXHAUST/COLLECTION UNIT INCLUDING ALL ASSOCIATED SUPPORTS, DUCTWORK, HARDWARE AND CONTROLS.
  21. REMOVE AND REPLACE EXISTING SUPPLY DIFFUSER TO ACCOMMODATE NEW CEILING WORK. (TYP.)
  22. EXISTING DUCTWORK SHALL REMAIN, CLEAN AND DISINFECT. SUBMIT REPORT UPON COMPLETION.
  23. EXISTING FAN SHALL REMAIN, CLEAN, ADJUST, PROVIDE NEW BELTS AND REBALANCE.
  24. EXISTING AIR HANDLING UNIT SHALL REMAIN, BRING TO PROPER WORKING CONDITION. REPLACE BELTS AND SHEAVES, LUBRICATE FAN, CLEAN, POWER WASH AND DISINFECT COIL, REPLACE FILTER, REPLACE CONTROL VALVE AND DAMPER ACTUATOR. PROVIDE NEW FREEZE/STAT. REBALANCE.
  25. EXISTING ROOFTOP HVAC UNIT TO REMAIN.
  26. EXISTING UNIT HEATER SHALL REMAIN, BRING TO PROPER WORKING CONDITION.

GHS  
Attachment A  
RPLG-2010-28

**GENERAL DEMOLITION NOTES :**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITY LINES (INCLUDING SEWER, WATER, GAS, TELEPHONE, ETC.) THE DRAWING THE APPROXIMATE LOCATION OF UTILITIES WHERE IN BUT THE DRAWINGS ARE NOT EXACT AS TO THE QU. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION THE WORK TO LOCATE, IDENTIFY, AND PROTECT EXISTING UTILITIES. THE CONTRACTOR SHALL RECORD LOCATION OF AND TO EXISTING UTILITIES WHICH ARE ENCOUNTERED AS THIS CONTRACT.  
ANY EQUIPMENT REMOVED DURING DEMOLITION WORK AT HIS OPTION, ANY SUCH MATERIAL SHALL BE STORED DESIGNATED BY THE OWNER. REMOVAL OF SUCH MATERIAL SHALL BE THE OWNER'S RESPONSIBILITY.

REFER TO ROOF PLAN FOR WORK ON BOILER RM ROOF.

REFER TO ROOF PLAN FOR WORK ON MEDIA CENTER ROOF.



ELEC SERV FOR RTU-1

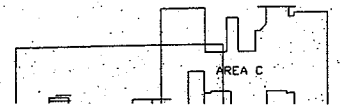
EXISTING MECHANICAL EXHAUST SYSTEM TO REMAIN.

AREA D

GHS Attachment A RPGL-2010-28

GENERAL NOTES

1. ALL DUCT CONNECTIONS TO EQUIPMENT SHALL BE FLEX CONNECTION TYPE. CONTRACTOR SHALL USE MAX. 5'-0" FLEX DUCT.
2. INSTALL UNITS WITH CLEARANCE FOR SERVICE.
3. REFER TO SYMBOL LIST ON SHEET M 0.0.0.
4. PROVIDE VOLUME DAMPERS WITH LOCKING QUADRANTS AT ALL TAKE-OFFS. DAMPERS IN DUCTS 12" AND MORE SHALL BE MULTIBLADE TYPE.





