

Regional School District 8 RHAM HIGH SCHOOL

BID DOCUMENTS

FOR HEATING, VENTILATION, AND AIR CONDITIONING UPGRADES FOR MEDIA CENTER AND WEIGHT ROOM AND CLASSROOMS

HVAC BID # 2019 - 101



Patricia Law, Ed.D.

Superintendent of Schools

Eva Gallupe

Business Manager

Michael J. Schlehofer

Director of Facilities

Regional School District No. 8 is an Affirmative Action/Equal Opportunity Employer.

INVITATION TO BID
HVAC Bid # 2019 - 101

Regional School District 8 is seeking bids for HVAC upgrades at RHAM High School for the Media Center, Weight Room and Classrooms, 85 Wall Street, Hebron, CT.

The Information for Bidders, Proposal Form, Plans, Specifications and other Contract Documents, as prepared by RZ Design Associates, Inc. 750 Old Main Street Suite 202 Rocky Hill, CT 06067; will be available via Regional School District 8 Website **Monday September 16, 2019**. The website address is www.rhamschools.org

A Pre-Bid Conference (not mandatory) will be held on **Monday September 23, 2019 at 11:00AM**, at RHAM High School, 85 Wall Street, Hebron, CT, in the Principal's Main Conference Room.

Sealed bids may be mailed to Regional School District 8 85 Wall Street, Hebron, CT 06248 or delivered in person to the Central Office, Regional School District No. 8, 85 Wall Street, Hebron, CT 06248. Bids will be accepted until **Friday, October 4, 2019 no later than 1:45PM** local time on Friday October 4, 2019 at which time they will be opened. Bids must be clearly marked with the bid number and title on the exterior of the sealed envelope. No responsibility shall be attached to any person or persons for the premature opening of bids not properly marked.

Facsimile Transmissions- Submission of this bid or any portion of this bid and/or any documents relating to this bid by means of Facsimile Transmission (fax machine) is unacceptable and will not be considered in the bid process.

As security, each Bid must be accompanied by a Certified Check or Cashiers Check drawn upon either a State Bank and Trust Company or a National Banking Association, to the order of the Regional School District No. 8, or the Bid must be accompanied by a Bid Bond having as surety thereto, such Surety Company or Companies as are authorized to do business in the State of Connecticut, of an amount not less than 10% of the Bid.

The successful Bidder shall furnish Performance, Labor and Material Payment Bonds, each for 100% of the Contract Sum.

Eva Gallupe, Business Manager
Regional School District 8
85 Wall Street
Hebron, CT 06248

Regional School District 8

BID TERMS AND CONDITIONS

1. INTRODUCTION

Regional School District 8 is seeking bids for HVAC upgrades at RHAM High School for the Media Center, Weight Room and Classrooms, 85 Wall Street, Hebron, CT.

The Information for Bidders, Proposal Form, Plans, Specifications and other Contract Documents, as prepared by RZ Design Associates, Inc. 750 Old Main Street Suite 202 Rocky Hill, CT 06067; will be available via Regional School District 8 Website after **Monday September 16, 2019**. The website address is www.rhamschools.org

It is the intention of Regional School District 8 to select a Contractor to provide these services based on factors that include the comprehensiveness and quality of the bid, the experience of the Contractor, the costs submitted by the Contractor, and factors which, in the opinion of Regional School District 8, will lead to efficient, cost effective, and well maintained facilities. Price in and of itself will not necessarily be the deciding factor in awarding the contract.

This invitation to Bid will be publicly advertised.

2. PROPOSALS AND DUE DATE with PRE-BID CONFERENCE

2.1 Pre-Bid Conference (not mandatory) **Monday, September 23, 2019 at 11:00AM** RHAM High School, 85 Wall Street, Hebron, CT 06248.

2.2 Sealed bids marked “**HVAC BID # 2019 - 101**” must be received in the Business Office by **1:45PM on FRIDAY, October 4, 2019**. Bids shall be opened at that time.

2.3 It is the intention of Regional School District 8 to select a Vendor to provide these services based on factors which include the comprehensiveness and quality of the proposal, the experience of the Vendor, the costs submitted by the Vendor, and factors which, in the opinion of Regional School District 8, will lead to efficient, cost effective, and well maintained facilities. Price in and of itself will not necessarily be the deciding factor in awarding the contract. Not with-standing the forgoing, the District may award the contract to the lowest responsible bidder, but reserves the right to reject any and all bids, or parts thereof, or to waive irregularities as deemed to be in the best interest of the District.

2.4 Bid proposals and signed specifications shall be submitted to:

Eva Gallupe, Business Manager
Regional School District 8
85 Wall Street

Hebron, CT 06248

3. INSTRUCTION TO BIDDERS

3.1 All bids submitted must be in SEALED ENVELOPES and must be notated with "**HVAC Bid # 2019 - 101**" on the face of the envelope to be considered. Bidders not marking the envelopes will have no recourse against any Board member and/or its employees for the failure of the bid to be considered. Amendments to or withdrawal of any section of the submitted bid received later than the time and date set for the bid opening will not be considered. Bids received later than the time and date specified will not be considered.

3.2 Facsimile Transmissions- Submission of this bid or any portion of this bid and/or any documents relating to this bid by means of Facsimile Transmission (fax machine) is unacceptable and will not be considered in the bid process.

3.3 No oral agreement made by a bidder or contractor with any agency or employee of the Board or the District will be binding upon the Board or the District and such oral agreement will be disregarded.

3.4 Request for interpretation of any portion of the bid may be made by email to the Board's [Director of Facilities](#). All replies will be given via email with an emailed copy of such inquiry and reply provided to each prospective bidder. Request for interpretation due by September 25, 2019.

3.5 Interested bidders are encouraged to visit and inspect the school sites before submitting a bid in order to familiarize themselves with work requirements. Additional information, if required, can be obtained from the Facilities Director at 860-228-5311. Failure to visit the school will not relieve the contractor of its obligation to confirm its ability to perform the work indicated in the specifications.

3.6 The Board is exempt from the payment of taxes imposed by the Federal Government and/or the State of Connecticut. Such taxes should not be included in the bid price.

3.7 In the event of receipt of identical bids as to offerings, delivery, service, content, price, etc. from two or more different lowest responsible qualified bidders, the contract will be awarded in accordance with the information contained in the bid documents, based on Board Policy No. 3330 Subsection 6 Requirements Governing Bid Awards found on page 2 and Subsection 3 of the Competitive Proposal Process for Special or Professional Services on page 5 of the Policy.

3.8 For bids to be considered, the attached Non Collusive Bid Statement must be completed and submitted with the bid.

3.9 Once bids are opened, the bid shall stand firm for ninety (90) days after the bid opening.

3.10 To be considered, all bids must contain -

- Completed Bid Form.

- Name, address, phone number, and email address of firm/person(s) responsible for the project, if different from the Bid Form signatory.
- At least three (3) references and contact information for which you have performed this type of work.
- Proposed project schedule.
- Bid security payable to the Regional School District 8 in the form of a certified check or Bid Bond is required for five (5) percent of the bid amount, issued by an acceptable surety on AIA documents A311 or comparable legal form and must accompany bid.

4. **SCOPE OF WORK -**

4.1 See attached Specifications and other Contract Documents, as prepared by RZ Design Associates, Inc.

5. **SERVICE CONTRACTOR REQUIREMENTS -**

5.1 If the contractor is a corporation, limited liability company or limited liability partnership, the contractor must be authorized to do business in the State of Connecticut as evidenced on the records of the Connecticut Secretary of the State.

5.2 Employees of the contractor providing services under the contract must have a minimum of 2 years' experience in the type of work to be performed and be properly licensed. Bidder must submit at least three (3) current references where similar work was performed by the bidder.

The Contractor represents, warrants and guarantees:

5.3 That Contractor is financially solvent and the Contractor is experienced in and competent to perform the type of work and to furnish the materials, supplies, and equipment to be performed or furnished by it.

5.4 That Contractor shall procure and maintain solely at its own expense Workers Compensation, Connecticut Disability Insurance, and Connecticut Unemployment Insurance in amounts as required by law for all of its employees engaged in the performance of the Contract. That it shall procure and maintain, solely at its own expense, such insurance coverages in the amounts and under the conditions set forth in Section 8 of the Contract. Certificates of Insurance, where applicable, will be submitted to the designated Districts' Offices no later than 30 days prior to the initiation of each Contract year.

5.5 That it will comply with Federal and State Fair Labor Standards Act minimum wage standards set by law as to all of its employees while they are engaged in work under any Contract between Contractor and the Districts.

5.6 Complete and complies with State of Connecticut educational employment verification form. (Act-16-67)

5.7 That it will comply with the Occupational Safety and Health Act (“OSHA”) and the “Toxic Substances Act” (“Right to Know Act”) with respect to all operations or activities on School Districts’ premises, and all other federal, state or local laws, rules or regulations concerning the handling and disposal of toxic or hazardous substances and wastes.

5.8 The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, religion, national origin, ancestry, sex, sexual orientation, marital status, age, military or veteran status, genetic information, gender identity or expression or disability or any other reason prohibited by federal or state law. Such action shall be taken with reference but not limited to: recruitment, hiring, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination, rates of pay or other forms of compensation, and selection for training or retraining, including apprenticeship and on-the-job training. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth provisions of this nondiscrimination clause.

5.9 The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to of race, creed, color, national origin, sex, sexual orientation, marital status, age, or disability or any other reason prohibited by federal or state law.

5.10 The Contractor will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this Contract so that such provisions will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies.

5.11 The Contractor will comply with all federal and state provisions for drug and alcohol testing and be responsible for any and all fines related thereto.

5.12 The Contractor will comply with any and all other applicable Federal, State, and/or Local laws, rules, and regulations, and the policies and procedures of each District.

6. WORK CONTRACT PROVISIONS -

The paragraphs listed below are informational only; bidders are advised that any bidder awarded a contract shall be subject to these conditions. This list is not meant to be comprehensive or all-inclusive. The District reserves its rights to add to or otherwise alter these conditions at its sole discretion.

6.1. **Proof of Insurance** - Original, completed Certificates of Insurance shall be presented to Regional School District 8 prior to contract issuance. Provider agrees to provide replacement/renewal certificates at least 60 days prior to the expiration date of the policies.

6.2 **Insurance Requirements** - Provider shall agree to maintain in force at all times during the contract the following minimum coverage and shall name Regional School District 8 as an Additional Insured on a primary and non-contributory basis to all policies except Workers

Compensation. All policies should also include a Waiver of Subrogation. Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum AM Best's Rating of "A-" VIII. In addition, all Carriers are subject to approval by the Regional School District 8.

		(Minimum Limits)
General Liability	Each Occurrence	\$1,000,000
General Aggregate		\$2,000,000
Products/Completed	Operations Aggregate	\$2,000,000
Auto Liability	Combined Single Limit	
Each Accident		\$1,000,000
Umbrella	Each Occurrence	\$1,000,000
(Excess Liability)	Aggregate	\$1,000,000

If any policy is written on a "Claims Made" basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting period for claims for the policy in effect during the contract for two (2) years from the completion date.

6.3 **Workers' Compensation Insurance** for all the employees employed on said Work shall be maintained in accordance with Connecticut's Workers' Compensation Act. In case any class of employees engaged in hazardous Work under the contract at the site of the Work is not protected under the Workers' Compensation Act, the contractor shall provide Workers' Compensation Insurance for the protection of its employees not otherwise protected.

6.4 **Occupational Safety and Health Act of 1970-** Contractor shall warrant that the machinery, equipment or other materials used in the performance of the services under the contract shall be in compliance with the standards required by the Occupational Safety and Health Act of 1970 (and all amendments thereto) as well as the standards required by comparable State and local laws, if any, for such machinery, equipment or other materials in effect at the time of such use.

6.5 **Machines and/or Equipment Lockout/Tagout-** In an effort to comply with OSHA's final rule on control of hazardous energy sources, contractors must warrant that any and all machines and/or equipment as is offered under this bid will be supplied and/or installed and/or equipped with lockout/tag out devices as prescribed by OSHA.

6.6 **Hazardous Materials** - Any materials required by this bid and subsequent purchase orders that are hazardous under federal, state or local statute, ordinance, regulation or agency order will be packaged, labeled, marked and shipped by the contractor to comply with all federal, state and local regulations then in effect including but not limited to the provisions of the Hazardous Materials Transportation Act and Regulations promulgated there under and will

further comply with any special requirements and any policies and procedures of the Board relating to the purchase of hazardous materials as might be noted on subsequent purchase orders or otherwise communicated to contractor in writing.

6.7 Material Safety Data Sheets (“MSDS”) - MSDS shall be provided by the contractor upon delivery to Board for any goods having carcinogens listed in the following references:

OSHA 1910 Subpart Z

ACHIG Current Threshold Values

DOT HazMat Table 49

IARC Carcinogen List

National Toxicology Program Carcinogen List

Radioactive Materials

These Material Safety Data Sheets must be consistent with and include information required by the OSHA Hazard Communication Standard published as 29 CFR 1910.1200, as the same may be amended or supplemented from time to time. Where possible, these MSDS sheets should comply with GHS (Globally Harmonized System) standards.

6.8 Permits -

Awarded bidders are responsible for obtaining all necessary permits as required by OSHA, Federal, State and/or Town regulations. Town permit fee applies to Regional School District 8.

6.9 Wage Rates -

The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of section 31-53 of the general statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day. The schedule of prevailing wage and welfare payments for this project as supplied by the State of Connecticut, Labor Department is attached. The Contractor shall comply with the provisions of Section I of Public Act 85-355 of the June 16, 1985 session of the General Assembly.

6.10 Invoicing and Payment -

- A. At a frequency not to exceed once a month, the Contractor may submit to the Engineer for review the Application for Payment filled out and signed by the Contractor covering the Work completed as of the date of the Application and supported by such data as the Engineer may reasonably require. Only under certain conditions, and if approved by the Owner, if payment is requested on the basis of materials and equipment not incorporated

in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application or Payment shall also be accompanied by such supporting data, satisfactory to the Owner, as will establish the title to the material and equipment and protect his interest therein, including applicable insurance.

- B. The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will have passed to the Owner prior to the making of the Application for Payment, free and clear of all liens, claims, security interests and encumbrances; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.
- C. The Engineer will, within fourteen days after receipt of each Application for Payment, either indicate in writing his approval of payment and present the Application to the Owner or return the Application to the Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application.
- D. The amount paid the Contractor shall be the amount due less 5% retainage. The retainage shall be held by the Owner until completion of the Work.
- E. The Owner will, within fourteen days of presentation to him of an approved Application for Payment, pay the Contractor the amount approved by the Engineer.

6.11 Certificates of Completion and Final Payment -

- A. Upon written notice from the Contractor that the Project is complete, the Engineer will make a final inspection with the Contractor and will notify the Contractor in writing of any particulars in which this Inspection reveals that the Work is defective. The Contractor shall immediately make such corrections as are necessary to remedy such defects.
- B. After the Contractor has completed any such corrections to the satisfaction of the Engineer and delivered all maintenance and operating instructions, schedules, guarantees, bonds certificates of inspection and other documents all as required by the Contract Documents, the Owner will issue a certificate of completion and Contractor may make application for final payment following the procedure for progress payments.

The final Application for Payment shall be accompanied by such supporting data as the Engineer may require, together with complete and legally effective releases or waivers (satisfactory to the Owner) of all Liens arising out of the Contract Documents and the Labor and services performed and the material and equipment furnished thereunder.

