



# EDINBURG CISD

## PURCHASING DEPARTMENT

411 N. 8<sup>th</sup> Ave., Edinburg, TX 78541  
(956) 289-2311, (956) 383-7687

DOMINGA "MINGA" VELA, President  
CARMEN GONZÁLEZ, Vice President  
OSCAR SALINAS, Secretary  
LUIS ALAMIA, Member  
MIGUEL "MIKE" FARIAS, Member  
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*Dr. Mario H. Salinas, Superintendent*

### ADDENDUM 1

CSP 22-70

## Edinburg High School Heating & Air Condition (HVAC) Improvements Funded through the Elementary & Secondary Emergency Relief (ESSER) Funds March 28, 2022

### I. INSTRUCTIONS:

- A. The following changes, omissions or alterations to the specification and drawings shall be made insofar as the specifications and drawings are inconsistent with following, this addendum shall govern.
- B. Acknowledge receipt of this addendum by inserting its number and date of issue in the place provided for same in the proposal. This addendum forms a part of the Contract Documents.
- C. It is imperative that this addendum be inserted INTO set of specifications.

### II. SEE ADDENDUM BELOW:

#### **Item No. 1 Specification 23 09 53 – Refrigerant Monitor System**

- A. Added specification 23 09 53.

#### **Item No. 2 Specification 23 83 43 – Electric Duct Heaters**

- A. Added specification 23 83 43.

#### **Item No. 03 Mechanical Drawings**

- A. Replace mechanical sheets listed below in their entirety.
- B. Replace: G0.00, M0.01, MD3.01, MD3.02, MD3.03, MD3.04, MD3.05, MD3.06, M3.01, M3.02, M3.03, M3.04, M3.05, M3.06, M4.01, M5.01, M5.02, M5.03, M6.01, M6.02, M6.03, M6.04, M6.05.

#### **Item No. 04 Electrical Drawings**

- A. Add drawings E0.01, EP2.11, EP2.12, EP2.13, EP2.14, EPD2.11, EPD2.12, EPD2.13, EPD2.14 and E6.01 to construction documents.

#### **Item No.5 Opening of Proposals:**

- A. Opening of proposals modified to 4:00 PM.

Respectfully Submitted,

Amaro Tijerina  
Director of Purchasing

\_\_\_\_\_  
(Signature of authorized officer)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company Name

### **Nondiscrimination Statement**

It is the policy of Edinburg CISD not to discriminate on the basis of gender, age, handicap, religion, race, color, or national origin in its educational programs.  
Es poliza del Distrito Escolar de Edinburg el no discriminar por razones con base en genero, edad, religion, raza, color origen nacional, ni discapacidad dentro de sus programas educacionales.



SERVICE | QUALITY | INTEGRITY | SUSTAINABILITY

200 South 10th Street  
Suite 901  
McAllen, TX 78501  
v 956.683.1640

## Addendum

**DATE**

3/23/2022

**ADDENDUM NO.**

1

**PROJECT** 218007.001 | Edinburg CISD - Edinburg HS - HVAC Improvements

The work described herein shall be added to the scope of work defined by the contract documents or it shall modify the scope of work defined by the contract documents as described. This work shall become a part of the contract documents by addendum.

### SPECIFICATIONS

**Item 01 Specification 23 09 53 – Refrigerant Monitor System**

A. Added specification 23 09 53.

**Item 02 Specification 23 83 43 – Electric Duct Heaters**

A. Added specification 23 83 43.

### DRAWINGS

**Item 03 Mechanical Drawings**

- A. Replace mechanical sheets listed below in their entirety.
1. Replace: G0.00, M0.01, MD3.01, MD3.02, MD3.03, MD3.04, MD3.05, MD3.06, M3.01, M3.02, M3.03, M3.04, M3.05, M3.06, M4.01, M5.01, M5.02, M5.03, M6.01, M6.02, M6.03, M6.04, M6.05.

**Item 04 Electrical Drawings**

- A. Add drawings E0.01, EP2.11, EP2.12, EP2.13, EP2.14, EPD2.11, EPD2.12, EPD2.13, EPD2.14 and E6.01 to construction documents.

END OF ADDENDUM



## SECTION 23 09 53

### REFRIGERANT MONITOR SYSTEM

#### PART 1 - GENERAL

##### 1.1 GENERAL

- A. The requirements of the General Conditions and Supplementary Conditions apply to all work herein.
- B. Section 23 02 00 - Basic Materials and Methods for HVAC shall be included as a part of this Section as though written in full in this document.

##### 1.2 WORK INCLUDED

- A. Refrigerant monitoring system and all related controls and accessories.

##### 1.3 RELATED SECTIONS

- A. Section 23 02 00 - Basic Materials and Methods for HVAC
- B. Section 23 09 63 - Energy Management and Control System (EMCS)
- C. Section 23 64 16 - Centrifugal Water Chillers
- D. Section 23 64 26 - Rotary Screw Water Chillers

##### 1.4 REFERENCES

- A. ASHRAE Std 15 - Safety Standard for Refrigeration Systems.
- B. ICC (IFC) - International Fire Code.
- C. ICC (IMC) - International Mechanical Code.
- D. NFPA 70 - National Electrical Code.

##### 1.5 QUALITY ASSURANCE

- A. Refrigerant monitoring system shall be configured to meet ASHRAE Std 15, B-52 and all ICC (IMC) International Mechanical Code and ICC (IFC) International Fire Code requirements.
- B. All monitoring system wiring shall be in accordance with NFPA 70.
- C. Installation and Start-up: Provide services of a representative authorized by the manufacturer to perform inspection, start-up and certification of system.

##### 1.6 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Division One.

##### 1.7 OPERATIONS PERSONNEL TRAINING

- A. Provide a training session for the owner's operations personnel. Training session shall be performed by a qualified person who is knowledgeable in the subject system/equipment. Submit a training agenda two (2) weeks prior to the proposed training session for review and approval. Training session shall include at the minimum:

1. Purpose of equipment
2. Principle of how the equipment works
3. Important parts and assemblies
4. How the equipment achieves its purpose and necessary operating conditions
5. Most likely failure modes, causes and corrections
6. On site demonstration

## **PART 2 - PRODUCTS**

### **2.1 GENERAL**

- A. The gas monitoring system shall continuously measure and display the specified gas concentration. The system shall provide visual indicators when preset limits are exceeded. Relay output for alarms and control shall be provided.

B. Number and Type of Monitoring Points: The number and type of monitors shall be as follows:

Gas	Range/Full Scale	Number of Points
R-123	0 - 1,000 ppm	
R-1233zd	0 - 1,000 ppm	
R-134a	0 - 1,000 ppm	
R-513a	0 - 1,000 ppm	
R-514a	0 - 1,000 ppm	

## 2.2 SYSTEM CONFIGURATION

A. Description - The system may consist of one of the following configurations:

1. Base remote sensor module including the Photoacoustic IR (PAIR) sensor, power supply.
2. Split construction with a control module and remote sensing module.
3. Stand-alone type with integrated control and sensing modules in a single enclosure.

B. Sensor Module - The unit shall be a wall mount type. It shall conform to Paragraphs 1 through 9.

1. NEMA 4X enclosure
2. Photoacoustic IR Sensor.
3. Five LED status indicators.
4. 24 VAC or VDC operation or 110/220, 50/60 Hz options.
5. Optional beacon
6. 4-20 mA and RS-485 ModBus outputs.
7. Single channel diffusion or optional pump sampling.
8. 4-channel sequencer with sample solenoids can be added as an option but requires the use of the Control Module to drive the sequencer.
9. 20 PPM detection limit.

C. Control Module - The unit shall be a wall mount type. It shall conform to Paragraphs 1 through 9.

1. Enclosure Type - The enclosure shall be a NEMA 4X version.
2. The control module shall feature digital signal processing with RS-232 system compatible. A 4-20 mA output and 0-10VDC shall also be available.
3. Accepts up to 8 remote sensor inputs over a single pair cable or up to 2 remote sensors with 4-channel pump/sequencer or any combination up to 8 channels.
4. Digital Display with optional remote display.
5. Three levels of Alarm and Fault indicators.
6. System configured via the front panel keypad.
7. Provides 24VDC power to operate remote sensors.
8. An 85 Db audible alarm with an acknowledge switch shall be available as standard on the control module.
9. A visual alarm strobe shall be available as an option on all units. 1.3.3.10 System power shall be 110/220 VAC 50/60 Hz.

D. Stand - Alone, Integrated Unit - The unit shall be wall mount type. It shall conform to Paragraphs 1 through 9.

1. Photoacoustic IR sensor
2. Diffusion operation or pumped with up to 4 sampling points.
3. 20 PPM detection limit
4. Digital signal processing
5. Digital display with optional remote display
6. 4-20 mA, 0-10VDC and RS-232 Outputs standard.
7. Three levels of Alarm and Fault status indicators.
8. System configured via the front panel keypad.
9. Enclosure Type - The enclosure shall be a NEMA 4X version.

E. Operating Principle - The principle of operation shall be of the infrared photo acoustic absorption type.

1. Analyzer Sample - Any version of the analyzer may be configured as a diffusion type monitor or be equipped with an internal pump and filter that can draw a sample from a distance of 300 feet. All sample connections shall be on the bottom of the enclosure.
  2. Analyzer Sensitivity - The analyzer limit of detection for all refrigerants shall be 20 PPM.
  3. Analyzer Linearity - The analyzer shall be within +/-5 PPM of a linear response in the range of 0-100 ppm and + 5% of full scale in the range of 100-1000 ppm.
  4. Temperature - The system shall operate over the range of 0o to 45o C.
  5. Stability - The 24 hour zero or span drift must be less than 5 PPM. The long term (1year) zero drift shall be less than 5 PPM. The long term span drift shall be less 10 PPM.
- F. Calibration: The calibration of all versions shall be performed using standard RP cylinders and existing calibration equipment.

### 2.3 MONITOR UNIT REQUIREMENTS:

- A. Readout Displays - A 2 line x 20 character alpha numeric display shall be provided for the purpose of displaying the gas concentration, diagnostics, set-up and calibration menu.
- B. Visual Alarm Indicators - All alarm indications shall be displayed on the front panel display.
- C. Alarm Set Point Levels - Three separate alarm set point levels shall be provided. The set points shall be independently adjustable for any value for a given range. The set points shall provide drive signals to user interface relays. The alarm set points shall have the capability of providing the user a selection of latching or non-latching.
- D. Relay outputs - The alarm set point drive signals shall activate user relays as specified in Paragraphs 1 through 4.
  1. Number of Relays - As a minimum, one relay for each alarm set point level shall be provided on the control unit.
  2. Contact Rating - All relays shall be Form C, single pole, double throw. Dry contacts shall be rated for 5 amps resistive at 240 VAC.
  3. Contact Selection - The contacts shall be capable of being selected normally energized or non-energized, latching or non-latching.
  4. The Trouble (Fault) relay is normally energized and closed for normal conditions. If a system fault is detected the Trouble relay will de-energize.
- E. Malfunction Indication - The readout display described in Paragraph 1.5.1 shall display full diagnostics when a fault exists without the use of codes.
- F. Audible Alarm - An audible buzzer is included; it sounds when one of the three pre-selected alarm conditions or a trouble condition occurs.
- G. Front Panel Controls - The function listed in this paragraph shall be accomplished using a keypad readily accessible on the front panel.
  1. No tool or special adapters shall be used for:
    - a. Display of alarm set point level on the readout display.
    - b. Resetting any alarm set point
    - c. Zero and Span calibration adjustme
- H. Sample Gas Filter - There shall be an internal sample gas filter on pumped units. This filter shall be easily serviced or replaced.
- I. Output Signals
  1. The 4-20 mA output shall have the following features:
    - a. Scalable to 1-10% of the full scale. The default shall be 100% full scale.
    - b. The output shall be sourcing current to module ground.
    - c. For refrigerants, software will have a dead-banding feature not allowing a value less than 10 PPM to be displayed on the front panel.

2. RS-485 using ModBus communication protocol will be included in all sensor modules.
  3. The control modules will have an ATO output option of RS-232, 4-20mA, or 0-10VDC.
  4. The 10 volt analog output may be used to identify the station being monitored in a multipoint sequencing unit.
- J. System Power Requirements shall be standard at 24 VDC or VAC. Optional input voltages shall be available for either module at 110 or 220 VAC, 50/60 Hz.
  - K. Multi Point Capability - The system shall be expandable to include a Multi-Point Sequencer with up to four (4) sampling points. Use of the sequencer requires the Control Module for control.
  - L. System must be capable of allowing the user, through the front panel keypad, to determine which of the four (4) points are to be active in the sequencer.
  - M. A method of detecting a flow blockage shall be provided.
  - N. Sequencer Programming Limits - The sequencer system parameters shall be within the following limits.
  - O. Sample Tubing Connection - Fittings suitable for the connection of 1/4" O.D. tubing shall be provided on the bottom of the enclosure for the purposes of connection, sample lines, calibration gases and exhaust.
  - P. Alarm - Three alarm set point levels shall be provided for each sample location. Any alarm set point shall be capable of activating one relay (SPDT, 8 amp at 120 VAC, resistive).
  - Q. Indicating Lights - All indications related to the Multi Point Sequencer shall appear on the front panel display.
  - R. Software shall be installed in the pumped versions to allow the user to enter the station dwell time to allow for the line length and sample transport time for each sensor.

#### 2.4 SAMPLE HANDLING

- A. Sample Line Compatibility - The system shall be capable of drawing a sample through 1/8" I.D. tubing for a distance of 300 feet.
- B. Sequencer Operation - A sample shall be drawn from the next line in sequence regardless of which location is being analyzed.
- C. Sample Conditioning - The system shall provide adequate filtration of the sample suitable to protect the analyzer.
- D. Exhaust - Exhaust fitting shall be provided on the bottom of the enclosure for the purpose of attaching lines to the exhaust and bypass flows.

#### 2.5 SYSTEM MAINTENANCE REQUIREMENTS

- A. Maximum System Maintenance Requirements - The system shall require no periodic maintenance other than periodic checking. Periodic checking or adjustments of the unit shall be capable of being accomplished by one person at the unit location.
- B. Manufacturer Capability Requirements - As a minimum, the Gas Monitoring Equipment manufacturer must meet the following requirements:
  1. Be capable of supplying all equipment used to check or calibrate the unit
  2. Be capable of providing onsite service with factory trained personnel
  3. Be capable of providing start-up assistance and training for the owner / operator

2.6 ACCEPTABLE MANUFACTURERS

- A. Mine Safety Appliances Company Chillgard 5000
- B. Honeywell Analytics model 301EM-20

**PART 3 - EXECUTION**

3.1 INSTALLATION

- A. All equipment shall be installed in accordance with the manufacturer's recommendations and printed installation instructions.
- B. All items required for a complete and proper installation are not necessarily indicated on the plans or in the specifications. Provide all items required as per manufacturers requirements.
- C. The Gas Monitoring System shall be tested, approved, and certified for electrical safety.

**END OF SECTION**

## SECTION 23 82 43

### ELECTRIC DUCT HEATERS

#### PART 1 - GENERAL

##### 1.1 GENERAL REQUIREMENTS

- A. The requirements of the General Conditions and Supplementary Conditions apply to all work herein.
- B. Section 23 02 00 - Basic Materials and Methods for HVAC shall be included as a part of this Section as though written in full in this document.

##### 1.2 SCOPE

- A. Scope of the Work shall include the furnishing and complete installation of the equipment covered by this Section, with all auxiliaries, ready for owner's use.

##### 1.3 RELATED SECTIONS

- A. Section 23 31 13 - Metal Ductwork
- B. Section 23 33 00 - Ductwork Accessories

##### 1.4 REFERENCES

- A. NFPA 70 - National Electrical Code.
- B. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems.
- C. UL 1996 - Electric Duct Heaters.

##### 1.5 QUALITY ASSURANCE

- A. Provide products listed and labeled to meet the requirements of UL 1996.

##### 1.6 OPERATIONS PERSONNEL TRAINING

- A. Provide a training session for the owner's operations personnel. Training session shall be performed by a qualified person who is knowledgeable in the subject system/equipment. Submit a training agenda two (2) weeks prior to the proposed training session for review and approval. Training session shall include at the minimum:
  - 1. Purpose of equipment.
  - 2. Principle of how the equipment works.
  - 3. Important parts and assemblies.
  - 4. How the equipment achieves its purpose and necessary operating conditions.
  - 5. Most likely failure modes, causes and corrections.
  - 6. On site demonstration.

#### PART 2 - PRODUCTS

##### 2.1 ACCEPTABLE MANUFACTURERS

- A. Indeeco
- B. Nailor

- C. Markel
- D. Greenheck
- E. Brasch Manufacturing

## 2.2 ELECTRIC DUCT HEATER

- A. Provide open coil, electric heating coils as listed in the schedule.
- B. Three phase heaters shall have balanced three phase steps unless specified otherwise.
- C. All heaters to be UL listed for zero clearance to combustible surfaces and bear the UL label.
- D. All heaters shall meet the requirements of the National Electrical Code.
- E. Standard terminal box, with 1/2 inch insulation, as well as element housing and racks wall to be made of heavy gauge galvanized steel. All contactors shall be silent type operation mercury contactors.
- F. All heating coils to be made of high grade nickel/chromium resistance wire and terminated by means of a loop of wire being sandwiched between stainless steel or nickel plated washers and terminal hardware. All terminal hardware to be insulated from the heater by a two piece ceramic bushing.
- G. Safety Controls:
  - 1. Positive air pressure switch to prevent heater from energizing until air flow is proven.
  - 2. Primary over temperature protection shall be provided by built-in disc type automatic reset thermal cutouts.
  - 3. Secondary over-temperature protection shall consist of a sufficient number of load carrying manual reset controls to deenergize the elements if the primary system fails; one pilot duty manual reset and back up contactors.
- H. Wiring Diagrams:
  - 1. A separate, complete and specific wiring diagram shall be permanently attached to each heater. Typical wiring diagrams are not acceptable.
  - 2. Control and line terminals in each heater shall be marked identical to the wiring diagram.
  - 3. Additional diagrams instructions, etc., to be firmly held in position by a metallic snap clip or pocket inside the cover.
- I. Overcurrent protection incorporating fuses or circuit or breakers must be provided for all heaters rated more than 48 amperes, factory installed, within the heater enclosure, or provide as a separate assembly by the heater manufacturer. Heaters exceeding 48 amperes total line current must be divided into subcircuits (as allowed by stages) of less than 48 amperes and be protected at not more than 60 amperes. The main conductors supplying these overcurrent protective devices are considered branch circuit conductors and are subject to the 125% ampere rating rule of NEC.
- J. All units shall include an integral disconnect switch to meet the NEC requirements for a disconnecting means within sight of the heater. Disconnect switch shall be located inside of heater control cabinet and shall be interlocked with control cabinet door. Disconnect switch shall have labeled "on" and "off" positions. If any other external sources of control voltage are required, a separate toggle switch shall be provided.

**PART 3 - EXECUTION**

3.1 INSTALLATION

- A. All HVAC equipment shall be installed as per manufacturer's printed installation instructions.
- B. All items required for a complete and proper installation are not necessarily indicated on the plans or in the specifications. Provide all items required as per manufacturer's requirements.
- C. Install electric duct heaters to comply with NFPA 70 and NFPA 90B.

**END OF SECTION**

# EDINBURG C.I.S.D DISTRICT WIDE HVAC IMPROVEMENTS EDINBURG HIGH SCHOOL



## BOARD OF TRUSTEES

Dominga Vela	Board President
Carmen Gonzalez	Vice-President
Oscar Salinas	Secretary
Luis G. Alamia	Member
Leticia Garcia	Member
Miguel Farias	Member
Xavier Salinas	Member
Dr. Mario H. Salinas	Superintendent

## 100% CONSTRUCTION DOCUMENTS

### PROJECT TEAM

DBR Inc.  
200 S. 10th St.  
Suite 901  
McAllen, Texas 782501  
956-683-1640  
MEP Engineer  
Hugo H. Avila, P.E.  
[havila@dbrinc.com](mailto:havila@dbrinc.com)

Edinburg C.I.S.D.  
411 N. 8th Ave.  
Edinburg, Tx 78539

ECISD Project Manager  
Carlos Lima

### LOCATION



2600 E. Wisconsin Rd,  
Edinburg, Tx 78542  
Tel:(956)289-2400



## SHEET LIST TABLE

Sheet No.	Sheet Title	Sheet No.	Sheet Title
G0.00	COVER SHEET	EP2.11	LEVEL 1 POWER PLAN - A/B/C/D/E/F
M0.01	MECHANICAL LEGEND	EP2.12	LEVEL 1 POWER PLAN - J/K/L/M/N
M2.11	COMPOSITE MECHANICAL PLAN	EP2.13	LEVEL 1 POWER PLAN - G/H/P/Q/R/S/T/U/V
MD2.11A	LEVEL 1 MECHANICAL DEMOLITION PLAN - A	EP2.14	ELECTRICAL POWER PLAN - MEZZANINES
MD2.11B	LEVEL 1 MECHANICAL DEMOLITION PLAN - B	E6.01	ELECTRICAL DETAILS
MD2.11C	LEVEL 1 MECHANICAL DEMOLITION PLAN - C		
MD2.11D	LEVEL 1 MECHANICAL DEMOLITION PLAN - D		
MD2.11E	LEVEL 1 MECHANICAL DEMOLITION PLAN - E		
MD2.11F	LEVEL 1 MECHANICAL DEMOLITION PLAN - F		
MD2.11G	LEVEL 1 MECHANICAL DEMOLITION PLAN - G		
MD2.11H	LEVEL 1 MECHANICAL DEMOLITION PLAN - H		
MD2.11J	LEVEL 1 MECHANICAL DEMOLITION PLAN - J		
MD2.11K	LEVEL 1 MECHANICAL DEMOLITION PLAN - K		
MD2.11L	LEVEL 1 MECHANICAL DEMOLITION PLAN - L		
MD2.11M	LEVEL 1 MECHANICAL DEMOLITION PLAN - M		
MD2.11N	LEVEL 1 MECHANICAL DEMOLITION PLAN - N		
MD2.11P	LEVEL 1 MECHANICAL DEMOLITION PLAN - P		
MD2.11Q	LEVEL 1 MECHANICAL DEMOLITION PLAN - Q		
MD2.11R	LEVEL 1 MECHANICAL DEMOLITION PLAN - R		
MD2.11S	LEVEL 1 MECHANICAL DEMOLITION PLAN - S		
MD2.11T	LEVEL 1 MECHANICAL DEMOLITION PLAN - T		
MD2.11U	LEVEL 1 MECHANICAL DEMOLITION PLAN - U		
MD2.11V	LEVEL 1 MECHANICAL DEMOLITION PLAN - V		
MD3.01	ENLARGED MECHANICAL PLANS - DEMOLITION		
MD3.02	ENLARGED MECHANICAL PLANS - DEMOLITION		
MD3.03	ENLARGED MECHANICAL PLANS - DEMOLITION		
MD3.04	ENLARGED MECHANICAL PLANS - DEMOLITION		
MD3.05	ENLARGED MECHANICAL PLANS - DEMOLITION		
MD3.06	ENLARGED MECHANICAL PLANS - DEMOLITION		
M2.11A	LEVEL 1 MECHANICAL PLAN - A		
M2.11B	LEVEL 1 MECHANICAL PLAN - B		
M2.11C	LEVEL 1 MECHANICAL PLAN - C		
M2.11D	LEVEL 1 MECHANICAL PLAN - D		
M2.11E	LEVEL 1 MECHANICAL PLAN - E		
M2.11F	LEVEL 1 MECHANICAL PLAN - F		
M2.11G	LEVEL 1 MECHANICAL PLAN - G		
M2.11H	LEVEL 1 MECHANICAL PLAN - H		
M2.11J	LEVEL 1 MECHANICAL PLAN - J		
M2.11K	LEVEL 1 MECHANICAL PLAN - K		
M2.11L	LEVEL 1 MECHANICAL PLAN - L		
M2.11M	LEVEL 1 MECHANICAL PLAN - M		
M2.11N	LEVEL 1 MECHANICAL PLAN - N		
M2.11P	LEVEL 1 MECHANICAL PLAN - P		
M2.11Q	LEVEL 1 MECHANICAL PLAN - Q		
M2.11R	LEVEL 1 MECHANICAL PLAN - R		
M2.11S	LEVEL 1 MECHANICAL PLAN - S		
M2.11T	LEVEL 1 MECHANICAL PLAN - T		
M2.11U	LEVEL 1 MECHANICAL PLAN - U		
M2.11V	LEVEL 1 MECHANICAL PLAN - V		
M3.01	ENLARGED MECHANICAL PLANS		
M3.02	ENLARGED MECHANICAL PLANS		
M3.03	ENLARGED MECHANICAL PLANS		
M3.04	ENLARGED MECHANICAL PLANS		
M3.05	ENLARGED MECHANICAL PLANS		
M3.06	ENLARGED MECHANICAL PLANS		
M4.01	MECHANICAL DETAILS		
M5.01	MECHANICAL SCHEDULES		
M5.02	MECHANICAL SCHEDULES		
M5.03	MECHANICAL SCHEDULES		
M6.01	MECHANICAL CONTROLS		
M6.02	MECHANICAL CONTROLS		
M6.03	MECHANICAL CONTROLS		
M6.04	MECHANICAL CONTROLS		
M6.05	MECHANICAL CONTROLS		
E0.01	ELECTRICAL SYMBOLS AND ABBREVIATIONS		
EPD2.11	LEVEL 1 POWER DEMOLITION PLAN - A/B/C/D/E/F		
EPD2.12	LEVEL 1 POWER DEMOLITION PLAN - J/K/L/M/N		
EPD2.13	LEVEL 1 POWER DEMOLITION PLAN - G/H/P/Q/R/S/T/U/V		
EPD2.14	ELECTRICAL POWER DEMOLITION PLAN - MEZZANINES		



REVISION No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
DRAWN BY: DBR  
CHECKED BY: DBR  
PROJECT NUMBER: 218007.001  
SHEET TITLE:

COVER SHEET



SHEET NUMBER:  
**G0.00**

Plotted: Mar 25, 2022, 1:15 AM by user: rbrinc - Sheet: 03/09/2022 by user: rbrinc - C:\Users\mgomez\OneDrive\Documents\218007-001 - ECISD - District Wide HVAC Improvements - EHS\Project Files\Drawings\04-218007-DETAILS AND SCHEDULES-3.dwg

**ABBREVIATIONS**

<b>A</b>	AIR (COMPRESSED)
ABV	ABOVE
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT, AIR COMPRESSOR
ACCH	AIR COOLED CHILLER
ACDU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR, AREA DRAIN
ADJ	ADJUSTABLE
AF	AIR FILTER
AFC	ABOVE FINISHED CEILING
AFD	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHRI	AIR-CONDITIONING, HEATING, AND REFRIGERATION INSTITUTE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AMB	AMBIENT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECT, ARCHITECTURAL
AS	AIR SEPARATOR
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AV	ACID VENT, AIR VENT
AVG	AVERAGE
AW	ACID WASTE
AWS	AMERICAN WELDING SOCIETY
AUX	AUXILIARY

<b>B</b>	BOILER
BC	BELOW COUNTER
B/C	BACK OF CURB
BFF	BELOW FINISHED FLOOR
BFV	BUTTERFLY VALVE
BH	BOX HORIZONTAL
BLDG	BUILDING
BM	BENCHMARK
BOX	BOTTOM OF FOOTING
BOS	BOTTOM OF STRUCTURE
BP	BACKFLOW PREVENTER
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BWV	BACK WATER VALVE

<b>C</b>	CELSIUS
CAB	CABINET
CB	CATCH BASIN
CD	CONDENSATE DRAIN LINE
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CH	CHILLER
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CI	CAST IRON
ORC	CIRCULATING
CL	CENTERLINE
CLG	CEILING
CLR	CONCRETE MASONRY UNIT
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESSOR
CONC	CONCRETE, CONCENTRIC
COND	CONDENSER, CONDENSATE
CONN	CONNECTION
CONT	CONTINUOUS, CONTINUATION
CTR	CENTER
CU	COPPER

<b>D</b>	DEPTH, DRAIN, DRYER
DB	DRY BULB
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DDMB	DUAL DUCT MIXING BOX
DESIG	DESIGNATION
DTL	DETAIL
DIA	DIAMETER
DIFF	DIFFUSER
DM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DPR	DAMPEN
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWP	DOMESTIC WATER PUMP
DX	DIRECT EXPANSION

<b>E</b>	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EDB	ENTERING DRY BULB
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EMERG	EMERGENCY
ENCL	ENCLOSURE
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EVAP	EVAPORATOR
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
EX	EXTERNAL
EXTG	EXISTING

<b>F</b>	FARENHEIT, FIRE
FBO	FURNISHED BY OTHERS
FCO	FLOOR CLEAN OUT
FCS	FLOOR CONTROL STATION
FCU	FAN COIL UNIT
FD	FLOOR DRAIN, FIRE DAMPER
FDC	FIRE DEPARTMENT SAMESE CONNECTION
FDV	FIRE DEPARTMENT VALVE
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLO	FLOOR
FPTU	FAN POWERED TERMINAL UNIT
FT	FOOT, FEET
FUT	FUTURE

<b>G</b>	GAS
GA	GAUGE
GALV	GALLON
GALVZ	GALVANIZED
GC	GENERAL CONTRACTOR
GLV	GLOBE VALVE
GND	GROUND
GPM	GALLONS PER MINUTE
GV	GATE VALVE

<b>H</b>	HORIZONTAL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HSTAT	HUMIDISTAT
HT	HEIGHT
HTC	HEATING
HTR	HEATER
HW	HOT WATER
HWP	HEATING WATER PUMP
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ

<b>I</b>	INSIDE DIAMETER
IE	INSIDE DIAMETER
IF	INVERT ELEVATION
IH	INFRARED HEATER
IN	INCH
INSUL	INSULATION
INT	INTERNAL, INTERIOR
INV	INVERT
IW	INDIRECT WASTE

<b>J</b>	JUNCTION BOX
JB	JUNCTION BOX
JP	JOCKEY PUMP

<b>K</b>	KITCHEN EQUIPMENT CONTRACTOR
KEC	KITCHEN EQUIPMENT CONTRACTOR
KO	KNOCKOUT
KVA	KILOVOLT-AMPS
KW	KILOWATT

<b>L</b>	LENGTH
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LF	LINEAR FEET
LP	LOW PRESSURE
LRA	LOCKED ROTOR AMPS
LVL	LEVEL
LWB	LEAVING WET BULB
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE

<b>M</b>	MIXED AIR TEMPERATURE
MAX	MAXIMUM
METH	THOUSAND OF BTU'S
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MI	MALLEABLE IRON
MIN	MINIMUM
MP	MEDIUM PRESSURE
MS	MOP SINK
MTD	MOUNTED
MU	MAKE-UP
MVD	MANUAL VOLUME DAMPER
MSAM	MINI-SPLIT AIR HANDLER
MSCU	MINI-SPLIT CONDENSING UNIT

<b>N</b>	NORMALLY CLOSED
N.C.	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NTC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NO	NUMBER
NTS	NOT TO SCALE

<b>O</b>	OUTSIDE AIR
OA	OUTSIDE AIR
OAF	OUTSIDE AIR FAN
OAHU	OUTSIDE AIR HANDLING UNIT
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OCU	OUTSIDE AIR FAN COIL UNIT
OPG	OPENING
OSBY	OPEN STEM AND YOLK

<b>P</b>	PRESSURE GAUGE
PG	PRESSURE GAUGE
PPF	POLYPROPYLENE
PPM	PART PER MILLION
PR	PRIMARY
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE

<b>R</b>	RETURN AIR
RA	RETURN AIR
RAD	REFRIGERATED AIR DRYER
RAF	RETURN AIR FAN
RAG	RETURN AIR GRILLE
RAT	RETURN AIR TEMPERATURE
ROP	REFLECTED CEILING PLAN
ROD	ROOF DRAIN
RE	REFERENCE, REFER
REFR	REFRIGERATOR
REG	REGISTER
REIN	REINFORCING
REID	REQUIRED
REV	REVISION, REVISE
RH	RELATIVE HUMIDITY
RHG	REFRIGERANT HOT GAS
RLA	REFRIGERANT LIQUID
RLL	RUNNING LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RTU	ROOF TOP UNIT
RV	RELIEF VALVE