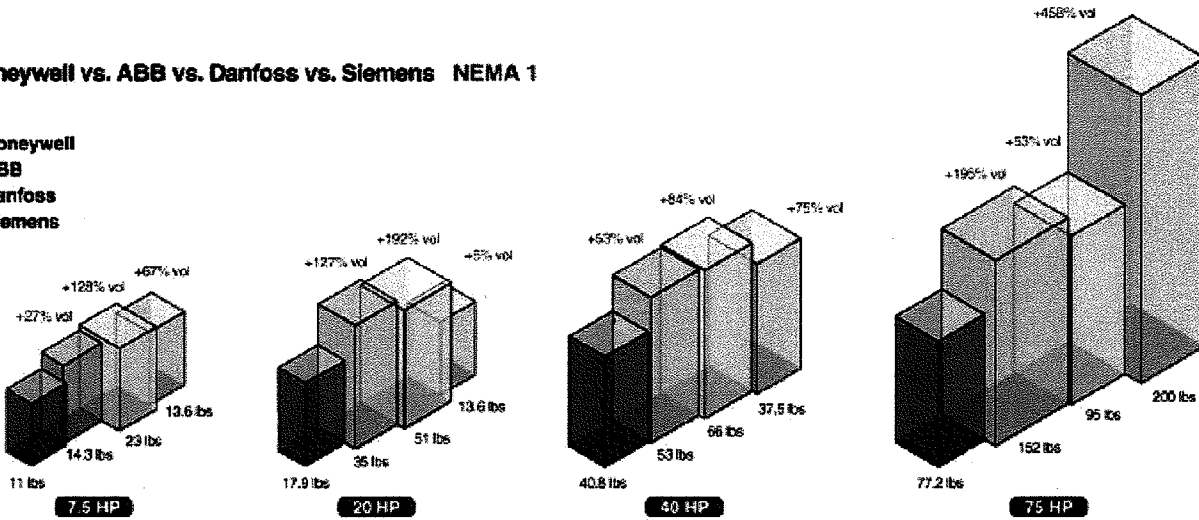
## VFD Competitive Comparisons

Honeywell's VFDs are dramatically smaller than competitive brands. In the images below, we have compared Honeywell's VFD size against ABB, Danfoss and Siemens in both NEMA 1 and NEMA 12.

**Critical Note: Both Danfoss and Siemens require an additional enclosure and/or bypass for AC Choke. This WILL further increase the size and weight discrepancy. Honeywell Drives have integrated AC Chokes!**

### Honeywell vs. ABB vs. Danfoss vs. Siemens NEMA 1

- Honeywell
- ABB
- Danfoss
- Siemens

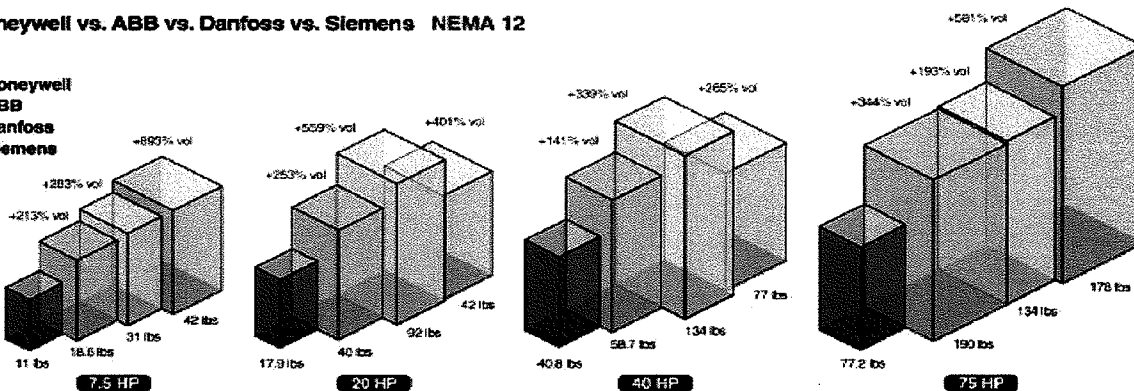


NEMA 1	HONEYWELL						ABB					DANFOSS					SIEMENS				
HP	W	H	D	V	WT.	W	H	D	V	WT.	W	H	D	V	WT.	W	H	D	V	WT.	
7.5	5.4	11.5	7.5	466	11	4.9	14.5	8.3	590	14.3	6.7	15.6	7.9	1064	23	7.3	13.6	7.7	776	13.6	
20	5.7	15.4	8.4	737	17.9	8	23	9.1	1674	35	9.5	22.1	10.2	2152	51	7.3	13.8	7.7	776	13.6	
40	7.7	20.4	9.3	1461	40.8	8	27.1	10.3	2233	53	9.5	27.6	10.2	2693	66	10.8	24.6	9.6	2551	37.5	
75	9.3	23.3	10.1	2189	77.2	11.8	34.6	15.8	6451	152	12.1	31.5	11.7	4451	95	16	54.5	14	12206	200	

(1 horsepower = 0.745699872 kilowatts)