In lieu thereof and as approved by the Owner, the Contractor may furnish receipts or releases in full; an affidavit of the Contractor that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which the owner or its property might in any way be responsible have been paid or otherwise satisfied; and the consent of the surety, if any, to final payment. If any Subcontractor or supplier fails to furnish a release or receipt in full, the Contractor may furnish a bond satisfactory to the Owner to indemnify it against any Lien.

- C. If, on the basis of his observation and review of the Work during construction, his final inspection and his review of the final Application for Payment - all as required by the Contract documents, the Engineer is satisfied that the Work has been completed and the Contractor has fulfilled all of his obligations under the Contract Documents, he will, within fourteen days after receipt of the final Application for Payment, indicate in writing his approval of payment and present the Application to the Owner for payment. Otherwise, he will return the Application to the Contractor, indicating in writing his reasons for refusing to approve final payment, in which case the Contractor will make the necessary corrections and resubmit the Application.
- D. Final payment shall constitute 95% of the final Contract amount. The remaining 5% will be payable in accordance with "Warranty and Guarantee: Removal or Acceptance of Defective Work". The Owner will, within fourteen days of presentation to him of an approved final Application for Payment, pay the Contractor the amount approved by the Engineer.

6.12 Owners Right to Stop or Suspend -

- A. If the Work is defective, or the Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if the Contractor fails to make prompt payments to Subcontractors or for labor, materials or equipment, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.
- B. The Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to the Contractor which shall fix the date on which Work shall be resumed. The Contractor will resume the Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time directly attributable to any suspension if he makes a claim therefore as provided in the General Conditions.

6.13 **Liquidated Damages -**

- A. If the Contractor fails to complete the work within the time specified in the contract, or any extension, as specified in the clause entitled Default of this contract, the Contractor shall pay to the Owner as liquidated damages, the sum of \$1,000.00 for each day of delay. If different completion dates are specified in the contract for separate parts or stages of the work, the amount of liquidated damages shall be assessed on those parts or stages which are delayed. To the extent that the Contractor's delay or nonperformance is excused under another clause in this contract, liquidated damages shall not be due the Owner. The Contractor remains liable for damages caused other than by delay.
- B. If the Owner terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final.

6.14 **Time for Completion -**

It is hereby understood and mutually agreed by and between the Contractor and the Owner that the date of beginning and the time for completion as specified in the Contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the notice to proceed. The Contractor agrees that said work shall be prosecuted regularly, diligently and uninterruptedly at such rate of progress as will insure full completion thereof within 210 calendar days from the notice to proceed. Furthermore, major construction activities (i.e. Rigging of equipment, ductwork modifications, etc.) shall occur between April 10, 2020 and April 17, 2020 when school is closed for vacation. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.

6.15 **Default-** It shall be understood that a contractor supplying equipment and/or supplies will be considered to be in default if/when he/she has not delivered the item(s) within the time constraints set forth in the contract. Contractors providing a service and/or construction will be considered to be in default if/when they have failed to meet the completion date(s) and/or times set forth in the contract and/or, in the case of construction, contractor has ceased on the project for a period of fifteen (15) days cumulative or consecutive.

6.16 **Indemnification -** The contractor agrees to indemnify and hold harmless the District and its employees from any and all liability arising out of the contractor's performance of services under the contract, its operations and functions and/or supplied items.

6.17 **Warranties -**

Work delivered shall be guaranteed against faulty material and workmanship for a period of one (1) year from owner's acceptance. If during this period such faults develop, the unit or part affected shall be replaced at no cost to the owner for materials and labor.

The terms and contents of these general bid terms and conditions are made a part of this bid.

7. STIPULATIONS -

7.1 A contract issued as a result of a bid shall not be considered exclusive. The District reserves the right to contract with other vendors for similar services when deemed appropriate.

7.2 The District maintains the right to withhold payment for unsatisfactory materials and/or workmanship until such time that the defect is corrected. If the defect is not satisfactorily remediated within 60 days, the District may elect to have the remediation done by an alternate vendor and subtract the cost from the contractor's invoice. The District also reserves the right to deduct from the contractor's billing any costs incurred as a result of inferior or unsatisfactory materials and/or workmanship.

7.3 The District reserves the right to cancel the contract at any time, for any or no reason, with no cost to the District. If the cancellation is for inadequate performance, then the cancellation shall be immediate. If the cancellation is for budgetary considerations or is based upon the discretionary right of the District then the cancellation shall be upon thirty (30) days written notice.

7.4 The District reserves the right not to award the continuation of a multiple year bid. The award of each year's contract is contingent upon adoption and approval of budgetary funds for this purpose.

8. DISPUTE RESOLUTION

Any controversy or disputes arising under this contract shall be litigated in a court of competent jurisdiction in the State of Connecticut or, as determined by the District, be first subject to mediation. The District will have the option to choose the forum. If the matter is brought in a court of competent jurisdiction, the prevailing party shall be entitled to court costs and reasonable attorney's fees. The District specifically **does not agree to be a party to any arbitration proceedings.**

9. CHOICE OF LAW

If any controversy between the parties arise Connecticut law will apply and the contract will be interpreted and governed by the laws of the State of Connecticut (excluding its choice of law rules).

EXHIBIT A

REGIONAL SCHOOL DISTRICT 8

OFFICIAL BID FORM HVAC 2019 - 101

Name of Company: _____

Address: _____

Name of Primary Contact: _____

Phone Number of Primary Contact: _____

Email Address of Primary Contact: _____

The undersigned _____, doing business in the Regional School District 8 submits herewith, in conformity with the general terms, conditions, and specifications for the above-mentioned public bid, the following proposal for: **HVAC 2019 - 101 – Regional School District 8**

The Undersigned agrees to perform all Construction Work as indicated on the Drawings and described in the Specifications, and Addenda thereto, for the lump sum price of:

_____ Dollars (\$_____).

(Written)

Date

Signature of Bidder

EXHIBIT B

REGIONAL SCHOOL DISTRICT 8

Business and Financial References

<u>Reference Name</u> <u>Contact Information</u>	<u>Contract Site</u>	<u>Dates</u>

EXHIBIT C

REGIONAL SCHOOL DISTRICT 8

CONTRACT

If notified of the acceptance of this Bid within sixty (60) calendar days of the time set for opening of bids, the Undersigned agrees to execute the “Standard Form of Agreement Between the Owner and Contractor where the basis of payment is a Stipulated Sum”, AIA Document A101, as issued by The American Institute of Architects, current edition, within thirty (30) calendar days of the receipt of such notification and in accordance with this Bid and the Contract Documents.

CONTRACT SECURITY

The Undersigned agrees if awarded the Contract, to execute and deliver to the owner at the time of Contract signing, Performance Bond and Labor and Materials Payment Bond (Form A311 as issued by the American Institute of Architects) in amounts equal to 100 percent of the Contract Sum, as set form in the Instructions to Bidders of the Project Specifications.

TIME OF COMPLETION

The Undersigned further agrees, if awarded the Contract, to commence work under this contract on or before a date to be specified in a written “Notice to Proceed” of the Owner and upon issuance of a Purchase Order; and to complete the entire project within 210 consecutive calendar days from the notice to proceed.

DECLARATION

The Undersigned hereby declares that he or she has carefully examined the Invitation to Bid, the Instruction to Bidders, the Drawings and Specification, has visited the actual location of the Work, has consulted his sources of supply, has satisfied himself as to all quantities and conditions, and understands that in signing this Bid, he waives all right to plead any misunderstanding regarding the same.

The Undersigned understands that his or her competence and responsibility and that of his proposed subcontractors, time of completion, as well as any other factors of interest to the Owner, will be a consideration in making the award. The Owner reserves the right to reject any or all bids, to accept or reject alternate bids and unit prices and to waive any informality or irregularity concerning the bids received as it may be in his or her interest to do.

(Legal Name of Bidder)

[Seal, if bid is by a
corporation]

(Address of Bidder)

By _____ (Authorized Officer)

Insert Spec drawings from RZ Design,
10 Pages

GENERAL NOTES

- RENOVATION**
- THIS PROJECT INVOLVES THE RENOVATION OF AN EXISTING FACILITY. BEFORE SUBMITTING THE BID, CONTRACTORS SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH THE PROJECT IS TO BE COMPLETED.
 - CONTRACTORS SHALL BE HELD RESPONSIBLE FOR ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS.
 - IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW EVERY DEVICE, APPURTENANCE, PIPE, WIRE OR CONDUIT TO BE REMOVED. MEP EQUIPMENT, UNITS, AND SYSTEMS NOT BEING REUSED, SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ASSOCIATED HANGERS, SUPPORTS, BASES, PADS, PIPES, DUCTS, CONDUITS, WIRES, INSULATION, AND CONTROLS BACK TO THE POINT OF ORIGIN.
 - EQUIPMENT, PIPING, OR CONDUIT SHALL NOT BE ABANDONED IN-PLACE UNLESS SPECIFICALLY SO NOTED.
 - PROPERLY DISPOSE OF DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES, REGULATIONS, AND DEP STANDARDS; TURN OVER TO THE OWNER, EQUIPMENT SO INDICATED.
 - RELOCATE EXISTING EQUIPMENT, DEVICES, PIPING, WIRING, AND RELATED SYSTEMS AS REQUIRED FOR CONSTRUCTION PURPOSES. ALL EXISTING SYSTEMS SHALL BE FULLY OPERATIONAL, INCLUDING RECONNECTION TO SERVICES AND UPGRADED SYSTEMS. ALL RELOCATED EQUIPMENT SHALL BE PROTECTED DURING CONSTRUCTION.
 - PROVIDE TEMPORARY CONNECTIONS AND SYSTEM MODIFICATIONS AS REQUIRED FOR CONSTRUCTION AND PHASING PURPOSES.
 - INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHEN NECESSARY. COORDINATE WITH GENERAL CONTRACTOR FOR PHASING REQUIREMENTS.
 - ALL EXISTING EQUIPMENT, FIXTURES, AND DEVICES TO BE REMOVED AND RELOCATED SHALL BE FIELD VERIFIED FOR EXACT QUANTITY AND CONDITION; KEEP AN ACCURATE RECORD OF STORED EQUIPMENT AND ITS CONDITION.
 - REBALANCE NEW AND EXISTING MECHANICAL AND ELECTRICAL SYSTEMS ASSOCIATED WITH THE RENOVATION, INCLUDING RENOVATED AREAS AND AREAS AFFECTED BY SYSTEM MODIFICATIONS.
 - SYSTEMS REQUIRING TO REMAIN IN OPERATION DURING DEMOLITION AND RENOVATION SHALL BE CAREFULLY PROTECTED FROM DAMAGE AND CONTAMINATION BY THE CONSTRUCTION PROCESS.

a	48" ABOVE FINISHED FLOOR
A	GENERAL SERVICE COMPRESSED AIR
AC	AIR COMPRESSOR
ACD	AUTOMATIC COOLING CONDENSATE PUMP
ACF	AIRFLOW CENTRIFUGAL FAN
ACU	AIR CONDITIONING UNIT(S)
AD	ACCESS DOOR
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AMB	AMBIENT
ANN	ANNUNCIATOR
APD	AIR PRESSURE DROP
APPROX	APPROXIMATE
ARV	AXIAL ROOF VENTILATOR
AS	AIR SEPARATOR
ATC	AUTOMATIC TEMPERATURE CONTROL
AVG	AVERAGE
AWT	AVERAGE WATER TEMPERATURE
b	42" ABOVE FINISHED FLOOR
BDD	BACK DRAFT DAMPER
BFW	BOILER FEED WATER
BHP	BRAKE HORSEPOWER
BICF	BACKWARD INCLINED CENTRIFUGAL FAN
BSMT	BASEMENT
BTUH	BRITISH THERMAL UNITS/HOUR
CV	COEFFICIENT, VALVE FLOW
CC	COOLING COIL
CD	CONDENSATE
CER/CEG	CEILING EXHAUST REG./GRILLE
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHP	CONSOLE HEAT PUMP
CI	CAST IRON
CLGWTR	COOLING WATER
CLG	CEILING
CMV	CEILING MOUNTED VENTILATOR
CO	CLEANOUT
CO2	CARBON DIOXIDE
COMP	COMPRESSOR
COND	CONDENSER
CONV	CONVECTOR
CP	CONDENSATE PUMP
CRU	COMPUTER ROOM UNIT
CRV	CENTRIFUGAL ROOF VENTILATOR
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWV	CENTRIFUGAL WALL VENTILATOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CU FT	CUBIC FEET
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME
CW	COLD WATER
dB	DECIBEL
D	DEPTH
DB	DRY BULB TEMPERATURE
DCV	DOUBLE CHECK VALVE
DEG or °	DEGREE
DIA or Ø	DIAMETER
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DSA	DUCT SOUND ATTENUATORS
DWG	DRAWING
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EBR	ELECTRIC BASEBOARD RADIATION
EDR	EQUIVALENT DIRECT RADIATION
EF	EXHAUST FAN
EFF	EFFICIENCY
ELEC	ELECTRICAL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK (HVAC)
ETR	EXISTING TO REMAIN
ETP	ELECTRIC TRAP PRIMER
EUH	ELECTRIC UNIT HEATER
EVAP	EVAPORATOR
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXP	EXPANSION
F	FAHRENHEIT
FCCF	FORWARD CURVE CENTRIFUGAL FAN

ABBREVIATIONS

FCU	FAN COIL UNIT
FD	FIRE DAMPER
FD/SB	FIRE DAMPER WITH INTEGRAL SECURITY BARS
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
FHC	FIRE HOSE CABINET
FM	FLOW METER
FOB	FLAT ON BOTTOM
FOF	FUEL OIL FILL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FOV	FUEL OIL VENT
FP	FIRE PUMP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOOR SINK
FT	FOOT OR FEET
FVC	FIRE VALVE CABINET
G	GAS
GA	GAUGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRAINS
GW	GAS WATER HEATER
H	HEIGHT
H	HEATING COIL
HC	HEATING/COOLING
HIC	HEAD
HD	HANDICAP
HD/CP	HORSEPOWER
HP	HORSEPOWER
HPG	HIGH PRESSURE GAS
HR	HOUR(S)
HT	HEAT
HTR	HEATER
HUM	HUMIDIFIER
HV	HEATING/VENTILATION UNIT
HW	HOT WATER
HWR	HOT WATER RETURN
HWRP	HOT WATER RETURN PUMP
HWRR	HOT WATER REVERSE RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
ICF	IN-LINE CENTRIFUGAL FAN
ID	INSIDE DIAMETER
IEF	IN-LINE EXHAUST FAN
IN	INCHES
IN WG	INCHES OF WATER, GAUGE (PRESS.)
IW	INDIRECT WASTE
JP	JOCKEY PUMP
KEF	KITCHEN EXHAUST FAN
KHWST	KITCHEN HOT WATER STORAGE TANK
KWH	KITCHEN WATER HEATER
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LF	LINEAR FEET
LIQ	LIQUID
LV	LABORATORY VACUUM
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAX	MAXIMUM
MBH	BTU PER HOUR (THOUSAND)
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFF	MIXED FLOW FAN
MFR	MANUFACTURER
MIN	MINIMUM
MJAU	MAKE UP AIR UNIT
N/A	NOT APPLICABLE
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
ORD	OVERFLOW ROOF DRAIN
ORWL	OVERFLOW RAIN WATER LEADER
PCD	PUMPED CONDENSATE DRAIN (COOLING)
PD	PRESSURE DROP
PF	PROPELLER FAN
PH / Ø	PHASE