<b>S</b>	SUPPLY AIR
SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SAG	SUPPLY AIR GRILLE
SAN	SANITARY SINK
SAR	SUPPLY AIR REGISTER
SC	STEAM CONDENSATE
SCHED	SCHEDULED
SD	STORM DRAIN
SEC	SECONDARY
SECT	SECTION
SENS	SENSIBLE
SF	SQUARE FEET
SFCS	SPRINKLER FLOOR CONTROL STATION
SH	SHOWER
SHT	SHEET
SHR	SHOWER
SK	SINK
SM	SHEET METAL
SP	STATIC PRESSURE, SUMP PUMP
SPEC	SPECIFICATION
SPR	SPRINKLER
SS	SQUARE
SSS	SERVICE SINK
STD	SOLID STATE SPEED CONTROL
STL	STANDARD
STR	STEEL
STR	STRAINER
SURF	SURFACE
SUSP	SUSPEND
SV	SANITARY VENT
SW	SOFT WATER

<b>T</b>	TEMPERATURE CONTROL
TC	TEMPERATURE CONTROL
TCC	TEMPERATURE CORREAL COMPRESSOR
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TF	TRANSFER FAN
TH BLK	THRUST BLOCK
THERM	THERMOMETER
TMSV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TPD	TRAP PRIMER DEVICE
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TW	TEMPERED HOT WATER TYPICAL

<b>U</b>	URINAL
U	URINAL
UCD	UNDER CUT DOOR
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC
UNO	UNLESS NOTED OTHERWISE
U/F	UNDERFLOOR
U/S	UNDERSLAB

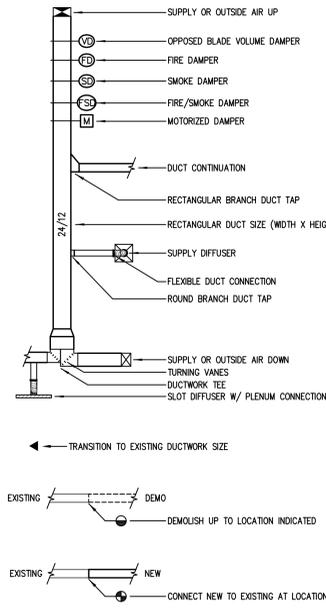
<b>V</b>	VOLT
V	VOLT
VA	VOLT-AMPERE
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VALVE BOX VACUUM BREAKER
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VB	VALVE IN BOX
VOV	VALVE ON VERTICAL
VVP	VACUUM PUMP
VVR	VARIABLE AIR VOLUME REHEAT
VTR	VENT THRU ROOF

<b>W</b>	WATT, WIDTH
W	WATT, WIDTH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WM	WATER METER
WP	WEATHERPROOF
WPD	WATER PRESSURE DROP
WVF	WELDED WIRE FABRIC

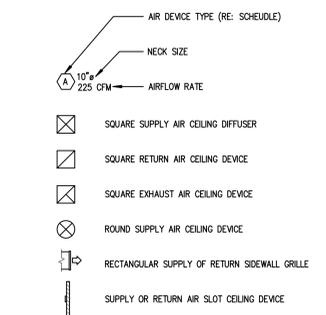
<b>Y</b>	YARD HYDRANT
Y	YARD HYDRANT

<b>Z</b>	ZONE
Z	ZONE

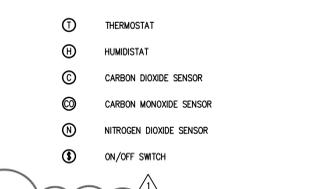
**DUCTWORK**



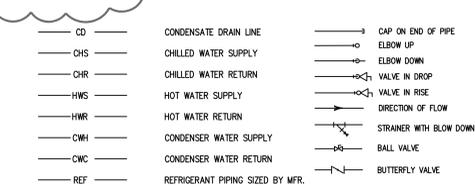
**AIR DEVICE TYPES**



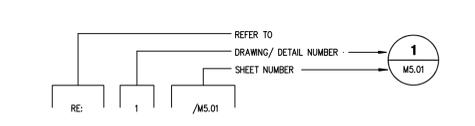
**WALL MOUNTED SENSOR TYPES**



**PIPING TYPES**



**DRAWING/DETAIL REFERENCE KEY**



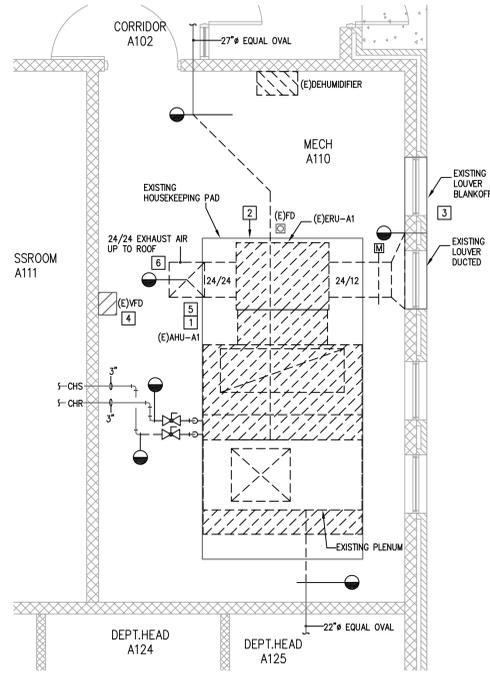
**MECHANICAL GENERAL NOTES**

1. PIPING AND DUCTWORK SHOWN ON PLANS ARE SCHEMATIC ONLY. COORDINATE WITH OTHER TRADES FOR PIPING AND DUCTWORK ROUTING. OFFSET AND RUN PIPING DUCTWORK INSIDE THE STRUCTURE IF REQUIRED. PROVIDE ALL NECESSARY PIPING, DUCTWORK, FITTING, INSULATION, AND OTHER ACCESSORIES IN ORDER TO COMPLETE THE INSTALLATIONS.
2. EXACT LOCATIONS OF VAV TERMINAL UNITS, GRILLES, AND DAMPERS SHALL BE FIELD COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS AND ALLOW ADEQUATE CLEARANCES.
3. EQUIPMENT SIZES, DIMENSIONS, AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE MANUFACTURER DRAWINGS AND OUTSHEETS BEFORE FABRICATING OF DUCTWORK, PIPING, OR POURING OF CONCRETE HOUSEKEEPING PANELS.
4. SHEET METAL INLET DUCTS TO VAV TERMINAL UNITS SHALL BE SAME SIZE AS THE BOX INLET SIZE. PROVIDE RIGID ROUND DUCT THAT IS ONE SIZE LARGER THAN THE INLET BOX SIZE IF THE DISTANCE BETWEEN THE MAIN DUCT AND THE VAV BOX IS MORE THAN 6'-0".
5. PROVIDE CONICAL SPIN-IN CONNECTOR FOR ALL ROUND DUCT CONNECTIONS TO VAV TERMINAL UNIT INLETS.
6. INSTALL VAV TERMINAL UNITS TO ENSURE ACCESS PANELS ARE NOT BLOCKED. ACCESS FOR SERVICE MUST BE PROVIDED.
7. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
8. DUCT SIZES SHOWN ON PLANS ARE CLEAR INSIDE DIMENSIONS.
9. PROVIDE RECTANGULAR BRANCH DUCT TAP FOR ALL RECTANGULAR DUCT CONNECTIONS TO RECTANGULAR DUCT TRUNKS.
10. ALL MEDIUM AND LOW PRESSURE DUCTWORK AND ASSOCIATED ACCESSORIES SHALL BE CONSTRUCTED TO MEET THE LATEST SMACNA STANDARDS FOR MEDIUM AND LOW PRESSURE DUCTWORK.
11. ALL OUTSIDE AIR, SUPPLY AIR, AND RETURN AIR DUCTWORK AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-8 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND SHALL BE INSULATED WITH A MINIMUM OF R-8 INSULATION WHERE LOCATED OUTSIDE THE BUILDING. REFER TO SPECIFICATION 23 07 13 DUCT INSULATION FOR FURTHER INFORMATION AND ADDITIONAL REQUIREMENTS.
12. ALL DUCTWORK SHALL BE CONSTRUCTED TO SEAL CLASS 'A' AS REFERENCED IN SMACNA STANDARDS. ALL NON-WELDED JOINTS AND SEAMS SHALL BE SEALED. THIS INCLUDES BUT IS NOT LIMITED TO TRANSVERSE JOINTS, LONGITUDINAL SEAMS, DUCT WALL PENETRATIONS, SPIN-INS, TAPS, AND OTHER BRANCH CONNECTIONS, ACCESS DOORS, ACCESS PANELS, AND DUCT CONNECTIONS TO EQUIPMENT. OPENINGS FOR ROTATING SHAFTS SHALL ALSO BE SEALED WITH BUSHINGS. REFER TO SPECIFICATION 23 31 13 METAL DUCTWORK FOR FURTHER INFORMATION.
13. ALL EXPOSED DUCTWORK AND PIPING WITH ASSOCIATED ACCESSORIES IN AREAS WITH NO CEILING OR PARTIAL CEILING SHALL BE PAINTED. REFER TO ARCHITECT FOR COLOR.
14. DIVISION 23 MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR PRIOR TO ACTUAL INSTALLATION OF TEMPERATURE SENSORS AND HUMIDITY SENSORS.
15. PROVIDE REMOTE SPIN-IN DAMPER OPERATOR FOR SPIN-IN CONNECTIONS AND VOLUME DAMPERS LOCATED OVER GYPSUM CEILINGS.
16. PROVIDE AIRFLOW TYPE TURNING VANES IN ALL 90 DEGREE ELBOWS.
17. COORDINATE LOCATIONS OF FLOOR AND WALL OPENINGS WITH ARCHITECT AND STRUCTURAL ENGINEER.
18. ALL CEILING MOUNTED AND WALL MOUNTED AIR DEVICE FINISHES SHALL MATCH ADJACENT ARCHITECTURAL SURFACE. CONTRACTOR SHALL COORDINATE COLOR WITH ARCHITECT.
19. NO PIPE HANGERS SHALL BE SPACED MORE THAN 10'-0" O.C. COMPLY WITH PIPE SPACING AS SPECIFIED IN THE PIPING SUPPORT SPECIFICATIONS.
20. MECHANICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF ALL OUTSIDE AIR INTAKES TO MAINTAIN 15 FEET DISTANCE BETWEEN OUTSIDE AIR INTAKES AND ANY EXHAUST AIR OUTLET, FLUES OR PLUMBING VENTS.
21. CONTRACTOR SHALL PROVIDE FIRE SPRINKLERS BELOW DUCTWORK WIDER THAN 4'-0" IN MECHANICAL ROOMS. NO PORTION OF THE FIRE PROTECTION SYSTEMS SHALL BE TURNED OFF, MODIFIED OR CHANGED IN ANY WAY WITHOUT THE EXPRESS KNOWLEDGE AND WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE IN ORDER TO PROTECT SYSTEMS THAT SHALL REMAIN IN SERVICE.
22. PROVIDE SMOKE DETECTOR ON SUPPLY AND RETURN DUCTWORK SUPPLYING MORE THAN 2,000 CFM.

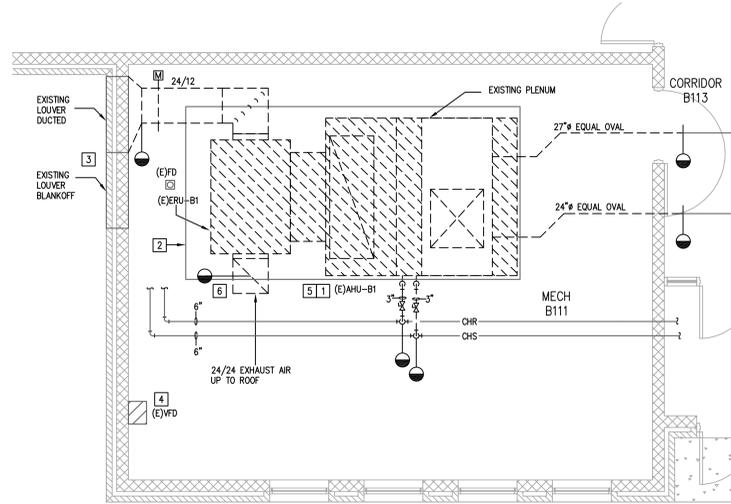
**CONTROLS SCHEMATIC SYMBOLS LEGEND**

(AI)	ANALOG INPUT
(AO)	ANALOG OUTPUT
(DI/BI)	DIGITAL/BINARY INPUT
(DO/BO)	DIGITAL/BINARY OUTPUT
(MD)	ON-OFF MOTORIZED DAMPER
(MMD)	MODULATING TYPE MOTORIZED DAMPER
(AFMS)	AIR FLOW MEASURING STATION
(MCV)	CONTROL VALVE, MODULATING TYPE
(VFD)	VARIABLE FREQUENCY DRIVE
(CSR)	CURRENT SENSING RELAY
(FRZ)	FREEZE STAT
(HSL)	HIGH STATIC LIMIT
(SPT)	STATIC PRESSURE TRANSMITTER
(DPT)	DIFFERENTIAL PRESSURE TRANSDUCER
(FM)	FLOW METER
(FS)	FLOW SWITCH
(DAT)	DISCHARGE AIR TEMPERATURE SENSOR
(S)	WALL SENSOR
(T)	THERMOSTAT
(CO2)	CARBON DIOXIDE SENSOR
(SP)	SET POINT
(S/A)	SUPPLY AIR
(R/A)	RETURN AIR
(O/A)	OUTSIDE AIR
(HC)	HEATING COIL
(CC)	COOLING COIL
(DX)	DIRECT EXPANSION COOLING COIL
(PICV)	PRESSURE INDEPENDENT CHARACTERIZED CONTROL VALVE
(AFC)	AIRFLOW CROSS
(DPS)	DIFFERENTIAL PRESSURE SWITCH

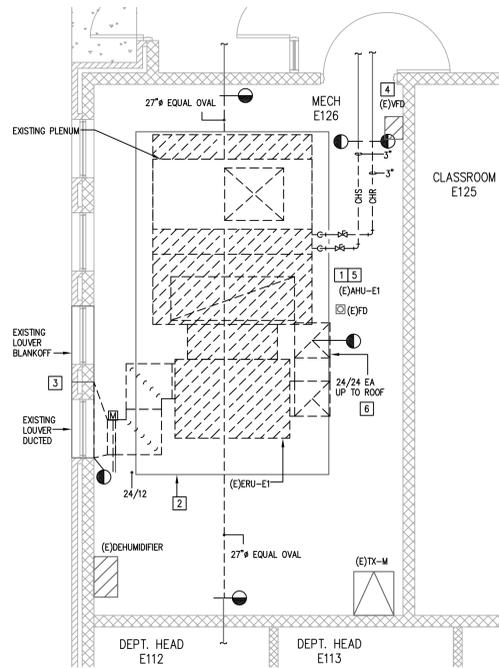




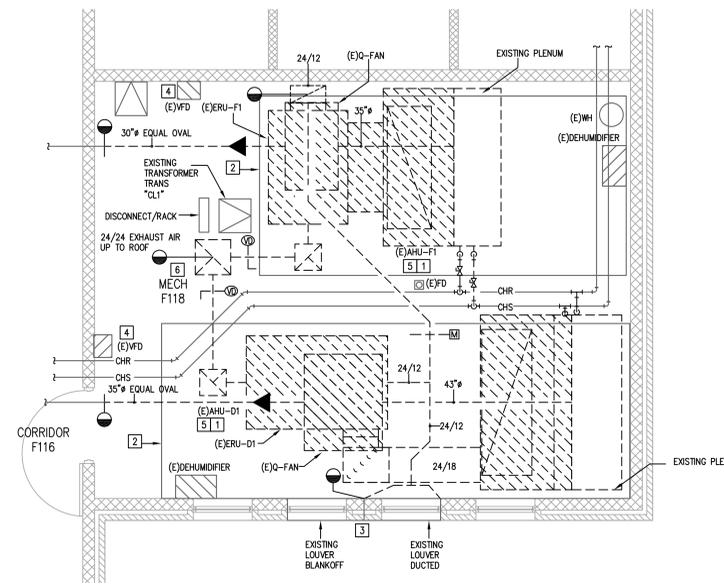
**1 ENLARGED MECHANICAL ROOM - A110 - DEMOLITION**  
 MD3.01 1/4" = 1'-0"



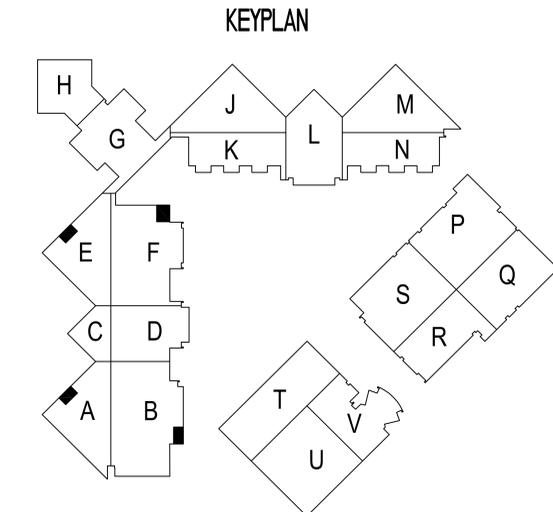
**2 ENLARGED MECHANICAL ROOM - B111 - DEMOLITION**  
 MD3.01 1/4" = 1'-0"



**3 ENLARGED MECHANICAL ROOM - E126 - DEMOLITION**  
 MD3.01 \*\*\*\*\*



**4 ENLARGED MECHANICAL ROOM - F118 - DEMOLITION**  
 MD3.01 1/4" = 1'-0"



**MECHANICAL DEMOLITION GENERAL NOTES:**

- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXISTING JOBSITE CONDITIONS DURING THE BIDDING PERIOD, SO THEY HAVE OBTAINED THE SCOPE OF THE MECHANICAL DEMOLITION WORK INVOLVED AS A RESULT OF MODIFICATIONS TO THE EXISTING STRUCTURE. THE SCOPE OF WORK SHALL INCLUDE MATERIALS AND DUCTWORK CONSISTING OF DEVICES, EQUIPMENT, OR APPARATUS WHICH MAY BE RELOCATED, RELOCATED, OR REMOVED EITHER TEMPORARILY OR PERMANENTLY, OR WHICH MUST BE REROUTED OR REMOVED EITHER ACCOMPLISHED. NOT ALL EXISTING CONDITIONS ARE NECESSARILY INDICATED ON DRAWINGS. CONTRACTOR SHALL DEMOLISH ONLY WHAT IS INDICATED TO BE DEMOLISHED ON DRAWINGS.
- B. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL EQUIPMENT BEING REMOVED. OWNER SHALL RESERVE THE RIGHT TO CLAIM ALL EQUIPMENT, DUCTWORK, AND AIR DEVICES REMOVED DURING DEMOLITION.
- C. CONTRACTOR TO REPORT ANY DAMAGED EQUIPMENT THAT IS SHOWN AS EXISTING TO REMAIN TO THE OWNER PRIOR TO STARTING ALL WORK. ALL EQUIPMENT FOUND TO BE DAMAGED AT THE TIME OF SUBSTANTIAL COMPLETION, THAT HAD NOT BEEN REPORTED PRIOR TO CONSTRUCTION, CONTRACTOR TO REPAIR AT THEIR OWN COST.
- D. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND ASSOCIATED ACCESSORIES SHALL REMAIN UNLESS OTHERWISE INDICATED.
- E. EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN ON PLANS HAVE BEEN OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS AND ARE SCHEMATIC ONLY. FIELD VERIFY EXISTING SIZES AND LOCATIONS BEFORE DEMOLITION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES BETWEEN EXISTING DUCTWORK AND DUCTWORK SHOWN ON DRAWINGS, WHICH MAY REQUIRE MODIFICATIONS (PRIOR TO FABRICATION OF ANY DUCTWORK).
- F. FIELD VERIFY ALL DUCTWORK AND AIR DEVICES OF EXISTING AIR HANDLING UNITS ALONG WITH RETURN, EXHAUST, AND MAKE-UP AIR DUCTWORK. EVERY EFFORT HAS BEEN MADE TO SHOW THE APPROXIMATE LOCATIONS AND CONNECTIONS TO THE EXISTING DUCT, AIR DEVICES, EQUIPMENT AND OTHER APPARATUS RELATED TO THIS PHASE OF WORK.
- G. CONFIRM CFM QUANTITIES AT EXISTING AIR DEVICES TO REMAIN PRIOR TO ANY MODIFICATIONS TO DUCTWORK AND ASSOCIATED HVAC EQUIPMENT. RE-BALANCE AIR DEVICES TO SAME CFM QUANTITIES ONCE MODIFICATIONS HAVE BEEN COMPLETED AND RE-BALANCE HVAC EQUIPMENT ACCORDINGLY.
- H. PATCH ALL WALLS DISTURBED DUE TO THE DEMOLITION WORK THAT ARE TO REMAIN. FINISH ALL PATCH WORK TO MATCH ADJACENT AREA AND FIRE RATING.
- J. NO PORTION OF THE FIRE PROTECTION SYSTEMS SHALL BE TURNED OFF, MODIFIED OR CHANGED IN ANY WAY WITHOUT THE EXPRESS KNOWLEDGE AND WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE IN ORDER TO PROTECT SYSTEMS THAT SHALL REMAIN IN SERVICE.

**MECHANICAL DEMOLITION KEYED NOTES:**

- 1. EXISTING AIR HANDLING UNIT SHALL BE REMOVED IN ITS ENTIRETY. REMOVE THE SUPPLY, RETURN (WHERE APPLICABLE), EXV EXHAUST (WHERE APPLICABLE), AND OUTSIDE AIR DUCT UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING CHILLED WATER CONNECTIONS UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING BUILDING AUTOMATION SENSORS.
- 2. EXISTING HOUSEKEEPING PAD SHALL REMAIN.
- 3. EXISTING LOUVER SHALL REMAIN. CONTRACTOR SHALL REMOVE EXISTING DUCTWORK ON LOUVER.
- 4. EXISTING VFD SHALL BE REMOVED.
- 5. CONTRACTOR SHALL SAW CUT EXISTING CONCRETE SLAB AND RELOCATE EXISTING FLOOR DRAIN TO NEW LOCATION AS INDICATED. CONTRACTOR SHALL CONNECT TO EXISTING SANITARY SEWER PIPING. PATCH FLOOR TO MATCH EXISTING.
- 6. EXISTING GRAVITY HOOD ON ROOF SHALL REMAIN.



REVISION

No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1

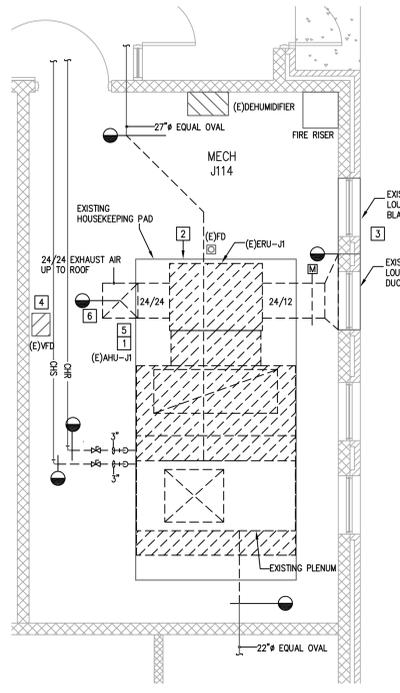


EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

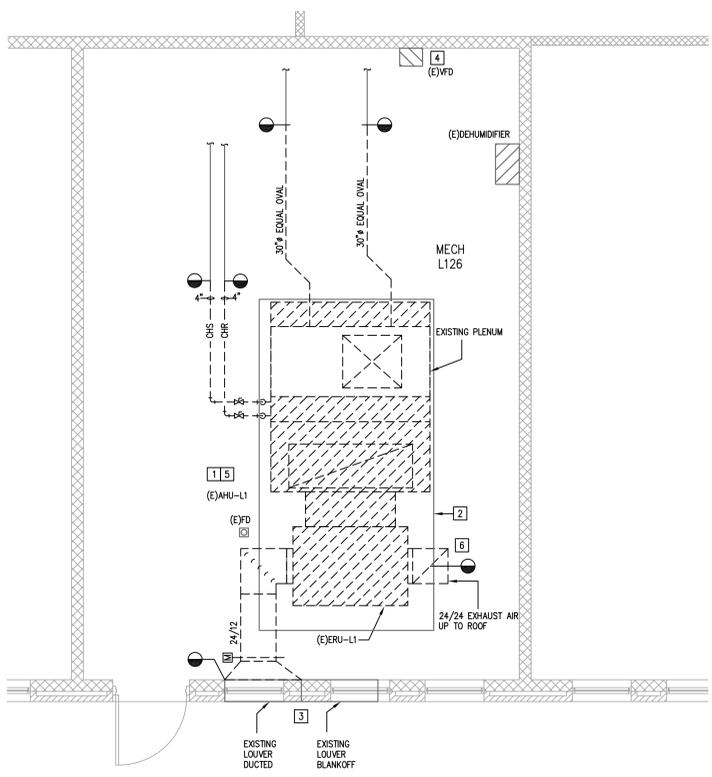
DATE: 03/09/2022  
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 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE: ENLARGED MECHANICAL PLAN - DEMOLITION  
 SHEET NUMBER: MD3.01

DBR Project Number 218007.001  
 HA | MG | JB | TL | --

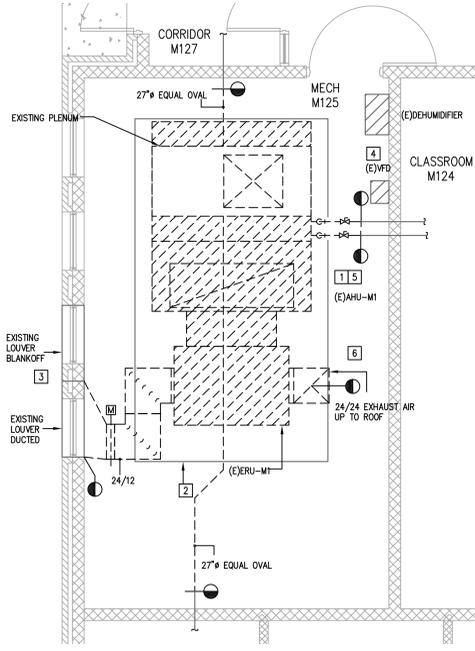
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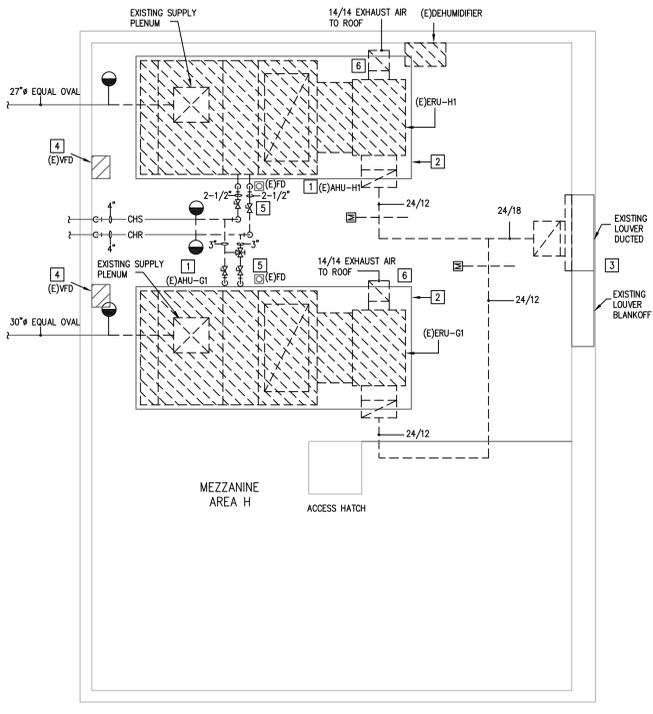
**1 ENLARGED MECHANICAL ROOM - J114 - DEMOLITION**  
 MD3.02 1/4" = 1'-0"



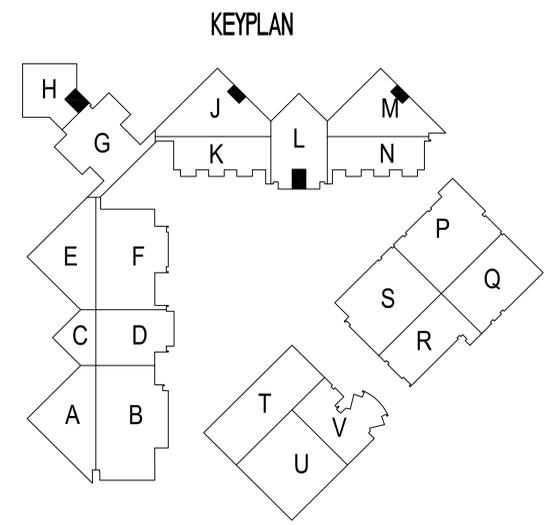
**2 ENLARGED MECHANICAL ROOM - L126 - DEMOLITION**  
 MD3.02 1/4" = 1'-0"



**3 ENLARGED MECHANICAL ROOM - M125 - DEMOLITION**  
 MD3.02 \*\*\*\*\*



**4 ENLARGED MECHANICAL ROOM - MEZZANINE H - DEMOLITION**  
 MD3.02 1/4" = 1'-0"



**MECHANICAL DEMOLITION GENERAL NOTES:**

- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXISTING JOBSITE CONDITIONS DURING THE BIDDING PERIOD, SO THEY HAVE OBTAINED THE SCOPE OF THE MECHANICAL DEMOLITION WORK INVOLVED AS A RESULT OF MODIFICATIONS TO THE EXISTING STRUCTURE. THE SCOPE OF WORK SHALL INCLUDE MATERIALS AND DUCTWORK CONSISTING OF DEVICES, EQUIPMENT, OR APPARATUS WHICH MAY BE RELOCATED, RELOCATED, OR REMOVED EITHER TEMPORARILY OR PERMANENTLY, OR WHICH MUST BE REROUTED OR REMOVED EITHER ACCOMPLISHED. NOT ALL EXISTING CONDITIONS ARE NECESSARILY INDICATED ON DRAWINGS, CONTRACTOR SHALL DEMOLISH ONLY WHAT IS INDICATED TO BE DEMOLISHED ON DRAWINGS.
- B. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL EQUIPMENT BEING REMOVED. OWNER SHALL RESERVE THE RIGHT TO CLAIM ALL EQUIPMENT, DUCTWORK, AND AIR DEVICES REMOVED DURING DEMOLITION.
- C. CONTRACTOR TO REPORT ANY DAMAGED EQUIPMENT THAT IS SHOWN AS EXISTING TO REMAIN TO THE OWNER PRIOR TO STARTING ALL WORK. ALL EQUIPMENT FOUND TO BE DAMAGED AT THE TIME OF SUBSTANTIAL COMPLETION, THAT HAD NOT BEEN REPORTED PRIOR TO CONSTRUCTION, CONTRACTOR TO REPAIR AT THEIR OWN COST.
- D. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND ASSOCIATED ACCESSORIES SHALL REMAIN UNLESS OTHERWISE INDICATED.
- E. EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN ON PLANS HAVE BEEN OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS AND ARE SCHEMATIC ONLY. FIELD VERIFY EXISTING SIZES AND LOCATIONS BEFORE DEMOLITION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES BETWEEN EXISTING DUCTWORK AND DUCTWORK SHOWN ON DRAWINGS, WHICH MAY REQUIRE MODIFICATIONS (PRIOR TO FABRICATION OF ANY DUCTWORK).
- F. FIELD VERIFY ALL DUCTWORK AND AIR DEVICES OF EXISTING AIR HANDLING UNITS ALONG WITH RETURN, EXHAUST, AND MAKE-UP AIR DUCTWORK. EVERY EFFORT HAS BEEN MADE TO SHOW THE APPROXIMATE LOCATIONS AND CONNECTIONS TO THE EXISTING DUCT, AIR DEVICES, EQUIPMENT AND OTHER APPARATUS RELATED TO THIS PHASE OF WORK.
- G. CONFIRM CFM QUANTITIES AT EXISTING AIR DEVICES TO REMAIN PRIOR TO ANY MODIFICATIONS TO DUCTWORK AND ASSOCIATED HVAC EQUIPMENT. RE-BALANCE AIR DEVICES TO SAME CFM QUANTITIES ONCE MODIFICATIONS HAVE BEEN COMPLETED AND RE-BALANCE HVAC EQUIPMENT ACCORDINGLY.
- H. PATCH ALL WALLS DISTURBED DUE TO THE DEMOLITION WORK THAT ARE TO REMAIN. FINISH ALL PATCH WORK TO MATCH ADJACENT AREA AND FIRE RATING.
- J. NO PORTION OF THE FIRE PROTECTION SYSTEMS SHALL BE TURNED OFF, MODIFIED OR CHANGED IN ANY WAY WITHOUT THE EXPRESS KNOWLEDGE AND WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE IN ORDER TO PROTECT SYSTEMS THAT SHALL REMAIN IN SERVICE.