### Honeywell vs. ABB vs. Danfoss vs. Siemens NEMA 12

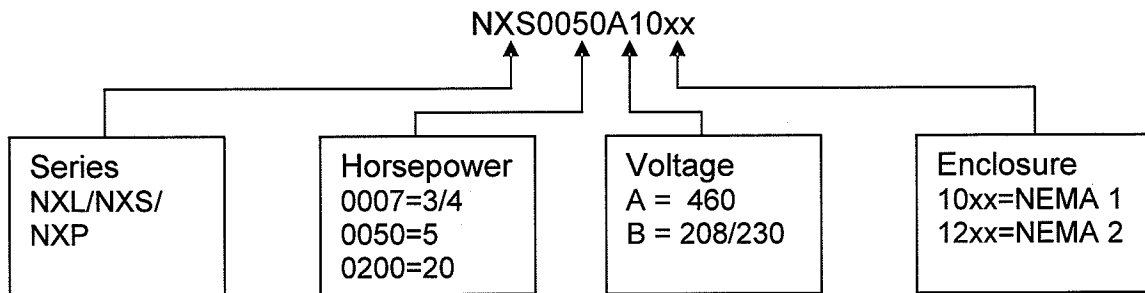
- Honeywell
- ABB
- Danfoss
- Siemens



NEMA 12	HONEYWELL						ABB					DANFOSS					SIEMENS				
HP	W	H	D	V	WT.	W	H	D	V	WT.	W	H	D	V	WT.	W	H	D	V	WT.	
7.5	5.4	11.5	7.5	466	11	8.7	18.2	9.2	1457	18.6	11.1	20.9	7.7	1786	31	13.8	23.9	11.2	3694	42	
20	5.7	15.4	8.4	737	17.9	10.5	24.8	10	2604	40	13.8	31.9	11	4842	62	13.8	23.9	11.2	3694	42	
40	7.7	20.4	9.3	1461	40.8	10.5	29.8	11.2	3516	58.7	15.8	37	11	6410	134	14.2	27	13.9	5329	77	
75	9.3	23.3	10.1	2189	77.2	16.1	36.4	16.6	9728	190	15.8	37	11	6410	134	17.7	45.3	18.6	14914	178	

(1 horsepower = 0.745699872 kilowatts)

## PRODUCT IDENTIFICATION SYSTEM



(1 horsepower = 0.745699872 kilowatts)

**Note:** When selecting by Hp – and the drive is to be used with a motor with 8 poles or more – verify the current capacity of the drives is sufficient. The NX drives are suitable for multi-motor application. The NX drives are suitable for multi-motor applications. The total value of the rated motor currents must then be less than the rated drive current. If the motors are required to start on a running drive, the starting current of the largest motor must be added to the total value of the running currents.

[http://customer.honeywell.com/NR/rdonlyres/8C990CE6-BE95-45E5-86C7-FE60EC2D966F/1734/63\\_9251VFDQuickSelectionGuide\\_LoRez.pdf](http://customer.honeywell.com/NR/rdonlyres/8C990CE6-BE95-45E5-86C7-FE60EC2D966F/1734/63_9251VFDQuickSelectionGuide_LoRez.pdf)

### Model Number & Transfer Price

Please refer to you Regional Marketing for more information.

## PRODUCT AVAILABILITY

Jul. 1, 2006

## CONTACT INFORMATION

### ◆ Regional Marketing

CHN/HK	Xu, Hua(CH04)
TWN	Chen, Jason(TW01)
SEA	Choong, Eleanor(SN01)
India	Rao, Sanjeev(IE03x)
JPN	Morita, Kazuteru(JA25)
KOR	Kim, KP(KO06)
PAC	Littleton, Bronwen(AS01)

### ◆ Customer Care support

CHN/HK	Yu, Jie(CH01)
TWN	Chou, Sunny(TW01)
SEA	Tan, Christina(SN01)
India	Setty, Roy(IE03x)
JPN	Yamazaki, Yasuhiro(JA25)
KOR	Kim, WD(KO06)
PAC	Murray, Elizabeth(AS01)

## LITERATURE

- ◆ Slimline VFD Bypass Assembly sell sheet

[http://customer.honeywell.com/NR/ronlyres/13A96B5D-9919-4DBA-B77A-5BB7E8F7111D/1736/63\\_9468VFDSlimlineBypassAssemblySellSheet\\_LoRez.pdf](http://customer.honeywell.com/NR/ronlyres/13A96B5D-9919-4DBA-B77A-5BB7E8F7111D/1736/63_9468VFDSlimlineBypassAssemblySellSheet_LoRez.pdf)

- ◆ Cool Blue Bypass Assembly brochure

[http://customer.honeywell.com/NR/ronlyres/80764249-1E42-4000-86B9-FD6652E11E2E/1735/63\\_9463CoolBlueVFDBypassAssemblyBrochure\\_LoRez.pdf](http://customer.honeywell.com/NR/ronlyres/80764249-1E42-4000-86B9-FD6652E11E2E/1735/63_9463CoolBlueVFDBypassAssemblyBrochure_LoRez.pdf)