PIV	POST INDICATOR VALVE
PLEF	PLENUM FAN
PLUF	PLUG FAN
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RAF	RETURN AIR FAN
RD	ROOF DRAIN
REF	REFRIGERANT PIPING (MULTIPLE PIPES)
REF	ROOF EXHAUST FAN
REG	REGISTER
RF	RELIEF FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHG	REFRIGERANT HOT GAS
RL	RELOCATED
RM	ROOM
RMS	ROOT MEAN SQUARED
RPD	REDUCED PRESSURE DEVICE
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT
RV	RADON VENT
RWL	RAIN WATER LEADER
S	SOIL
S&R	SUPPLY AND RETURN
SA	SUPPLY AIR
SAC	SHOP AIR COMPRESSOR
SCC	SPRINKLER CONTROL CABINET
SD	SMOKE DAMPER
SP	STANDPIPE
SP	STATIC PRESSURE
SP	SUMP PUMP
SPEC	SPECIFICATION
SPK	SPRINKLER
SPK/SP	COMBINED SPRINKLER/ STANDPIPE
SPST	SINGLE POLE SINGLE THROW
SQ	SQUARE
SS	STAINLESS STEEL
ST	STORM
STD	STANDARD
SUCT	SUCTION
SWBD	SWITCHBOARD
SW	SWITCH
TAF	TUBEXIAL FAN
TAG	IDENTIFICATION OF EQUIPMENT
TD	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TP	TAMPERPROOF
TP	TRAP PRIMER
TSP	TOTAL STATIC PRESSURE
T*STAT	THERMOSTAT
TW	TEMPERED WATER
TWR	TEMPERED WATER RETURN
TYP	TYPICAL
UH	UNIT HEATER
UPF	UPBLAST PROPELLER ROOF EXHAUST FAN
UR	URINAL
USF	UTILITY SET FAN
V	VENT
V	VOLTAGE
VAF	VANEAXIAL FAN
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VFC	VARIABLE FREQUENCY CONTROLLER
VIF	VERIFY IN FIELD
VOL	VOLUME
VTR	VENT THRU ROOF
W	WASTE
W	WATT
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WEF	WALL EXHAUST FAN
WH	WALL HYDRANT (HOSE BIBB)
WHA	WATER HAMMER ARRESTER
WI	WIDTH
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WTG	WALL TRANSFER GRILLE
WTR	WATER
WV	WASTE AND VENT COMBINATION
WWM	WELDED WIRE MESH

FITTINGS AND VALVES

	PIPE ANCHOR
	BACKFLOW PREVENTOR
	STRAINER OR STRAINER WITH BLOW-DOWN VALVE HOSE END, CAP AND CHAIN
	WALL CLEANOUT OR BLIND FLANGE
	"P" TRAP
	PIPE TEE DOWN
	IN-LINE EXPANSION COMPENSATOR
	FLOOR CLEANOUT
	STEAM TRAP ASSEMBLY
	STEEL PENETRATION/PIPE SLEEVE
	PIPE ELBOW UP OR PIPE TEE UP
	PIPE ELBOW DOWN
	COMPANION FLANGE
	PIPE CAP OR CAPPED END OF PIPE
	PIPE GUIDES
	PUMP
	WATER HAMMER ARRESTOR
	TAKEOFF FROM TOP OF MAIN PIPE
	TAKEOFF FROM BOTTOM OF MAIN PIPE
	DIRECTION OF FLUID FLOW
	VALVE ON RISER
	VALVE ON DROP
	METERING ORIFICE
	AIR VENT
	FLOW SENSOR
	PIPE DROP WITH VALVE
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	BALL VALVE
	CALIBRATED BALANCING VALVE
	SHUT-OFF VALVE (SEE SPECIFICATIONS FOR APPLICATION TYPE)
	BUTTERFLY VALVE
	CHECK VALVE
	THERMOSTATIC MIXING VALVE
	GLOBE VALVE
	GATE VALVE
	PRESSURE REDUCING VALVE
	GAS COCK
	TRIPLE DUTY VALVE
	OS&Y VALVE
	FUSOMATIC VALVE (FIREMATIC)
	DRAIN VALVE WITH HOSE END, CAP & CHAIN OR WALL HYDRANT / HOSE BIBB
	MOTORIZED BUTTERFLY VALVE
	PRESSURE RELIEF SAFETY VALVE
	AQUASTAT
	SOLENOID VALVE
	TEMPERATURE SENSOR WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
	TEMPERATURE GAUGE WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
	THERMOMETER WITH SEPARABLE SOCKET IN IMMERSIBLE WELL
	PRESSURE GAUGE
	PRESSURE SENSOR WITH SYPHON (STEAM)
	FLEXIBLE CONNECTOR

GENERAL SYMBOLS

	THICK, DARK SOLID LINES INDICATE NEW OR RELOCATED ITEMS OR NEW RACEWAY AND WIRING
	THIN, LIGHT LINES INDICATE EXISTING ITEMS OR RACEWAY TO REMAIN IN PLACE AND BE REUSED
	THICK, DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED
	POINT OF NEW TO EXISTING CONNECTION, INCLUDING TRANSITIONS

HVAC SYMBOLS

	RECTANGULAR, FLAT OVAL OR ROUND AIR DUCT
	AIR DUCT WITH ACOUSTICAL LINING
	SUPPLY AIR DUCT UP
	SUPPLY AIR DUCT DOWN
	RETURN AIR DUCT UP
	RETURN AIR DUCT DOWN
	EXHAUST AIR DUCT UP
	EXHAUST AIR DUCT DOWN
	TURNING VANES
	ACCESS DOOR
	FLEXIBLE DUCT CONNECTION
	CEILING SUPPLY DIFFUSERS
	CEILING RETURN / EXHAUST GRILLE
	HARD DUCTED DIFFUSER OR GRILLE WITH FULL SIZE BOTTOM TAKE-OFF
	DIRECTION OF SUPPLY OR OUTDOOR AIRFLOW
	DIRECTION OF RETURN OR EXHAUST AIRFLOW
	DOOR UNDERCUT
	BACK DRAFT DAMPER
	VOLUME DAMPER
	FIRE DAMPER
	FIRE DAMPER WITH INTEGRAL SECURITY BARS
	VAV BOX w/ UNIT TYPE
	FAN POWERED VAV BOX
	SUPPLY PIPING. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
	RETURN PIPING. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
	ELECTRICAL HEATING CABLE. REFER TO ABBREVIATION LIST FOR DESIGNATION (XXX)
	SMOKE DAMPER SYSTEM AND ASSOCIATED DEVICES PER SPECIFICATIONS AND MEP DETAILS
	COMBINATION FIRE AND SMOKE DAMPER
	MOTORIZED DAMPER
	HUMIDIFIER TUBE/PANEL
	DUCT SMOKE DETECTOR WITH REMOTE INDICATING LIGHT AND TEST SWITCH
	DUCT STATIC PRESSURE SENSOR
	DIFFERENTIAL PRESSURE SENSOR
	VARIABLE FREQUENCY CONTROLLER
	AIR FLOW STATION
	DUCT SOUND ATTENUATOR
	ROOM THERMOSTAT
	ROOM TEMPERATURE WITH CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	HUMIDISTAT
	FINNED TUBE RADIATION
	DANFOSS CONTROL VALVE
	FLOW METER
	FIN TUBE TAG
DUCT SIZING	
20x12	RECTANGULAR DUCT
20/12	FLAT OVAL DUCT
20"Ø	ROUND DUCT

RZ Design Associates, Inc.
MECHANICAL, ELECTRICAL, AND STRUCTURAL ENGINEERING
 750 OLD MAIN STREET
 SUITE 202
 ROCKY HILL, CT 06067
 P: (860) 436-4336
 F: (860) 436-4450
 www.rzdesignassociates.com

SEAL

SUBMISSION HISTORY

JOB INFO

**RTU
 REPLACEMENT
 for
 RHAM
 High School
 Wall Street
 Hebron, CT
 06248**

DWG DATA

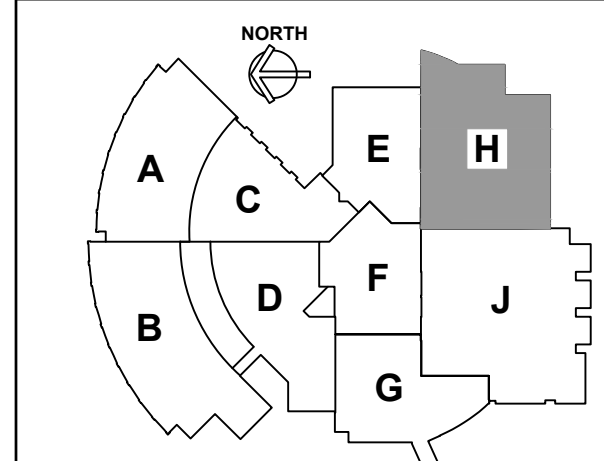
PROJECT NUMBER:	19-338
SUBMISSION DATE:	09/13/19
DRAWN:	PA
REVIEWED:	KH
SCALE:	AS NOTED

DWG TITLE

**MECHANICAL
 LEGEND,
 ABBREVIATIONS
 AND NOTES**

DWG #

M-0



MAIN LEVEL KEY PLAN

SEAL

SUBMISSION HISTORY

JOB INFO

**RTU
 REPLACEMENT
 for
 RHAM
 High School
 Wall Street
 Hebron, CT
 06248**

DWG DATA

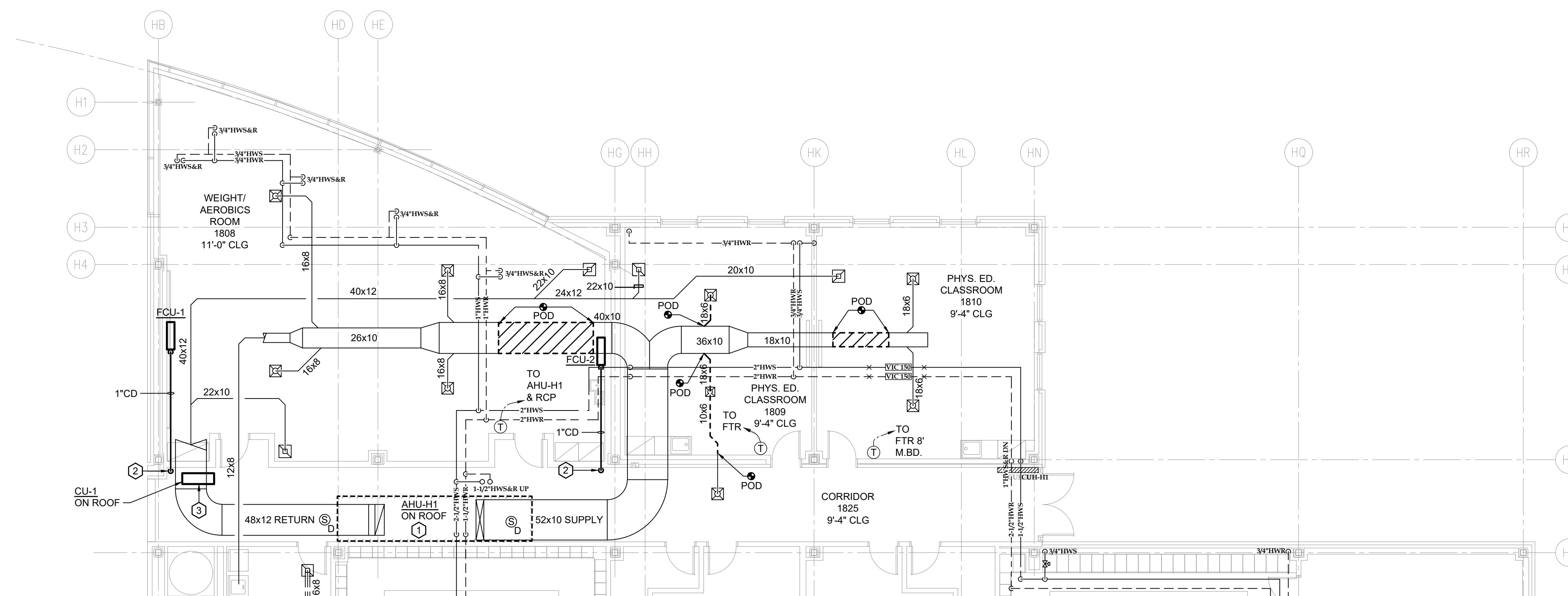
PROJECT NUMBER: 19-338
 SUBMISSION DATE: 09/13/19
 DRAWN: PA
 REVIEWED: KH
 SCALE: 1/8" = 1'-0"

DWG TITLE

**MECHANICAL
 PLAN**

DWG #

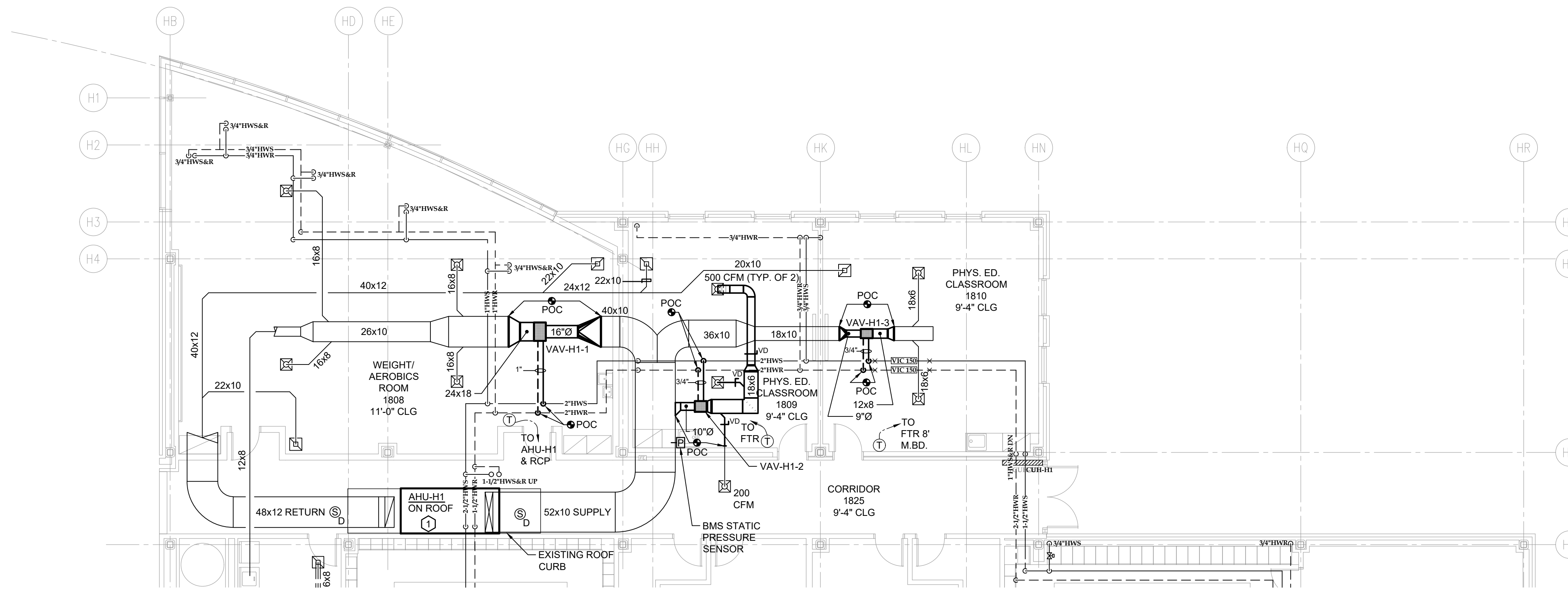
M-1



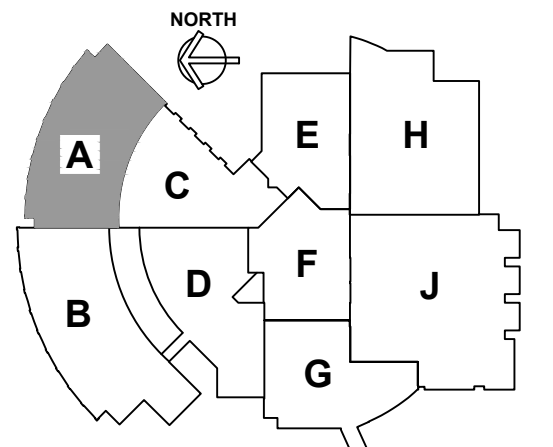
1 MECHANICAL DEMOLITION PART PLAN
 1/8" = 1'-0"

- HVAC GENERAL NOTES:**
- UNLESS OTHERWISE NOTED, ALL HVAC EQUIPMENT SHALL BE EXISTING TO REMAIN.
 - BALANCE AHU-H1 TO FLOW RATES INDICATED WITHIN THE RTU SCHEDULE. BALANCE REGISTERS ASSOCIATED WITH VAV-H1-2 TO THE FLOW RATES INDICATED ON THE DRAWINGS.