**MECHANICAL DEMOLITION KEYED NOTES:**

1. EXISTING AIR HANDLING UNIT SHALL BE REMOVED IN ITS ENTIRETY. REMOVE THE SUPPLY, RETURN (WHERE APPLICABLE), EXHAUST (WHERE APPLICABLE), AND OUTSIDE AIR DUCT UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING CHILLED WATER CONNECTIONS UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING BUILDING AUTOMATION SENSORS.
2. EXISTING HOUSEKEEPING PAD SHALL REMAIN.
3. EXISTING LOUVER SHALL REMAIN. CONTRACTOR SHALL REMOVE EXISTING DUCTWORK ON LOUVER.
4. EXISTING VFD SHALL BE REMOVED.
5. CONTRACTOR SHALL SAW CUT EXISTING CONCRETE SLAB AND RELOCATE EXISTING FLOOR DRAIN TO NEW LOCATION AS INDICATED. CONTRACTOR SHALL CONNECT TO EXISTING SANITARY SEWER PIPING. PATCH FLOOR TO MATCH EXISTING.
6. EXISTING GRAVITY HOOD ON ROOF SHALL REMAIN.



REVISION No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



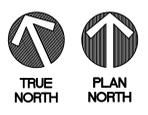
EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE:

**ENLARGED MECHANICAL PLAN - DEMOLITION**

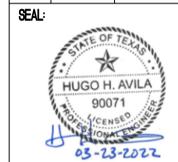
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**MD3.02**



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REVISION	No.	DATE	DESCRIPTION
	1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

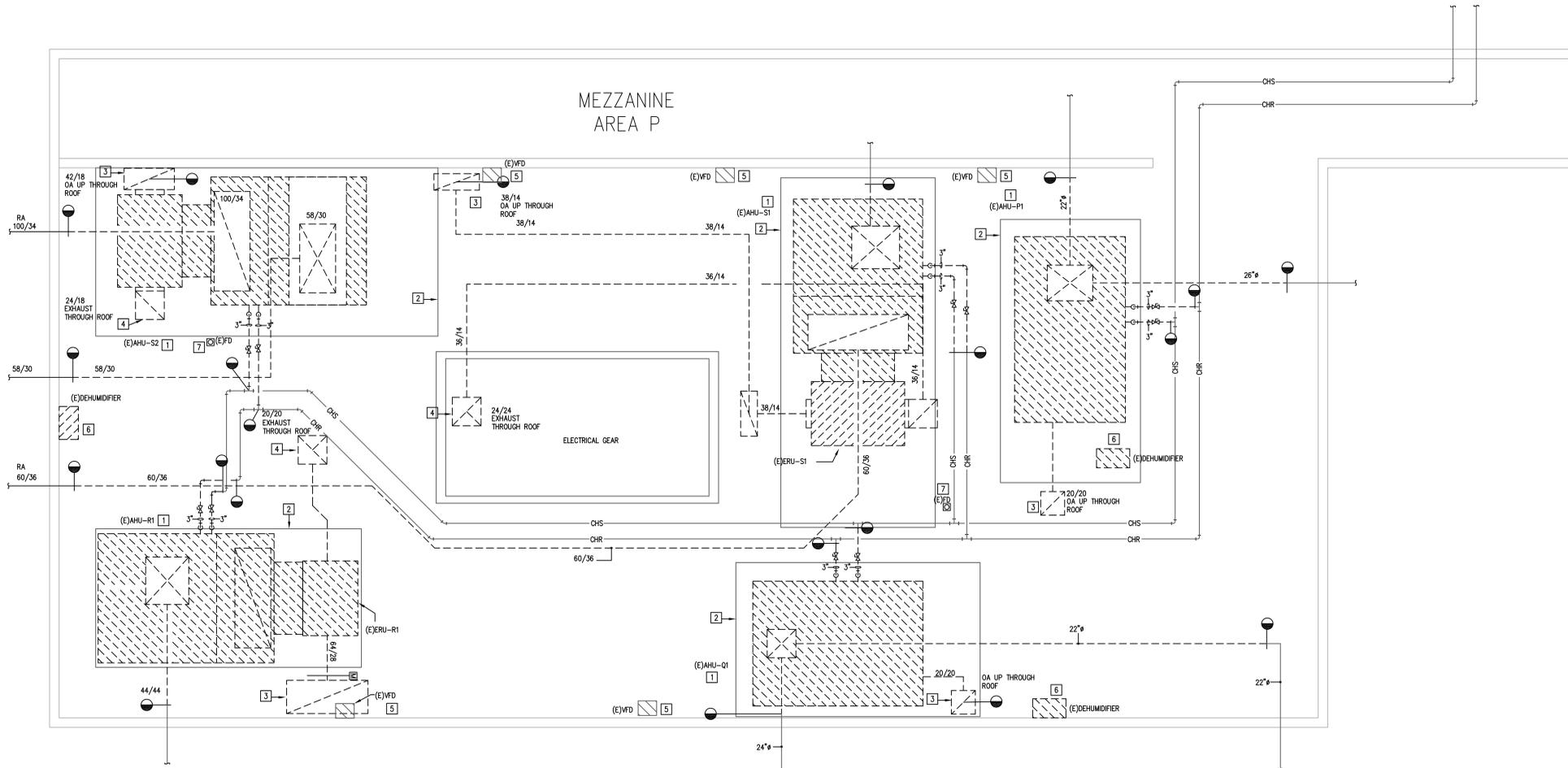
DATE:	03/09/2022
DRAWN BY:	DBR
CHECKED BY:	DBR
PROJECT NUMBER:	218007.001
SHEET TITLE:	ENLARGED MECHANICAL PLAN - DEMOLITION
SHEET NUMBER:	MD3.03

**MECHANICAL DEMOLITION GENERAL NOTES:**

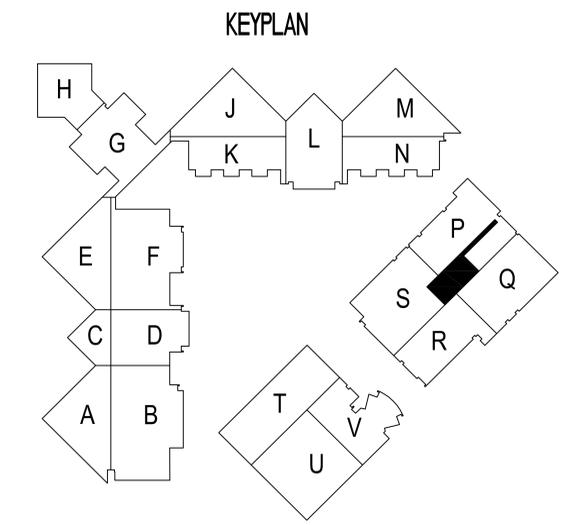
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXISTING JOBSITE CONDITIONS DURING THE BIDDING PERIOD, SO THEY HAVE OBTAINED THE SCOPE OF THE MECHANICAL DEMOLITION WORK INVOLVED AS A RESULT OF MODIFICATIONS TO THE EXISTING STRUCTURE. THE SCOPE OF WORK SHALL INCLUDE MATERIALS AND DUCTWORK CONSISTING OF DEVICES, EQUIPMENT, OR APPARATUS WHICH MAY BE RELOCATED, RELOCATED, OR REMOVED EITHER TEMPORARILY OR PERMANENTLY, OR WHICH MUST BE RESROUTED OR REMOVED EITHER ACCOMPLISHED. NOT ALL EXISTING CONDITIONS ARE NECESSARILY INDICATED ON DRAWINGS. CONTRACTOR SHALL DEMOLISH ONLY WHAT IS INDICATED TO BE DEMOLISHED ON DRAWINGS.
- CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL EQUIPMENT BEING REMOVED. OWNER SHALL RESERVE THE RIGHT TO CLAIM ALL EQUIPMENT, DUCTWORK, AND AIR DEVICES REMOVED DURING DEMOLITION.
- CONTRACTOR TO REPORT ANY DAMAGED EQUIPMENT THAT IS SHOWN AS EXISTING TO REMAIN TO THE OWNER PRIOR TO STARTING ALL WORK. ALL EQUIPMENT FOUND TO BE DAMAGED AT THE TIME OF SUBSTANTIAL COMPLETION, THAT HAD NOT BEEN REPORTED PRIOR TO CONSTRUCTION, CONTRACTOR TO REPAIR AT THEIR OWN COST.
- ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND ASSOCIATED ACCESSORIES SHALL REMAIN UNLESS OTHERWISE INDICATED.
- EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN ON PLANS HAVE BEEN OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS AND ARE SCHEMATIC ONLY. FIELD VERIFY EXISTING SIZES AND LOCATIONS BEFORE DEMOLITION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES BETWEEN EXISTING DUCTWORK AND DUCTWORK SHOWN ON DRAWINGS, WHICH MAY REQUIRE MODIFICATIONS (PRIOR TO FABRICATION OF ANY DUCTWORK).
- FIELD VERIFY ALL DUCTWORK AND AIR DEVICES OF EXISTING AIR HANDLING UNITS ALONG WITH RETURN, EXHAUST, AND MAKE-UP AIR DUCTWORK. EVERY EFFORT HAS BEEN MADE TO SHOW THE APPROXIMATE LOCATIONS AND CONNECTIONS TO THE EXISTING DUCT, AIR DEVICES, EQUIPMENT AND OTHER APPARATUS RELATED TO THIS PHASE OF WORK.
- CONFIRM CFM QUANTITIES AT EXISTING AIR DEVICES TO REMAIN PRIOR TO ANY MODIFICATIONS TO DUCTWORK AND ASSOCIATED HVAC EQUIPMENT. RE-BALANCE AIR DEVICES TO SAME CFM QUANTITIES ONCE MODIFICATIONS HAVE BEEN COMPLETED AND RE-BALANCE HVAC EQUIPMENT ACCORDINGLY.
- PATCH ALL WALLS DISTURBED DUE TO THE DEMOLITION WORK THAT ARE TO REMAIN. FINISH ALL PATCH WORK TO MATCH ADJACENT AREA AND FIRE RATING.
- NO PORTION OF THE FIRE PROTECTION SYSTEMS SHALL BE TURNED OFF, MODIFIED OR CHANGED IN ANY WAY WITHOUT THE EXPRESS KNOWLEDGE AND WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE IN ORDER TO PROTECT SYSTEMS THAT SHALL REMAIN IN SERVICE.

**MECHANICAL DEMOLITION KEYED NOTES:**

- EXISTING AIR HANDLING UNIT SHALL BE REMOVED IN ITS ENTIRETY. REMOVE THE SUPPLY, RETURN (WHERE APPLICABLE), ERV EXHAUST (WHERE APPLICABLE), AND OUTSIDE AIR DUCT UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING CHILLED WATER CONNECTIONS UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING BUILDING AUTOMATION SENSORS.
- EXISTING HOUSEKEEPING PAD SHALL REMAIN.
- EXISTING GRAVITY HOOD ON ROOF SHALL REMAIN.
- EXISTING GRAVITY HOOD SHALL BE REMAIN IN PLACE AND TEMPORARILY CAPPED.
- EXISTING VFD SHALL BE REMOVED.
- EXISTING DEHUMIDIFIER SHALL BE REMOVED IN ITS ENTIRETY; REMOVE ASSOCIATED DUCTWORK, POWER, AND CONTROLS. CONTRACTOR SHALL SEAL/PATCH INSULATE ANY ROOF/WALL OPENINGS REMAINING FROM THE REMOVAL OF EQUIPMENT AND APPURTENANCES.
- CONTRACTOR SHALL SAW CUT EXISTING CONCRETE SLAB AND RELOCATE EXISTING FLOOR DRAIN TO NEW LOCATION AS INDICATED. CONTRACTOR SHALL CONNECT TO EXISTING SANITARY SEWER PIPING. PATCH FLOOR TO MATCH EXISTING.



**1 ENLARGED MECHANICAL ROOM - MEZZANINE P - DEMOLITION**  
 MD3.03 1/4" = 1'-0"



**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p. 956.683.1903 f  
 TBPE Firm Registration No. 2234

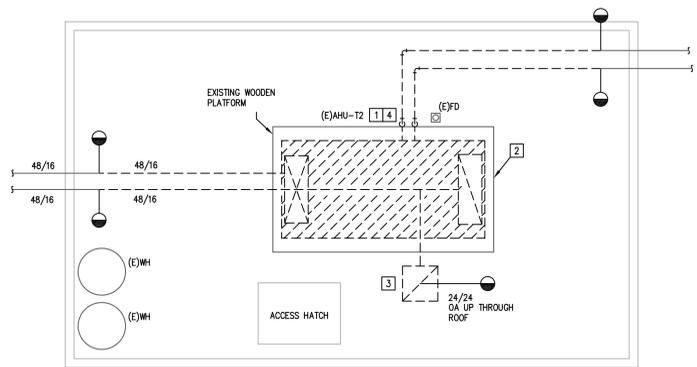
TRUE NORTH  
 PLAN NORTH

DBR Project Number 218007.001  
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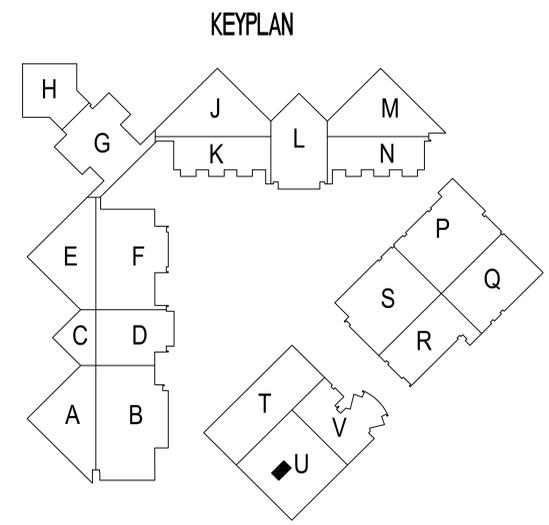
**1 ENLARGED MECHANICAL PLAN - DEMOLITION - MEZZANINE KITCHEN**  
 MD3.05 1/4" = 1'-0"

**MECHANICAL DEMOLITION GENERAL NOTES:**

- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXISTING JOBSITE CONDITIONS DURING THE BIDDING PERIOD, SO THEY HAVE OBTAINED THE SCOPE OF THE MECHANICAL DEMOLITION WORK INVOLVED AS A RESULT OF MODIFICATIONS TO THE EXISTING STRUCTURE. THE SCOPE OF WORK SHALL INCLUDE MATERIALS AND DUCTWORK CONSISTING OF DEVICES, EQUIPMENT, OR APPARATUS WHICH MAY BE REROUTED, RELOCATED, OR REMOVED EITHER TEMPORARILY OR PERMANENTLY, OR WHICH MUST BE REROUTED OR REMOVED EITHER ACCOMPLISHED. NOT ALL EXISTING CONDITIONS ARE NECESSARILY INDICATED ON DRAWINGS, CONTRACTOR SHALL DEMOLISH ONLY WHAT IS INDICATED TO BE DEMOLISHED ON DRAWINGS.
- B. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL EQUIPMENT BEING REMOVED. OWNER SHALL RESERVE THE RIGHT TO CLAIM ALL EQUIPMENT, DUCTWORK, AND AIR DEVICES REMOVED DURING DEMOLITION.
- C. CONTRACTOR TO REPORT ANY DAMAGED EQUIPMENT THAT IS SHOWN AS EXISTING TO REMAIN TO THE OWNER PRIOR TO STARTING ALL WORK. ALL EQUIPMENT FOUND TO BE DAMAGED AT THE TIME OF SUBSTANTIAL COMPLETION THAT HAD NOT BEEN REPORTED PRIOR TO CONSTRUCTION, CONTRACTOR TO REPAIR AT THEIR OWN COST.
- D. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND ASSOCIATED ACCESSORIES SHALL REMAIN UNLESS OTHERWISE INDICATED.
- E. EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN ON PLANS HAVE BEEN OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS AND ARE SCHEMATIC ONLY. FIELD VERIFY EXISTING SIZES AND LOCATIONS BEFORE DEMOLITION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES BETWEEN EXISTING DUCTWORK AND DUCTWORK SHOWN ON DRAWINGS, WHICH MAY REQUIRE MODIFICATIONS (PRIOR TO FABRICATION OF ANY DUCTWORK).
- F. FIELD VERIFY ALL DUCTWORK AND AIR DEVICES OF EXISTING AIR HANDLING UNITS ALONG WITH RETURN, EXHAUST, AND MAKE-UP AIR DUCTWORK. EVERY EFFORT HAS BEEN MADE TO SHOW THE APPROXIMATE LOCATIONS AND CONNECTIONS TO THE EXISTING DUCT, AIR DEVICES, EQUIPMENT AND OTHER APPARATUS RELATED TO THIS PHASE OF WORK.
- G. CONFIRM CFM QUANTITIES AT EXISTING AIR DEVICES TO REMAIN PRIOR TO ANY MODIFICATIONS TO DUCTWORK AND ASSOCIATED HVAC EQUIPMENT. RE-BALANCE AIR DEVICES TO SAME CFM QUANTITIES ONCE MODIFICATIONS HAVE BEEN COMPLETED AND RE-BALANCE HVAC EQUIPMENT ACCORDINGLY.
- H. PATCH ALL WALLS DISTURBED DUE TO THE DEMOLITION WORK THAT ARE TO REMAIN. FINISH ALL PATCH WORK TO MATCH ADJACENT AREA AND FIRE RATING.
- J. NO PORTION OF THE FIRE PROTECTION SYSTEMS SHALL BE TURNED OFF, MODIFIED OR CHANGED IN ANY WAY WITHOUT THE EXPRESS KNOWLEDGE AND WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE IN ORDER TO PROTECT SYSTEMS THAT SHALL REMAIN IN SERVICE.

**MECHANICAL DEMOLITION KEYED NOTES: [7]**

1. EXISTING AIR HANDLING UNIT SHALL BE REMOVED IN ITS ENTIRETY. REMOVE THE SUPPLY, RETURN (WHERE APPLICABLE), EXHAUST (WHERE APPLICABLE), AND OUTSIDE AIR DUCT UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING CHILLED WATER CONNECTIONS UP TO LOCATION INDICATED ON PLAN. REMOVE EXISTING BUILDING AUTOMATION SENSORS.
2. EXISTING WOODEN PLATFORM SHALL REMAIN.
3. EXISTING GRAVITY HOOD ON ROOF SHALL REMAIN.
4. CONTRACTOR SHALL SAW CUT EXISTING CONCRETE SLAB AND RELOCATE EXISTING FLOOR DRAIN TO NEW LOCATION AS INDICATED. CONTRACTOR SHALL CONNECT TO EXISTING SANITARY SEWER PIPING. PATCH FLOOR TO MATCH EXISTING.



  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p 956.683.1903 f  
 TBPE Firm Registration No. 2234  
 DBR Project Number 218007.001  
 HA | MG | JB | TL | --

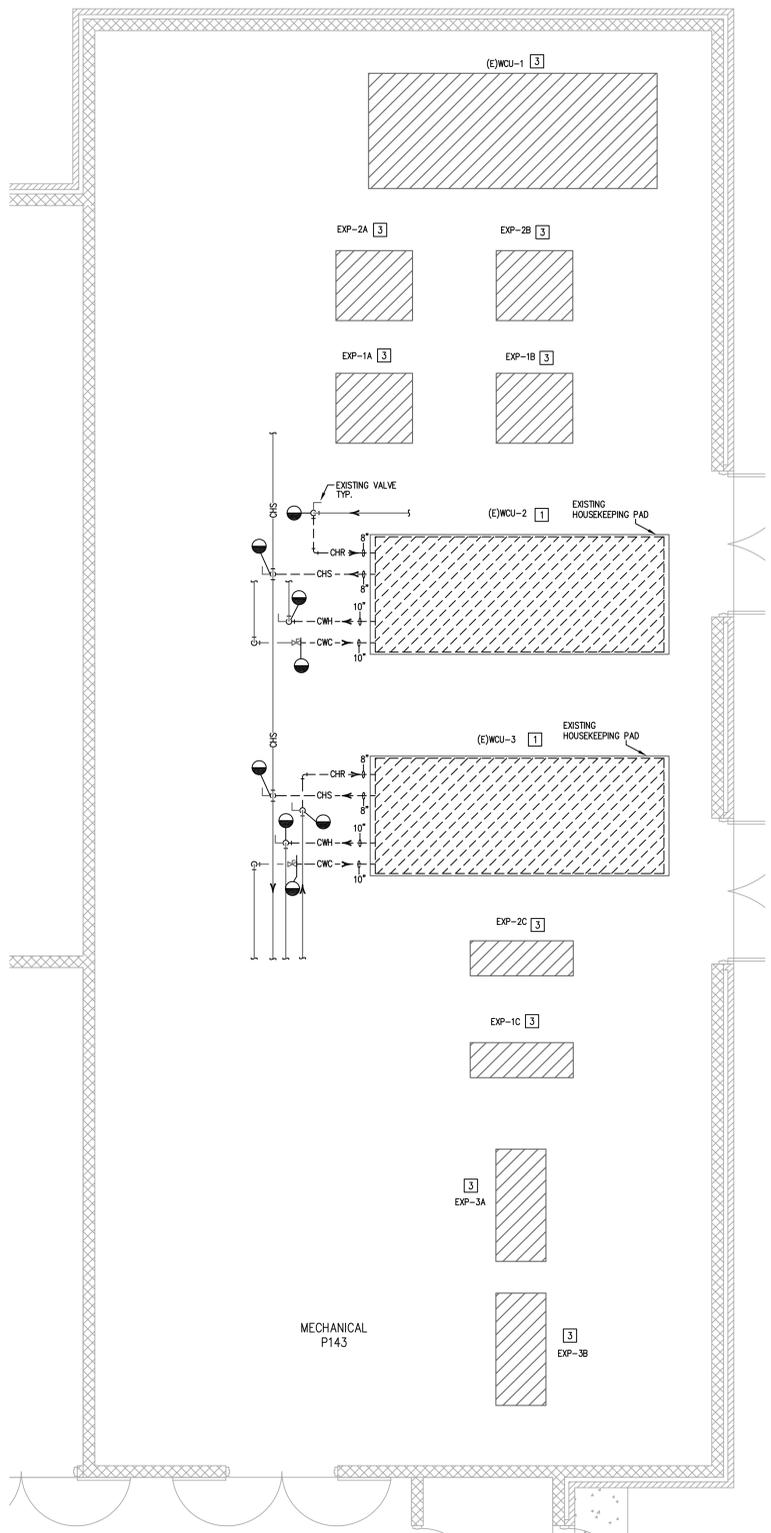
  
 210.546.0200 v 210.546.0201 f  
 9601 McAllister Freeway, Suite 410  
 San Antonio, Texas 78216  
 TBPE Firm Registration No. 2234

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1	03/23/2022	ADDENDUM No.1

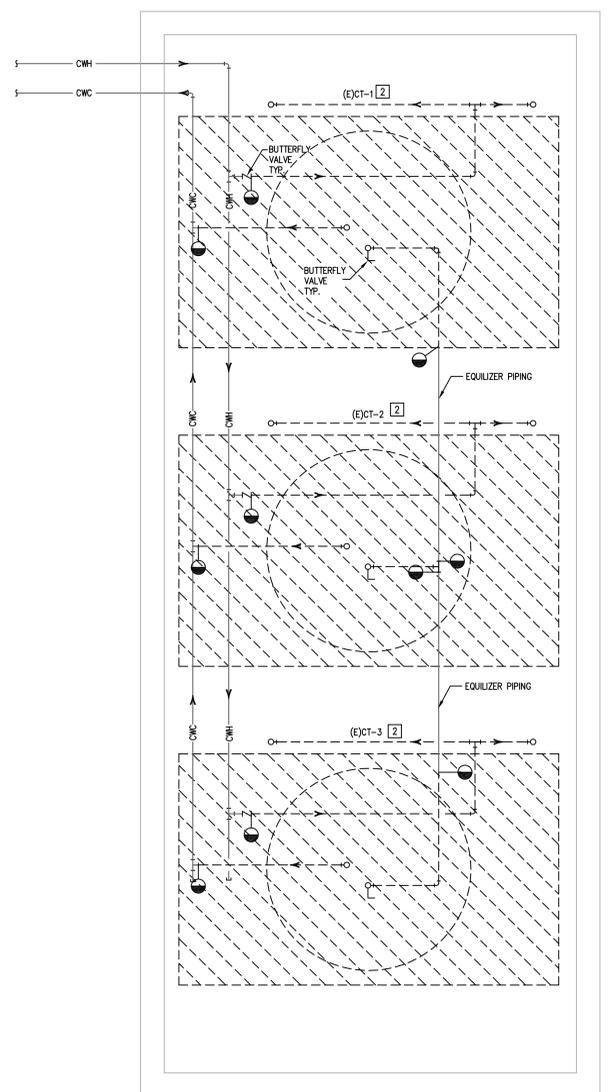
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EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
 EDINBURG HS - HVAC IMPROVEMENTS  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
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 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE: ENLARGED MECHANICAL PLAN - DEMOLITION  
 SHEET NUMBER: MD3.05



**1 ENLARGED MECHANICAL PLAN - MECHANICAL P143 - DEMOLITION**  
 MD3.06 1/4" = 1'-0"



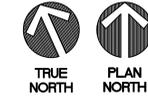
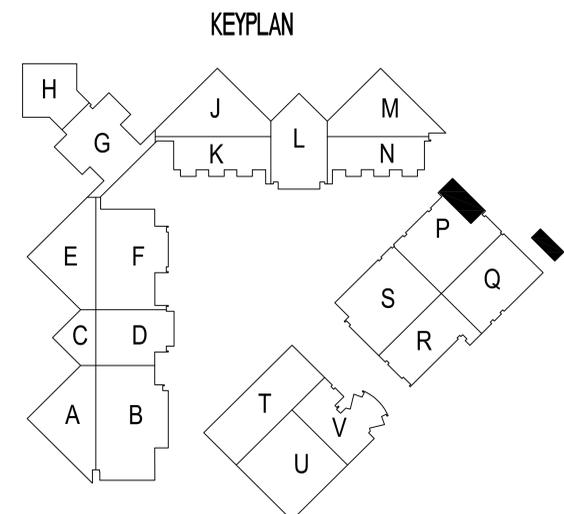
**2 ENLARGED MECHANICAL PLAN - COOLING TOWERS - DEMOLITION**  
 MD3.06 1/4" = 1'-0"

**MECHANICAL DEMOLITION GENERAL NOTES:**

- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE VERIFIED EXISTING JOBSITE CONDITIONS DURING THE BIDDING PERIOD, SO THEY HAVE OBTAINED THE SCOPE OF THE MECHANICAL DEMOLITION WORK INVOLVED AS A RESULT OF MODIFICATIONS TO THE EXISTING STRUCTURE. THE SCOPE OF WORK SHALL INCLUDE MATERIALS AND DUCTWORK CONSISTING OF DEVICES, EQUIPMENT, OR APPARATUS WHICH MAY BE REROUTED, RELOCATED, OR REMOVED EITHER TEMPORARILY OR PERMANENTLY, OR WHICH MUST BE REROUTED OR REMOVED EITHER ACCOMPLISHED. NOT ALL EXISTING CONDITIONS ARE NECESSARILY INDICATED ON DRAWINGS, CONTRACTOR SHALL DEMOLISH ONLY WHAT IS INDICATED ON DRAWINGS.
- B. CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL EQUIPMENT BEING REMOVED. OWNER SHALL RESERVE THE RIGHT TO CLAIM ALL EQUIPMENT, DUCTWORK, AND AIR DEVICES REMOVED DURING DEMOLITION.
- C. CONTRACTOR TO REPORT ANY DAMAGED EQUIPMENT THAT IS SHOWN AS EXISTING TO REMAIN TO THE OWNER PRIOR TO STARTING ALL WORK. ALL EQUIPMENT FOUND TO BE DAMAGED AT THE TIME OF SUBSTANTIAL COMPLETION, THAT HAD NOT BEEN REPORTED PRIOR TO CONSTRUCTION, CONTRACTOR TO REPAIR AT THEIR OWN COST.
- D. ALL EXISTING DUCTWORK, EQUIPMENT, PIPING, AND ASSOCIATED ACCESSORIES SHALL REMAIN UNLESS OTHERWISE INDICATED.
- E. EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN ON PLANS HAVE BEEN OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS AND ARE SCHEMATIC ONLY. FIELD VERIFY EXISTING SIZES AND LOCATIONS BEFORE DEMOLITION. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES BETWEEN EXISTING DUCTWORK AND DUCTWORK SHOWN ON DRAWINGS, WHICH MAY REQUIRE MODIFICATIONS (PRIOR TO FABRICATION OF ANY DUCTWORK).
- F. FIELD VERIFY ALL DUCTWORK AND AIR DEVICES OF EXISTING AIR HANDLING UNITS ALONG WITH RETURN, EXHAUST, AND MAKE-UP AIR DUCTWORK. EVERY EFFORT HAS BEEN MADE TO SHOW THE APPROXIMATE LOCATIONS AND CONNECTIONS TO THE EXISTING DUCT, AIR DEVICES, EQUIPMENT AND OTHER APPARATUS RELATED TO THIS PHASE OF WORK.
- G. CONFIRM CFM QUANTITIES AT EXISTING AIR DEVICES TO REMAIN PRIOR TO ANY MODIFICATIONS TO DUCTWORK AND ASSOCIATED HVAC EQUIPMENT. RE-BALANCE AIR DEVICES TO SAME CFM QUANTITIES ONCE MODIFICATIONS HAVE BEEN COMPLETED AND RE-BALANCE HVAC EQUIPMENT ACCORDINGLY.
- H. PATCH ALL WALLS DISTURBED DUE TO THE DEMOLITION WORK THAT ARE TO REMAIN. FINISH ALL PATCH WORK TO MATCH ADJACENT AREA AND FIRE RATING.
- I. NO PORTION OF THE FIRE PROTECTION SYSTEMS SHALL BE TURNED OFF, MODIFIED OR CHANGED IN ANY WAY WITHOUT THE EXPRESS KNOWLEDGE AND WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE IN ORDER TO PROTECT SYSTEMS THAT SHALL REMAIN IN SERVICE.

**MECHANICAL DEMOLITION KEYED NOTES:**

1. REMOVE EXISTING WATER COOLED CHILLER IN ITS ENTIRETY. REMOVE EXISTING CHILLED WATER AND CONDENSER WATER LINE CONNECTIONS TO CLOSEST SHUT OFF VALVE. REMOVE EXISTING POWER CONNECTIONS. REMOVE EXISTING PURGE PIPING. CONTRACTOR TO DISPOSE OF CHILLER.
2. REMOVE EXISTING COOLING TOWER IN ITS ENTIRETY. REMOVE EXISTING CONDENSER WATER SUPPLY AND RETURN LINES TO CLOSEST VALVE OR FITTING AS INDICATED ON PLAN. EXISTING PIPING SUPPORTS SHALL REMAIN. REMOVE EXISTING BASIN EQUALIZER LINE UP TO LOCATION AS INDICATED ON PLAN. REMOVE POWER CONNECTION TO EXISTING DISCONNECT. DISCONNECT EXISTING MAKEUP WATER LINE AND LEAVE READY FOR NEW COOLING TOWER. EXISTING CONCRETE STRUCTURE TO REMAIN.
3. EXISTING MECHANICAL EQUIPMENT TO REMAIN.