- ◆ VFD Product line brochure

[http://customer.honeywell.com/NR/ronlyres/05A531AF-5615-49FA-98B4-485211B25A6B/1733/63\\_9464VFDProductLineBrochure\\_LoRez.pdf](http://customer.honeywell.com/NR/ronlyres/05A531AF-5615-49FA-98B4-485211B25A6B/1733/63_9464VFDProductLineBrochure_LoRez.pdf)

- ◆ NXL Series – Guide Specification

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## Training Presentation

D:\Cindy\  
Honeywell\_XL5000\

# SCHOOL YEAR AT A GLANCE

## 2009 2010



Professional Development  
 Early Dismissal  
 Gideon Welles, SMS, & GHS  
 October 8, 2009  
 February 4, 2010  
 March 11, 2010

SCHOOL BEGINS: Sept 1 Grs. 7-12  
 SCHOOL BEGINS: Sept 2 Grs. K-6

\*SCHOOL ENDS: JUNE 16

M	T	W	TH	F
<b>AUGUST 2009</b>				
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28
31				

<b>SEPTEMBER 2009</b>				
<i>Gr. 7-12 20 DAYS</i>				
<i>Gr. K-6 19 DAYS</i>				
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30		

<b>OCTOBER 2009</b>				
<i>21 DAYS</i>				
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

<b>NOVEMBER 2009</b>				
<i>18 DAYS</i>				
2	3	4	5	6
9	10	11	12	13
16	17	18	19	20
23	24	25	26	27
30				

<b>DECEMBER 2009</b>				
<i>17 DAYS</i>				
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30	31	

<b>JANUARY 2010</b>				
<i>Gr. 7-12 18 DAYS</i>				
<i>Gr. K-6 19 DAYS</i>				
			1	
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	29

APPROVED: 02.26.07  
 REVISED 09.22.08

AUG 31	Teacher Work Day
◇ SEPT 1	FIRST DAY OF SCHOOL, GRADES 7-12 Teacher Work Day, Grades K-6
◇ SEPT 2	FIRST DAY OF SCHOOL, GRADES K-6 FULL DAY
SEP 7	Labor Day
SEP 28	Yom Kippur
OCT 8	Early Dismissal GW, SMS, GHS Only
OCT 12	Columbus Day
NOV 3	Election Day - No School for Students
NOV 25	Early Dismissal
NOV 26-27	Thanksgiving Recess
DEC 24-	Holiday Recess
JAN 1	(Includes Christmas and New Year's Day)
JAN 18	Martin Luther King Day
JAN 21-26	Grades 7-12: Mid-Term Exams (Early Dismissal Grades 9-12)
△ JAN 27	Gr. 7-12 No School for Students Teacher Work Day, Grades 7-12
FEB 4	Early Dismissal GW, SMS, GHS Only
FEB 15-19	Winter Recess (Includes Presidents' Day)
MAR 11	Early Dismissal GW, SMS, GHS Only
APR 2	Good Friday
APR 19-23	Spring Recess
MAY 31	Memorial Day
Last 4 Days	Final Exams, Grades 7-12 (Early Dismissal Grades 7-12)
Last Day	<b>Projected Last Day - June 16</b> Early Dismissal Grades 1-12 (PM K will attend AM Session) <b>Projected Teacher Work Day - June 17</b> Teacher Work Day will be the first work day following the last day for students.
□	SCHOOL CLOSED

M	T	W	TH	F
<b>FEBRUARY 2010</b>				
<i>15 DAYS</i>				
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26

<b>MARCH 2010</b>				
<i>23 DAYS</i>				
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30	31		

<b>APRIL 2010</b>				
<i>16 DAYS</i>				
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

<b>MAY 2010</b>				
<i>20 DAYS</i>				
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28
31				

<b>JUNE 2010</b>				
<i>12 DAYS</i>				
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30		

**\*SCHOOL ENDS JUNE 16**

\*If weather or other emergencies require the closing of school, the lost days will be made up by extending the school year in June up to 9 days.  
 If additional days are needed, they will be taken from the Spring Recess, beginning April 19.