- HVAC KEY NOTES:**
- REMOVE EXISTING AHU-H1 ON ROOF. PROVIDE REPLACEMENT AHU-H1 AND CURB ADAPTER TO ALLOW INSTALLATION ON THE EXISTING CURB AND CONNECT TO EXISTING DUCTWORK. REMOVE EXISTING HWS&R PIPING TO BELOW ROOF AND EXTEND 1 1/4" PIPING TO NEW HOT WATER COIL. VERIFY ALL DIMENSIONS IN FIELD.
 - TERMINATE 1" CONDENSATE WITH 90° ELBOW DOWN ABOVE LOWER ROOF.
 - MOUNT CU-1 TO EXISTING MASONRY WALL UTILIZING MANUFACTURERS WALL BRACKET.

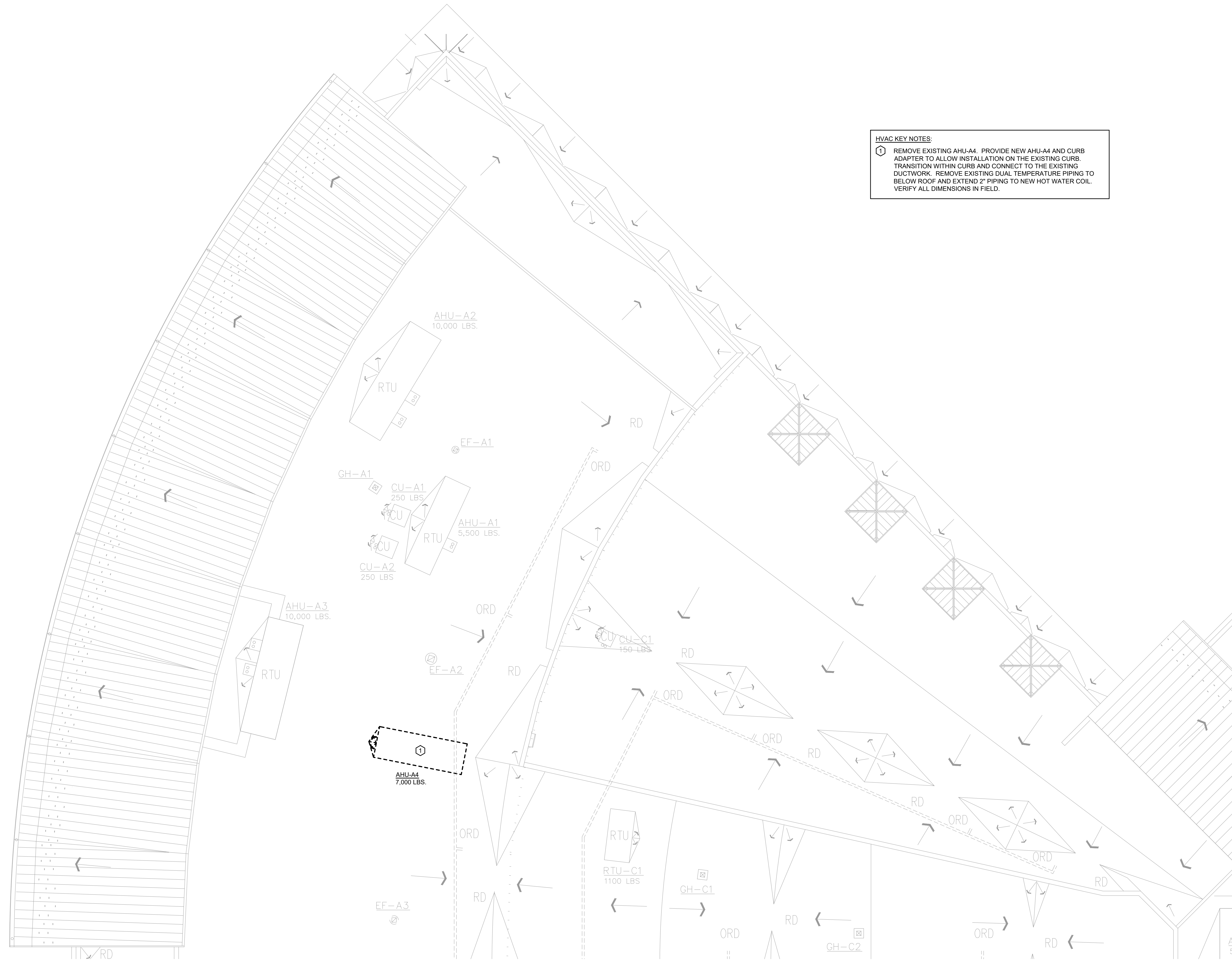


2 MECHANICAL NEW WORK PART PLAN
 1/8" = 1'-0"



MAIN LEVEL KEY PLAN

HVAC KEY NOTES:
 ① REMOVE EXISTING AHU-A4. PROVIDE NEW AHU-A4 AND CURB ADAPTER TO ALLOW INSTALLATION ON THE EXISTING CURB. TRANSITION WITHIN CURB AND CONNECT TO THE EXISTING DUCTWORK. REMOVE EXISTING DUAL TEMPERATURE PIPING TO BELOW ROOF AND EXTEND 2" PIPING TO NEW HOT WATER COIL. VERIFY ALL DIMENSIONS IN FIELD.



1 MECHANICAL ROOF PART PLAN
 M-2 1/8" = 1'-0"

SEAL

SUBMISSION HISTORY

JOB INFO

**RTU
 REPLACEMENT
 for
 RHAM
 High School
 Wall Street
 Hebron, CT
 06248**

DWG DATA

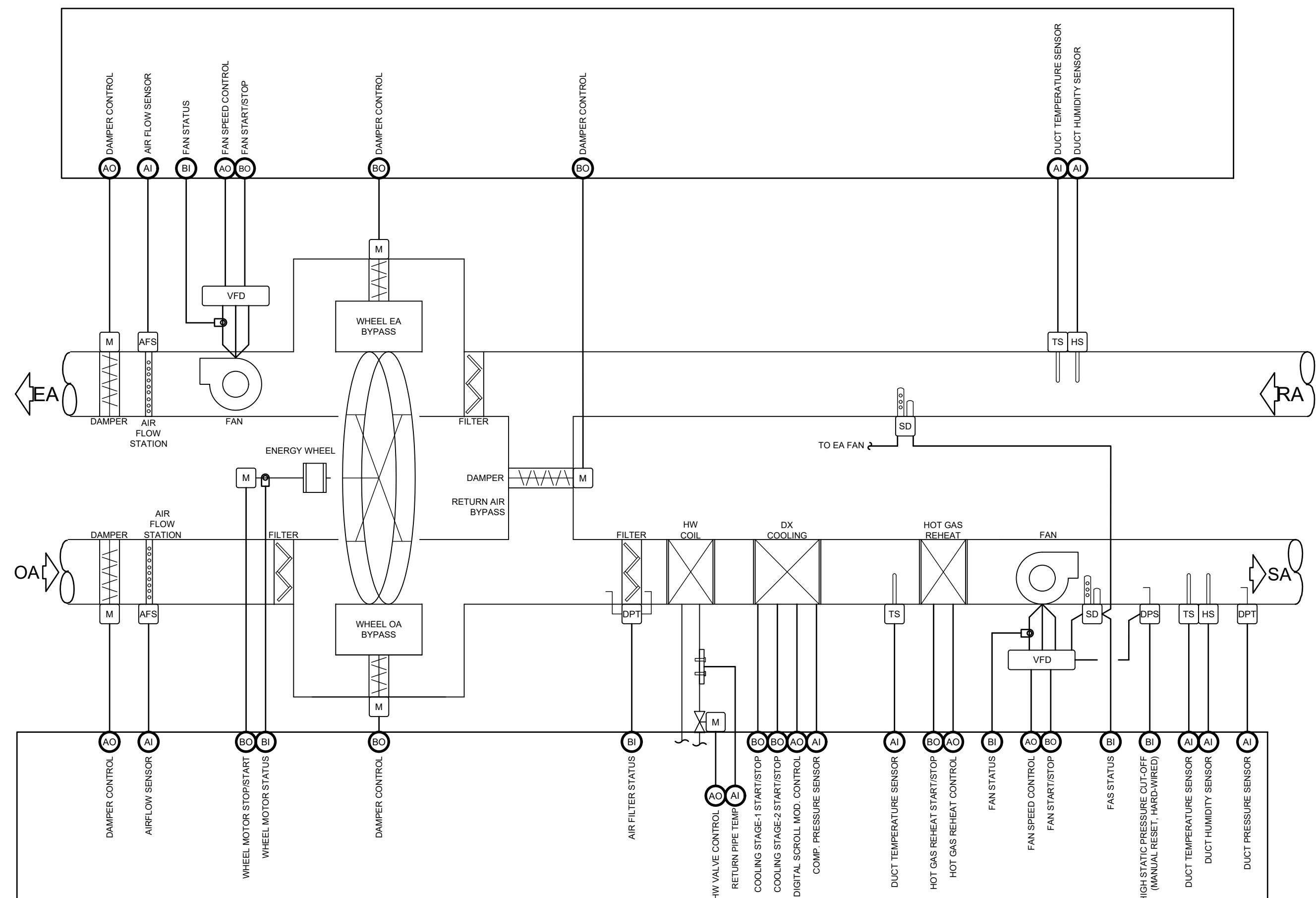
PROJECT NUMBER: 19-338
 SUBMISSION DATE: 09/13/19
 DRAWN: PA
 REVIEWED: KH
 SCALE: 3/32" = 1'-0"