**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p 956.683.1903 f  
 TBPE Firm Registration No. 2234

DBR Project Number 218007.001

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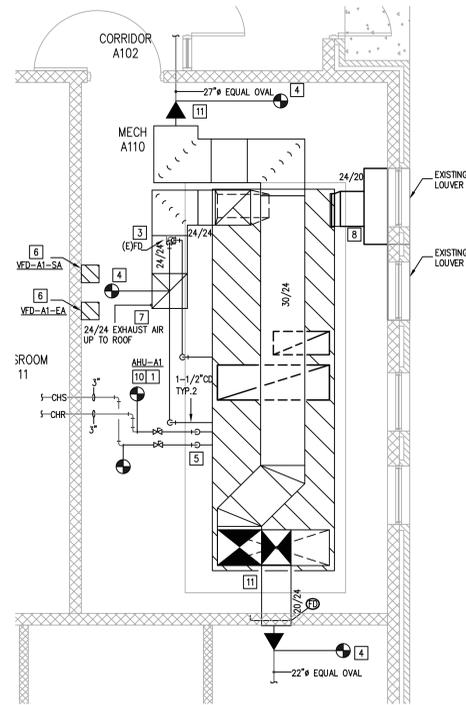
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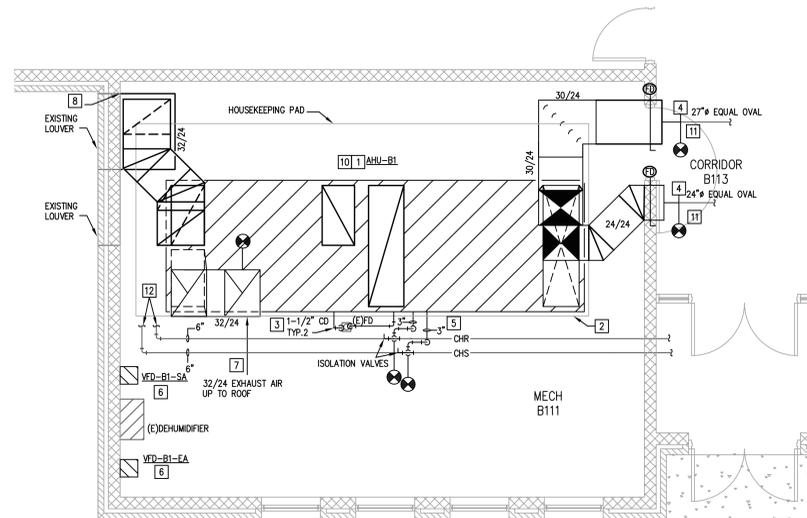
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**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
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 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE: ENLARGED MECHANICAL PLAN - DEMOLITION  
 SHEET NUMBER: MD3.06

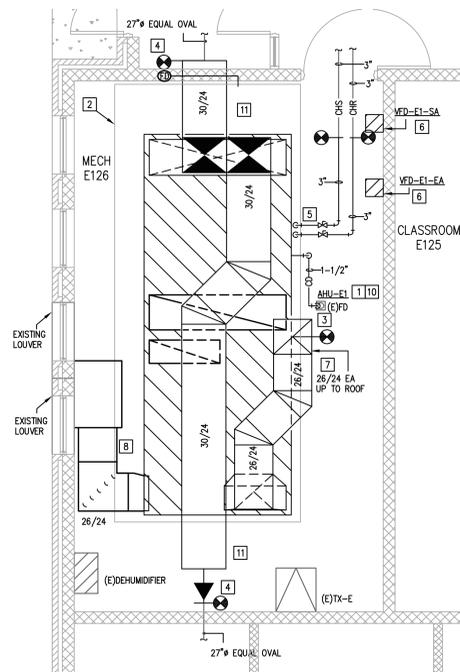
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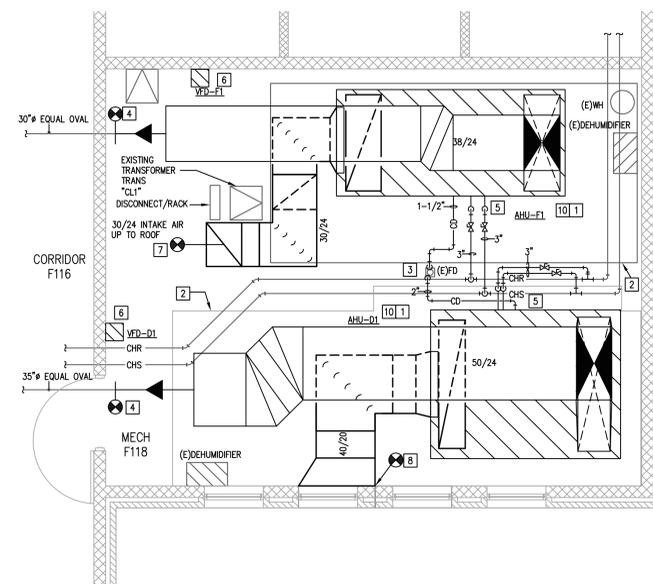
**1 ENLARGED MECHANICAL ROOM - A110**  
 M3.01 1/4" = 1'-0"



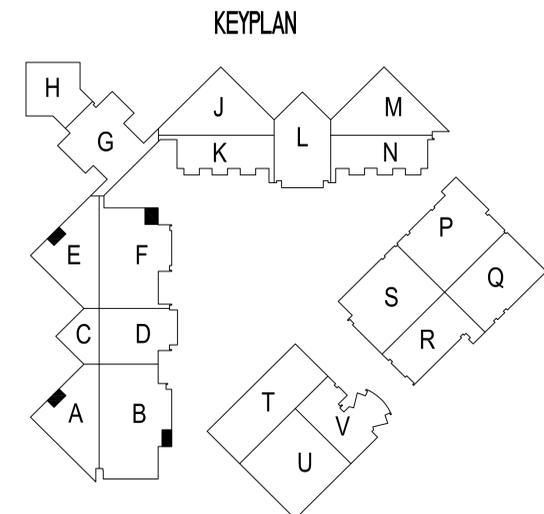
**2 ENLARGED MECHANICAL ROOM - B111**  
 M3.01 1/4" = 1'-0"



**3 ENLARGED MECHANICAL ROOM - E126**  
 M3.01 1/4" = 1'-0"



**4 ENLARGED MECHANICAL ROOM - F118**  
 M3.01 1/4" = 1'-0"



**MECHANICAL GENERAL NOTES:**

A. REFER TO M3.01 FOR MECHANICAL GENERAL NOTES.

**MECHANICAL KEYED NOTES:**

1. PROVIDE AIR HANDLING UNIT AS SCHEDULED. MOUNT ON EXISTING HOUSEKEEPING PAD.
2. CONTRACTOR SHALL EXTEND WITH NEW HOUSEKEEPING PAD TO PROVIDE 3" BEYOND FOOTPRINT OF NEW AIR HANDLING UNIT. CONTRACTOR SHALL MATCH HOUSEKEEPING PAD HEIGHT TO EXISTING.
3. CONTRACTOR SHALL RELOCATE EXISTING FLOOR DRAIN AND ROUTE CONDENSATE PIPING SIZED AND ROUTED AS INDICATED ON PLAN. PROVIDE DRAIN WITH TRAP GUARD. RE: DETAIL 9/M4.01.
4. CONNECT NEW DUCTWORK TO EXISTING. CONTRACTOR SHALL PROVIDE TRANSITIONS TO CONNECT NEW DUCTWORK TO EXISTING.
5. ROUTE CHILLED WATER SUPPLY AND CHILLED WATER RETURN PIPING TO AIR HANDLING UNIT CONNECTIONS FROM EXISTING CHILLED WATER PIPING. PROVIDE ISOLATION VALVES. SIZE AS NOTED ON PLAN. CONTRACTOR SHALL VERIFY LOCATION OF CHILLED WATER SUPPLY AND CHILLED WATER RETURN COIL CONNECTIONS PRIOR TO INSTALLATION OF PIPING TO UNIT. RE: DETAIL 14/M4.01.
6. PROVIDE VFD AS SCHEDULED. MOUNT ON PREVIOUS LOCATION. COORDINATE FINAL LOCATION WITH EXISTING SITE CONDITIONS.
7. ROUTE DUCTWORK TO EXISTING GRAVITY HOOD. PROVIDE DUCTWORK TRANSITIONS TO GRAVITY HOOD OPENING.
8. ROUTE OUTSIDE AIR DUCTWORK TO EXISTING LOUVER. TRANSITION DUCTWORK TO LOUVER OPENING.
9. PROVIDE EXHAUST FAN FOR BUILDING RELIEF AND ROUTE TO EXISTING GRAVITY HOOD. EXHAUST FAN OPERATION SHALL BE INTERLOCKED WITH BUILDING PRESSURE SENSOR.
10. CONTRACTOR SHALL PROVIDE UPRIGHT FIRE SPRINKLER BELOW DUCTWORK WIDER THAN 4'-0".
11. CONTRACTOR SHALL PROVIDE A STATIC PRESSURE TRANSMITTER 2/3 DOWN LONGEST RUN OF SUPPLY DUCTWORK.
12. CONTRACTOR SHALL REROUTE EXISTING CHILLED WATER PIPING TO AVOID CONFLICT WITH NEW DUCTWORK. CONNECT TO EXISTING AND COORDINATE WITH EXISTING SITE CONDITIONS AND STRUCTURAL. PROVIDE PIPE SUPPORT.



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**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

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 DRAWN BY: DBR  
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 PROJECT NUMBER: 218007.001  
 SHEET TITLE:

**ENLARGED MECHANICAL PLAN**

SHEET NUMBER:

**M3.01**



**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p. 956.683.1903 f.  
 TBPE Firm Registration No. 2234

DBR Project Number 218007.001

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**MECHANICAL GENERAL NOTES:**

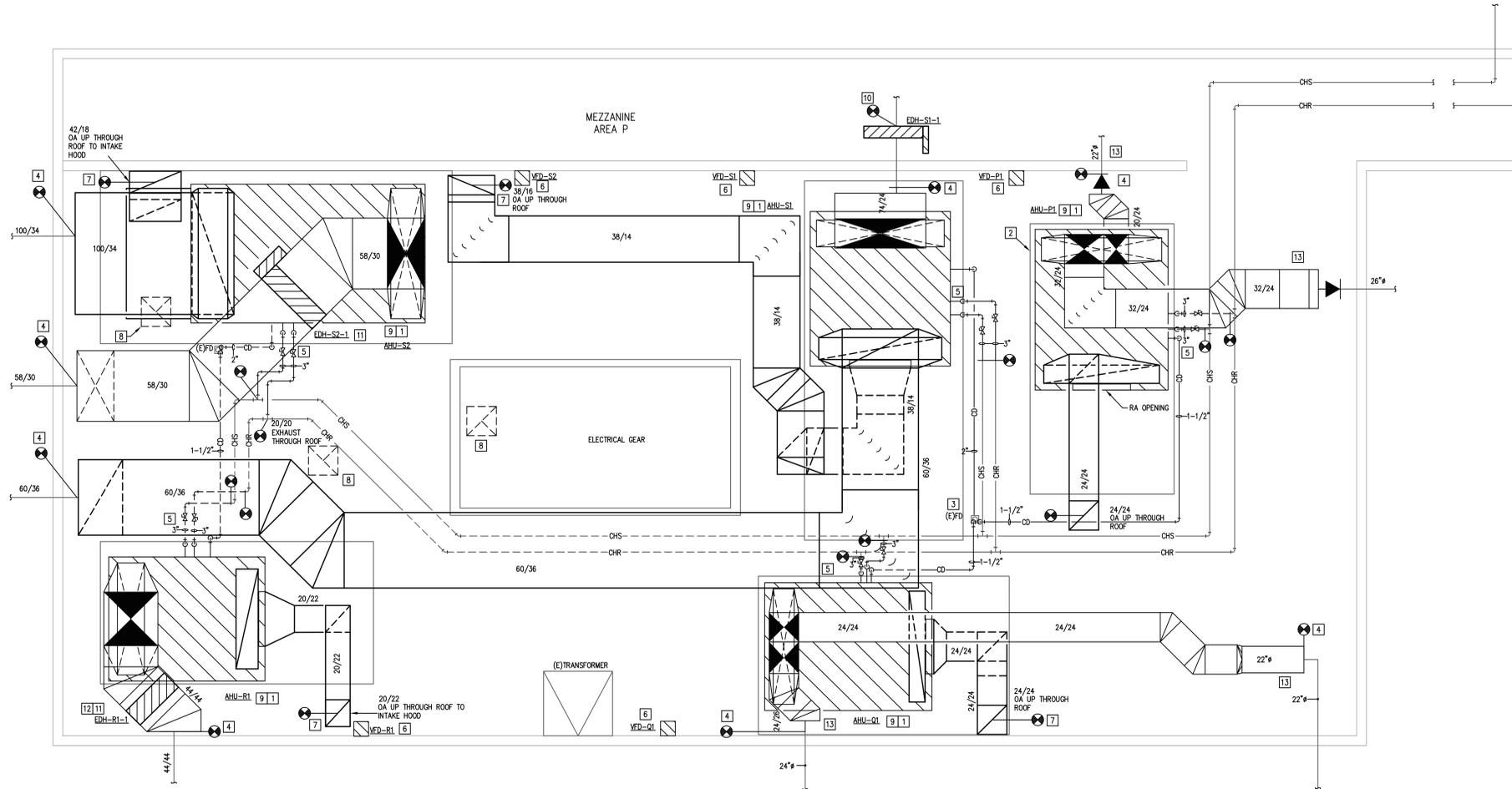
A. REFER TO M3.01 FOR MECHANICAL GENERAL NOTES.

**MECHANICAL KEYED NOTES:**

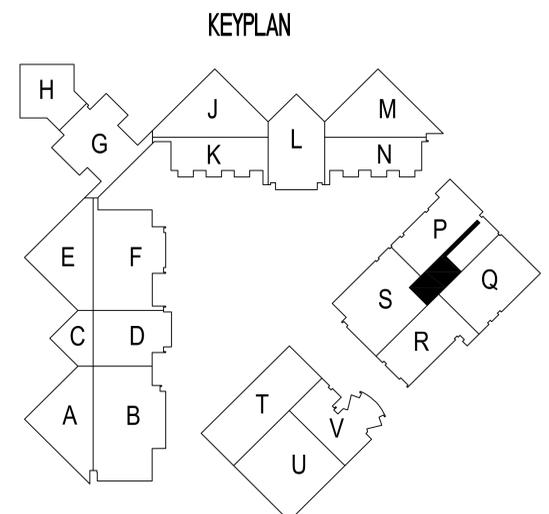
1. PROVIDE AIR HANDLING UNIT AS SCHEDULED. MOUNT ON EXISTING HOUSEKEEPING PAD.
2. CONTRACTOR SHALL EXTEND WITH NEW HOUSEKEEPING PAD TO PROVIDE 3" BEYOND FOOTPRINT OF NEW AIR HANDLING UNIT. CONTRACTOR SHALL MATCH HOUSEKEEPING PAD HEIGHT TO EXISTING.
3. CONTRACTOR SHALL RELOCATE EXISTING FLOOR DRAIN AND ROUTE CONDENSATE PIPING SIZED AND ROUTED AS INDICATED ON PLAN. PROVIDE DRAIN WITH TRAP GUARD. RE: DETAIL 9/M4.01.
4. CONNECT NEW DUCTWORK TO EXISTING. CONTRACTOR SHALL PROVIDE TRANSITIONS TO CONNECT NEW DUCTWORK TO EXISTING.
5. ROUTE CHILLED WATER SUPPLY AND CHILLED WATER RETURN PIPING TO AIR HANDLING UNIT CONNECTIONS FROM EXISTING CHILLED WATER PIPING. PROVIDE ISOLATION VALVES. SIZE AS NOTED ON PLAN. CONTRACTOR SHALL VERIFY LOCATION OF CHILLED WATER SUPPLY AND CHILLED WATER RETURN COIL CONNECTIONS PRIOR TO INSTALLATION OF PIPING TO UNIT. RE: DETAIL 14/M4.01.
6. PROVIDE VFD AS SCHEDULED. MOUNT ON PREVIOUS LOCATION. COORDINATE FINAL LOCATION WITH EXISTING SITE CONDITIONS.
7. ROUTE DUCTWORK TO EXISTING GRAVITY HOOD. PROVIDE DUCTWORK TRANSITIONS TO GRAVITY HOOD OPENING. SIZE DUCTWORK AS INDICATED ON PLANS.
8. PROVIDE EXHAUST FAN FOR BUILDING RELIEF AND ROUTE TO EXISTING GRAVITY HOOD. EXHAUST FAN OPERATION SHALL BE INTERLOCKED WITH BUILDING PRESSURE SENSOR.
9. CONTRACTOR SHALL PROVIDE UPRIGHT FIRE SPRINKLER BELOW DUCTWORK WIDER THAN 4'-0".
10. PROVIDE ELECTRIC DUCT HEATER AS SCHEDULED AND INDICATED ON PLAN. CONTRACTOR SHALL REMOVE/DISCONNECT PART OF EXISTING DUCTWORK TO ACCOMMODATE ELECTRIC DUCT HEATER. CONTRACTOR SHALL FIELD VERIFY SIZE OF EXISTING DUCTWORK PRIOR TO PURCHASING/INSTALLING ELECTRIC DUCT HEATER.
11. PROVIDE ELECTRIC DUCT HEATER AS SCHEDULED AND INDICATED ON PLAN. INSTALL AS PER MANUFACTURER RECOMMENDATIONS.
12. ELECTRIC DUCT HEATER SHALL BE INSTALLED WITH CONTROL PANEL BELOW TO MEET ACCESS AND CLEARANCE REQUIREMENTS.
13. CONTRACTOR SHALL PROVIDE A STATIC PRESSURE TRANSMITTER 2/3 DOWN LONGEST RUN OF SUPPLY DUCTWORK.

**REVISION:**

No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



**1** ENLARGED MECHANICAL ROOM - MEZZANINE AREA P  
 M3.03 1/4" = 1'-0"



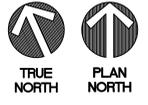
EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE:

**ENLARGED MECHANICAL PLAN**

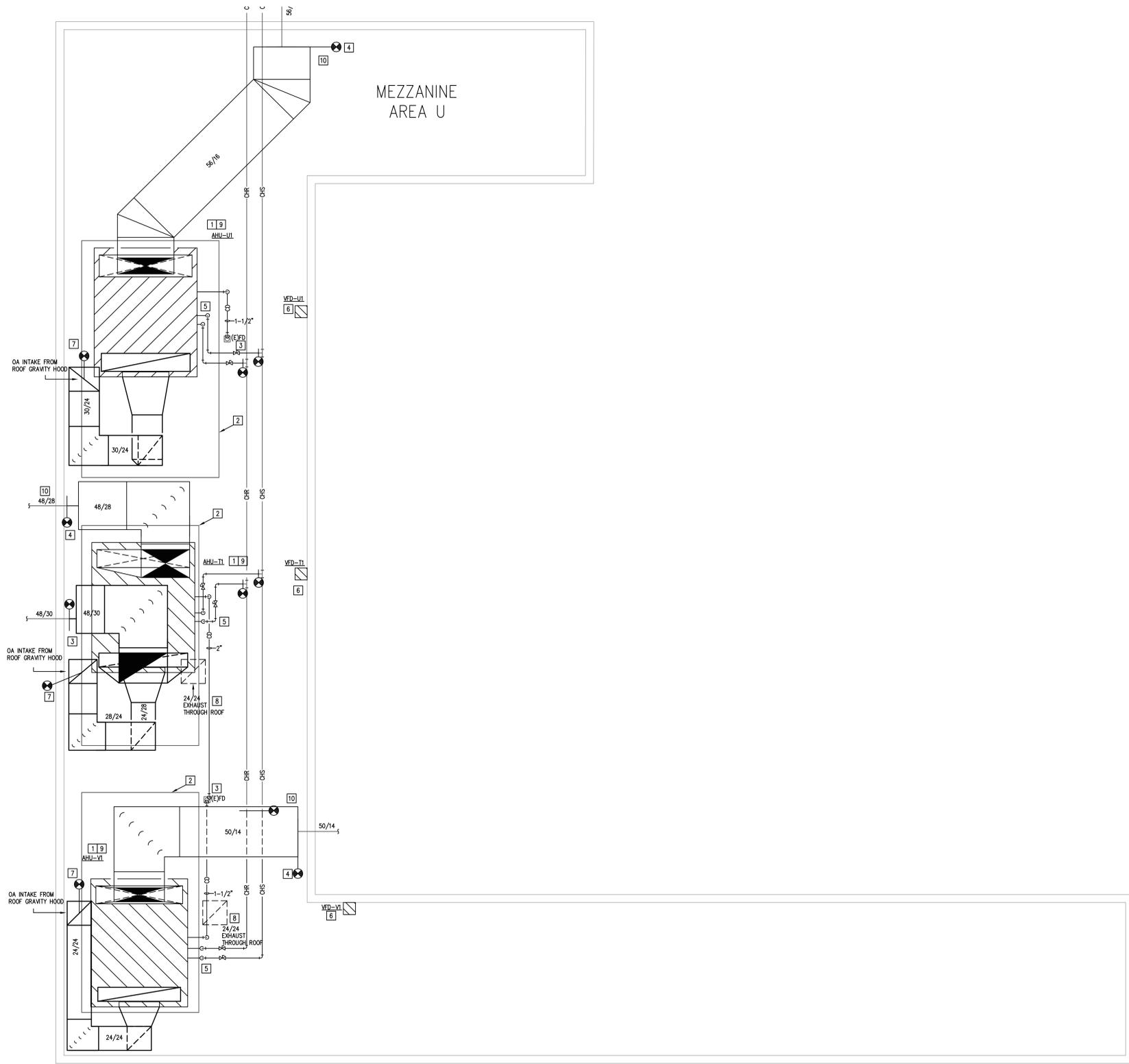
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**M3.03**



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**1** ENLARGED MECHANICAL ROOM - MEZZANINE AREA U  
 M3.04 1/4" = 1'-0"

**MECHANICAL GENERAL NOTES:**

A. REFER TO M0.01 FOR MECHANICAL GENERAL NOTES.

**MECHANICAL KEYED NOTES:**

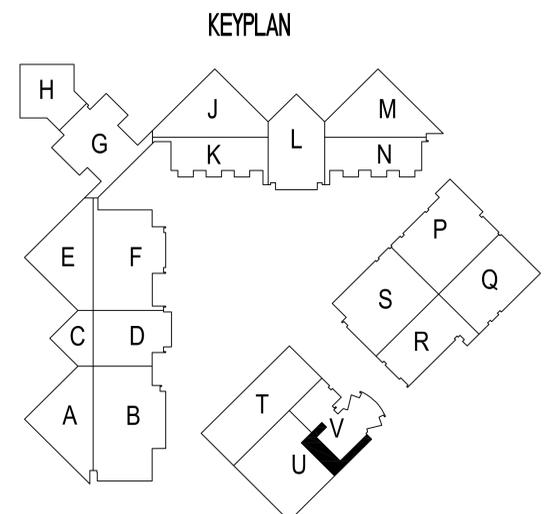
1. PROVIDE AIR HANDLING UNIT AS SCHEDULED. MOUNT ON EXISTING HOUSEKEEPING PAD.
2. CONTRACTOR SHALL EXTEND WITH NEW HOUSEKEEPING PAD TO PROVIDE 3" BEYOND FOOTPRINT OF NEW AIR HANDLING UNIT. CONTRACTOR SHALL MATCH HOUSEKEEPING PAD HEIGHT TO EXISTING.
3. CONTRACTOR SHALL RELOCATE EXISTING FLOOR DRAIN AND ROUTE CONDENSATE PIPING SIZED AND ROUTED AS INDICATED ON PLAN. PROVIDE DRAIN WITH TRAP GUARD. RE: DETAIL 9/M4.01.
4. CONNECT NEW DUCTWORK TO EXISTING. CONTRACTOR SHALL PROVIDE TRANSITIONS TO CONNECT NEW DUCTWORK TO EXISTING.
5. ROUTE CHILLED WATER SUPPLY AND CHILLED WATER RETURN PIPING TO AIR HANDLING UNIT CONNECTIONS FROM EXISTING CHILLED WATER PIPING. PROVIDE ISOLATION VALVES. SIZE AS NOTED ON PLAN. CONTRACTOR SHALL VERIFY LOCATION OF CHILLED WATER SUPPLY AND CHILLED WATER RETURN COIL CONNECTIONS PRIOR TO INSTALLATION OF PIPING TO UNIT. RE: DETAIL 14/M4.01.
6. PROVIDE VFD AS SCHEDULED. MOUNT ON PREVIOUS LOCATION. COORDINATE FINAL LOCATION WITH EXISTING SITE CONDITIONS.
7. ROUTE DUCTWORK TO EXISTING GRAVITY HOOD. PROVIDE DUCTWORK TRANSITIONS TO GRAVITY HOOD OPENING.
8. PROVIDE EXHAUST FAN FOR BUILDING RELIEF AND ROUTE TO EXISTING GRAVITY HOOD. EXHAUST FAN OPERATION SHALL BE INTERLOCKED WITH BUILDING PRESSURE SENSOR.
9. CONTRACTOR SHALL PROVIDE UPRIGHT FIRE SPRINKLER BELOW DUCTWORK WIDER THAN 4'-0".
10. CONTRACTOR SHALL PROVIDE A STATIC PRESSURE TRANSMITTER 2/3 DOWN LONGEST RUN OF SUPPLY DUCTWORK.



REVISION No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542



**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p. 956.683.1903 f.  
 TBPE Firm Registration No. 2234  
 DBR Project Number 218007.001  
 HA | MG | JB | TL | --

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE: ENLARGED MECHANICAL PLAN  
 SHEET NUMBER: M3.04

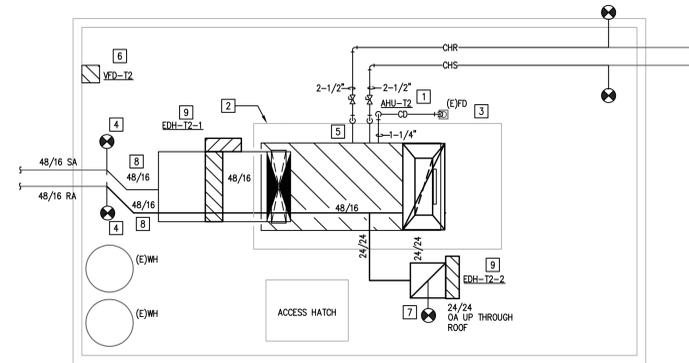
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**MECHANICAL GENERAL NOTES:**

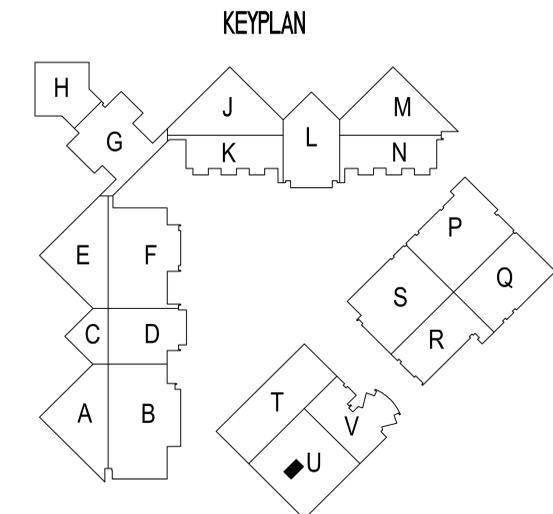
A. REFER TO M0.01 FOR MECHANICAL GENERAL NOTES.

**MECHANICAL KEYED NOTES:**

1. PROVIDE AIR HANDLING UNIT AS SCHEDULED. MOUNT ON EXISTING HOUSEKEEPING PAD.
2. CONTRACTOR SHALL EXTEND WITH NEW HOUSEKEEPING PAD TO PROVIDE 3" BEYOND FOOTPRINT OF NEW AIR HANDLING UNIT. CONTRACTOR SHALL MATCH HOUSEKEEPING PAD HEIGHT TO EXISTING.
3. CONTRACTOR SHALL RELOCATE EXISTING FLOOR DRAIN AND ROUTE CONDENSATE PIPING SIZED AND ROUTED AS INDICATED ON PLAN. PROVIDE DRAIN WITH TRAP GUARD. RE: DETAIL 9/44.01.
4. CONNECT NEW DUCTWORK TO EXISTING. CONTRACTOR SHALL PROVIDE TRANSITIONS TO CONNECT NEW DUCTWORK TO EXISTING.
5. ROUTE CHILLED WATER SUPPLY AND CHILLED WATER RETURN PIPING TO AIR HANDLING UNIT CONNECTIONS FROM EXISTING CHILLED WATER PIPING. PROVIDE ISOLATION VALVES. SIZE AS NOTED ON PLAN. CONTRACTOR SHALL VERIFY LOCATION OF CHILLED WATER SUPPLY AND CHILLED WATER RETURN COIL CONNECTIONS PRIOR TO INSTALLATION OF PIPING TO UNIT. RE: DETAIL 14/44.01.
6. PROVIDE VFD AS SCHEDULED. MOUNT ON PREVIOUS LOCATION. COORDINATE FINAL LOCATION WITH EXISTING SITE CONDITIONS.
7. ROUTE DUCTWORK TO EXISTING GRAVITY HOOD. PROVIDE DUCTWORK TRANSITIONS TO GRAVITY HOOD OPENING.
8. CONTRACTOR SHALL PROVIDE UPRIGHT FIRE SPRINKLER BELOW DUCTWORK WIDER THAN 4'-0".
9. PROVIDE ELECTRIC DUCT HEATER AS SCHEDULED AND INDICATED ON PLAN. INSTALL AS PER MANUFACTURER RECOMMENDATIONS.