# ATTENTION CONTRACTOR

- APPROVED FORM FOR YOUR FILES-NOTE ANY COMMENTS BOTTOM OF PAGE 2 - APPROVAL REQUIREMENTS
- APPLICATION DENIED-SEE BOTTOM PAGE 2

## GLASTONBURY PUBLIC SCHOOLS

OFFICE OF DISTRICT SAFETY OFFICER

Dr. Kenneth R. Roy  
Director of Environmental Health & Safety  
330 Hubbard St.  
Glastonbury, CT 06033-3099

Telephone: (860) 652-7200 Ext. 2002  
Fax: (860) 652-7275  
E-mail: royk@glastonburyus.org

### CONTRACTOR COMPLIANCE FORM

Notice to Contractors:

In concert with, but not limited to, all OSHA General Industry and Construction standards, EPA, NFPA, AHERA, and building codes, contractors conducting work activities at/on any Glastonbury Public School District property are required to provide the following information:

**NOTICE: THIS FORM MUST BE COMPLETED AND APPROVED  
3 DAYS PRIOR TO COMMENCING ANY OPERATIONS**

Once approved, the form will be returned to the originator. Approval is conditional relative to noted specifications by GPS Safety Officer/Director of Environmental Health and Safety.

1. Project Information:

**Project Description:**

**Location:**

**Start Date:**

**Completion Date:**

**Contractor Safety Officer**

**Phone:**

**Fax:**

**Permit Prepared By:**

**Date Prepared:**

Project Scope	Yes	No	Comments
Confined Spaces*	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical Work	<input type="checkbox"/>	<input type="checkbox"/>	
Forklift	<input type="checkbox"/>	<input type="checkbox"/>	
Hazardous Materials	<input type="checkbox"/>	<input type="checkbox"/>	
Ladders/Scaffolds	<input type="checkbox"/>	<input type="checkbox"/>	
Respirators	<input type="checkbox"/>	<input type="checkbox"/>	
Rigging/Lifting	<input type="checkbox"/>	<input type="checkbox"/>	
Welding**	<input type="checkbox"/>	<input type="checkbox"/>	
Asbestos Management***	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	

\* Contractors need to secure "Confined Space Program" form and seek approval from GPS Safety Compliance Officer 3 days prior to working in permit confined spaces.

\*\* Hot permits are required from GPS Safety Compliance Officer prior to "hot" work.

\*\*\* Contractors need to secure Asbestos Management plan from Glastonbury Public Schools prior to all construction/demolition work.

2. Provide district safety officer with Material Safety Data Sheets (MSDS) for all materials used on-site.

LIST EITHER CHEMICAL OR TRADE NAME OF EACH ATTACHED MSD SHEET BELOW	

3. In cases of hazardous waste production, a written disposal plan must be provided to and approved by the District Safety Director, 5 days prior to initiation of work for those materials disposed of on site.
4. All contractors and/or their personnel are required **to be in compliance with all EPA, NFPA, AHERA and OSHA and other appropriate safety standards** when working on site (under the direction of a contractor's project supervisor).
5. All on-site activities carried out by contractors, and/or their employees, must be done in such a manner as to **maintain a safe working environment** for all Glastonbury Public Schools' employees, students and visitors.
6. Contractor employees found to be in non-compliance **may be removed from the District worksite** by the District Safety Officer.
7. Contractors found to be in non-compliance will be subject to **forfeiture of payment and/or contract termination**.
8. The district reserves the right to inspect the worksite **at any time** for safety compliance.
9. The district may require review of a contractors OSHA 200/300 log for a period of three (3) previous years.

**Please type company name and address below**

	<p><b>RETURN TO:</b></p> <p><b>Dr. Kenneth Roy, Safety Compliance Officer</b></p> <p><b>E-mail:       royk@glastonburyus.org</b></p>
--	--

By signature, the contractor agrees to adhere to all components and the spirit of this document.

Signature of Contractor	Title	Date

<p><b>INTERNAL USE ONLY</b></p> <p><b>APPROVAL STATUS:</b> <input type="checkbox"/> YES                                   <input type="checkbox"/> NO</p> <p><b>GPS Safety Officer:</b> _____ <b>Date:</b> _____</p> <p>c: <input type="checkbox"/> Maintenance Office File  <input type="checkbox"/> Contractor  <input type="checkbox"/> Safety Officer Roy  <input type="checkbox"/> Building Principal/Supervisor  <input type="checkbox"/> (Other)  <input type="checkbox"/> (Other)</p>	<p><b><u>NOTE TO CONTRACTOR:</u> APPROVAL CONTINGENT ON THE FOLLOWING ITEMS:</b></p>
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ATTACHMENT B  
PROPOSAL RESPONSE PAGE

TOWN OF GLASTONBURY  
PROPOSAL  
DATE ADVERTISED

RPGL #  
DATE / TIME DUE

2010-28  
January 13, 2010 @  
11:00 a.m.