DWG TITLE

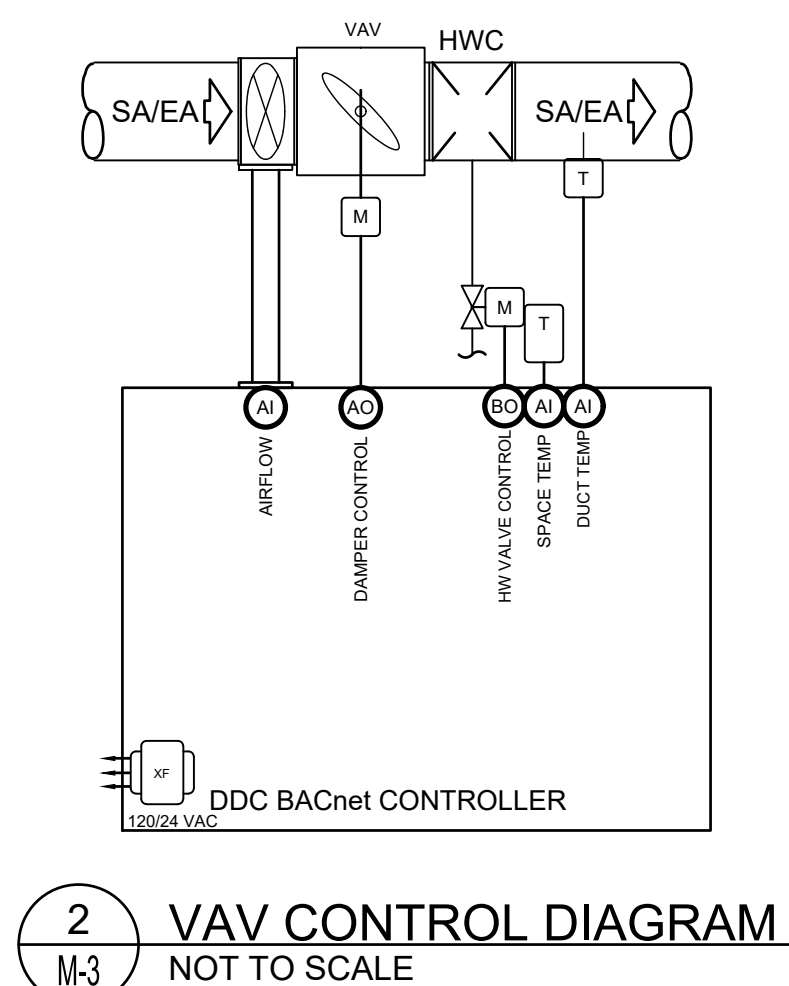
**MECHANICAL
 ROOF PLAN**

DWG #

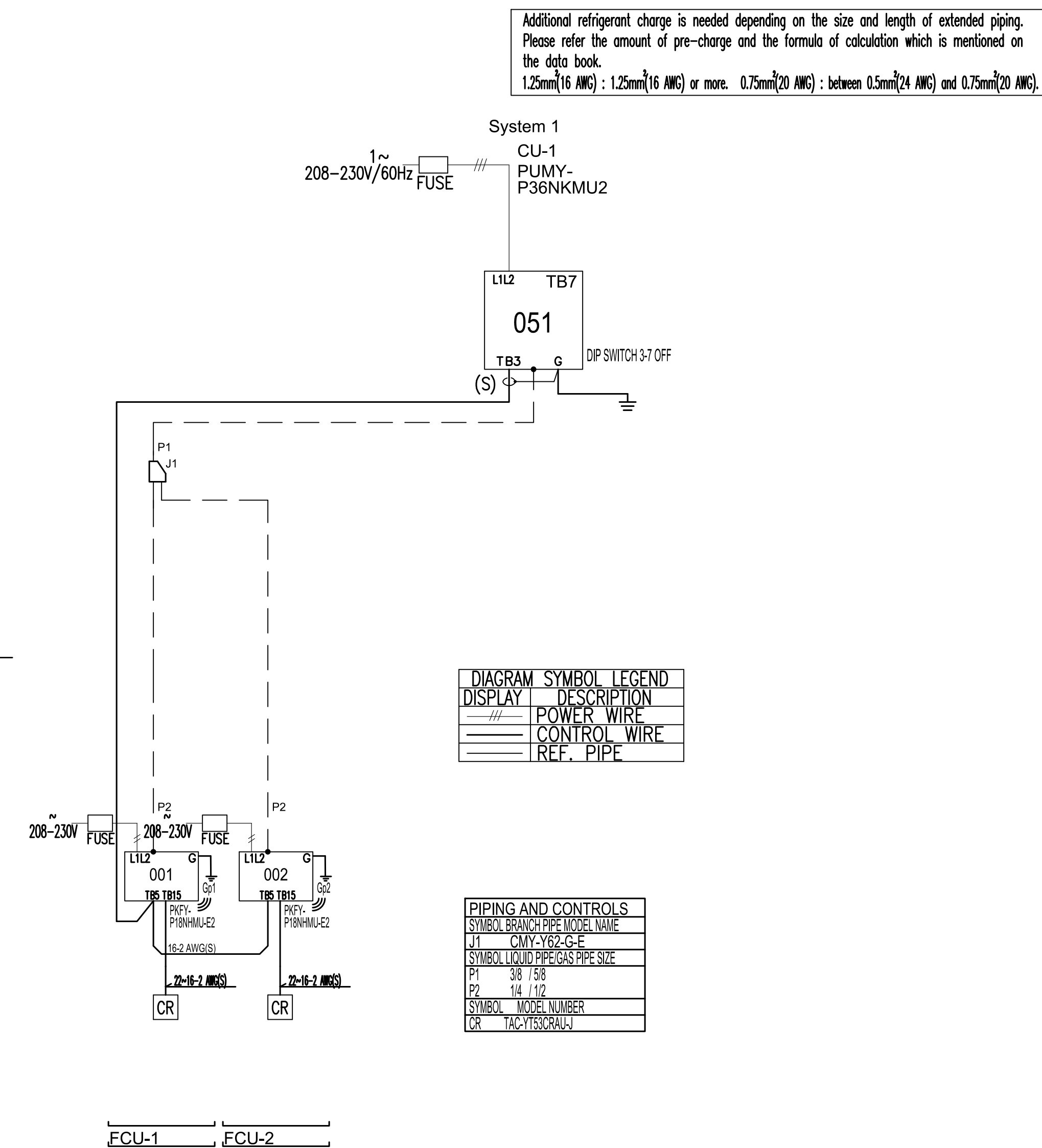
M-2



3 VARIABLE VOLUME RTU CONTROL DIAGRAM
 NOT TO SCALE



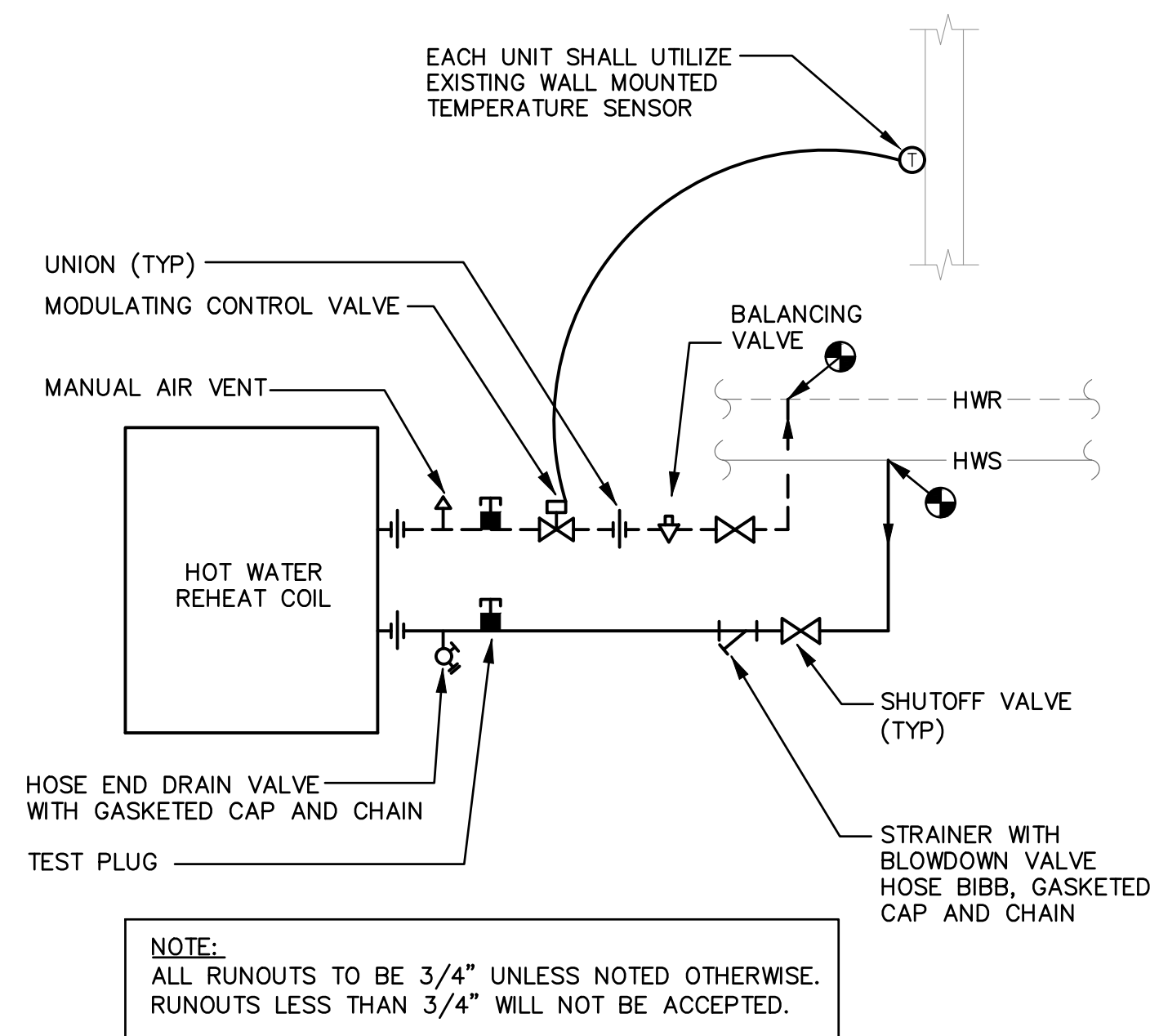
2 VAV CONTROL DIAGRAM
 NOT TO SCALE



1 SPLIT SYSTEM PIPING DIAGRAM
 NOT TO SCALE

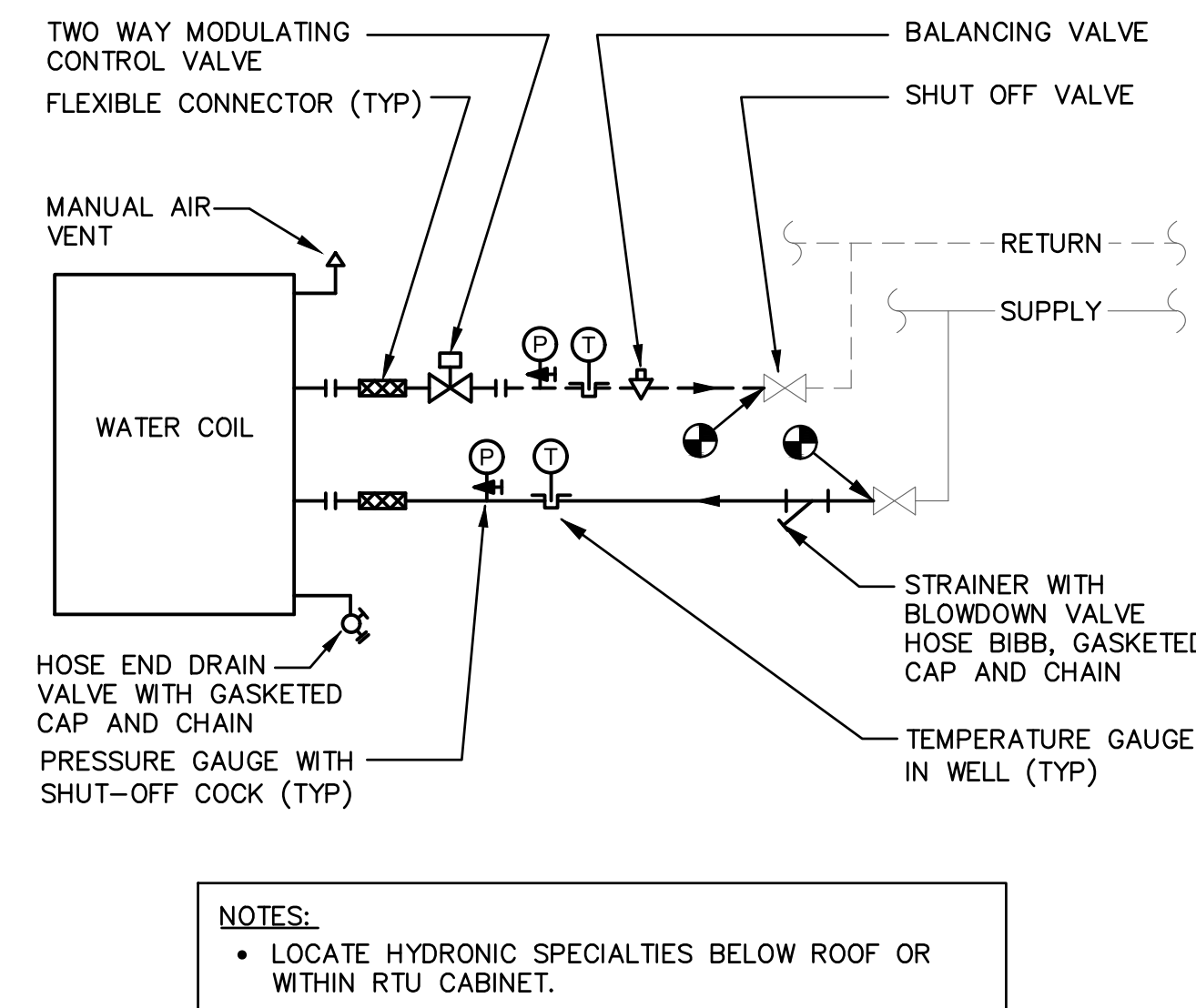
DIAGRAM SYMBOL	LEGEND DESCRIPTION
---	POWER WIRE
---	CONTROL WIRE
---	REF. PIPE

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
J1	CMY-V62-G-E
SYMBOL LIQUID PIPE/GAS PIPE SIZE	
P1	3/8 / 5/8
P2	1/4 / 1/2
SYMBOL MODEL NUMBER	
CR	TAC-T133CRALJ



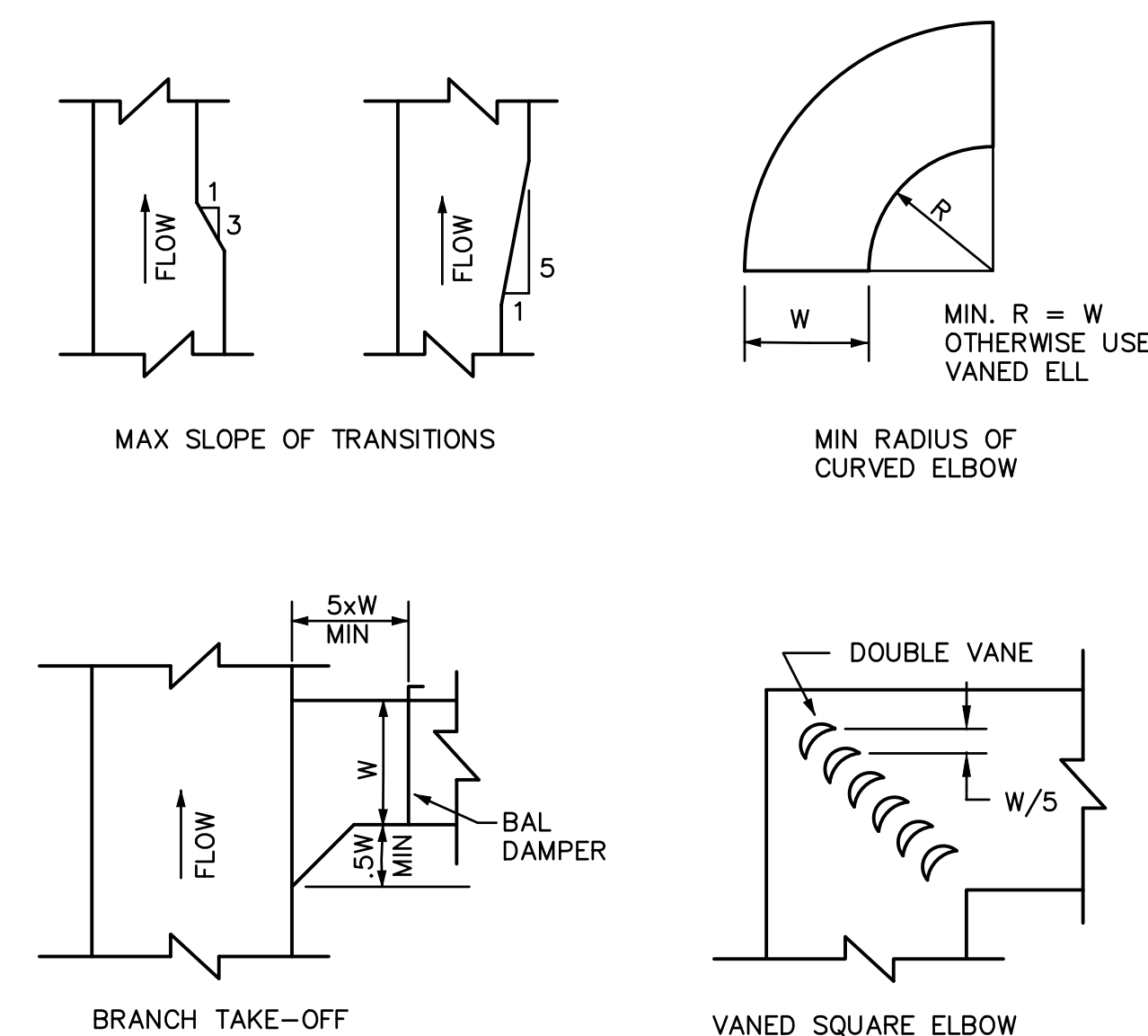
6 VAV HOT WATER RE-HEAT COIL PIPING DETAIL
 NOT TO SCALE

NOTE:
 ALL RUNOUTS TO BE 3/4" UNLESS NOTED OTHERWISE.
 RUNOUTS LESS THAN 3/4" WILL NOT BE ACCEPTED.



5 AHU WATER COIL PIPING DETAIL
 NOT TO SCALE

NOTES:
 • LOCATE HYDRONIC SPECIALTIES BELOW ROOF OR WITHIN RTU CABINET.



4 DUCT CONSTRUCTION
 NOT TO SCALE

Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
 1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG).

SEAL

SUBMISSION HISTORY

JOB INFO

RTU REPLACEMENT for
RHAM High School
Wall Street
Hebron, CT 06248

DWG DATA

PROJECT NUMBER: 19-338
 SUBMISSION DATE: 09/13/19
 DRAWN: PA
 REVIEWED: KH
 SCALE: AS NOTED

DWG TITLE

MECHANICAL DETAILS

DWG #

M-3

SPLIT SYSTEM SCHEDULE (BASED ON MITSUBISHI)															
INDOOR UNIT					OUTDOOR UNIT					AHRI RATINGS					
TAG	MODEL	COOLING BTUH	HEATING BTUH	VOLTS/Ø	MCA/MFS	TAG	MODEL	COOLING BTUH	HEATING BTUH	VOLTS/Ø	MCA	MOCOP	EER	SEER	COP
FCU-1	PKFY-P18NHMU-E2	18,000	20,000	208/1	0.38/15	CU-1	PUMY-P36NKMJ2	36,000	42,000	208/1	29	44	15	22.3	4.08
FCU-2	PKFY-P18NHMU-E2	18,000	20,000	208/1	0.38/15										

*COOLING PERFORMANCE BASED ON 80°F IDB, 67°F IWB AND 95°F ODB. HEATING PERFORMANCE BASED ON 70°F IDB, 45°F ODB AND 43°F OWB.