**1** ENLARGED MECHANICAL PLAN - MEZZANINE KITCHEN  
 M3.05 1/4" = 1'-0"



**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p 956.683.1903 f  
 TBPE Firm Registration No. 2234

DBR Project Number 218007.001

HA	MG	JB	TL	--
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**DBR**  
 210.546.0200 v 210.546.0201 f  
 9601 McAllister Freeway, Suite 410  
 San Antonio, Texas 78216  
 TBPE Firm Registration No. 2234

**REVISION**

No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1

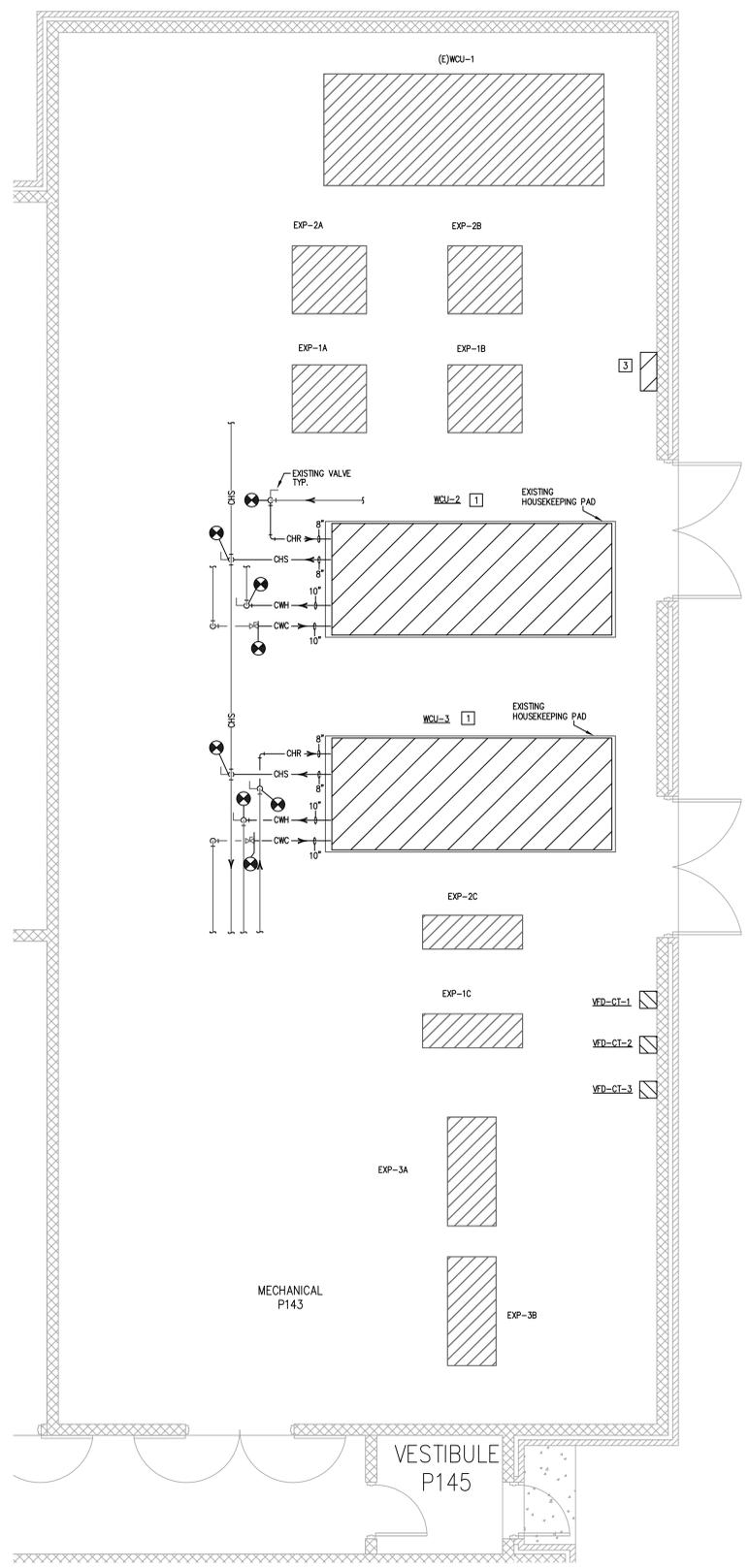
**SEAL:**

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

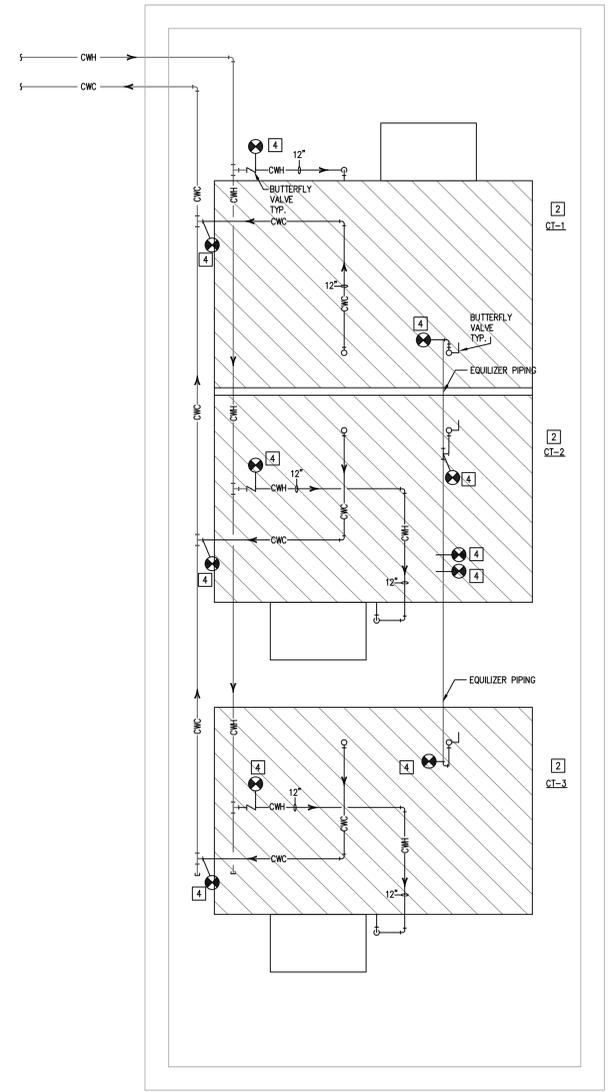
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 CHECKED BY: DBR  
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 SHEET TITLE:

**ENLARGED MECHANICAL PLAN**

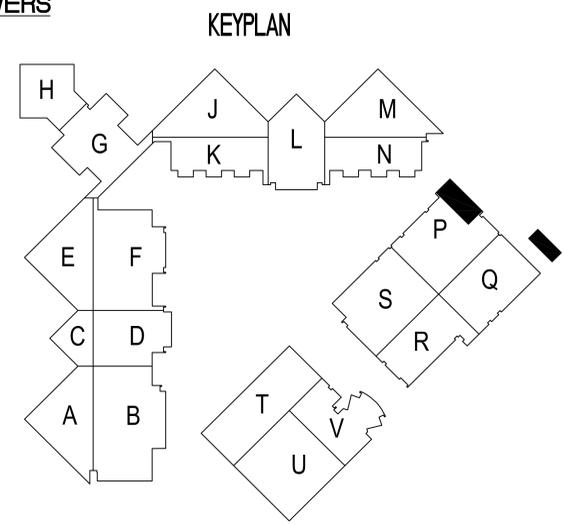
SHEET NUMBER:  
**M3.05**



**1** ENLARGED MECHANICAL PLAN - MECHANICAL P143  
 M3.06 1/4" = 1'-0"



**1** ENLARGED MECHANICAL PLAN - COOLING TOWERS  
 M3.06 1/4" = 1'-0"



**MECHANICAL GENERAL NOTES:**

A. REFER TO M0.01 FOR MECHANICAL GENERAL NOTES.

**MECHANICAL KEYED NOTES:**

1. PROVIDE WATER COOLED CHILLER AS SCHEDULED. MOUNT ON EXISTING CONCRETE PAD. EXTEND CONCRETE PAD TO ACCOMMODATE NEW CHILLER. CONNECT NEW CHILLED WATER AND CONDENSER WATER LINE CONNECTIONS FROM CLOSEST SHUT OFF VALVE TO NEW CHILLER CONNECTIONS. PROVIDE HYDRONIC ACCESSORIES AS NOTED ON DETAILS. CONNECT POWER TO NEW UNIT FROM EXISTING POWER LOCATION IN MECHANICAL ROOM. INSTALL NEW COPPER PURGE PIPING AND ROUTE TO EXTERIOR OF BUILDING AS INDICATED ON PLAN.
2. PROVIDE COOLING TOWER AS SCHEDULED AND MOUNT ON EXISTING CONCRETE STRUCTURE. PROVIDE NEW GALVANIZED STEEL STRUCTURE TO SUPPORT NEW TOWER. CONNECT CONDENSER WATER SUPPLY AND RETURN LINES FROM CLOSEST VALVE OR FITTING AS INDICATED ON PLAN TO NEW COOLING TOWER INLET AND OUTLET CONNECTIONS. INSTALL NEW BASIN EQUALIZER LINE BETWEEN ALL TOWERS AND CONNECT TO EXISTING EQUALIZER LINE. INSTALL POWER CONNECTION FROM EXISTING DISCONNECT TO NEW COOLING TOWER. CONNECT EXISTING MAKEUP WATER PIPING TO COOLING TOWER. CONTRACTOR SHALL PROVIDE ADDITIONAL PIPE SUPPORT.
3. INSTALL NEW REFRIGERANT LEAK DETECTION SYSTEM.
4. CONNECT TO EXISTING. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF CONDENSER WATER SUPPLY/RETURN AND EQUALIZER PIPING.



**REVISION:**

No.	DATE	DESCRIPTION
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EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
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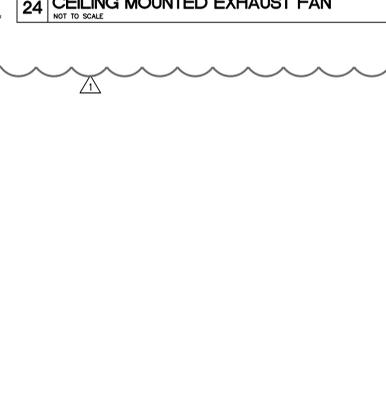
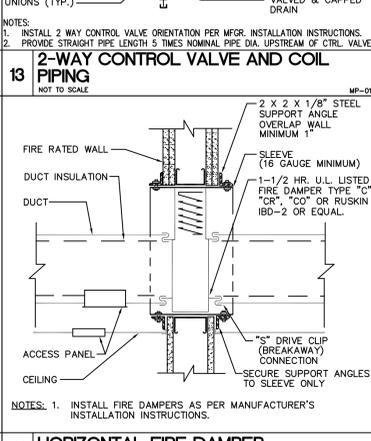
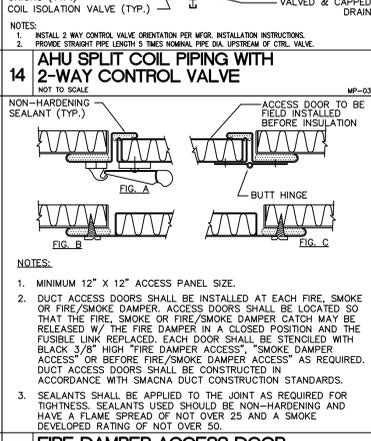
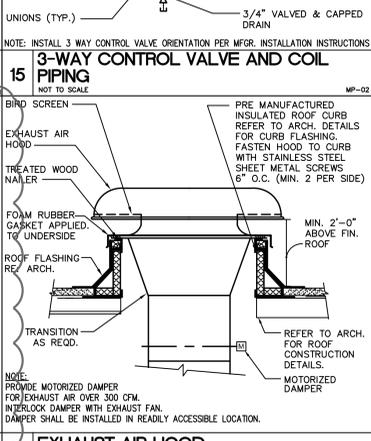
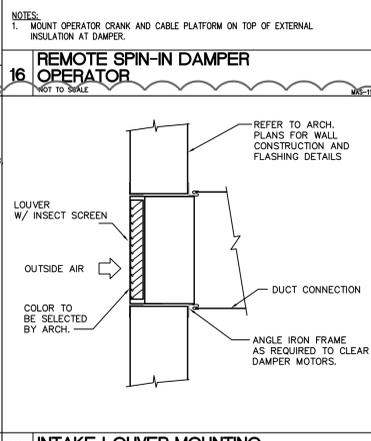
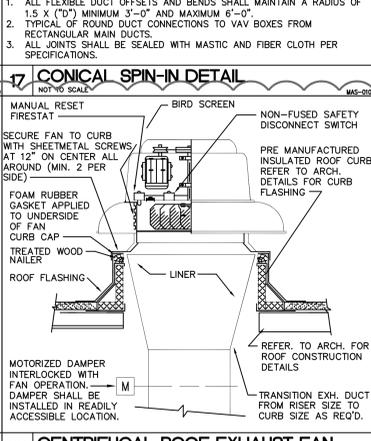
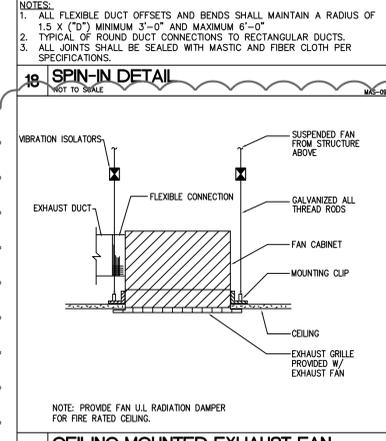
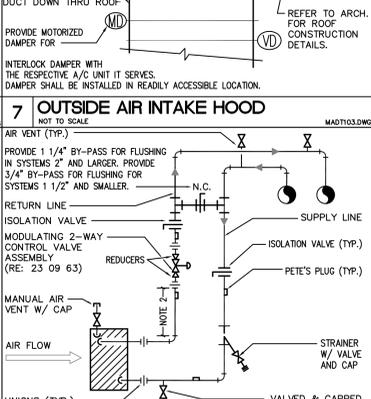
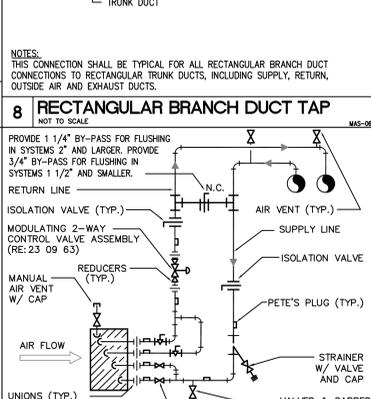
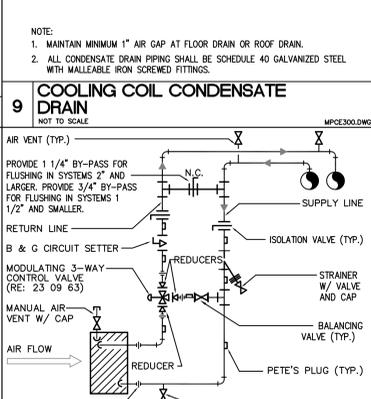
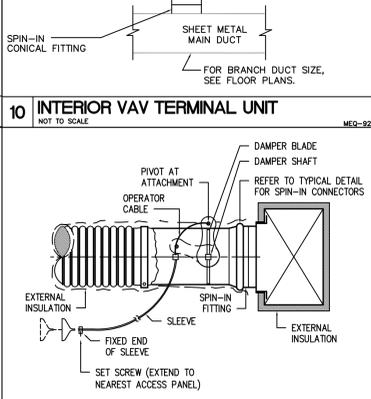
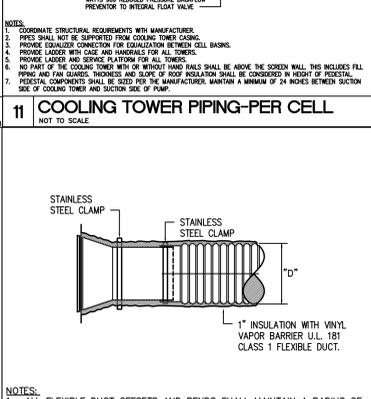
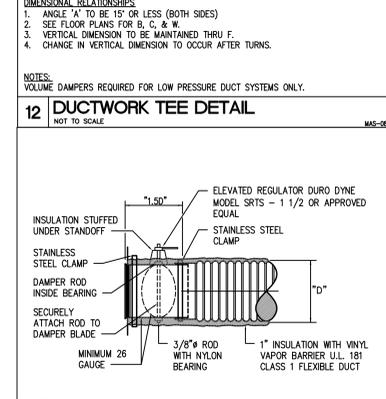
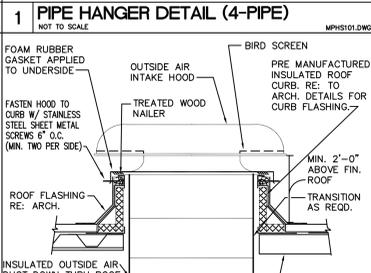
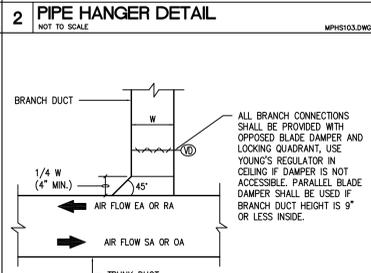
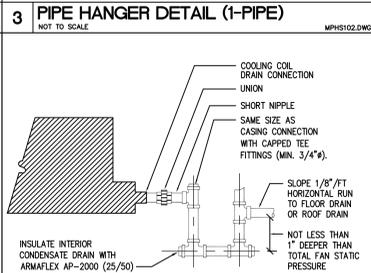
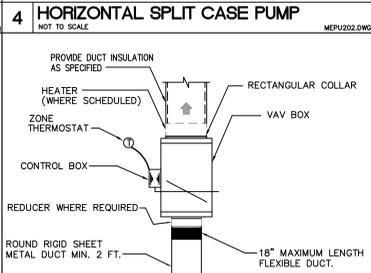
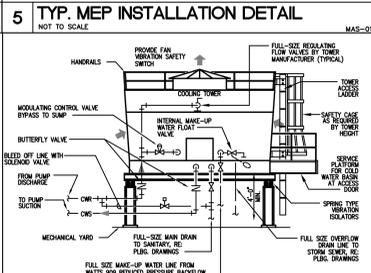
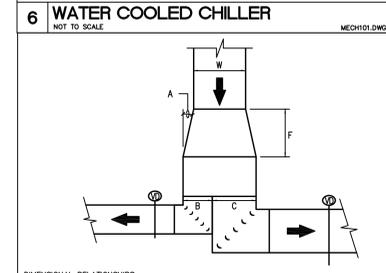
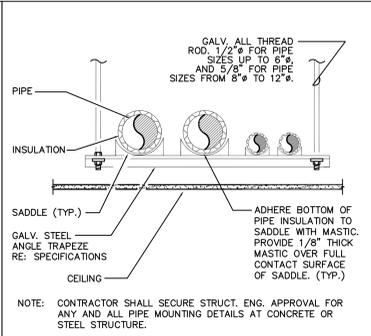
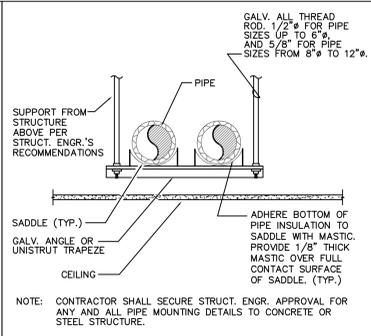
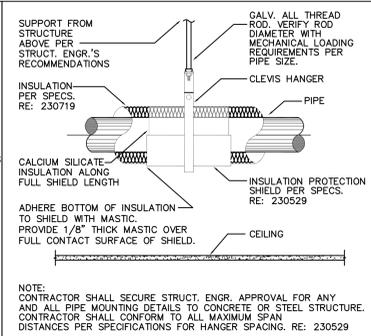
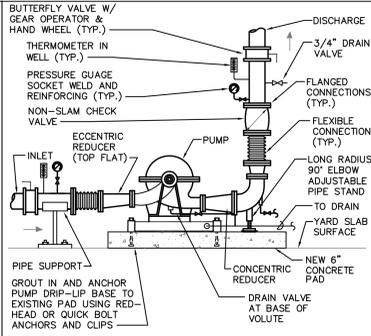
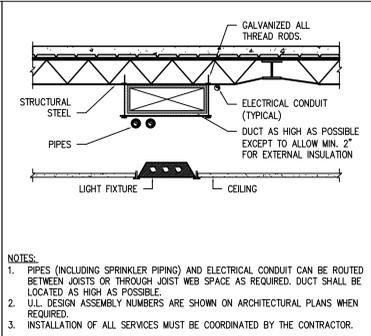
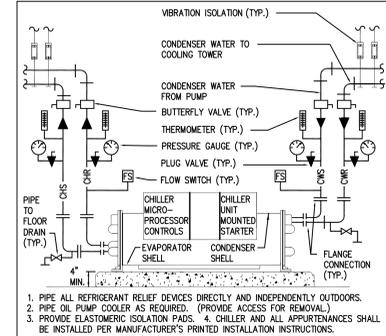
**ENLARGED MECHANICAL PLAN**

SHEET NUMBER:  
**M3.06**

DBR Project Number 218007.001

HA	MG	JB	TL	--
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WATER COOLED CHILLER SCHEDULE		
MARK	WCU-2	WCU-3
COMPRESSOR TYPE	CENTRIFUGAL	CENTRIFUGAL
COOLING CAPACITY (TONS)	500	500
NUMBER OF STAGES	1	1
NUMBER OF COMPRESSORS	VARIABLE	VARIABLE
FULL-LOAD EFFICIENCY (KW / TON)	0.559	0.559
NPLV (KW/TON)	0.333	0.333
<b>EVAPORATOR DATA</b>		
DESIGN FLOW RATE (GPM)	856	856
MINIMUM FLOW RATE (GPM)	400	400
ENTERING WATER TEMPERATURE (°F)	55	55
LEAVING WATER TEMPERATURE (°F)	42	42
MAX PRESSURE DROP (FT. H2O W.G.)	7	7
FOULING FACTOR (HR-SQFT-F/BTU)	0.00010	0.00010
TUBING THICKNESS (INCH)	0.028	0.028
NUMBER OF PASSES	2	2
REFRIGERANT TYPE	R-134a	R-134a
<b>CONDENSER DATA</b>		
DESIGN FLOW RATE (GPM)	1,500	1,500
ENTERING WATER TEMPERATURE (°F)	85	85
LEAVING WATER TEMPERATURE (°F)	94.4	94.4
MAX PRESSURE DROP (FT. H2O W.G.)	10.3	10.3
TUBING THICKNESS (INCH)	0.035	0.035
FOULING FACTOR (HR-SQFT-F/BTU)	0.00025	0.00025
<b>ELECTRICAL DATA</b>		
MCA (MINIMUM CIRCUIT AMPACITY)	457	457
MOC (MAX. OVER CURRENT PROTECTION)	800	800
MOTOR STARTER	VFD	VFD
VOLTS/PHASE/HERTZ	480/3/60	480/3/60
MANUFACTURER	JCI	JCI
MODEL NUMBER	YMC2-S1758A	YMC2-S1758A
UNIT DIMENSIONS (FT.) (WxLxH)	6'-7"X16'-4"X8'-3"	6'-7"X16'-4"X8'-3"
OPERATING WEIGHT (LBS.)	27,202	27,202
NOTES	ALL	ALL

- NOTES:
1. PROVIDE FACTORY INSTALLED VFD.
  2. PROVIDE WITH INTEGRAL DISCONNECT SWITCH AND MAIN CIRCUIT BREAKER RATED AT 65,000 AIC.
  3. PROVIDE WITH SINGLE POINT ELECTRICAL CONNECTION AND CONTROL POWER TRANSFORMER.
  4. PROVIDE FACTORY INSTALLED AUTOMATICALLY RESEATING RELIEF VALVES. RUPTURE DISCS ARE NOT ACCEPTABLE.
  5. PROVIDE OIL FREE MAGNETIC BEARING COMPRESSOR MOTOR SYSTEM. MOTOR SHALL BE HERMETIC. PERMANENT MAGNET TYPE DIRECTLY COUPLED TO THE COMPRESSOR. CHILLERS WITH OIL WILL NOT BE ACCEPTABLE TO OWNER.
  6. PROVIDE WITH CONTROLLER BY MANUFACTURER. CONTROLLER SHALL BE CAPABLE OF BACNET COMMUNICATION FOR INTEGRATION WITH EMCS.

COOLING TOWER SCHEDULE - ALTERNATE No.2			
MARK	CT-1	CT-2	CT-3
CELL DESIGNATION	1	2	3
TOTAL CAPACITY PER CELL (TONS)	500	500	500
TOTAL CONDENSER WATER FLOW RATE PER CELL (GPM)	1,500	1,500	1,500
EWV (°F)	95.0	95.0	95.0
LWT (°F)	85.0	85.0	85.0
ASHRAE 90.1 PERFORMANCE (GPM/HP)	87	87	87
AMBIENT AIR WB (°F)	80.0	80.0	80.0
FAN MOTOR HORSEPOWER PER CELL	25 HP	25 HP	25 HP
AIRFLOW PER CELL (CFM)	124,900	124,900	124,900
TOTAL EVAPORATED WATER RATE PER CELL (GPM)	12.0	12.0	12.0
Basin Heater Per Cell (KW)	18 KW	18 KW	18 KW
OVERALL WIDTH (FT) X LENGTH (FT) X HEIGHT (FT)	12'X18'X18' 6 1/4"	12'X18'X18' 6 1/4"	12'X18'X18' 6 1/4"
VOLTAGE / PHASE / HERTZ	480/3/60	480/3/60	480/3/60
MANUFACTURER	EVAPCO	EVAPCO	EVAPCO
MODEL NO.	USS224-4L18	USS112-4L18	USS112-4L18
TOTAL OPERATING WEIGHT PER CELL (LBS)	21,980	21,980	21,980
NOTES	ALL	ALL	ALL

- NOTES:
1. PROVIDE REMOTE MOUNTED VARIABLE FREQUENCY DRIVE FOR EACH FAN MOTOR WITH SHAFT GROUNDING RINGS.
  2. PROVIDE UNIT WITH TYPE 316 STAINLESS STEEL BASIN.
  3. FAN MOTOR STARTER SHALL BE NEMA 4X RATED.
  4. PROVIDE COOLING TOWER WITH BLOW DOWN FLOW METER AND MAKE-UP WATER FLOW METER. METERS TO BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR INTEGRATING BOTH FLOW METERS WITH THE EMCS.
  5. BELT DRIVEN FAN ASSEMBLY WITH INTERNALLY FAN MOTOR MOUNTED ON A SWINGOUT BASE FOR EASE OF SERVICE/REPLACEMENT VIA EXTERNAL SERVICE PLATFORM/SAFETY CAGE & MOTOR DAVIT ASSEMBLY.
  6. PROVIDE TOWER WITH PLENUM ACCESS DOOR, PLENUM ACCESS PLATFORM, MOTOR ACCESS PLATFORM AND MAINTENANCE LADDER WITH SAFETY GAGE.
  7. PROVIDE TOWER WITH INTERNAL WALKWAY, INTERIOR MECHANICAL EQUIPMENT ACCESS PLATFORM AND INTERIOR LADDER FOR EASE OF MAINTENANCE. (EXTERNAL SERVICE PLATFORM)
  8. PROVIDE WITH 316 STAINLESS STEEL DEPRESSED SIDE OUTLET PUMP.
  9. PROVIDE 12" DIA. EQUALIZATION PIPE CONNECTION BETWEEN CELLS WITH BUTTERFLY TYPE ISOLATION VALVE.
  10. PROVIDE A VIBRATION CUT-OUT SWITCH TO DE-ENERGIZE FAN MOTOR UPON EXCESSIVE VIBRATION.
  11. MOTOR DAVIT ASSEMBLY PER CELL.

**ALTERNATE No.1:**  
ALL SINGLE DUCT TERMINAL UNITS. REFER TO SCHEDULES FOR QUANTITIES.

**ALTERNATE No.2:**  
ALL COOLING TOWERS. REFER TO SCHEDULE FOR QUANTITIES.

ENERGY RECOVERY AIR HANDLING UNIT SCHEDULE						
MARK	AHU-A1	AHU-B1	AHU-E1	AHU-J1	AHU-L1	AHU-M1
UNIT	WING A	WING B	WING C AND E	WING J	WING K, L, AND N	WING M
UNIT	WING A	WING B	WING C AND E	WING J	WING K, L, AND N	WING M
TYPE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE
UNIT CONFIGURATION	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL
DISCHARGE	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL
<b>SUPPLY FAN</b>						
DESIGN SUPPLY AIR (CFM)	15,695	17,270	20,095	15,695	27,410	20,095
MINIMUM SUPPLY AIR (CFM)	6,280	6,910	8,040	6,280	12,895	8,040
DESIGN OUTDOOR AIR (CFM)	3,870	6,560	5,070	4,035	12,895	5,070
MINIMUM OUTSIDE AIR (CFM)	1,935	3,280	2,535	2,020	6,450	2,535
EXT. S.P. (IN. W.G.)	2.50	2.50	2.50	2.50	2.50	2.50
FAN MOTOR HORSEPOWER (HP / # OF FANS)	9/2	11.5/23	6/4	9.0/2	8.5/4	6/4
VOLTS/PHASE/HERTZ	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60
MAX FAN RPM	2,038	2,210	2,608	2,055	2,090	2,173
FULL LOAD AMPS (FLA) (EACH FAN/TOTAL)	11.0/22.0	13.9/27.8	7.5/30	11.0/22.0	10.5/42.0	7.5/30
<b>EXHAUST FAN</b>						
DESIGN EXHAUST AIR (CFM)	3,870	6,560	5,070	4,035	11,500	5,295
EXT. S.P. (IN. W.G.)	1.00	1.00	1.00	1.00	1.00	1.00
FAN MOTOR HORSEPOWER (HP / # OF FANS)	1.5/2	3/3	2/2	1.5/2	4.5/2	1.5/3
VOLTS/PHASE/HERTZ	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60
MAX FAN RPM	2,749	3,122	2,405	1,894	1,592	2,437
FULL LOAD AMPS (FLA) (EACH FAN/TOTAL)	1.9/3.8	4/12	2.7/5.4	1.9/3.8	5.9/11.8	1.9/5.7
<b>COOLING COIL</b>						
MAX COIL FACE VELOCITY (FPM)	450	450	450	450	450	450
MINIMUM COIL ROWS	6	6	6	6	6	6
MAX FINS PER INCH	6	6	6	6	6	6
COIL CFM	15,695	17,270	20,095	15,695	27,410	20,095
EAT DB/WB (°F)	76.9/64.2	78.2/65.3	77.0/64.3	77.0/64.2	78.8/65.6	77.1/64.4
LAT DB/WB (°F)	54.2/53.3	54.1/53.3	54.4/53.5	54.2/53.3	51.9/51.6	53.8/52.8
TOTAL COOLING CAPACITY (MBH)	493.1	904.0	630.7	493.5	1,106.4	671.7
SENSIBLE COOLING CAPACITY (MBH)	386.6	450.6	493.9	388.2	797.0	512.0
EWV/LWT (°F)	42.0/56.0	42.0/56.0	42.0/56.0	42.0/56.0	42.0/56.0	42.0/56.0
COIL WATER FLOW (GPM)	70.2	85.8	89.7	70.2	157.3	95.5
MAX WATER P.D. (FT. HD.)	8.0	7.8	6.2	5.7	9.9	11.8
<b>ENERGY RECOVERY</b>						
TYPE	CORE	CORE	CORE	CORE	CORE	CORE
OUTSIDE AIR	3,870	6,560	5,070	4,035	11,500	5,295
EXHAUST AIR	3,870	6,560	5,070	4,035	11,500	5,295
SUMMER OUTDOOR EAT (DB/WB)	100/76	100/76	100/73	100/76	100/76	100/76
SUMMER INDOOR EAT (DB/WB)	75/62.5	75/62.5	75/62.5	75/62.5	75/62.5	75/62.5
SUMMER ERV LAT (DB/WB)	82.7/69.2	83.3/69.9	83.1/69.6	84.9/70.5	82.9/71.3	83.0/69.6
RECOVERED COOLING CAPACITY (MBH)	97.30	148.40	120.33	83.20	210.60	126.50
TOTAL SUMMER COOLING EFFECTIVENESS	53.9	48.5	50.9	44.2	36.8	51.2
WINTER OUTDOOR EAT (DB/WB)	35.8/35.8	35.8/35.8	35.8/35.8	35.8/35.8	35.8/35.8	35.8/35.8
WINTER INDOOR EAT (DB/WB)	70/53	70/53	70/53	70/53	70/53	70/53
WINTER ERV LAT (DB/WB)	56.4/46.7	56.0/46.4	56.2/46.5	54.3/45.6	59.2/47.7	56.2/46.6
RECOVERED HEATING CAPACITY (MBH)	84.00	155.40	121.60	87.80	288.60	127.20
TOTAL WINTER COOLING EFFECTIVENESS	59.6	58.2	58.9	53.5	65.7	59.0
MANUFACTURER	TEMTRON	TEMTRON	TEMTRON	TEMTRON	TEMTRON	TEMTRON
MODEL NUMBER	ITF	ITF	ITF	ITF	ITF	ITF
UNIT DIMENSIONS (WxLxH)(IN.)	83x261.5x93.5	90x284x93.5	100x261.5x93.5	83x260.5x93.5	134x344x93.5	102x256x93.5
OPERATING WEIGHT (LBS.)	11,738	12,993	13,053	11,367	19,044	13,367
NOTES	ALL	ALL	ALL	ALL	ALL	ALL

- NOTES:
1. PROVIDE UNIT WITH EA AND SA FAN SECTIONS, 2" MERV 8 AND 4" MERV 13 FILTER SECTION, CHILLED WATER COOLING COIL SECTION, DIRECT DRIVE EXHAUST AND SUPPLY FAN SECTIONS, ACCESS DOORS TO ALL COMPONENTS AND ALL SIDES OF ENERGY RECOVERY CORE. PROVIDE TWO RETURN AIR CONNECTIONS.
  2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES DUE TO COILS, FILTERS, AND CASING.
  3. PROVIDE DUAL POWER CONNECTION FOR SUPPLY FAN MOTOR SECTION AND EXHAUST FAN SECTION. ALL FAN MOTORS SHALL BE 1800 RPM.
  4. PROVIDE CHILLED WATER COIL WITH 2-WAY AUTOMATIC CONTROL VALVE.
  5. PROVIDE WITH REMOTE MOUNTED VARIABLE FREQUENCY DRIVE. REFER TO VFD SCHEDULE.
  6. UNITS SHALL STRICTLY ADHERE TO SCHEDULED DIMENSIONS. PROVIDE UNIT CONSTRUCTED WITH 2 OR MORE SHIPPING SPLITS.
  7. PROVIDE UNIT WITH 2" R-13 DOUBLE WALL FOAM CONSTRUCTION WITH THERMAL BREAK.
  8. PROVIDE WITH THERMAL DISPERSION AFMS.