NAME OF PROPOSAL

Provide and Install Variable Frequency Drives  
REQUEST FOR PROPOSAL

**Pricing proposals shall be formatted as shown on the next page**

**CODE OF ETHICS:**

I / We have reviewed a copy of the Town of Glastonbury's Code of Ethics and agree to submit a Consultant Acknowledgement Form if I /We are selected. Yes \_\_\_\_\_ No \_\_\_\_\_ \*

\*Respondent is advised that effective August 1, 2003, the Town of Glastonbury cannot consider any proposal where the respondent has not agreed to the above statement.

**The Respondent acknowledges receipt of the following Addendums:**

Addendum #1 \_\_\_\_\_ Date: \_\_\_\_\_  
Addendum #2 \_\_\_\_\_ Date: \_\_\_\_\_  
Addendum #3 \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
Type or Print Name of Individual

\_\_\_\_\_  
Doing Business as (Trade Name)

\_\_\_\_\_  
Signature of Individual

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Date

\_\_\_\_\_  
Telephone Number / Fax Number

\_\_\_\_\_  
E-Mail Address

\_\_\_\_\_  
SS # or TIN#

(Seal – If proposal is by a Corporation)

Attest

**VFD REQUIREMENTS FOR RCX**

**SMITH MIDDLE SCHOOL**

Unit	Area Served	Measure	Type	Contractor to Provide VFD	Install	Proposed Pricing
						Labor Material
RTU-1	Media Center	EO	1 x 20 HP	No	Yes	
RTU-1	Media Center	EO	1 x 10 HP	1 x 10 HP	Yes	
RTU-2	Gym	OCC-1	1 x 5 HP	No	Yes	
RTU-2	Gym	OCC-1	1 x 5 HP	No	Yes	
RTU-3	Gym	OCC-1	1 x 5 HP	1x 5 HP	Yes	
RTU-3	Gym	OCC-1	1 x 5 HP	1x 5 HP	Yes	
RTU-4	Administration	HV-1				
RTU-5	Administration	HV-1				
RTU-6	Cafeteria	EO	1 x 15 HP	No	Yes	
RTU-6	Cafeteria	EO	1 x 7.5 HP	No	Yes	
RTU-7	Auditorium	OCC-3	1 x 10 HP	No	Yes	
RTU-7	Auditorium	OCC-3	1 x 5 HP	No	Yes	
RTU-8	Auditorium	OCC-3	1 x 10 HP	No	Yes	
RTU-8	Auditorium	OCC-3	1 x 5 HP	No	Yes	

**GLASTONBURY HIGH SCHOOL**

Unit	Area Served	Measure	Type	Provide	Install
RTU-1	Cafeteria	EO	1 x 20 HP	No	Yes
RTU-1	Cafeteria	EO	1 x 7.5 HP	No	Yes
AHU-E-1	Auditorium	OCC-3	1 x 20 HP	1 x 20 HP	Yes
AHU-E-2	Band/Choral	HV-5	1 x 10 HP	1 x 10 HP	Yes

<b>Subtotal (Labor &amp; Material)</b>					
<b>Total Price (Sum of Labor and Material Subtotals)</b>					

Provide the below listed additional pricing data:

- A. Premium rate for after hours/holiday work
- B. Unit price mark-up for additional equipment and material
- C. Hourly labor rates

**Note:** Material price should include all VFDs (where necessary), enclosures (as necessary), and ancillary materials. The need for enclosures for the VFDs may be dependent on the contractor's proposed solution, therefore, the contractor's technical proposal shall include which units are to be provided an enclosure and the material cost listed here shall include the enclosure, where appropriate.



ATTACHMENT C

TOWN OF GLASTONBURY  
PROCUREMENT NOTICE  
REQUEST FOR PROPOSAL  
Provide and Install VFDs at Various Schools  
RPGL-2010-28

NON-COLLUSION STATEMENT

The company submitting this proposal certifies that it is being submitted without any collusion, communication or agreement as to any matter relating to it with any other respondent or competitor. We understand that this proposal must be signed by an authorized agent of our company to constitute a valid proposal.

Date: \_\_\_\_\_

Name of Company: \_\_\_\_\_

Name and Title of Agent: \_\_\_\_\_

By (SIGNATURE): \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_