NOTES:
 1. PROVIDE OPTIONAL CONDENSATE PUMP SI3100-230 FOR EACH INDOOR UNIT. MOUNT CONDENSATE PUMP ABOVE CEILING.
 2. PROVIDE MODEL DPSL1 UL LISTED DRAIN PAN LEVEL SENSOR FOR EACH INDOOR UNIT (FIELD INSTALLED.)
 3. PROVIDE MANUFACTURER'S CONDENSING UNIT WALL SUPPORT BRACKET.
 4. INSTALL REFRIGERANT PIPING IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 5. PROVIDE PAC-UKPRO2001-CU-1 COMMUNICATION ADAPTER FOR EACH INDOOR UNIT FOR BMS COMMUNICATION.
 6. PROVIDE LINE-HIDE COVER SYSTEM TO CONCEAL ALL EXPOSED REFRIGERANT AND CONDENSATE PIPING.

SHUT OFF TYPE VAV BOX SCHEDULE - HYDRONIC											
TAG	INLET SIZE	PRIMARY AIRFLOW (CFM)		HEATING COIL PERFORMANCE						NC	NC
		MAXIMUM	MINIMUM	FLOW (CFM)	ROWS	LAT	GPM	LWT	PD (FT)	MAX. DISCH.	MAX. RAD.
VAV H-1.1	16	2,950	885	2,950	2	90	5.0	140.2	0.41	22	24
VAV H-1.2	10	1,200	360	1,200	2	90	2.2	142.8	0.31	18	20
VAV H-1.3	9	1,000	300	1,000	2	90	1.6	137.0	0.21	18	19

GENERAL NOTES/ACCESSORIES:
 1. BOXES ARE BASED ON KRUEGER (MODEL# LMHS)
 2. ACCEPTABLE MANUFACTURERS BY: NAILOR INDUSTRIES INC., PRICE & TRANE.
 3. 0.5" MAXIMUM ALLOWABLE STATIC PRESSURE DROP FOR BOX AND REHEAT COIL
 4. HEATING COIL PERFORMANCE BASED ON NOMINAL CFM LISTED IN THE SCHEDULE @ 60° DEGREE F. ENTERING AIR TEMPERATURE, 180° DEGREE F. ENTERING WATER TEMPERATURE.

AIR HANDLING UNIT SCHEDULE										
TAG	MFR	MODEL	MINIMUM OA	AREA SERVED	WEIGHT					
AHU-A4	AAON	RN-040	3,420	MEDIA CENTER	7,147					
AHU-H1	AAON	RN-015	1,875	WEIGHT ROOM	2,543					
SUPPLY FAN										
TAG	CFM	ESP (IN WG)	TSP (IN WG)	RPM	HP	BHP	VFD			
AHU-A4	13,400	3.00	4.69	1372	(2)15	10.12	YES			
AHU-H1	4,600	2.75	4.28	1858	7.5	4.57	YES			
HOT WATER COIL										
TAG	EAT (°F)	LAT (°F)	MBH	EWT (°F)	LWT (°F)	GPM	MAXIMUM VELOCITY (FFM)	MAXIMUM WPD (FT)	ROWS	
AHU-A4	65.6	101.4	522.8	180.0	146.4	32.0	714.7	1.0	2	
AHU-H1	60.7	98.0	188.6	180.0	147.7	12.0	788.6	3.0	2	
ELECTRICAL										
TAG	MCA	MOCOP	VOLTS/ PHASE	IEER	REMARKS					
AHU-A4	137	150	460/3	11.7	ALL					
AHU-H1	48	60	460/3	13.0	ALL					
DX COIL										
TAG	EAT DB/WB (°F)	LAT DB/WB (°F)	TOTAL MBH	SENSIBLE MBH	REFRIG. TYPE	MAXIMUM VELOCITY (FFM)	ROWS	DRAIN PIPE SIZE (IN)	HOT GAS REHEAT CAPACITY (MBH)	LAT (db) (°F)
AHU-A4	76.4 / 63.1	56.5 / 53.5	421	339	R-410	420	4	1"	250	70.0
AHU-H1	77.9 / 64.2	53.4 / 51.4	177	132	R-410	315	4	1"	95	70.0
EXHAUST FAN										
TAG	CFM	ESP (IN WG)	TSP (IN WG)	RPM	HP	BHP	VFD			
AHU-A4	13,400	1.00	1.63	968	(2) 5	2.95	YES			
AHU-H1	4,600	0.75	1.65	1538	3	2.00	YES			
ENERGY RECOVERY WHEEL										
TAG	WHEEL PERFORMANCE (SUMMER)			WHEEL PERFORMANCE (WINTER)						
	O.A. DB / WB (°F)	LEAVING S.A. DB / WB (°F)	RETURN AIR DB / WB (°F)	O.A. DB (°F)	LEAVING S.A. DB (°F)	RETURN AIR DB (°F)				
AHU-A4	95 / 75	80.6 / 66.2	75 / 62	0	52.7	70				
AHU-H1	95 / 75	82.1 / 67.1	75 / 62	0	47.2	70				
SOUND POWER DISCHARGE/RETURN LW(dB)										
TAG	1ST OCTAVE	2ND OCTAVE	3RD OCTAVE	4TH OCTAVE	5TH OCTAVE	6TH OCTAVE	7TH OCTAVE	8TH OCTAVE		
AHU-A4	96 / 88	95 / 87	94 / 84	96 / 79	94 / 79	93 / 78	86 / 77	80 / 76		
AHU-H1	94 / 90	93 / 88	99 / 90	91 / 80	83 / 77	81 / 75	78 / 71	73 / 65		
GENERAL NOTES/ACCESSORIES:										
1. ACCEPTABLE MANUFACTURERS BY: VALENT, TRANE. PROVIDE UNITS WITHOUT CONTROLS FOR FIELD INSTALLATION OF CONTROLS BY THE CONTROLS CONTRACTOR.					5. PROVIDE MERV-13 FILTERS.					
2. AHU SHALL BE PREWIRED FOR SINGLE POINT POWER CONNECTION, INCLUDING FAN CIRCUITRY AND 120V LIGHT/RECEPTACLE CIRCUIT WITH TRANSFORMER.					6. PROVIDE DUCT TRANSITION AT THE UNIT, COORDINATE STEEL FRAMING WITH AIR HANDLING SUBMITTALS AND ADJUST STEEL AS NECESSARY AT NO COST TO OWNER V.I.F.					
3. ALTERNATE MANUFACTURER OF EQUAL PERFORMANCE AND CAPACITY MUST HAVE SIMILAR PHYSICAL DIMENSIONS. OTHERWISE BASE MANUFACTURER MUST BE SUPPLIED. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING DIMENSIONS IN FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL STRUCTURAL AND MECHANICAL MODIFICATIONS AT NO COST TO OWNER.					7. PROVIDE O.A. INTAKE HOODS.					
4. ROOFTOP VFD'S SHALL BE MOUNTED IN WEATHER PROOF ENCLOSURE INSTALLED BY UNIT'S MANUFACTURER.					8. PROVIDE CURB ADAPTER TO ALLOW INSTALLATION ON EXISTING CURB. THE CONTRACTOR SHALL FIELD MEASURE THE EXISTING CURB AND SUBMIT SHOP DRAWINGS FOR THE ADAPTA CURB.					
					9. PROVIDE NON-FUSED DISCONNECT SWITCH.					
					10. PROVIDE 100% MODULATING OUTSIDE AIR ECONOMIZER.					
					11. PROVIDE HINGED SERVICE ACCESS AND STAINLESS STEEL DRAIN PANS.					
					12. PROVIDE VARIABLE CAPACITY COMPRESSORS.					

SEAL

SUBMISSION HISTORY

JOB INFO

**RTU
 REPLACEMENT
 for
 RHAM
 High School
 Wall Street
 Hebron, CT
 06248**

DWG DATA

PROJECT NUMBER: 19-338
 SUBMISSION DATE: 09/13/19
 DRAWN: PA
 REVIEWED: KH
 SCALE: AS NOTED

DWG TITLE

**MECHANICAL
 SCHEDULES**

DWG #

M-4

ELECTRICAL GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH CURRENT APPLICABLE CODES, ORDINANCES, THE REGULATORY AGENCIES HAVING JURISDICTION AND THE SPECIFICATIONS. THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE, IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
2. THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THE SPECIFIED ELECTRICAL SYSTEM SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
3. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
4. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST. REFER TO DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND CONDUITS. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EQUIPMENT AND CONDUITS INSTALLATION WITH ALL THE TRADES BEFORE COMMENCING WORK.
6. EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. WHEN EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING (GYP BOARD OR EQUIVALENT), OR BEHIND A WALL, AN APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. IF AN ACCESS DOOR IS REQUIRED, IT SHALL BE OF A RATING APPROPRIATE FOR THE WALL/CEILING IN WHICH IT IS TO BE INSTALLED. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ACCESS PANELS FOR ALL DEVICES REQUIRING ACCESS, WITH THE ARCHITECT, PRIOR TO INSTALLATION OF SUCH DEVICES OR OTHER APPURTENANCES.
7. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
8. THIS CONTRACT SHALL INCLUDE ALL THE NECESSARY CONDUITS, FITTINGS, TRANSITIONS ETC. AS REQUIRED TO INSTALL CONDUITS AND EQUIPMENT, AND TO AVOID ANY CONFLICTS WITH OTHER TRADES AND THE BUILDING STRUCTURE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO COORDINATE WITH OTHER TRADES OR BECOME FULLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES.
9. DO NOT INSTALL ANY ELECTRICAL PANELS, TRANSFORMERS, SPECIAL EQUIPMENT, BELOW PIPING OR THROUGH MECHANICAL ROOMS, THAT ARE NOT ASSOCIATED WITH OR SERVE THE RESPECTIVE ROOMS. COORDINATE THE LOCATION OF MECHANICAL EQUIPMENT IN THE FIELD AND ADJUST AS NECESSARY.
10. ALL HOMERUNS SHALL BE 2#12, 1#12G, .34" C TO 20A-1P CIRCUIT BREAKER IN PANEL DESIGNATED UNLESS OTHERWISE NOTED.
11. ALL 120 VAC (277 VAC) CIRCUITS EXCEEDING 150' IN LENGTH SHALL BE INCREASED TO #10, #10G, 3/4" CONDUIT UNLESS OTHERWISE NOTED.
12. ALL BRANCH CIRCUITS SHALL BE PROVIDED WITH SEPARATE NEUTRALS. USE OF COMMON NEUTRALS WILL NOT BE ALLOWED.
13. FIELD VERIFY WITH MANUFACTURER'S PROVIDED EXACT ELECTRICAL CHARACTERISTICS AND CONNECTION REQUIREMENTS OF ALL OPERATIONAL EQUIPMENT PRIOR TO MAKING ELECTRICAL POWER CONNECTION. FURNISH AND INSTALL SAFETY DISCONNECT AS REQUIRED BY NEC.
14. RECEPTACLES LOCATED WITHIN 6' OF A WATER SOURCE, OR OUTSIDE, AND WHERE REQUIRED BY CODE SHALL BE PROVIDED WITH GFCI PROTECTION, WHETHER INDICATED OR NOT.
15. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED SLEEVES AND FIRE STOP FOR CONDUITS AND CABLES PENETRATING FIRE RATED WALLS AND FLOORS.
16. ELECTRICAL CONTRACTOR SHALL SEAL ALL CONDUITS PENETRATING EXTERIOR WALLS.
17. ALL WIRING SHALL BE IN CONDUIT, UNLESS OTHERWISE INDICATED. CONDUITS SHALL BE RUN CONCEALED IN NEW WALLS AND ABOVE CEILINGS.
18. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF EQUIPMENT WITH DIV. 21, 22 AND 23 PRIOR TO ROUGHING OR INSTALLING OUTLETS.
19. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER, ALL LOCATIONS OF EQUIPMENT BEING FURNISHED BY THE OWNER PRIOR TO ROUGHING OR INSTALLING OUTLETS.
20. REFER TO ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND EXACT LOCATION OF DEVICES PRIOR TO ROUGHING OR INSTALLATION OF OUTLETS.
21. CONDUITS AND/OR WIRING SHALL NOT PENETRATE STAIR ENCLOSURES UNLESS SPECIFICALLY SERVING EQUIPMENT OR DEVICES LOCATED WITHIN STAIR ENCLOSURE.
22. WHERE INDICATED, PROVIDE FIXTURES WITH EMERGENCY BATTERY TO OPERATE LAMPS FOR 1 1/2 HOURS UPON LOSS OF NORMAL POWER. WIRE EMERGENCY BATTERY AND EXIT LIGHTS TO LINE SIDE OF AREA LIGHTING CIRCUIT.
23. DIRECTIONAL CHEVRONS SHALL CONFORM TO NFPA 5-10.4 1.2 AND SHALL BE IDENTIFIABLE AS A DIRECTIONAL INDICATOR AT A MINIMUM OF 40 FT. UNDER ALL SPACE CONDITIONS. PROVIDE DIRECTIONAL CHEVRONS AS INDICATED ON PLAN.
24. BRANCH CIRCUIT WIRING IS SHOWN ON THE FLOOR PLANS. NUMERALS ADJACENT TO THE HOMERUN SYMBOLS FOR LIGHTING, RECEPTACLES, MOTORS, APPLIANCES, ETC. INDICATE THE CIRCUIT NUMBER TO WHICH THE ITEMS ARE TO BE CONNECTED. PROVIDE BRANCH CIRCUIT WIRING FOR ALL ITEMS SHOWN IN ACCORDANCE WITH THESE GENERAL NOTES AND THE ELECTRICAL SPECIFICATIONS.
25. ALL 1 POLE, 15 AND 20 AMPERE BRANCH CIRCUITS SERVING RECEPTACLE OR LIGHTING SHALL BE 2 WIRE CIRCUITS PROVIDING AN INDIVIDUAL NEUTRAL CONDUCTOR FOR EACH UNGROUNDED (HOT) CIRCUIT CONDUCTOR. DO NOT SHARE NEUTRAL CONDUCTORS.
26. REFER TO ARCHITECTS REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF CEILING MOUNTED DEVICES.
27. ALL EXPOSED CABLES OF ANY TYPE IN PLENUM CEILING SPACE SHALL BE PLENUM RATED.
28. CONTRACTOR SHALL PROVIDE ALL NECESSARY MISCELLANEOUS STEEL FOR THE SUPPORT OF ALL EQUIPMENT, PIPING, CONDUIT AND DUCTWORK. SUSPENDED FROM SLAB, STEEL, WALL OR TRUSSWORK.
29. ALL PENETRATIONS OF FLOORS AND WALLS (WHETHER OR NOT FIRE RESISTANCE RATED) SHALL BE PROVIDED WITH A THROUGH PENETRATION PROTECTION SYSTEM (FIRES TOPPING), EACH THROUGH - PENETRATION PROTECTION SYSTEM SHALL BE TESTED IN ACCORDANCE WITH ASTM E814 AND BE LISTED FOR THE TYPE OF FLOOR OR WALL ASSEMBLY PENETRATED AND THE TYPE OF PROTECTION SYSTEM.
30. IT IS NOT THE INTENTION TO SHOW EVERY FITTING, HANGER, WIRE OR DEVICE. ALL SUCH ITEMS SHALL BE FURNISHED AND INSTALLED AS NECESSARY FOR A COMPLETE SYSTEM.
31. SEE SPECIFICATION SECTION "ELECTRICAL IDENTIFICATION" FOR PROPERLY LABELING EQUIPMENT WIRING, BOXES, ETC.
32. CONTRACTOR SHALL DETERMINE THE QUANTITY OF CONDUCTORS REQUIRED FOR PROPER OPERATION OF ALL SWITCHING SCHEMES.
33. PROVIDE ALL BONDING AND GROUNDING REQUIRED BY THE NATIONAL ELECTRIC CODE, NFPA 70 AND AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
34. ALL REQUIRED BONDING CONDUCTORS SHALL BE MINIMUM #8 SOLID INSULATED COPPER, PROVIDE ALL NECESSARY FITTINGS, JUNCTION BOXES, END FITTINGS, ETC., FOR A COMPLETE, CONTINUOUS INSTALLATIONS.
35. ALL BONDING/GROUNDING CONNECTIONS SHALL BE MADE BY LISTED CLAMP OR CONNECTORS AS REQUIRED BY ARTICLE 250 OF NFPA 70, THE NATIONAL ELECTRIC CODE (CURRENT ADOPTED EDITION).
36. SEISMICALLY SUPPORT THE EQUIPMENT AS REQUIRED BY CODE. THE AUTHORITY HAVING JURISDICTION, AND/OR AS SPECIFIED, SUBMIT ENGINEERED INSTALLATION DETAILS PER THE SPECIFICATIONS. THE CONTRACTOR'S SEISMIC ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A DETAILED REPORT FOR THE RECORD.