ELECTRIC DUCT HEATER SCHEDULE - REHEAT				
MARK	EDHR-1-1	EDHS-1-1	EDHS-2-1	EDH-T2-1
SERVES	AHU-R1	AHU-S1	AHU-S2	AHU-T2
CFM	9,100	10,850	11,405	4,890
SIZE (WIDTH X HEIGHT) (IN.)	--	--	--	--
KW/STAGES	90/ SCR	110/ SCR	110/ SCR	50/ SCR
ENTERING AIR TEMP. DB (F)	55	54	55	55
LEAVING AIR TEMP. DB (F)	85	85	85	85
VOLTS/PHASE/HERTZ	480 / 3 / 60	480 / 3 / 60	480 / 3 / 60	480 / 3 / 60
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK
MODEL NO.	IDHE	IDHE	IDHE	IDHE
NOTES	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4

- NOTES:
1. SHALL INCLUDE AUTOMATIC AND MANUAL RESET THERMAL CUTOUTS, DIFFERENTIAL PRESSURE AIRFLOW SWITCH, FUSES FOR EACH CIRCUIT MORE THAN 48 AMPS, CONTROL TRANSFORMER, AND SNAP-ACTING DISCONNECT SWITCH WITH DOOR INTERLOCK.
  2. HEATER TO BE PROVIDED WITH SCR CONTROLLER FOR MODULATING HEATER LOAD.
  3. COORDINATE WITH CONTROLS FOR ASSOCIATED AIR SYSTEM.
  4. CONTRACTOR SHALL FIELD VERIFY SIZE OF EXISTING DUCTWORK PRIOR TO ORDERING/PURCHASING.

ELECTRIC DUCT HEATER SCHEDULE - PREHEAT	
MARK	EDH-T2-2
SERVES	AHU-T2
CFM	4,890
SIZE (WIDTH X HEIGHT) (IN.)	--
KW/STAGES	30/ SCR
ENTERING AIR TEMP. DB (F)	35
LEAVING AIR TEMP. DB (F)	55
VOLTS/PHASE/HERTZ	480 / 3 / 60
MANUFACTURER	GREENHECK
MODEL NO.	IDHE
NOTES	1, 2, 3, 4

- NOTES:
1. SHALL INCLUDE AUTOMATIC AND MANUAL RESET THERMAL CUTOUTS, DIFFERENTIAL PRESSURE AIRFLOW SWITCH, FUSES FOR EACH CIRCUIT MORE THAN 48 AMPS, CONTROL TRANSFORMER, AND SNAP-ACTING DISCONNECT SWITCH WITH DOOR INTERLOCK.
  2. HEATER TO BE PROVIDED WITH SCR CONTROLLER FOR MODULATING HEATER LOAD.
  3. COORDINATE WITH CONTROLS FOR ASSOCIATED AIR SYSTEM.
  4. CONTRACTOR SHALL FIELD VERIFY SIZE OF EXISTING DUCTWORK PRIOR TO ORDERING/PURCHASING.



210.546.0200 v. 210.546.0201 f  
9601 McAllister Freeway, Suite 410  
San Antonio, Texas 78216  
TBPE Firm Registration No. 2234



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
EDINBURG HS - HVAC IMPROVEMENTS  
2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
DRAWN BY: DBR  
CHECKED BY: DBR  
PROJECT NUMBER: 218007.001  
SHEET TITLE:

MECHANICAL SCHEDULES

SHEET NUMBER:

M5.01

DBR Project Number 218007.001

HA | MG | JB | TL | --

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**AIR HANDLING UNIT SCHEDULE**

MARK	AHU-D1	AHU-F1	AHU-G1	AHU-H1	AHU-P1	AHU-Q1	AHU-R1	AHU-S1	AHU-S2	AHU-T1	AHU-T2	AHU-U1	AHU-V1
SERVES	WING D	WING F	WING G	WING H	GYM LOCKERS AND WEIGHT ROOM	GYM LOCKERS AND SHOP	GYM 2	GYM 1	GYM 1	CAFETERIA	KITCHEN	ORCHESTRA AND BAND HALL	PERFORMANCE HALL
TYPE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE	SINGLE ZONE	SINGLE ZONE	SINGLE ZONE	MULTIZONE	MULTIZONE	MULTIZONE	MULTIZONE
UNIT CONFIGURATION	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL
DISCHARGE	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL
DESIGN SUPPLY AIR (CFM)	19,590	13,325	13,380	9,470	16,795	14,510	18,200	21,170	22,810	15,000	4,890	19,280	14,115
MINIMUM SUPPLY AIR (CFM)	7,825	6,050	5,355	3,790	6,720	5,805	7,280	8,470	9,125	6,105	4,890	7,715	5,650
DESIGN OUTDOOR AIR (CFM)	7,125	6,050	1,635	3,775	4,880	4,660	3,440	4,660	4,660	9,105	4,890	6,015	4,910
MINIMUM OUTSIDE AIR (CFM)	3,585	3,025	820	1,890	2,440	2,190	1,720	2,330	2,330	4,555	2,445	3,010	2,455
EXT. S.P. (IN. W.G.)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
FAN MOTOR HORSEPOWER (HP EA/ # OF FANS)	15/ 2	10/ 2	10/ 2	10/ 1	10/ 2	10/ 2	15/ 2	15/ 2	15/ 2	15/ 2	7.5/ 1	15/ 2	10/ 2
VOLTS/PHASE/HERTZ	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60	480/3/60
MAX. FAN RPM	2,174	2,452	2,639	1,899	2,355	2,335	2,133	2,131	1,830	2,259	3,131	2,133	2,334
FULL LOAD AMPS (FLA) (EACH FAN/TOTAL)	18/ 36	12/ 5/ 25	12/ 5/ 25	14/ 3/ 14.3	12/ 5/ 25	12/ 5/ 25	18/ 36	18/ 36	12/ 5/ 25	8/ 7/ 8.7	18/ 36	12/ 5/ 25	12/ 5/ 25
MAX. COIL FACE VELOCITY (FPM)	476	447	449	434	443	441	443	454	437	445	449	446	450
MINIMUM COIL ROWS	5	4	4	5	5	4	4	4	4	6	8	5	4
MAX. FINS PER INCH	10	13	11	11	11	10	10	10	11	10	10	11	11
COIL CFM	19660	13325	13380	9470	16795	14510	18200	21170	22810	15000	4890	19280	14115
EAT DB/WB (°F)	84.1/67.9	86.4/69.1	78.1/64.4	85/68.4	82.3/66.8	85.5/67	79.7/65.4	80.5/65.8	80.2/71.2	100/76	82.8/67.1	83.7/67.7	83.7/67.7
LAT DB/WB (°F)	54.9/53.6	54.3/52.94	54.8/53.29	54.33/53.1	54.81/53.49	54.84/53.52	54.93/53.49	54.77/53.3	54.61/53.22	54.91/54.12	51.56/51.03	54.67/53.46	54.52/53.26
TOTAL COOLING CAPACITY (MBH)	808.1	624.2	431.6	433.6	642.7	554.1	610.8	746.4	826.2	790.5	361.9	787.6	606.7
SENSIBLE COOLING CAPACITY (MBH)	592.6	440.7	337	310.7	481.2	455.4	467.0	563.5	629.7	561.7	235.6	583.5	441.0
EWTLWT (°F)	42/55.98	42/55.04	42/55.95	42/55.96	42/55.07	42/55.94	42/55.91	42/56	42/55.91	42/56.07	42/55.99	42/56.02	42/56.04
COIL WATER FLOW (GPM)	118.9	91.7	61.6	61.8	93.7	82.3	90.9	110.4	118.3	111.9	51.7	111.7	86.0
MAX. WATER P.D. (FT. HD.)	7.8	14	9.8	14.8	8.9	4.1	10.8	10.8	5.2	6.4	11.0	8.1	10.1
MANUFACTURER	YORK	YORK	YORK	YORK	YORK	YORK	YORK	YORK	YORK	YORK	YORK	YORK	YORK
MODEL NUMBER	Solution-XTI-78x102	Solution-XTI-57x102	Solution-XTI-72x84	Solution-XTI-57x78	Solution-XTI-69x108	Solution-XTI-63x105	Solution-XTI-78x102	Solution-XTI-78x114	Solution-XTI-78x126	Solution-XTI-66x102	Solution-XTI-42x60	Solution-XTI-78x102	Solution-XTI-66x96
UNIT DIMENSIONS (WxLxH)(IN.)	111x132x84	102x128x63	84x122x80	78x121x63	106x132x75	105x136x69	102x127x84	114x127x84	126x130x84	102x130x72	60x122x48	102x129x84	96x128x72
OPERATING WEIGHT (LBS.)	4734	3915	3476	3097	4460	4335	4718	4989	5412	4319	2294	4734	4024
NOTES	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL

1. PROVIDE UNIT WITH MIXING BOX WITH OA AND RA DAMPERS, 2" MERV 8 AND 4" MERV 13 FILTER SECTION, CHILLED WATER COOLING COIL SECTION, ACCESS DOOR, DIRECT DRIVE FAN SECTION WITH ACCESS AND TOP DISCHARGE.
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES DUE TO COILS, FILTERS, AND CASING.
3. PROVIDE SINGLE POWER CONNECTION FOR SUPPLY FAN MOTOR SECTION. ALL FAN MOTORS SHALL BE 1800 RPM.
4. PROVIDE CHILLED WATER COIL WITH 2-WAY AUTOMATIC CONTROL VALVE.
5. FREQUENCY DRIVE. REFER TO VFD SCHEDULE.
6. UNITS SHALL STRICTLY ADHERE TO SCHEDULED DIMENSIONS. PROVIDE UNIT CONSTRUCTED WITH 2 OR MORE SHIPPING SPLITS.
7. PROVIDE UNIT WITH 2" R-13 DOUBLE WALL FOAM CONSTRUCTION WITH THERMAL BREAK.
8. PROVIDE WITH THERMAL DISPERSION AFMS.

**AHU-C1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE**

MARK	COOLING CFM		HEATING CFM		REHEAT	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL
	MAX	MIN	MAX	MIN	KW				
VAV-C01	1,190	360	595	360	7	12"Ø	480/3/60	TITUS	DESV
VAV-C02	1,270	385	635	385	8	12"Ø	480/3/60	TITUS	DESV
VAV-C03	660	200	330	200	4	8"Ø	480/3/60	TITUS	DESV
VAV-C04	1,000	300	500	300	6	10"Ø	480/3/60	TITUS	DESV

1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.
2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.
3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.
4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

**AHU-D1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE**

MARK	COOLING CFM		HEATING CFM		REHEAT	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL
	MAX	MIN	MAX	MIN	KW				
VAV-D01	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D02	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D03	1,005	305	505	305	6	10"Ø	480/3/60	TITUS	DESV
VAV-D04	955	290	480	290	6	10"Ø	480/3/60	TITUS	DESV
VAV-D05	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D06	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D07	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D08	1,100	330	550	330	7	12"Ø	480/3/60	TITUS	DESV
VAV-D09	1,100	330	550	330	7	12"Ø	480/3/60	TITUS	DESV
VAV-D10	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D11	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D12	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D13	1,100	330	550	330	7	12"Ø	480/3/60	TITUS	DESV
VAV-D14	1,100	330	550	330	7	12"Ø	480/3/60	TITUS	DESV
VAV-D15	1,000	300	500	300	6	10"Ø	480/3/60	TITUS	DESV
VAV-D16	1,000	300	500	300	6	10"Ø	480/3/60	TITUS	DESV
VAV-D17	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D18	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D19	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-D20	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV

1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.
2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.
3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.
4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

**ALTERNATE No.1:**  
ALL SINGLE DUCT TERMINAL UNITS. REFER TO SCHEDULES FOR QUANTITIES.

**ALTERNATE No.2:**  
ALL COOLING TOWERS. REFER TO SCHEDULE FOR QUANTITIES.

**AHU-B1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE**

MARK	COOLING CFM		HEATING CFM		REHEAT	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL
	MAX	MIN	MAX	MIN	KW				
VAV-B01	1,475	445	740	445	9	12"Ø	480/3/60	TITUS	DESV
VAV-B02	1,300	390	650	390	8	12"Ø	480/3/60	TITUS	DESV
VAV-B03	375	115	190	115	3	6"Ø	480/3/60	TITUS	DESV
VAV-B04	1,775	535	890	535	10	14"Ø	480/3/60	TITUS	DESV
VAV-B05	880	265	440	265	5	10"Ø	480/3/60	TITUS	DESV
VAV-B06	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B07	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B08	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B09	1,945	585	975	585	11	14"Ø	480/3/60	TITUS	DESV
VAV-B10	1,240	375	620	375	7	12"Ø	480/3/60	TITUS	DESV
VAV-B11	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B12	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B13	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B14	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B15	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-B16	500	150	250	150	3	8"Ø	480/3/60	TITUS	DESV
VAV-B17	500	150	250	150	3	8"Ø	480/3/60	TITUS	DESV
VAV-B18	880	265	440	265	5	10"Ø	480/3/60	TITUS	DESV

1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.
2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.
3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.
4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

**AHU-E1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE**

MARK	COOLING CFM		HEATING CFM		REHEAT	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL
	MAX	MIN	MAX	MIN	KW				
VAV-E01	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E02	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E03	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E04	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E05	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E06	1,200	360	600	360	7	12"Ø	480/3/60	TITUS	DESV
VAV-E07	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E08	1,125	340	565	340	7	12"Ø	480/3/60	TITUS	DESV
VAV-E09	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E10	1,515	455	780	455	9	12"Ø	480/3/60	TITUS	DESV
VAV-E11	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV
VAV-E12	940	285	470	285	6	10"Ø	480/3/60	TITUS	DESV
VAV-E13	725	220	365	220	5	10"Ø	480/3/60	TITUS	DESV
VAV-E14	1,190	360	595	360	7	12"Ø	480/3/60	TITUS	DESV
VAV-E15	1,090	330	545	330	7	10"Ø	480/3/60	TITUS	DESV
VAV-E16	1,790	540	895	540	10	14"Ø	480/3/60	TITUS	DESV

1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.
2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.
3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.
4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

**AHU-A1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE**

MARK	COOLING CFM		HEATING CFM		REHEAT	INLET SIZE	VOLTS/
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AHU-G1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-G01	685	210	345	210	4	8"Ø	480/3/60	TITUS	DESV	
VAV-G02	1,255	380	630	380	7	12"Ø	480/3/60	TITUS	DESV	
VAV-G03	1,115	335	560	335	7	12"Ø	480/3/60	TITUS	DESV	
VAV-G04	525	160	265	160	3	8"Ø	480/3/60	TITUS	DESV	
VAV-G05	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-G06	2,500	750	1250	750	14	16"Ø	480/3/60	TITUS	DESV	
VAV-G07	880	265	440	265	5	10"Ø	480/3/60	TITUS	DESV	
VAV-G08	880	265	440	265	5	10"Ø	480/3/60	TITUS	DESV	
VAV-G09	900	270	450	270	5	10"Ø	480/3/60	TITUS	DESV	
VAV-G10	1,760	530	880	530	10	14"Ø	480/3/60	TITUS	DESV	
VAV-G11	2,100	630	1050	630	12	16"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-H1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-H01	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-H02	510	155	255	155	3	8"Ø	480/3/60	TITUS	DESV	
VAV-H03	810	245	405	245	5	10"Ø	480/3/60	TITUS	DESV	
VAV-H04	870	265	435	265	5	10"Ø	480/3/60	TITUS	DESV	
VAV-H05	880	265	440	265	5	10"Ø	480/3/60	TITUS	DESV	
VAV-H06	2,040	615	1020	615	12	14"Ø	480/3/60	TITUS	DESV	
VAV-H07	1,870	565	935	565	11	14"Ø	480/3/60	TITUS	DESV	
VAV-H08	1,690	510	845	510	10	14"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-J1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-J01	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J02	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J03	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J04	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J05	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J06	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J07	1,235	375	620	375	7	12"Ø	480/3/60	TITUS	DESV	
VAV-J08	1,125	340	565	340	7	12"Ø	480/3/60	TITUS	DESV	
VAV-J09	1,200	360	600	360	7	12"Ø	480/3/60	TITUS	DESV	
VAV-J10	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J11	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J12	940	285	470	285	6	10"Ø	480/3/60	TITUS	DESV	
VAV-J13	1,790	540	895	540	10	14"Ø	480/3/60	TITUS	DESV	
VAV-J14	725	220	365	220	5	10"Ø	480/3/60	TITUS	DESV	
VAV-J15	1,090	330	545	330	7	10"Ø	480/3/60	TITUS	DESV	
VAV-J16	1,190	360	595	360	7	12"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-K1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-K01	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-K02	1,290	390	645	390	8	12"Ø	480/3/60	TITUS	DESV	
VAV-K03	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-K04	1,290	390	645	390	8	12"Ø	480/3/60	TITUS	DESV	
VAV-K05	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-K06	1,290	390	645	390	8	12"Ø	480/3/60	TITUS	DESV	
VAV-K07	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-L1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-L01	1,255	380	630	380	7	12"Ø	480/3/60	TITUS	DESV	
VAV-L02	300	90	150	90	2	6"Ø	480/3/60	TITUS	DESV	
VAV-L03	350	105	175	105	2	6"Ø	480/3/60	TITUS	DESV	
VAV-L04	1,190	360	595	360	7	12"Ø	480/3/60	TITUS	DESV	
VAV-L05	1,095	330	550	330	7	10"Ø	480/3/60	TITUS	DESV	
VAV-L06	400	120	200	120	3	8"Ø	480/3/60	TITUS	DESV	
VAV-L07	920	280	460	280	6	10"Ø	480/3/60	TITUS	DESV	
VAV-L08	920	280	460	280	6	10"Ø	480/3/60	TITUS	DESV	
VAV-L09	920	280	460	280	6	10"Ø	480/3/60	TITUS	DESV	
VAV-L10	920	280	460	280	6	10"Ø	480/3/60	TITUS	DESV	
VAV-L11	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-L12	920	280	460	280	6	10"Ø	480/3/60	TITUS	DESV	
VAV-L13	775	235	390	235	5	10"Ø	480/3/60	TITUS	DESV	
VAV-L14	775	235	390	235	5	10"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-M1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-M01	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M02	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M03	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M04	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M05	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M06	1,200	360	600	360	7	12"Ø	480/3/60	TITUS	DESV	
VAV-M07	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M08	1,125	340	565	340	7	12"Ø	480/3/60	TITUS	DESV	
VAV-M09	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M10	1,515	455	760	455	9	12"Ø	480/3/60	TITUS	DESV	
VAV-M11	800	240	400	240	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M12	940	285	470	285	6	10"Ø	480/3/60	TITUS	DESV	
VAV-M13	725	220	365	220	5	10"Ø	480/3/60	TITUS	DESV	
VAV-M14	1,190	360	595	360	7	12"Ø	480/3/60	TITUS	DESV	
VAV-M15	1,090	330	545	330	7	10"Ø	480/3/60	TITUS	DESV	
VAV-M16	1,790	540	895	540	10	14"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-N1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-N01	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-N02	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-N03	1,290	390	645	390	8	12"Ø	480/3/60	TITUS	DESV	
VAV-N04	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-N05	1,290	390	645	390	8	12"Ø	480/3/60	TITUS	DESV	
VAV-N06	1,590	480	795	480	9	12"Ø	480/3/60	TITUS	DESV	
VAV-N07	1,290	390	645	390	8	12"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

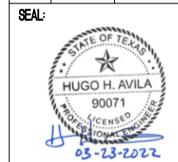
AHU-P1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM		REHEAT KW	INLET SIZE	VOLTS/PHASE/HZ	MANUFACTURER	MODEL	
	MAX	MIN	MAX	MIN						
VAV-P01	1,800	540	900	540	10	14"Ø	480/3/60	TITUS	DESV	
VAV-P02	1,320	400	660	400	8	12"Ø	480/3/60	TITUS	DESV	
VAV-P03	370	115	185	115	3	6"Ø	480/3/60	TITUS	DESV	
VAV-P04	620	190	310	190	4	8"Ø	480/3/60	TITUS	DESV	
VAV-P05	1,275	385	640	385	8	12"Ø	480/3/60	TITUS	DESV	
VAV-P06	1,275	385	640	385	8	12"Ø	480/3/60	TITUS	DESV	
VAV-P07	1,990	600	995	600	12	14"Ø	480/3/60	TITUS	DESV	
VAV-P08	2,410	725	1205	725	14	16"Ø	480/3/60	TITUS	DESV	
VAV-P09	1,535	465	770	465	9	12"Ø	480/3/60	TITUS	DESV	
VAV-P10	1,545	465	775	465	9	12"Ø	480/3/60	TITUS	DESV	
VAV-P11	1,025	310	515	310	6	10"Ø	480/3/60	TITUS	DESV	

NOTES:  
 1. PROVIDE AEROCROSS MULTI-POINT CENTER AVERAGING VELOCITY SENSOR IN AIR INLET.  
 2. PROVIDE TERMINAL UNIT CASING WITH 1/2" INTERNALLY LINED FIBERGLASS FREE INSULATION.  
 3. PROVIDE TERMINAL UNIT WITH INTEGRAL DISCONNECT SWITCH.  
 4. PROVIDE ELECTRIC REHEAT COIL WITH 0-10V SCR MODULATING CAPACITY CONTROL.

AHU-Q1 SINGLE INLET VAV BOX WITH REHEAT SCHEDULE										
MARK	COOLING CFM		HEATING CFM							



REVISION No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1

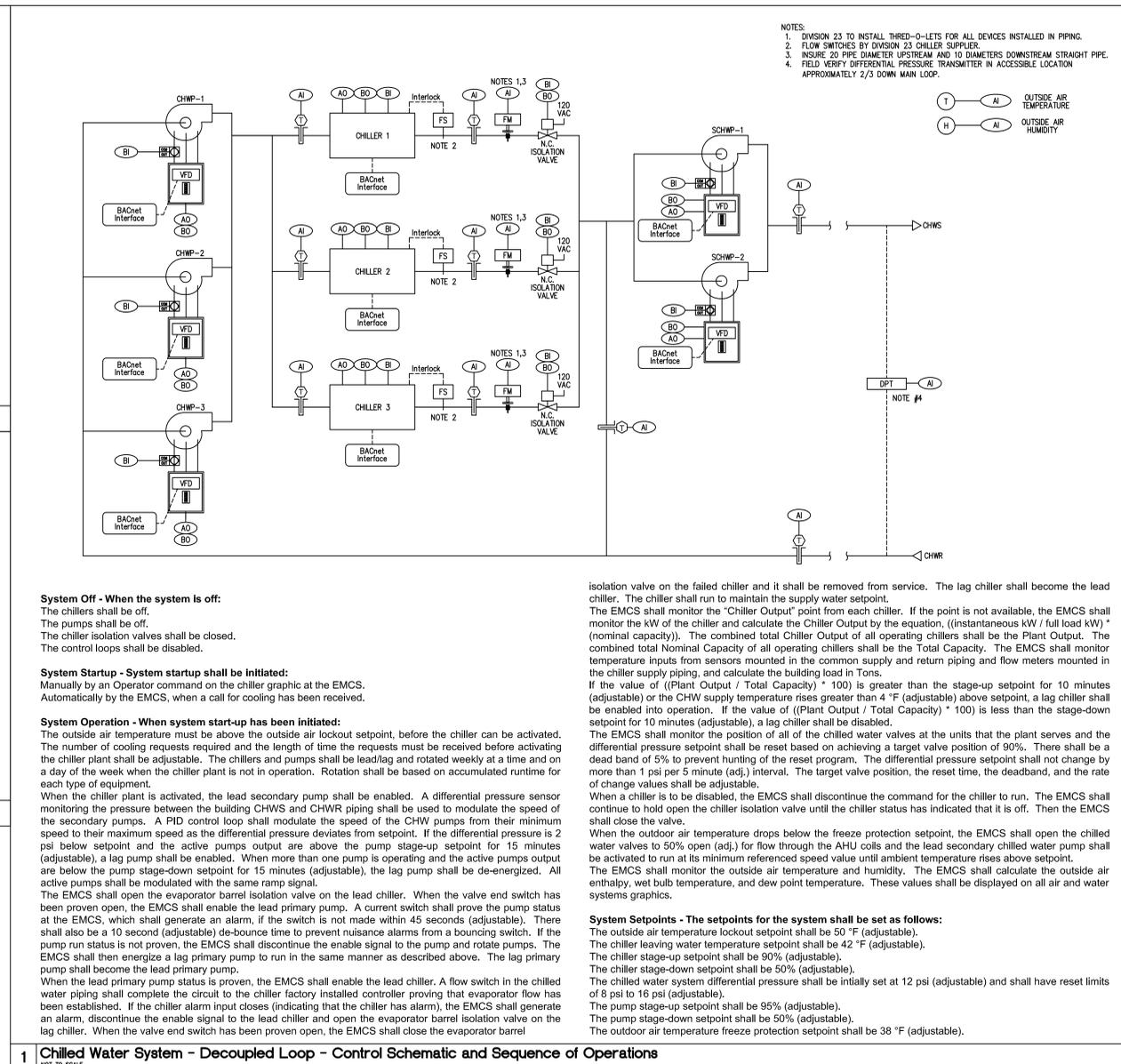


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 EDINBURG HS - HVAC IMPROVEMENTS  
 2600 E WISCONSIN RD, EDINBURG, TX 78642

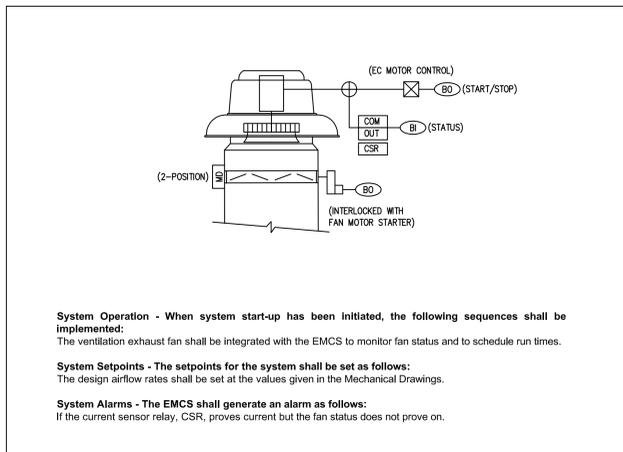
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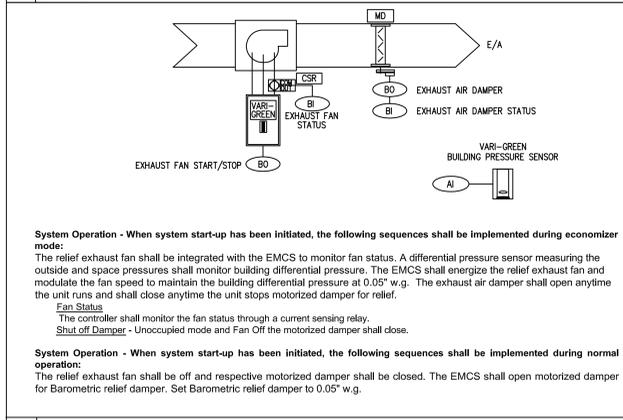
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HA	MG	JB	TL	--



**1 Chilled Water System - Decoupled Loop - Control Schematic and Sequence of Operations**  
NOT TO SCALE



**2 Ventilation Exhaust Fan - Control Schematic and Sequence of Operations**  
NOT TO SCALE



**3 Relief Exhaust Fan - Control Schematic and Sequence of Operations**  
NOT TO SCALE

**System Off - When the system is off:**  
 The chillers shall be off.  
 The pumps shall be off.  
 The chiller isolation valves shall be closed.  
 The control loops shall be disabled.

**System Startup - System startup shall be initiated:**  
 Manually by an Operator command on the chiller graphic at the EMCS.  
 Automatically by the EMCS, when a call for cooling has been received.

**System Operation - When system start-up has been initiated:**  
 The outside air temperature must be above the outside air lockout setpoint, before the chiller can be activated. The number of cooling requests required and the length of time the requests must be received before activating the chiller plant shall be adjustable. The chillers and pumps shall be lead/lag and rotated weekly at a time and on a day of the week when the chiller plant is not in operation. Rotation shall be based on accumulated runtime for each type of equipment.  
 When the chiller plant is activated, the lead secondary pump shall be enabled. A differential pressure sensor monitoring the pressure between the building CHWS and CHWR piping shall be used to modulate the speed of the secondary pumps. A PID control loop shall modulate the speed of the CHW pumps from their minimum speed to their maximum speed as the differential pressure deviates from setpoint. If the differential pressure is 2 psi below setpoint and the active pumps output are above the pump stage-up setpoint for 15 minutes (adjustable), a lag pump shall be enabled. When more than one pump is operating and the active pumps output are below the pump stage-down setpoint for 15 minutes (adjustable), the lag pump shall be de-energized. All active pumps shall be modulated with the same ramp signal.  
 The EMCS shall open the evaporator barrel isolation valve on the lead chiller. When the valve end switch has been proven open, the EMCS shall enable the lead primary pump. A current switch shall prove the pump status at the EMCS, which shall generate an alarm, if the switch is not made within 45 seconds (adjustable). There shall also be a 10 second (adjustable) de-bounce time to prevent nuisance alarms from a bouncing switch. If the pump run status is not proven, the EMCS shall discontinue the enable signal to the pump and rotate pumps. The EMCS shall then energize a lag primary pump to run in the same manner as described above. The lag primary pump shall become the lead primary pump.  
 When the lead primary pump status is proven, the EMCS shall enable the lead chiller. A flow switch in the chilled water piping shall complete the circuit to the chiller factory installed controller proving that evaporator flow has been established. If the chiller alarm input closes (indicating that the chiller has alarm), the EMCS shall generate an alarm, discontinue the enable signal to the lead chiller and open the evaporator barrel isolation valve on the lag chiller. When the valve end switch has been proven open, the EMCS shall close the evaporator barrel

isolation valve on the failed chiller and it shall be removed from service. The lag chiller shall become the lead chiller. The chiller shall run to maintain the supply water setpoint.  
 The EMCS shall monitor the "Chiller Output" point from each chiller. If the point is not available, the EMCS shall monitor the kW of the chiller and calculate the Chiller Output by the equation, ((instantaneous kW / full load kW) \* (nominal capacity)). The combined total Chiller Output of all operating chillers shall be the Plant Output. The combined total Nominal Capacity of all operating chillers shall be the Total Capacity. The EMCS shall monitor temperature inputs from sensors mounted in the common supply and return piping and flow meters mounted in the chiller supply piping, and calculate the building load in Tons.  
 If the value of ((Plant Output / Total Capacity) \* 100) is greater than the stage-up setpoint for 10 minutes (adjustable) or the CHW supply temperature rises greater than 4 °F (adjustable) above setpoint, a lag chiller shall be enabled into operation. If the value of ((Plant Output / Total Capacity) \* 100) is less than the stage-down setpoint for 10 minutes (adjustable), a lag chiller shall be disabled.  
 The EMCS shall monitor the position of all of the chilled water valves at the units that the plant serves and the differential pressure setpoint shall be reset based on achieving a target valve position of 90%. There shall be a dead band of 5% to prevent hunting of the reset program. The differential pressure setpoint shall not change by more than 1 psi per 5 minute (adj.) interval. The target valve position, the reset time, the deadband, and the rate of change values shall be adjustable.  
 When a chiller is to be disabled, the EMCS shall discontinue the command for the chiller to run. The EMCS shall continue to hold open the chiller isolation valve until the chiller status has indicated that it is off. Then the EMCS shall close the valve.  
 When the outdoor air temperature drops below the freeze protection setpoint, the EMCS shall open the chilled water valves to 50% open (adj.) for flow through the AHU coils and the lead secondary chilled water pump shall be activated to run at its minimum referenced speed value until ambient temperature rises above setpoint.  
 The EMCS shall monitor the outside air temperature and humidity. The EMCS shall calculate the outside air enthalpy, wet bulb temperature, and dew point temperature. These values shall be displayed on all air and water systems graphics.