ELECTRICAL DEMOLITION NOTES

- 1. BEFORE SUBMITTING BID, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE DOCUMENTS OF OTHER TRADES UNDER WHICH THEIR WORK WILL BE ACCOMPLISHED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ANY DAILY INTERRUPTIONS OR SHUTDOWNS OF THE EXISTING SYSTEMS IN ADVANCE WITH OWNER'S DESIGNATED REPRESENTATIVE. THIS SHALL INCLUDE SERVICES INTERRUPTIONS AND CONNECTIONS, MECHANICAL AND ELECTRICAL DISRUPTIONS EFFECTING OTHER TRADES. INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHERE NECESSARY.
3. DEMOLITION DRAWINGS ARE STRICTLY DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT. IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ALL EQUIPMENT, PIPING OR CONDUIT TO BE REMOVED. EQUIPMENT NOT BEING REUSED SHALL BE REMOVED, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, PIPES, CONDUITS, WIRES, AND CONTROLS BACK TO THE POINT OF ORIGIN.
4. REFER TO THE ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE FULL EXTENT OF THE DEMOLITION AND RECONSTRUCTION SCOPE OF WORK SHALL BE DETERMINED BY THE ENTIRE SET OF BID DOCUMENTS.
5. THE CONTRACTORS SHALL COORDINATE THE DEMOLITION SCOPE OF WORK WITH THE GENERAL CONTRACTOR'S OR CONSTRUCTION MANAGER'S PHASING SCHEDULE PRIOR TO COMMENCEMENT OF WORK. CARE MUST BE TAKEN SO AS NOT TO DESTROY, REMOVE OR DEMOLISH ANY EQUIPMENT, APPURTENANCES OR DEVICES INTENDED TO REMAIN. PROVIDE TEMPORARY SERVICES AND SYSTEM MODIFICATIONS TO ACCOMMODATE CONTINUOUS OPERATION OF ACTIVE SYSTEM.
6. THE LOCATION OF EXISTING ELECTRICAL SYSTEM SHOWN ON FLOOR PLANS, IS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF CONSTRUCTION, EXACT QUANTITY AND LOCATION(S) OF EXISTING EQUIPMENT, PANELS, CONDUITS, LIGHTING, ETC. TO BE REMOVED AND ADJUST AS NECESSARY.
7. ALL EQUIPMENT, AND ASSOCIATED WIRING, CONDUITS INDICATED TO BE REMOVED OR RELOCATED, SHALL BE DISCONNECTED AND REMOVED, INCLUDING HANGERS AND OTHER COMPONENTS. NO EQUIPMENT, WIRING OR CONDUITS SHALL BE ABANDONED IN PLACE, UNLESS SPECIFICALLY NOTED.
8. ALL SYSTEMS TO BE REMOVED SHALL BE REMOVED BACK TO THE POINT OF SOURCE. THE CONTRACTOR SHALL VERIFY WHICH SYSTEMS MUST REMAIN ACTIVE TO SERVE ADJACENT SPACES DURING CONSTRUCTION. SHOULD THE CONTRACTOR ENCOUNTER, DURING DEMOLITION OF EXISTING WALLS OR CHASES, ANY WIRING OR CONDUIT WHICH MUST REMAIN ACTIVE, IMMEDIATELY GIVE NOTICE TO THE ENGINEER, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
9. ALL SALVAGEABLE MATERIALS OR EQUIPMENT TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER AT THE END OF EACH DAY. ITEMS REMOVED AND NOT REUSED OR CLAIMED BY THE OWNER SHALL BECOME PROPERTY OF THE TRADE CONTRACTOR AND SHALL BE TRANSPORTED FROM THE SITE. SITE STORAGE OF REMOVED ITEMS WILL NOT BE PERMITTED.
10. PROPERLY DISPOSE OF ALL DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES AND REGULATIONS; THIS APPLIES TO HAZARDOUS MATERIALS AND CONTAMINATED ITEMS TO BE DEMOLISHED.
11. THE CONTRACTOR SHALL OBTAIN EXISTING ELECTRICAL DRAWINGS FROM THE OWNER IF AVAILABLE TO HELP DETERMINE FULL SCOPE OF WORK.

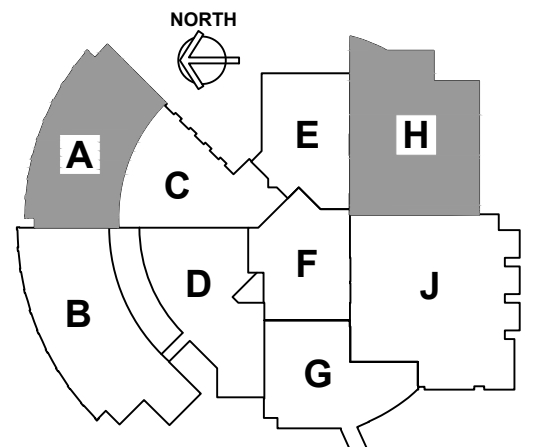
ELECTRICAL LEGEND

NOTE: ALL MOUNTING HEIGHTS GIVEN ARE TO CENTERLINE OF DEVICE UNLESS OTHERWISE NOTED.

Table with 2 columns: SYMBOL and DESCRIPTION. Lists various electrical symbols and their corresponding descriptions, such as CEILING RECESSED MOUNTED LIGHT FIXTURE, PENDANT (OR CABLE) MOUNTED LIGHT FIXTURE, TRACK LIGHT FIXTURE, etc.

NOTES:

- 1. RECEPTACLES LOCATED WITHIN 6' OF A WATER SOURCE, LOCATED OUTSIDE AND WHERE REQUIRED BY CODE SHALL BE PROVIDED WITH A GFI TYPE RECEPTACLE WHETHER INDICATED OR NOT. ADDITIONALLY, THOSE EXTERIOR RECEPTACLES SHALL BE PROVIDED WITH COVERS RATED "WEATHER PROOF" WHILE IN USE.
2. ALL BRANCH CIRCUITS TO BE PROVIDED WITH INDIVIDUAL DEDICATED NEUTRAL. MULTI-CIRCUIT FEEDERS UTILIZING COMMON NEUTRALS WILL NOT BE ACCEPTED.
3. ALL SYMBOLS MAY NOT BE USED.



MAIN LEVEL KEY PLAN

SEAL

SUBMISSION HISTORY

JOB INFO

RTU REPLACEMENT for RHAM High School Wall Street Hebron, CT 06248

DWG DATA

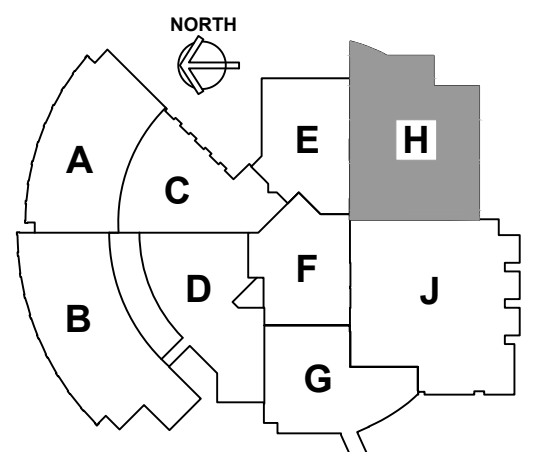
PROJECT NUMBER: 19-338
SUBMISSION DATE: 09/13/19
DRAWN: JJZ
REVIEWED: BJZ
SCALE: NONE

DWG TITLE

ELECTRICAL NOTES & LEGEND

DWG #

E-0



MAIN LEVEL KEY PLAN

SEAL

SUBMISSION HISTORY

JOB INFO

**RTU
 REPLACEMENT
 for
 RHAM
 High School
 Wall Street
 Hebron, CT
 06248**

DWG DATA

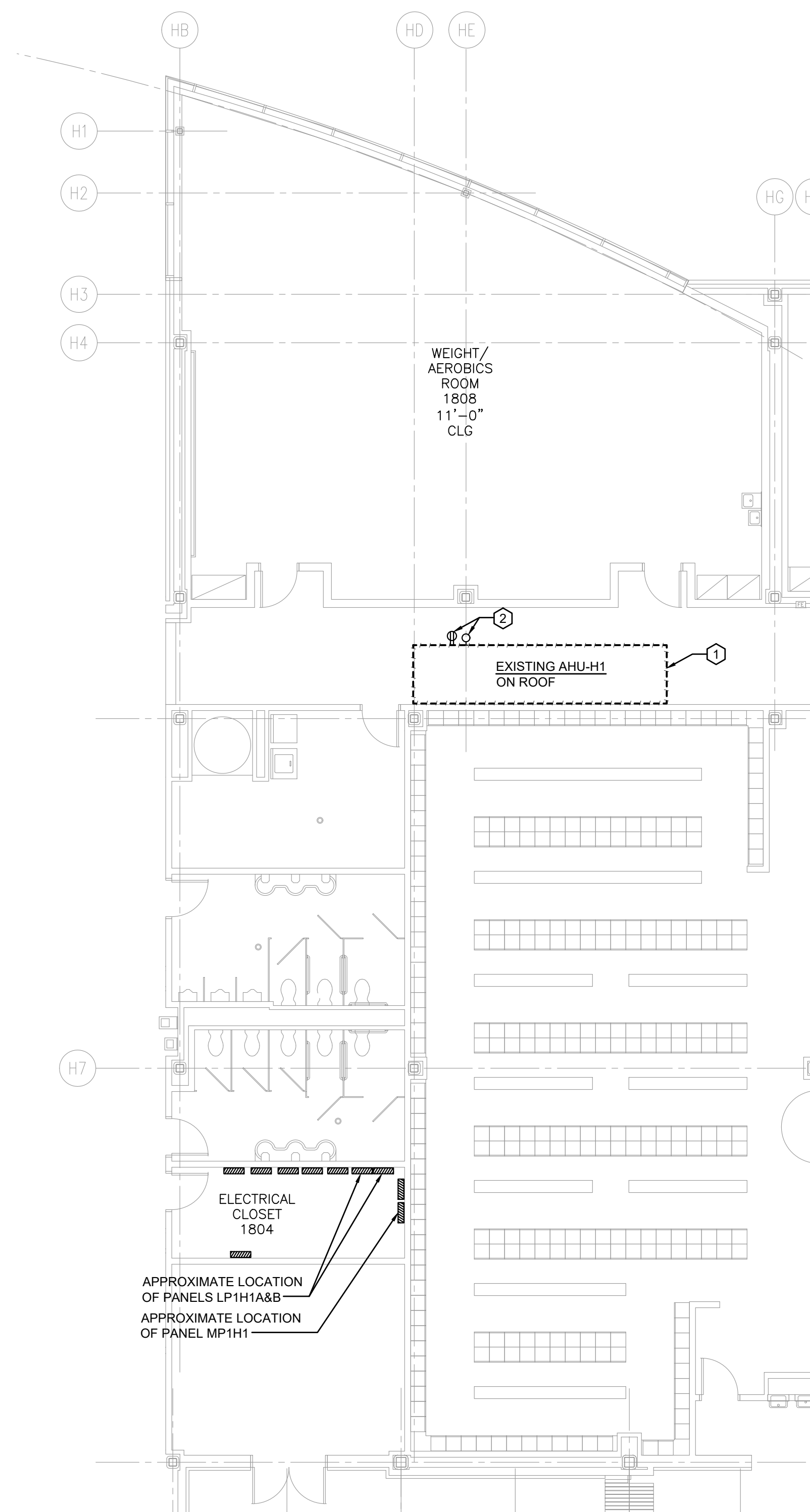
PROJECT NUMBER: 19-338
 SUBMISSION DATE: 09/13/19
 DRAWN: JZJ
 REVIEWED: BJZ
 SCALE: 1/8"=1'-0"