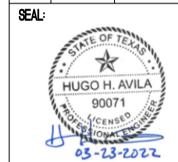
**System Setpoints - The setpoints for the system shall be set as follows:**  
 The outside air temperature lockout setpoint shall be 50 °F (adjustable).  
 The chiller leaving water temperature setpoint shall be 42 °F (adjustable).  
 The chiller stage-up setpoint shall be 90% (adjustable).  
 The chiller stage-down setpoint shall be 50% (adjustable).  
 The chilled water system differential pressure shall be initially set at 12 psi (adjustable) and shall have reset limits of 8 psi to 16 psi (adjustable).  
 The pump stage-up setpoint shall be 95% (adjustable).  
 The pump stage-down setpoint shall be 50% (adjustable).  
 The outdoor air temperature freeze protection setpoint shall be 38 °F (adjustable).

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REVISION	No.	DATE	DESCRIPTION
	1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
 EDINBURG HS - HVAC IMPROVEMENTS  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE:	03/09/2022
DRAWN BY:	DBR
CHECKED BY:	DBR
PROJECT NUMBER:	218007.001
SHEET TITLE:	MECHANICAL CONTROLS
SHEET NUMBER:	M6.05



200 South 10th Street Suite 901  
Mc Allen, Texas 78501  
956.883.1640 p 956.883.1903 f  
TBP# Firm Registration No. 2234

DBR Project Number 218007.001

HA | MG | JB | TL | --

**System off - When the system is off:**  
 The outside air damper shall be closed.  
 The return air damper shall be open.  
 The unit supply fan shall be off.  
 The cooling coil valve shall be closed.  
 All control loops shall be disabled.

**System Start-up - System start-up shall be initiated:**  
 By an operator entered manual command at the EMCS.  
 Automatically by the EMCS based on Pre-Start Mode or Night-Setback Mode.

**PRE-START MODE:**  
 The system shall be enabled by an operator entered manual command at the EMCS or automatically by the EMCS based on the Optimal Start/Stop algorithm. Once enabled, the system shall operate per the **System Operation** section, as detailed below. Operation of the system during Pre-Start Mode shall not include ventilation air.

**NIGHT-SETBACK MODE:**  
 The system shall be enabled automatically by the EMCS based on the cooling demand of 5 (adjustable) or more associated terminal units whose space temperature has exceeded the terminal units Unoccupied Cooling Setpoint. Once enabled, the system shall operate per the **System Operation** section, as detailed below. Operation of the system during Night-Setback Mode shall not include ventilation air.

**OCCUPIED MODE:**  
 The system shall be enabled automatically by the EMCS based on the actual space occupancy. When the Time of Day schedule (TOD) is active, the system shall operate per the **System Operation** section, as detailed below, and the Demand Control Ventilation sequence shall be active.

**Demand Control Ventilation -** The outside air intake damper shall be modulated to maintain the scheduled minimum outside air flowrate setpoint. If the space carbon dioxide concentration for any zone served by the associated AHU is above the defined high-limit, then the OSA damper shall be modulated to maintain the scheduled maximum outside air flowrate setpoint. If the OSA damper is above 95% open and the maximum outside air flowrate setpoint cannot be met, then modulate the return air damper closed until the flowrate is achieved. Do not modulate the return air damper to less than 60% open. Once the space carbon dioxide concentration for all associated zones has been below the defined high limit for 5 minutes (adj.), the OSA damper shall be modulated to maintain the scheduled minimum outside air flowrate setpoint.

**System Operation - When system start-up has been initiated:**  
 The variable speed supply fan shall start at its minimum speed. Following a confirmation of fan start status, the supply fan speed shall be modulated to maintain the supply air static pressure at setpoint. The speed of the fan shall not be adjusted by more than 20% in any one-minute period. The static pressure setpoint shall be reset via the control algorithm below to optimize the energy usage.

**Supply Air Static Pressure Reset -** The static pressure setpoint shall be reset up in defined increments at defined intervals until the primary air damper position to all of the associated terminal units have been below the defined value for more than the defined interval. The static pressure setpoint shall be reset down in defined increments at defined intervals until the primary air damper position to at least one (critical zone) of the associated terminal units has been above the defined value for more than the defined interval. The setpoints are detailed in the **System Setpoint** section below.

**The chilled water coil control valve shall be modulated to maintain the active supply air temperature setpoint. The supply air temperature setpoint shall be reset via the control algorithm below to optimize the energy usage.**

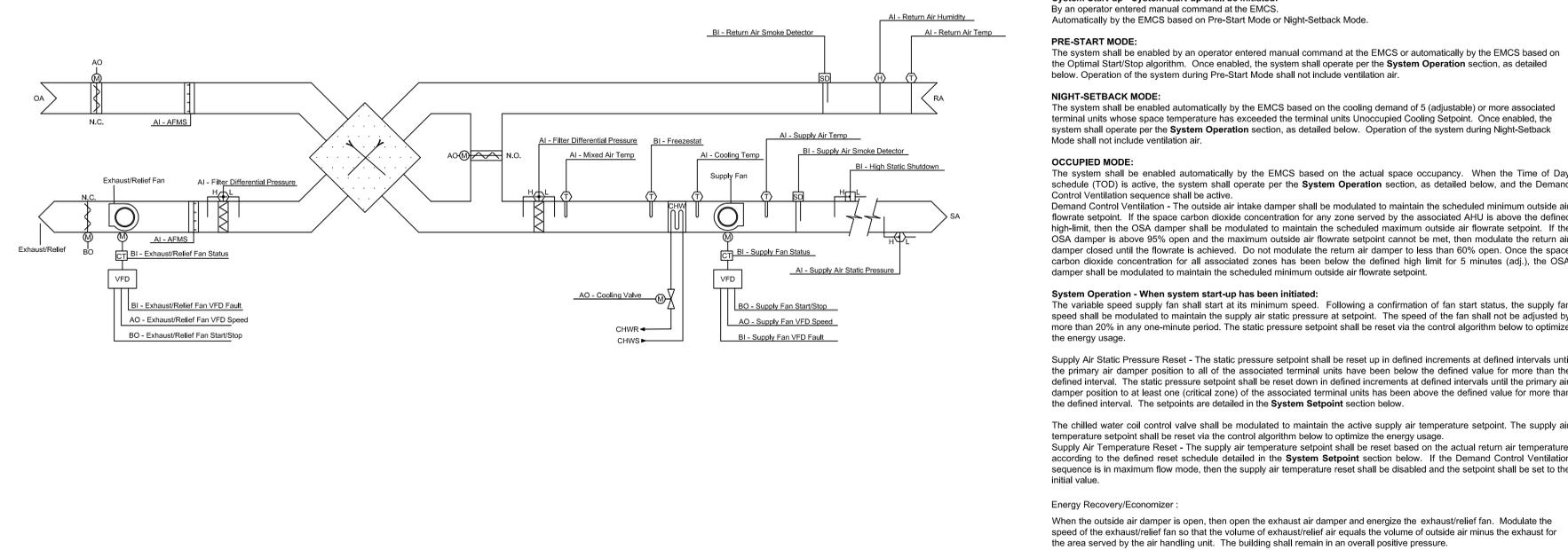
**Supply Air Temperature Reset -** The supply air temperature setpoint shall be reset based on the actual return air temperature, according to the defined reset schedule detailed in the **System Setpoint** section below. If the Demand Control Ventilation sequence is in maximum flow mode, then the supply air temperature reset shall be disabled and the setpoint shall be set to the initial value.

**Energy Recovery/Economizer :**  
 When the outside air damper is open, then open the exhaust air damper and energize the exhaust/relief fan. Modulate the speed of the exhaust/relief fan so that the volume of exhaust/relief air equals the volume of outside air minus the exhaust for the area served by the air handling unit. The building shall remain in an overall positive pressure.

**System Setpoints - The setpoints for the system shall be determined as follows:**  
 The maximum speed reference value shall be the VFD speed required to obtain the design supply airflow value from the unit schedule on the Mechanical Drawings.  
 The minimum speed reference value shall be VFD speed required to obtain 50% of the design supply airflow value from the unit schedule on the mechanical drawings but not less than the active outside air flow rate setpoint.  
 The supply air static pressure setpoint shall be set initially at 1.25 inches w.c. (adj) and shall have reset limits of 0.20 to 2.00 inches w.c. (adj)  
 The time interval for static pressure reset shall be set at 10 minutes (adj).  
 The static pressure reset increment shall be set at 0.05 inches w.c. (adj)  
 The terminal unit primary damper position setpoint shall be 90% open. (adj)  
 The time interval for terminal unit primary damper position shall be set at 15 minutes. (adj)  
 The supply air temperature setpoint shall be set initially at 54 °F. (adj)  
 The supply air temperature setpoint shall be reset to 54 °F (adj) when the return air temperature is at 78 °F. (adj)  
 The supply air temperature setpoint shall be reset to 58 °F (adj) when the return air temperature is at 72 °F. (adj)  
 The minimum outside air flowrate setpoint shall be set at the scheduled minimum flowrate from the unit schedule on the mechanical drawings.  
 The maximum outside air flowrate setpoint shall be set at the scheduled maximum flowrate from the unit schedule on the mechanical drawings.  
 The space carbon dioxide high-limit setpoint shall be set at 1000 ppm (adj).  
 The supply duct static pressure high-limit setpoint shall be set at 2.0 in. wc. (adj).  
 The air filter pressure differential high-limit setpoint shall be set at 1.0 in. wc. (adj).  
 The freeze-stat low-limit trip setpoint shall be set at 37°F(adj).

**System Shutdown - System shutdown shall be initiated:**  
 By operator entered manual command at the EMCS.  
 Automatically by the EMCS based on Night-Setback or Time of Day schedule.  
 Automatically by the high-static pressure shut down.  
 Automatically by the unit freeze-stat shut down.  
 Automatically by a supply fan current sensor status failure.

**System Alarms - The EMCS shall generate an alarm if:**  
 If the supply air temperature is outside the limits, which shall be set at +/- 5 °F around setpoint.  
 If any associated space carbon dioxide level exceeds its high-limit for more than 20 minutes (adj) or exceeds the high-limit by 10% or more.  
 If the supply duct static pressure exceeds the high-limit setpoint.  
 If the unit freeze-slat trips.  
 If the filter differential pressure exceeds the trip point.  
 If the current sensor relay indicates a supply fan failure status.  
 All alarms shall be inhibited when the supply fan is not operating.



1 VAV Air Handling Unit w/ Enthalpy Core - Control Schematic and Sequence of Operations  
 NOT TO SCALE

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ABBREVIATIONS

Table A: Abbreviations starting with A. Includes terms like AMPERES, AIR CONDITIONING, ALTERNATING CURRENT, etc.

Table G: Abbreviations starting with G. Includes terms like GAUGE, GALLON, GALVANIZED, etc.

Table R: Abbreviations starting with R. Includes terms like EXISTING TO BE REMOVED, RETURN AIR, REFRIGERATED AIR DRYER, etc.

Table B: Abbreviations starting with B. Includes terms like BUILDING AUTOMATION SYSTEM, BELOW COUNTER BREAKER, BUILDING, etc.

Table I: Abbreviations starting with I. Includes terms like INSIDE DIAMETER, ISOLATED GROUND, INCH, etc.

Table S: Abbreviations starting with S. Includes terms like SUPPLY AIR, SUPPLY AIR FAN SCHEDULE, SEWER EJECTOR, etc.

Table C: Abbreviations starting with C. Includes terms like CONDUIT, CELSIUS, CABLE TELEVISION SYSTEM, CLOSED CIRCUIT TELEVISION, etc.

Table J: Abbreviations starting with J. Includes terms like JUNCTION BOX, JOCKEY PUMP, etc.

Table K: Abbreviations starting with K. Includes terms like KITCHEN EQUIPMENT CONTRACTOR, KNOCKOUT, KILOVOLT-AMPS, etc.

Table D: Abbreviations starting with D. Includes terms like DECEBEL, DIRECT CURRENT, DIRECT DIGITAL CONTROL, etc.

Table L: Abbreviations starting with L. Includes terms like LIGHT EMITTING DIODE, LINEAR FEET, LOCKED ROTOR AMPS, etc.

Table M: Abbreviations starting with M. Includes terms like METER, MASTER ALARM PANEL, MASTER ANTENNA TELEVISION SYSTEM, etc.

Table E: Abbreviations starting with E. Includes terms like EXISTING, EACH, ELECTRICAL CONTRACTOR, etc.

Table N: Abbreviations starting with N. Includes terms like NEMA 3R ENCLOSURE, NEMA 4X ENCLOSURE, etc.

Table V: Abbreviations starting with V. Includes terms like VOLT, VOLT-AMPERE, VARIABLE AIR VOLUME, etc.

ELECTRICAL SYMBOLS

Table: Motors and Controls symbols. Includes symbols for motor rated switch, single or three phase motor, electric duct heater, etc.

RECEPTACLES AND OUTLETS

Table: Receptacles and Outlets symbols. Includes symbols for simplex wall receptacle, duplex wall receptacle, split wired receptacle, etc.

LIGHTING

Table: Lighting symbols. Includes symbols for 2' x 4' lighting fixture, 2' x 2' lighting fixture, 1' x 4' lighting fixture, etc.

RACEWAYS AND WIRING

Table: Raceways and Wiring symbols. Includes symbols for cap and stake conduit, exposed conduit, underground conduit, etc.

COMMUNICATIONS

Table: Communications symbols. Includes symbols for school intercommunication system handset, TV rough-in, microphone floor outlet, etc.

ONE LINE AND RISER DIAGRAMS

Table: One Line and Riser Diagrams symbols. Includes symbols for transformer, fuse, circuit breaker, shunt trip, etc.

GENERAL NOTES: A. NOT ALL SYMBOLS SHOWN ON THIS SYMBOL LIST ARE USED IN THE CONTRACT DOCUMENTS.

Table: Miscellaneous symbols. Includes symbols for shaded symbols, drawing note reference, starter/disconnect schedule reference, etc.

FIRE ALARM

Table: Fire Alarm symbols. Includes symbols for water flow switch, supervisory switch, smoke detector, heat detector, etc.

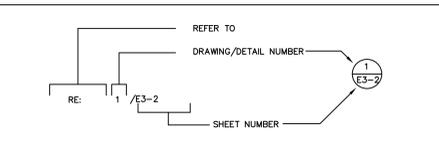
SECURITY

Table: Security symbols. Includes symbols for keypad, glass break sensor, hold up button, intercom door station, etc.

SWITCHES AND LIGHTING CONTROL DEVICES

Table: Switches and Lighting Control Devices symbols. Includes symbols for switch annotation, occupancy sensor, light sensor, etc.

DRAWING/DETAIL REFERENCE KEY



GENERAL NOTES

Text block containing general notes and a reference to the symbol list.



Table: Revision information. Includes columns for No., DATE, and DESCRIPTION.



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
EDINBURG HS - HVAC IMPROVEMENTS
2600 E WISCONSIN RD, EDINBURG, TX 78542

Table: Project information. Includes DATE (03/09/2022), DRAWN BY (DBR), CHECKED BY (DBR), PROJECT NUMBER (218007.001), SHEET TITLE (ELECTRICAL SYMBOLS AND ABBREVIATIONS), SHEET NUMBER (E0.01).

Vertical text on the left margin: Project: Mac 23\_2022\_0.65.DWG by: harr, harr - Sched: 03/09/2022, by: harr, harr - C:\Users\harr\Documents\218007.001 - EDINBURG HS - HVAC IMPROVEMENTS - EHS\Project Files\Drawings\02-218007-DETAILS AND SCHEDULES.dwg



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**GENERAL ELECTRICAL NOTES:**

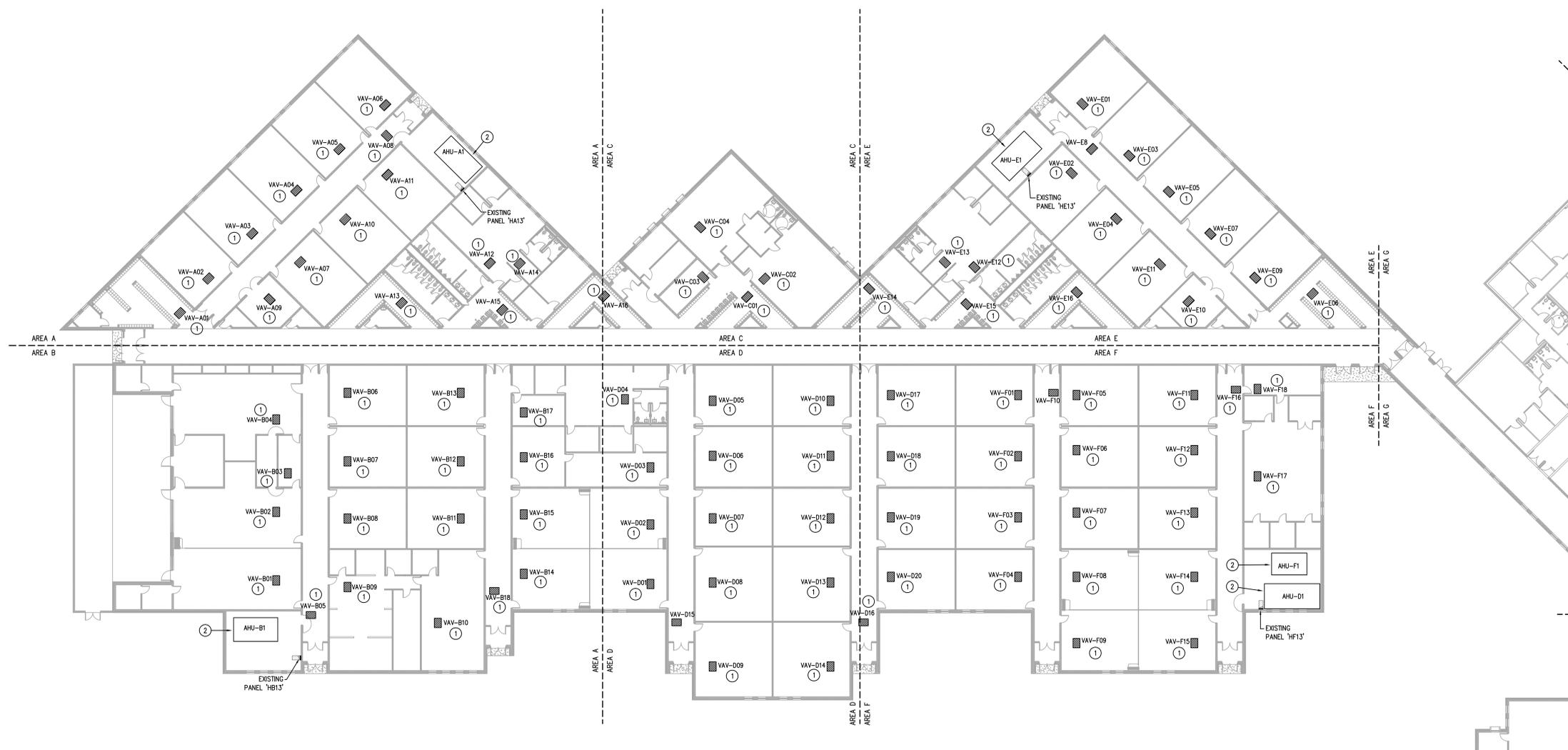
A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO DEMOLITION. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.

**ELECTRICAL KEYED NOTES:**

- ① CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING VAV UNIT TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.
- ② CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRE BACK TO PANEL.
- ③ CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.

**REVISION:**  
 No. / DATE / DESCRIPTION

1	03/23/2022	ADDENDUM No.1



① LEVEL 1 POWER DEMOLITION PLAN - AREAS A/B/C/D/E/F  
 EPD2.11 1" = 20'-0"

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001

SHEET TITLE:  
**LEVEL 1 ELECTRICAL POWER DEMOLITION PLAN**

SHEET NUMBER:  
**EPD2.11**

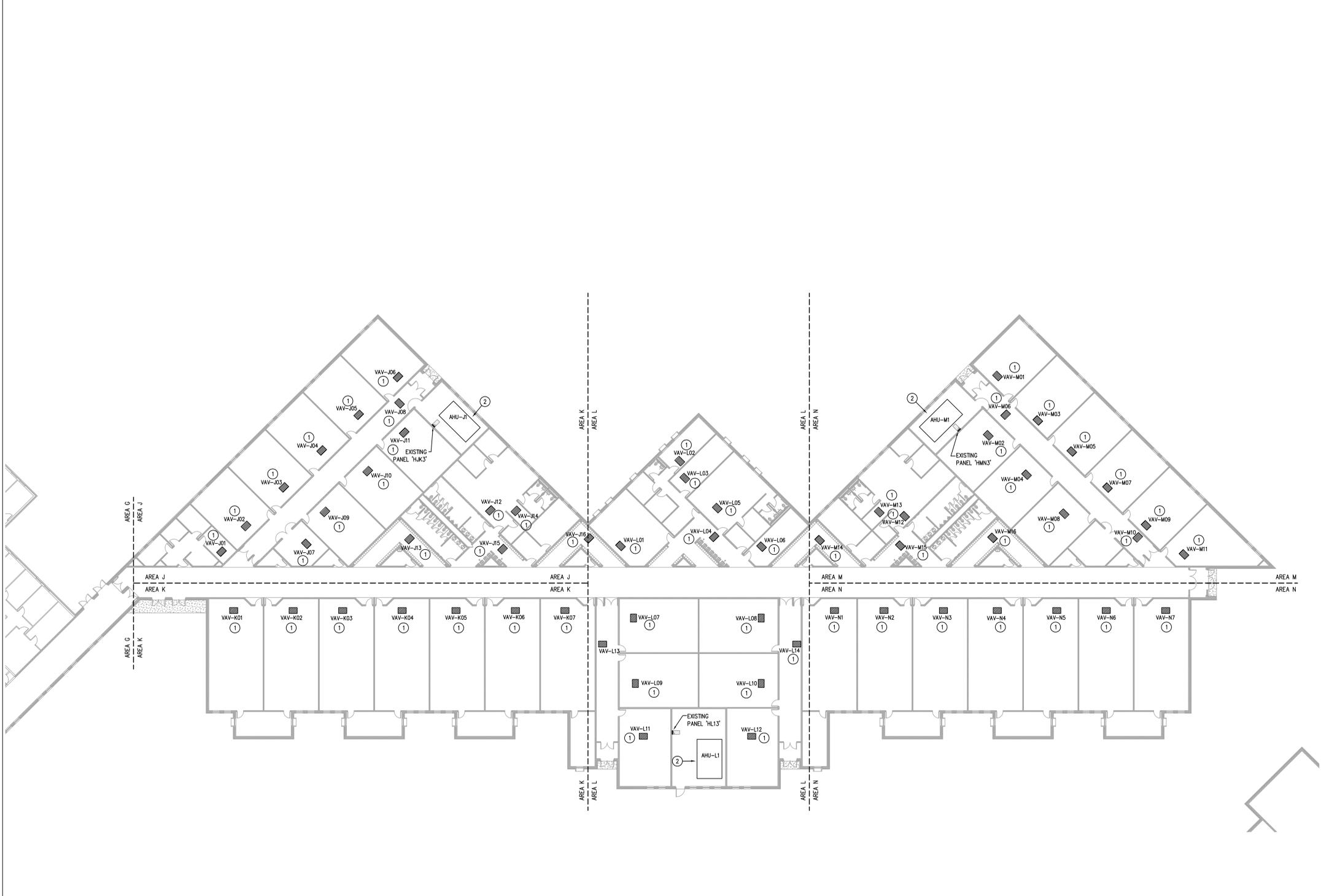
**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p 956.683.1903 f  
 TBPE Firm Registration No. 2234

DBR Project Number 218007.001

HA	MG	JB	TL	--
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 Plotter: HP DesignJet T1100e  
 Scale: 1/8" = 1'-0"  
 User: jacobr



1 LEVEL 1 POWER DEMOLITION PLAN - AREAS J/K/L/M/N  
 1" = 20'-0"

- GENERAL ELECTRICAL NOTES:**
- A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO DEMOLITION. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.
- ELECTRICAL KEYED NOTES:**
- ① CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING VAV UNIT TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.
  - ② CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRE BACK TO PANEL.
  - ③ CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.



**REVISION:**

No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
 EDINBURG HS - HVAC IMPROVEMENTS  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001

SHEET TITLE: LEVEL 1 ELECTRICAL POWER DEMOLITION PLAN  
 SHEET NUMBER: EPD2.12

**GENERAL ELECTRICAL NOTES:**

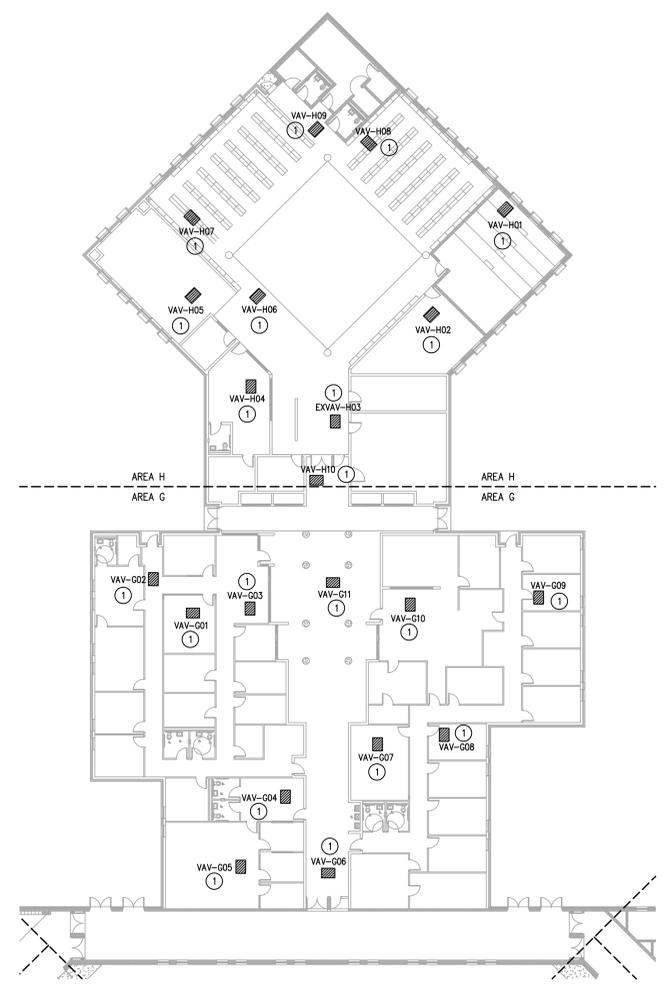
A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO DEMOLITION. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.

**ELECTRICAL KEYED NOTES:**

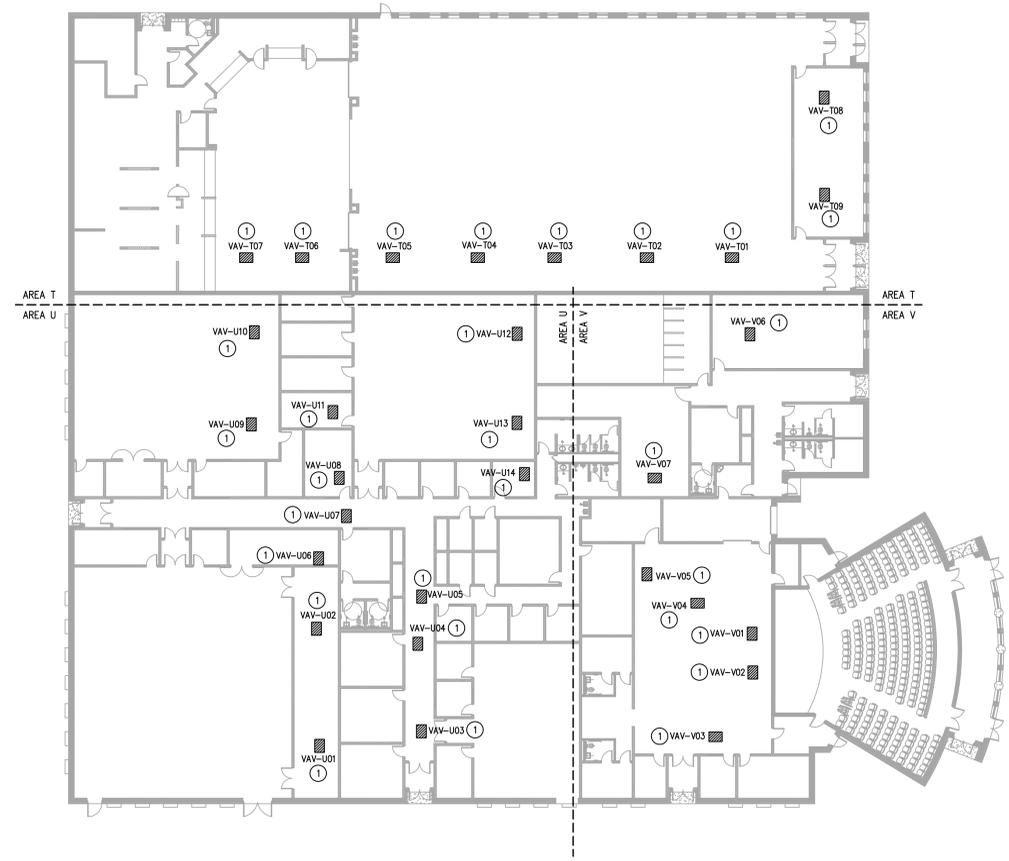
- ① CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING VAV UNIT TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.
- ② CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRE BACK TO PANEL.
- ③ CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.



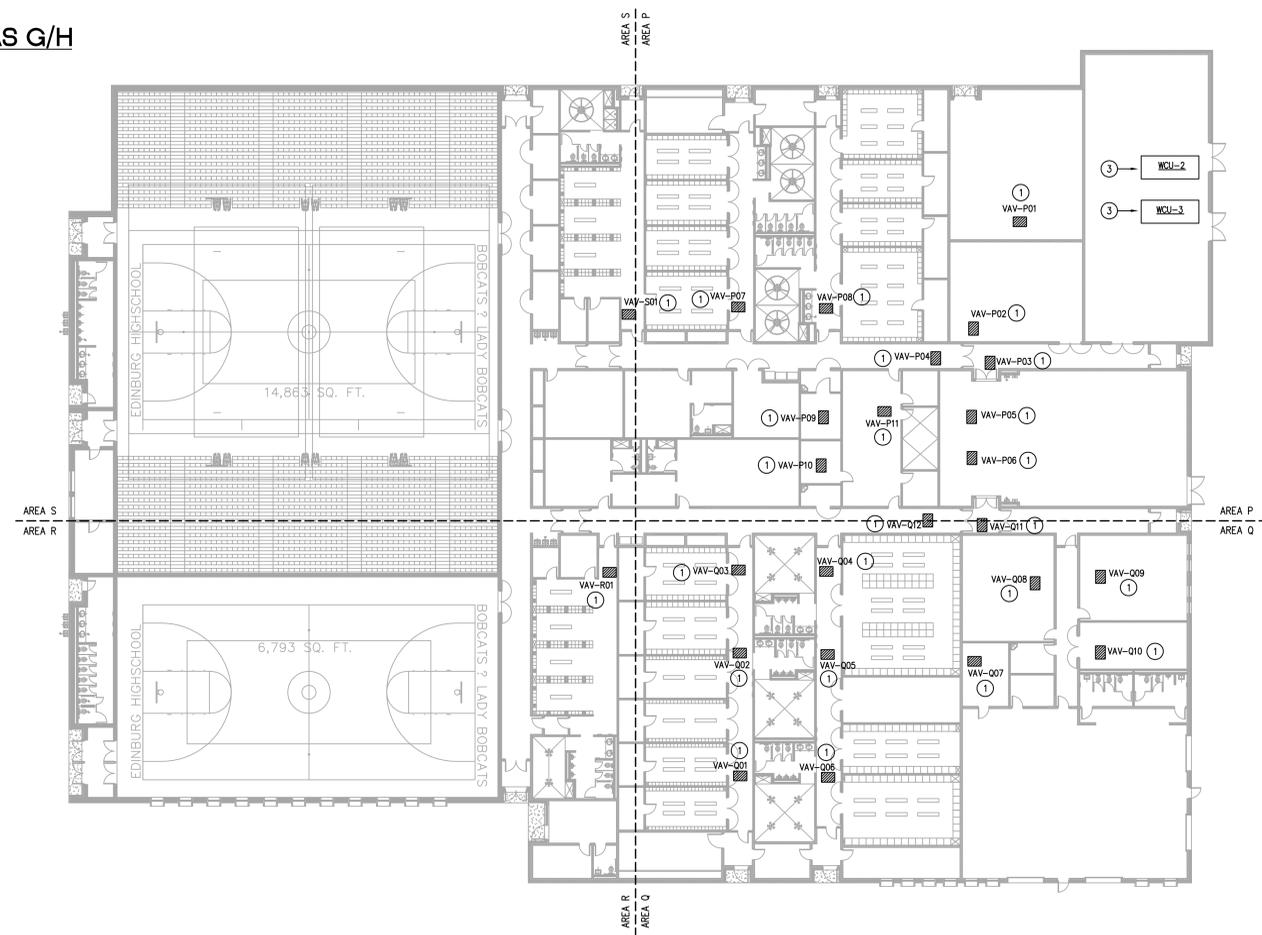
REVISION	No.	DATE	DESCRIPTION
	1	03/23/2022	ADDENDUM No.1



**1** LEVEL 1 POWER DEMOLITION PLAN - AREAS G/H  
EPD2.13 1" = 20'-0"



**2** LEVEL 1 POWER DEMOLITION PLAN - AREAS T/U/V  
EPD2.13 1" = 20'-0"

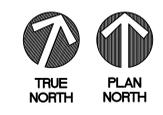


**3** LEVEL 1 POWER DEMOLITION PLAN - AREAS P/Q/R/S  
EPD2.13 1" = 20'-0"

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
EDINBURG HS - HVAC IMPROVEMENTS  
2600 E WISCONSIN RD, EDINBURG, TX 78542

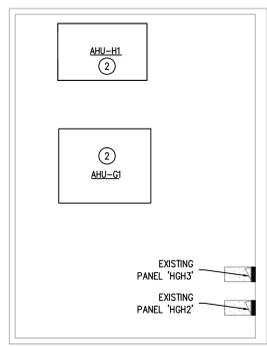
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DRAWN BY: DBR  
CHECKED BY: DBR  
PROJECT NUMBER: 218007.001

SHEET TITLE: LEVEL 1 ELECTRICAL POWER DEMOLITION PLANS  
SHEET NUMBER: EPD2.13

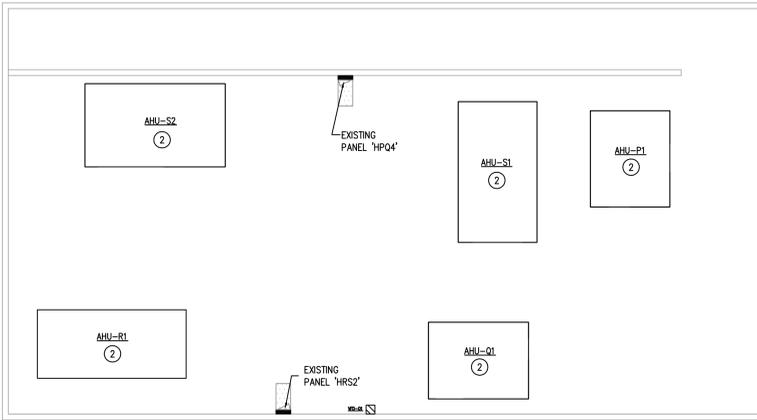


DBR Project Number	218007.001			
HA	MG	JB	TL	--

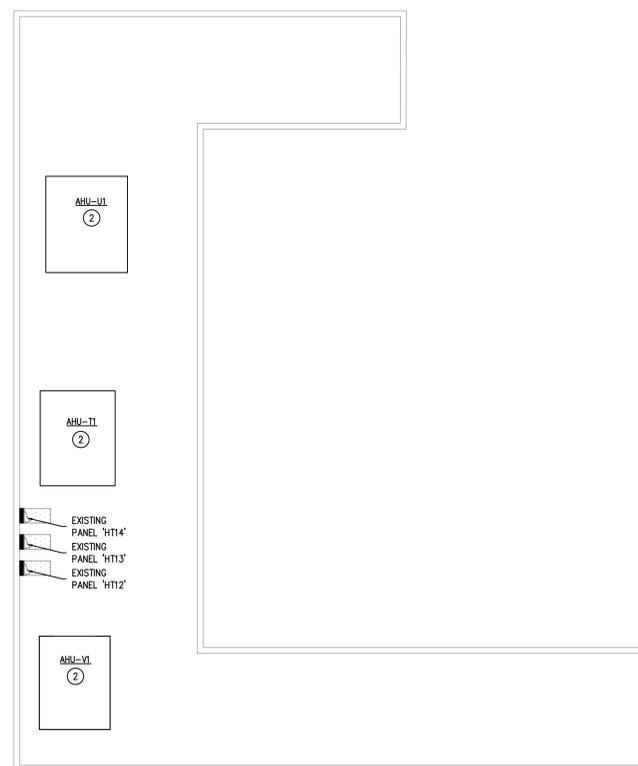
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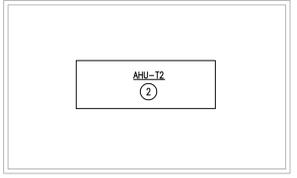
**1 ELECTRICAL POWER DEMOLITION PLAN - AREA H MEZZANINE**  
 EPD2.14 1/8" = 1'-0"



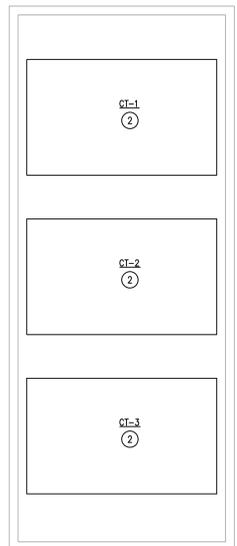
**2 ELECTRICAL POWER DEMOLITION PLAN - GYM MEZZANINE**  
 EPD2.14 1/8" = 1'-0"



**3 ELECTRICAL POWER DEMOLITION PLAN - FINE ARTS MEZZANINE**  
 EPD2.14 1/8" = 1'-0"



**4 ELECTRICAL POWER DEMOLITION PLAN - KITCHEN MEZZANINE**  
 EPD2.14 1/8" = 1'-0"



**5 ELECTRICAL POWER DEMOLITION PLAN - COOLING TOWERS**  
 EPD2.14 1/8" = 1'-0"

**GENERAL ELECTRICAL NOTES:**  
 A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO DEMOLITION. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.

**ELECTRICAL KEYED NOTES:**  
 1. CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING VAV UNIT TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.  
 2. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH MECHANICAL EQUIPMENT TO BE REMOVED. DISCONNECT AND REMOVE EXISTING CONDUIT AND WIRE BACK TO PANEL.  
 3. CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED. EXISTING CONDUIT AND WIRE TO REMAIN FOR CONNECTION OF NEW UNIT.



**REVISION:**

No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001

SHEET TITLE:  
**LEVEL 1 ELECTRICAL POWER DEMOLITION PLANS**

SHEET NUMBER:  
**EPD2.14**

DBR Project Number 218007.001

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**GENERAL ELECTRICAL NOTES:**

- A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO ROUGH-IN. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.
- B. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL EXHAUST FAN CONTROLS. PROVIDE A FAN SWITCH IF INDICATED BY MECHANICAL. ALL EXHAUST FANS SHALL BE PROVIDED WITH BUILT-IN DISCONNECT SWITCH.

**ELECTRICAL KEYED NOTES:**

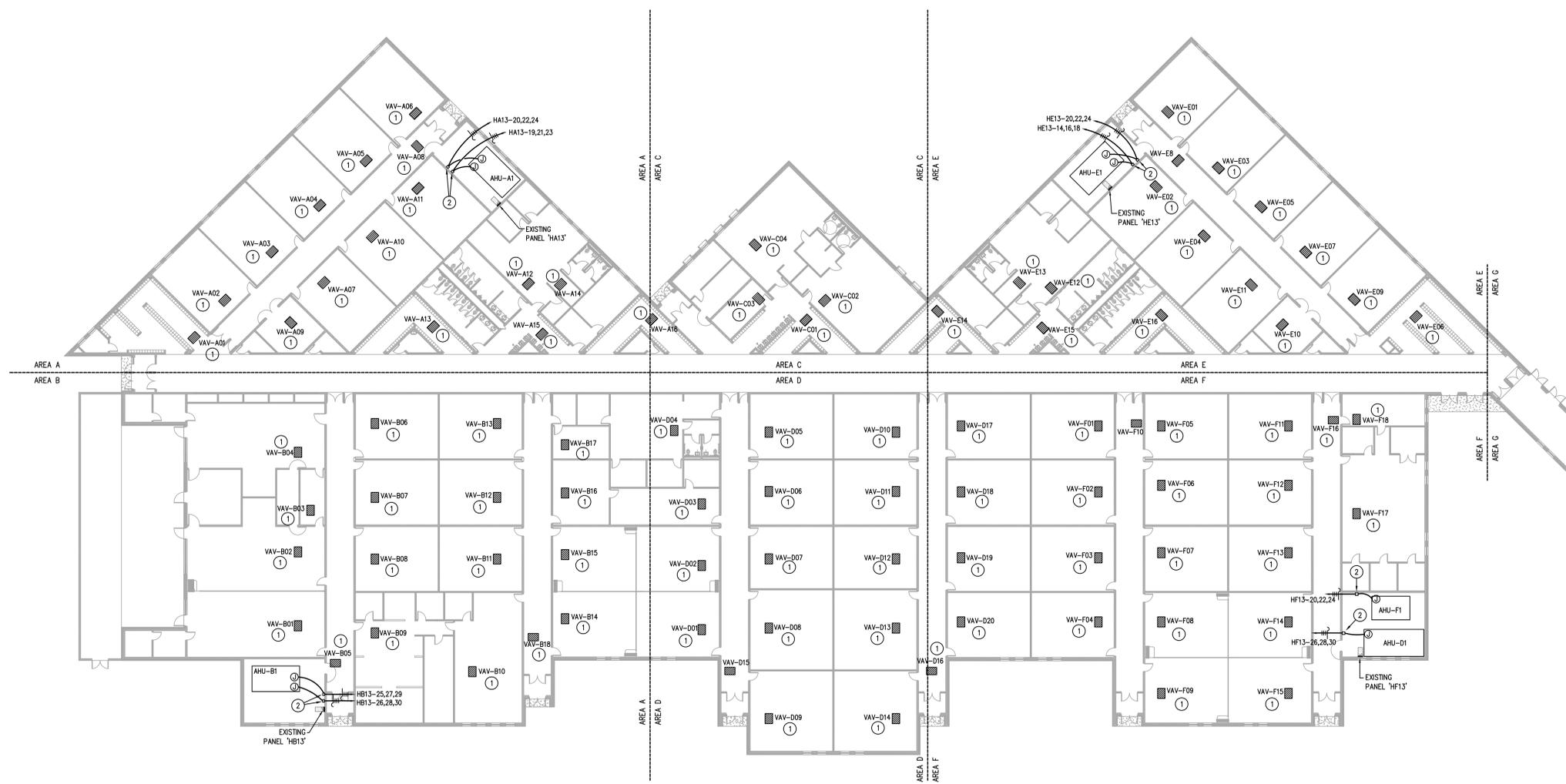
- ① CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL AS REQUIRED TO DISCONNECT EXISTING CIRCUIT FROM VAV UNIT TO BE REMOVED AND RECONNECT TO NEW UNIT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- ② VFD, COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL. WIRED BY ELECTRICAL. VFD SHALL SERVE AS DISCONNECTING MEANS.
- ③ CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED AND RECONNECT TO NEW CHILLER. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND INSTALLED EQUIPMENT.
- ④ PROVIDE 20A/1P CIRCUIT TO NEAREST 120V PANEL. PROVIDE NEW 20A/1P BREAKER. FIELD COORDINATE.
- ⑤ #4, #8GND, 1 1/4" CONDUIT TO MCC. REUSED EXISTING 80A/3P BREAKER. ROUTE CIRCUIT THROUGH VFD PROVIDED BY MECHANICAL. SEE DETAIL 3/FP2.13 FOR VFD LOCATION. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL. WIRED BY ELECTRICAL. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND INSTALLED EQUIPMENT.
- ⑥ 100A/3P/N/F, N/AX DISCONNECT SWITCH. COORDINATE EXACT LOCATION IN FIELD. PROVIDE CODE REQUIRED MOUNTING AND CLEARANCE.

REVISION	No.	DATE	DESCRIPTION
	1	03/23/2022	ADDENDUM No.1



**AHU ELECTRICAL SCHEDULE**

UNIT MARK	BREAKER SIZE	CIRCUIT SIZE
AHU-A1 (SUPPLY)	25A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-A1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-B1 (SUPPLY)	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-B1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-D1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-E1 (SUPPLY)	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-E1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-F1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-G1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-H1	20A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-J1 (SUPPLY)	25A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-J1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-L1 (SUPPLY)	50A/3P	3#8, #10GND, 1" CONDUIT
AHU-L1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-M1 (SUPPLY)	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-M1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-P1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-Q1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-R1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-S1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-S2	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-T1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-T2	20A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-U1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-V1	30A/3P	3#10, #10GND, 3/4" CONDUIT



① LEVEL 1 POWER PLAN - AREAS A/B/C/D/E/F  
 EP2.11  
 1" = 20'-0"

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE:	03/09/2022
DRAWN BY:	DBR
CHECKED BY:	DBR
PROJECT NUMBER:	218007.001
SHEET TITLE:	

**LEVEL 1  
 ELECTRICAL  
 POWER PLAN**

SHEET NUMBER:

**EP2.11**

**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.683.1640 p. 956.683.1903 f  
 TBPE Firm Registration No. 2234

TRUE NORTH  
 PLAN NORTH

DBR Project Number 218007.001

HA	MG	JB	TL	--
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 C:\Users\jrb@db...

**GENERAL ELECTRICAL NOTES:**

- A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO ROUGH-IN. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.
- B. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL EXHAUST FAN CONTROLS. PROVIDE A FAN SWITCH IF INDICATED BY MECHANICAL. ALL EXHAUST FANS SHALL BE PROVIDED WITH BUILT-IN DISCONNECT SWITCH.

**ELECTRICAL KEYED NOTES:**

- ① CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL AS REQUIRED TO DISCONNECT EXISTING CIRCUIT FROM VAV UNIT TO BE REMOVED AND RECONNECT TO NEW UNIT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- ② VFD, COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL. WRED BY ELECTRICAL. VFD SHALL SERVE AS DISCONNECTING MEANS.
- ③ CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED AND RECONNECT TO NEW CHILLER. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND INSTALLED EQUIPMENT.
- ④ PROVIDE 20A/1P CIRCUIT TO NEAREST 120V PANEL. PROVIDE NEW 20A/1P BREAKER. FIELD COORDINATE.
- ⑤ 4#4, #2GND, 1 1/4" CONDUIT TO MCC. REUSED EXISTING 80A/3P BREAKER. ROUTE CIRCUIT THROUGH VFD PROVIDED BY MECHANICAL. SEE DETAIL 3/E/P2.13 FOR VFD LOCATION. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL. WRED BY ELECTRICAL. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND INSTALLED EQUIPMENT.
- ⑥ 100A/3P/1LF, MAX DISCONNECT SWITCH. COORDINATE EXACT LOCATION IN FIELD. PROVIDE CODE REQUIRED MOUNTING AND CLEARANCE.

**REVISION:**

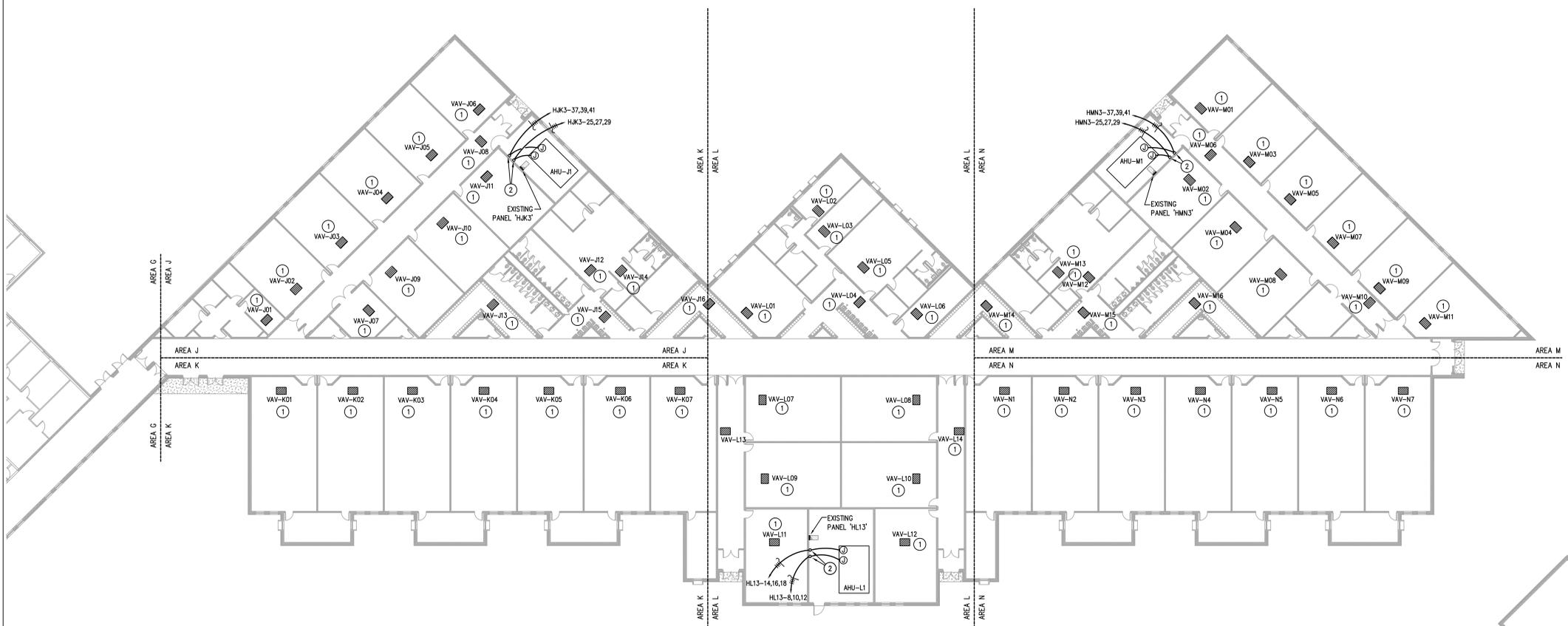
No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1

**SEAL:**



**AHU ELECTRICAL SCHEDULE**

UNIT MARK	BREAKER SIZE	CIRCUIT SIZE
AHU-A1 (SUPPLY)	25A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-A1 (EXHAUST)	15A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-B1 (SUPPLY)	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-B1 (EXHAUST)	15A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-D1	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-E1 (SUPPLY)	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-E1 (EXHAUST)	15A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-F1	30A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-G1	30A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-H1	20A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-J1 (SUPPLY)	25A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-J1 (EXHAUST)	15A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-L1 (SUPPLY)	50A/3P	3/8, #10GND, 1" CONDUIT
AHU-L1 (EXHAUST)	15A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-M1 (SUPPLY)	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-M1 (EXHAUST)	15A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-P1	30A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-Q1	30A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-R1	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-S1	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-S2	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-T1	30A/3P	3/10, #10GND, 3/4" CONDUIT
AHU-T2	20A/3P	3/12, #12GND, 3/4" CONDUIT
AHU-U1	40A/3P	3/8, #10GND, 1" CONDUIT
AHU-V1	30A/3P	3/10, #10GND, 3/4" CONDUIT



**① LEVEL 1 POWER PLAN - AREAS J/K/L/M/N**  
EP2.12 1" = 20'-0"

EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
**EDINBURG HS - HVAC IMPROVEMENTS**  
2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE:  
03/09/2022

DRAWN BY:  
DBR

CHECKED BY:  
DBR

PROJECT NUMBER:  
218007.001

SHEET TITLE:

**LEVEL 1  
ELECTRICAL  
POWER PLAN**

SHEET NUMBER:

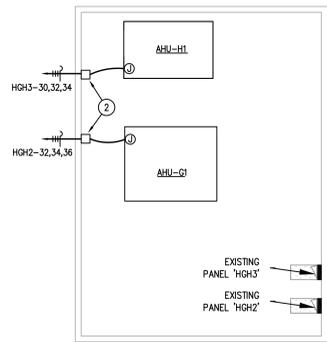
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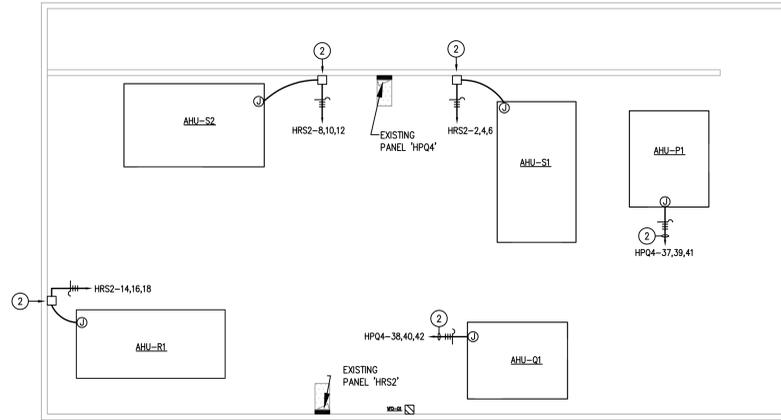
DBR Project Number 218007.001

HA MG JB TL --

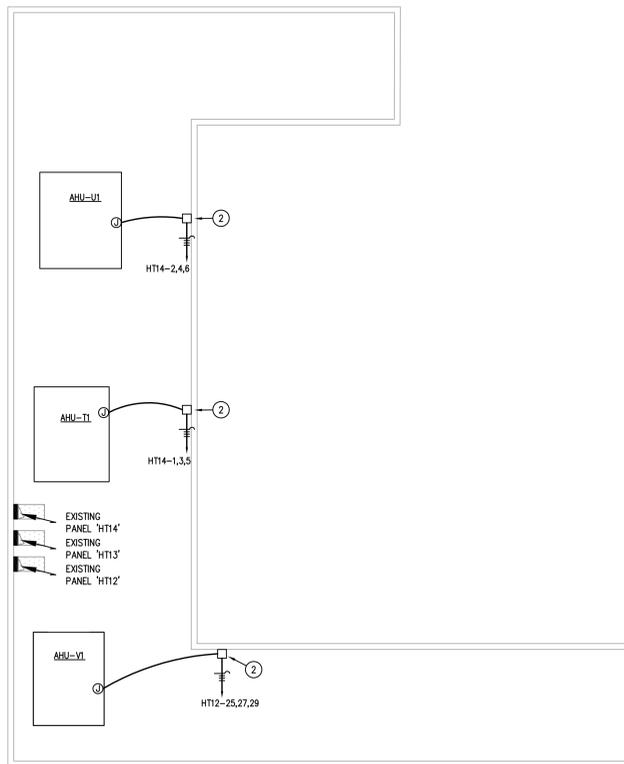




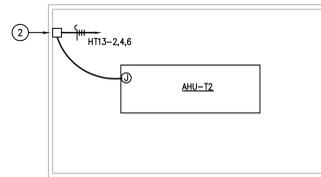
**1 ELECTRICAL POWER PLAN - AREA H MEZZANINE**  
EP2.14 1/8" = 1'-0"



**2 ELECTRICAL POWER PLAN - GYM MEZZANINE**  
EP2.14 1/8" = 1'-0"

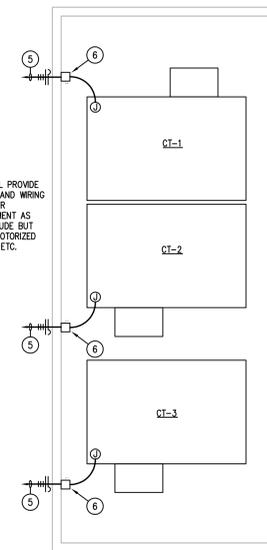


**3 ELECTRICAL POWER PLAN - FINE ARTS MEZZANINE**  
EP2.14 1/8" = 1'-0"



**4 ELECTRICAL POWER PLAN - KITCHEN MEZZANINE**  
EP2.14 1/8" = 1'-0"

NOTE:  
CONTRACTOR SHALL PROVIDE ALL NEW CONDUIT AND WIRING FOR COOLING TOWER ACCESSORY EQUIPMENT AS REQUIRED, TO INCLUDE BUT NOT LIMITED TO: MOTORIZED VALVES, HEATERS, ETC. COORDINATE WITH MECHANICAL.



**5 ELECTRICAL POWER PLAN - COOLING TOWERS**  
EP2.14 1/8" = 1'-0"

**GENERAL ELECTRICAL NOTES:**

- A. CONTRACTOR SHALL VERIFY EQUIPMENT LOCATIONS WITH MECHANICAL PRIOR TO ROUGH-IN. REFER TO M-SERIES SHEETS FOR ADDITIONAL INFORMATION.
- B. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL EXHAUST FAN CONTROLS. PROVIDE A FAN SWITCH IF INDICATED BY MECHANICAL. ALL EXHAUST FANS SHALL BE PROVIDED WITH BUILT-IN DISCONNECT SWITCH.

**ELECTRICAL KEYED NOTES:**

- 1 CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL AS REQUIRED TO DISCONNECT EXISTING CIRCUIT FROM VAN UNIT TO BE REMOVED AND RECONNECT TO NEW UNIT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
- 2 VFD, COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL. WIRING BY ELECTRICAL. VFD SHALL SERVE AS DISCONNECTING MEANS.
- 3 CONTRACTOR SHALL DISCONNECT EXISTING CIRCUIT FROM EXISTING CHILLER TO BE REMOVED AND RECONNECT TO NEW CHILLER. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND INSTALLED EQUIPMENT.
- 4 PROVIDE 20A/1P CIRCUIT TO NEAREST 120V PANEL. PROVIDE NEW 20A/1P BREAKER. FIELD COORDINATE.
- 5 #14, #16GND, 1 1/4" CONDUIT TO MCC. REVISED EXISTING 80A/3P BREAKER. ROUTE CIRCUIT THROUGH VFD PROVIDED BY MECHANICAL. SEE DETAIL 3/EP2.13 FOR VFD LOCATION. VFD SHALL BE PROVIDED AND INSTALLED BY MECHANICAL. WIRING BY ELECTRICAL. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL AND INSTALLED EQUIPMENT.
- 6 100A/3P N/F MAX DISCONNECT SWITCH. COORDINATE EXACT LOCATION IN FIELD. PROVIDE CODE REQUIRED MOUNTING AND CLEARANCE.

**AHU ELECTRICAL SCHEDULE**

UNIT MARK	BREAKER SIZE	CIRCUIT SIZE
AHU-A1 (SUPPLY)	25A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-A1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-B1 (SUPPLY)	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-B1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-D1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-E1 (SUPPLY)	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-E1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-F1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-G1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-H1	20A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-J1 (SUPPLY)	25A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-J1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-L1 (SUPPLY)	50A/3P	3#8, #10GND, 1" CONDUIT
AHU-L1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-M1 (SUPPLY)	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-M1 (EXHAUST)	15A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-P1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-Q1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-R1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-S1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-S2	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-T1	30A/3P	3#10, #10GND, 3/4" CONDUIT
AHU-T2	20A/3P	3#12, #12GND, 3/4" CONDUIT
AHU-U1	40A/3P	3#8, #10GND, 1" CONDUIT
AHU-V1	30A/3P	3#10, #10GND, 3/4" CONDUIT



**REVISION**

No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
EDINBURG HS - HVAC IMPROVEMENTS  
2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
DRAWN BY: DBR  
CHECKED BY: DBR  
PROJECT NUMBER: 218007.001  
SHEET TITLE: LEVEL 1 ELECTRICAL POWER PLAN

SHEET NUMBER: EP2.14

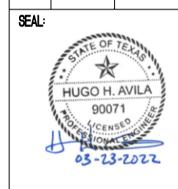
TRUE NORTH PLAN NORTH

DBR Project Number 218007.001

HA MG JB TL --

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REVISION No.	DATE	DESCRIPTION
1	03/23/2022	ADDENDUM No.1



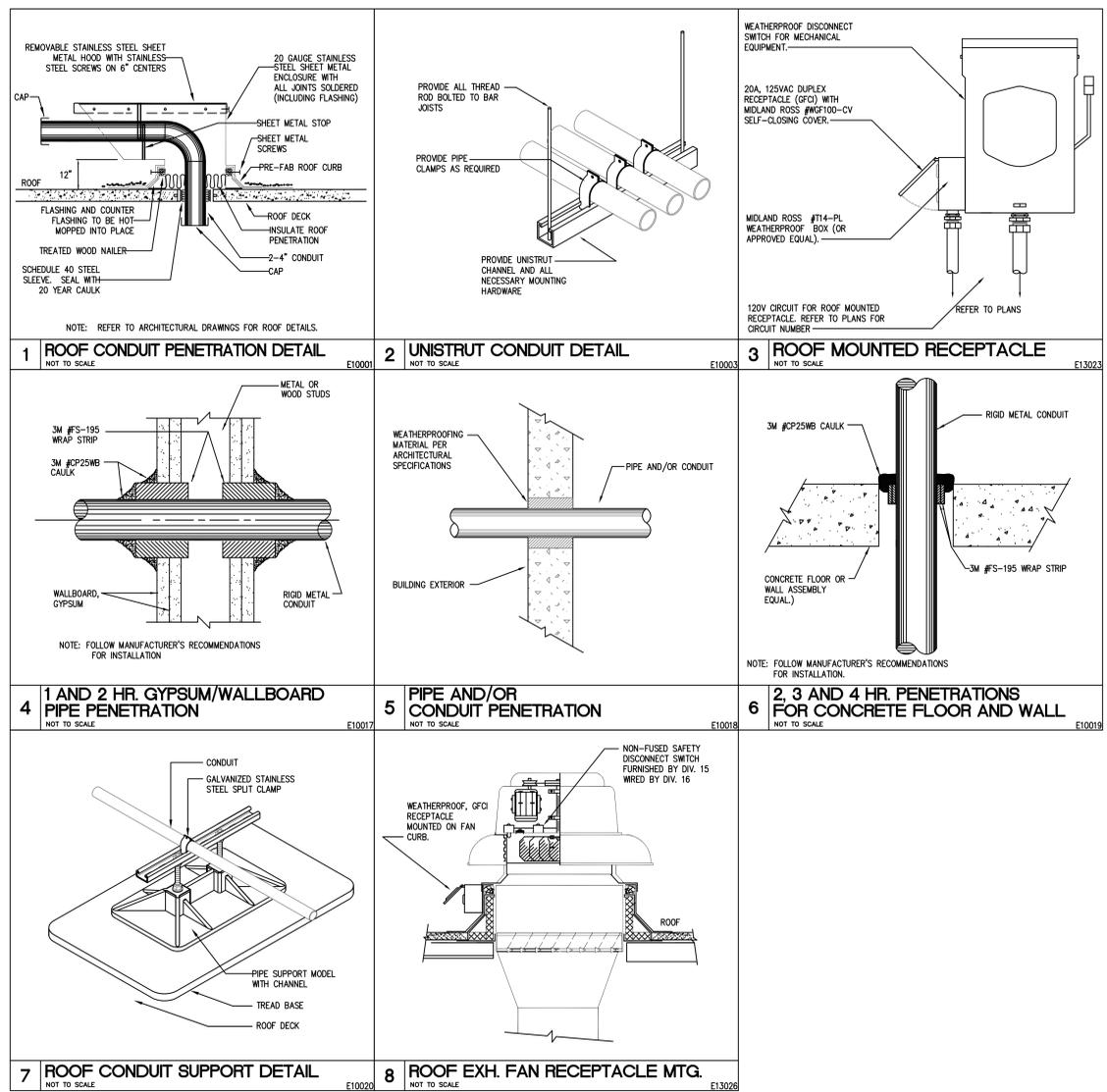
EDINBURG CONSOLIDATED INDEPENDENT SCHOOL DISTRICT  
 EDINBURG HS - HVAC IMPROVEMENTS  
 2600 E WISCONSIN RD, EDINBURG, TX 78542

DATE: 03/09/2022  
 DRAWN BY: DBR  
 CHECKED BY: DBR  
 PROJECT NUMBER: 218007.001  
 SHEET TITLE:

ELECTRICAL DETAILS  
 SHEET NUMBER: E6.01

**DBR**  
 200 South 10th Street Suite 901  
 Mc Allen, Texas 78501  
 956.883.1640 p. 956.883.1903 f  
 TBPE Firm Registration No. 2234

DBR Project Number 218007.001  
 HA | MG | JB | TL | --



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