DWG TITLE

**AREA H
 ELECTRICAL PLAN**

DWG #

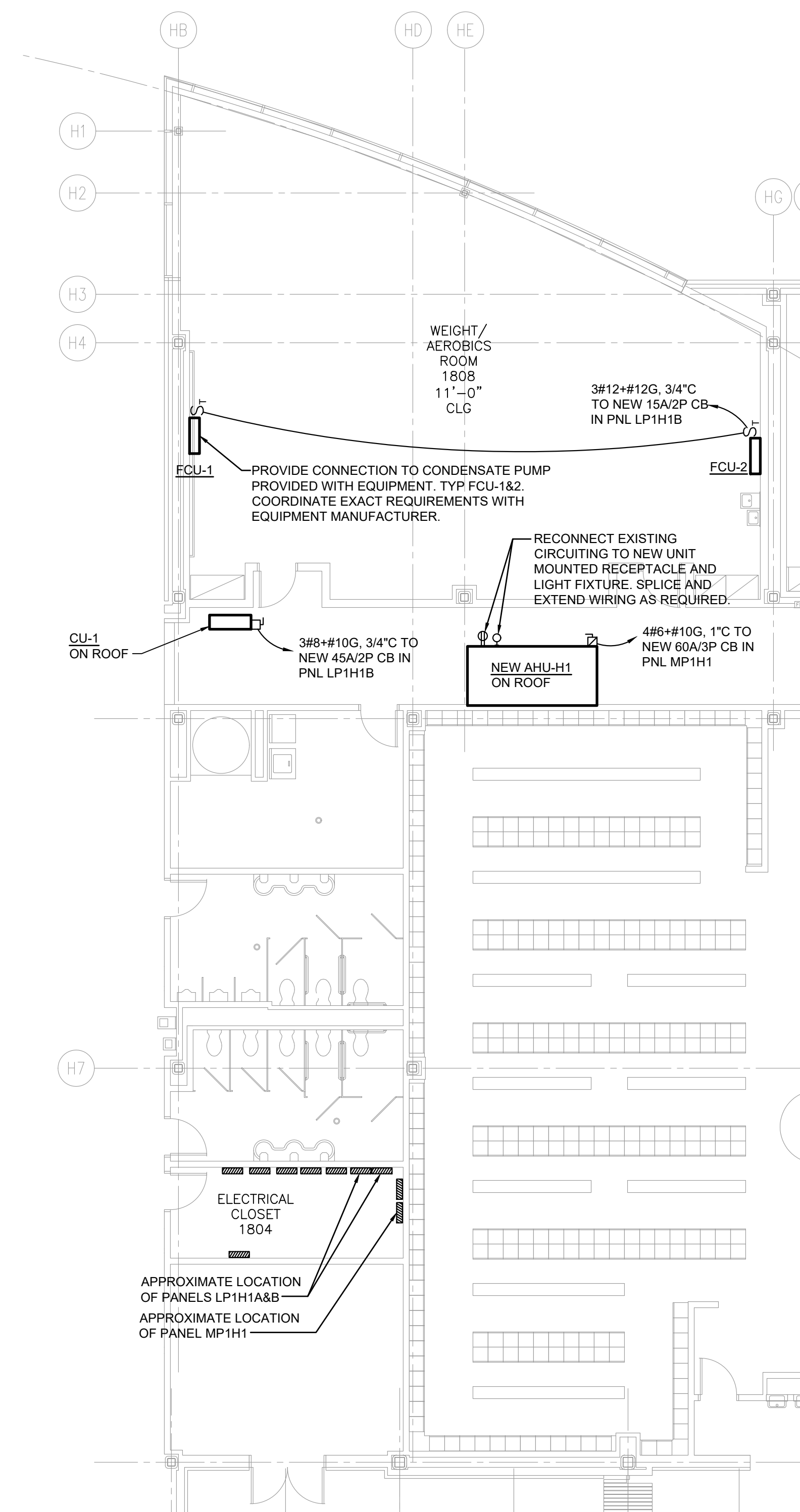
E-1



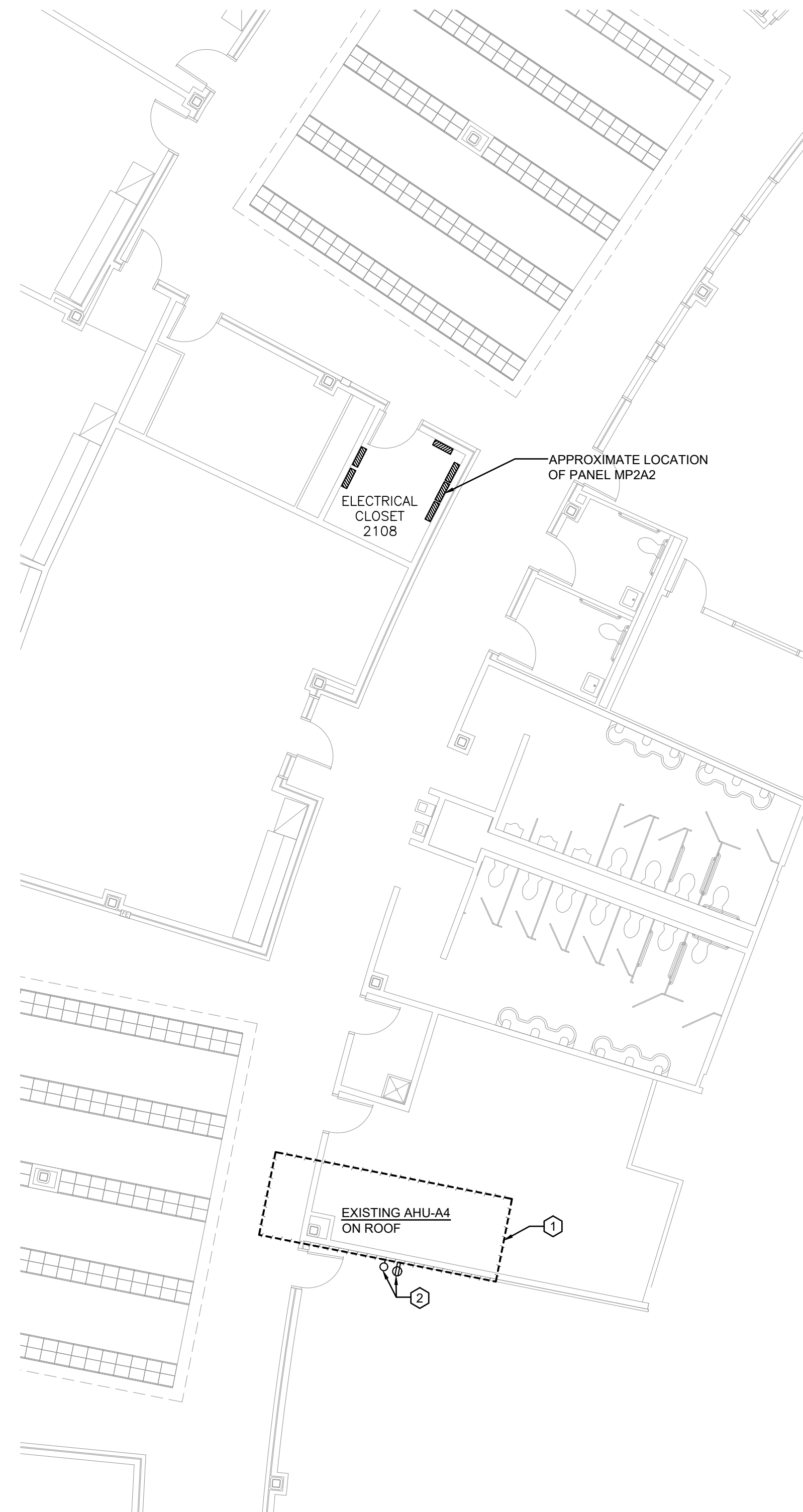
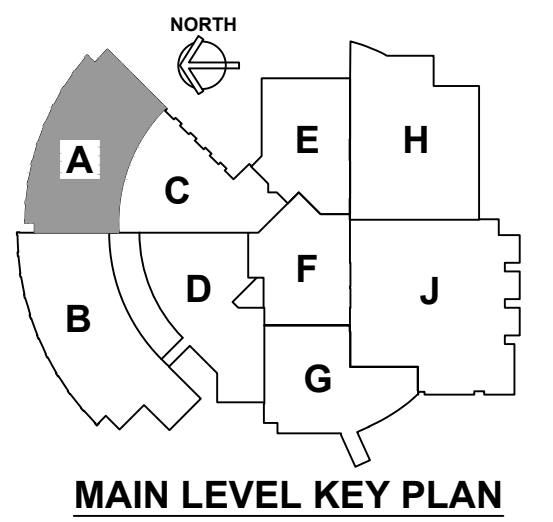
1 AREA H ELECTRICAL DEMO PLAN
 E-1 1/8"=1'-0"

DEMO KEYNOTES:

- 1 DISCONNECT EXISTING AIR HANDLING UNIT AHU-H1 (SUPPLY AND RETURN FANS) AND REMOVE ALL WIRING BACK TO SOURCE. EXISTING CIRCUIT BREAKERS IN PANEL MP1H1 SERVING EXISTING AHU-H1 TO REMAIN AND BE LABELED SPARE IN THE CIRCUIT DIRECTORY.
- 2 EXISTING UNIT MOUNTED RECEPTACLE AND LIGHT FIXTURE TO BE DISCONNECTED AND REMOVED. MAINTAIN EXISTING CIRCUIT FOR RECONNECTION TO NEW RECEPTACLE AND LIGHT FIXTURE PROVIDED WITH NEW UNIT. SPLICE AND EXTEND WIRING AS REQUIRED.



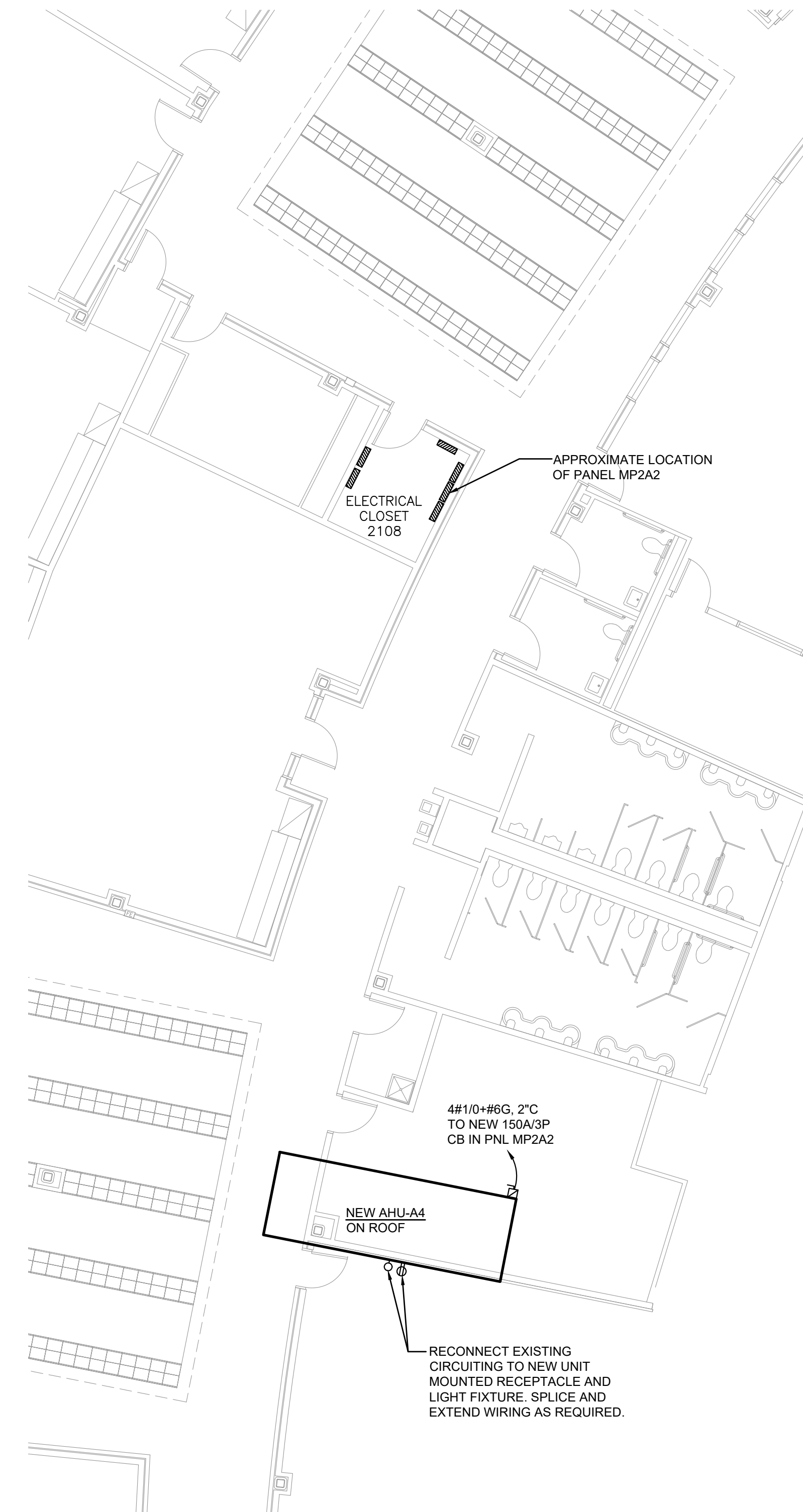
2 AREA H ELECTRICAL NEW WORK PLAN
 E-1 1/8"=1'-0"



1 AREA A ELECTRICAL DEMO PLAN
 E-2 1/8"=1'-0"

DEMO KEYNOTES:

- ① DISCONNECT EXISTING AIR HANDLING UNIT AHU-A4 (SUPPLY AND RETURN FANS) AND REMOVE ALL WIRING BACK TO SOURCE. EXISTING CIRCUIT BREAKERS IN PANEL MP2A2 SERVING EXISTING AHU-A4 TO REMAIN AND BE LABELED SPARE IN THE CIRCUIT DIRECTORY.
- ② EXISTING UNIT MOUNTED RECEPTACLE AND LIGHT FIXTURE TO BE DISCONNECTED AND REMOVED. MAINTAIN EXISTING CIRCUIT FOR RECONNECTION TO NEW RECEPTACLE AND LIGHT FIXTURE PROVIDED WITH NEW UNIT. SPLICE AND EXTEND WIRING AS REQUIRED.



2 AREA A ELECTRICAL NEW WORK PLAN
 E-2 1/8"=1'-0"

SEAL

SUBMISSION HISTORY

JOB INFO

**RTU
 REPLACEMENT
 for
 RHAM
 High School
 Wall Street
 Hebron, CT
 06248**

DWG DATA

PROJECT NUMBER: 19-338
 SUBMISSION DATE: 09/13/19
 DRAWN: JZ
 REVIEWED: BJZ
 SCALE: 1/8"=1'-0"

DWG TITLE

**AREA A
 ELECTRICAL PLAN**

DWG #

E-2

**STATE OF CONNECTICUT
Educational Employer Verification
(in accordance with Public Act 16-67)**

Directions for School District/Entity Considering Applicant for Employment: Each local or regional board of education, governing council of a state or local charter school or an interdistrict magnet school operator is required to obtain the information listed on this form from ALL current or former employer(s) of the applicant if such employer was a local or regional board of education, a governing council of a state or local charter school, an interdistrict magnet school operator or if the employment caused the applicant to have contact with children. Applicants are required under the law to provide a prospective employer with the name, address and telephone number of all current or former employers that meet the above criteria. Information may be collected either through a written communication or telephonically.

Directions for Current/Previous Employer: The applicant listed below is under consideration for a position with the school/district listed below in Section 2. The individual identified below has reported current/previous employment with your organization or contractual services with your organization in a position in which he/she had contact with children. As required by Connecticut General Statutes Section 10-222c, as amended by Public Act 16-67, please provide the information requested in Section 3. In accordance with the provisions of Public Act 16-67, you are required to respond to this request within five business days.

Section 1 – To be completed by the Applicant

Name of applicant	
Former name(s) (if applicable)	
Street address	
City, State, Zip Code	
Approximate dates of employment with employer listed in Section 3 of this form	
Position held with employer listed in Section 3 of this form	

Section 2 – To be completed by the Prospective Employer

Name of prospective employer	
Street address of prospective employer	
City, State, Zip Code	
Contact person	
Telephone number/email address	

Section 3 – To be completed by the Current/Former Employer

Name of employer	
Date of receipt of this notice	
Date of employment of above named applicant	
Contact person	
Telephone number/email address	

To your knowledge, has the Applicant ever:

- Yes No** Been the subject of an allegation of abuse or neglect or sexual misconduct for which there is an investigation currently pending with any current or prior employer, state agency or municipal police department or which has been substantiated?
- Yes No** Been disciplined or asked to resign from employment or resigned from or otherwise separated from any employment while an allegation of abuse or neglect or sexual misconduct was pending or under investigation, or due to a substantiation of abuse or neglect or sexual misconduct?
- Yes No** Had a professional or occupational license, certificate, authorization or permit suspended or revoked or ever surrendered such a license, certificate, authorization or permit while an allegation of abuse or neglect or sexual misconduct was pending or under investigation, or due to a substantiation of abuse or neglect or sexual misconduct?

Signature of Superintendent or HR Director

Date

Return all completed information to the Prospective Employer listed in Section 2 of this form.

NOTES:

The terms provided below are currently defined in state law as follows. Please note that statutes may be amended from time to time.

Sexual Misconduct – “any verbal, nonverbal, written or electronic communication, or any other act directed toward or with a student that is designed to establish a sexual relationship with the student, including a sexual invitation, dating or soliciting a date, engaging in sexual dialog, making sexually suggestive comments, self-disclosure or physical exposure of a sexual or erotic nature and any other sexual, indecent or erotic contact with a student.” Connecticut General Statutes § 10-222c(k).

Abuse or neglect – “abuse or neglect as described in Section 46b-120, and includes any violation of Sections 53a-70, 53a-70a, 53a-71, 53a-72a, 53a-72b or 53a-73a.” Connecticut General Statutes § 10-222c(k).