

February 8, 2022

Page 1

**ADDENDUM NUMBER ONE TO PLANS AND SPECIFICATIONS FOR  
2022 HVAC RENOVATION FOR  
RAINS JUNIOR HIGH SCHOOL  
RAINS INDEPENDENT SCHOOL DISTRICT**

**ENGINEER: EMA ENGINEERING & CONSULTING  
328 South Broadway  
Tyler, Texas 75702**



02/08/2022

This addendum forms a part of the Contract Documents and modifies the original Construction Documents dated **January 25, 2022** as noted below. Careful note of this Addendum shall be taken by all parties of interest so that proper allowance is made in all computations, estimates and Contracts. This Addendum supersedes all previous Specifications and Instructions pertaining to these items. The Proposer shall acknowledge receipt of this Addendum in the space provided on the Proposal Form. Failure to do so may subject the Proposer to disqualification.

**This Addendum consist of 2 pages and 2 attachments.**

**MEP**

**DRAWINGS**

**SHEET MEPD1.3**

A. Refer to the attached sheet for plan note location corrections.

**SHEET MEPD1.7**

A. Refer to the attached sheet for the Vocational Ag building demolition plans.

**SHEET MEP1.1**

A. Refer to the attached sheet for added duct detector notation.

**SHEET MEP1.2**

A. Refer to the attached sheet for added duct detector notation.

**SHEET MEP1.3**

A. Refer to the attached sheet for plan note and unit tag clarifications.

**SHEET MEP1.4**

- A. Refer to the attached sheet for plan note and unit tag clarifications.

**SHEET MEP1.5**

- A. Refer to the attached sheet for plan note and unit tag clarifications.

**SHEET MEP1.7**

- A. Refer to the attached sheet for the Vocational Ag MEP floor plan.

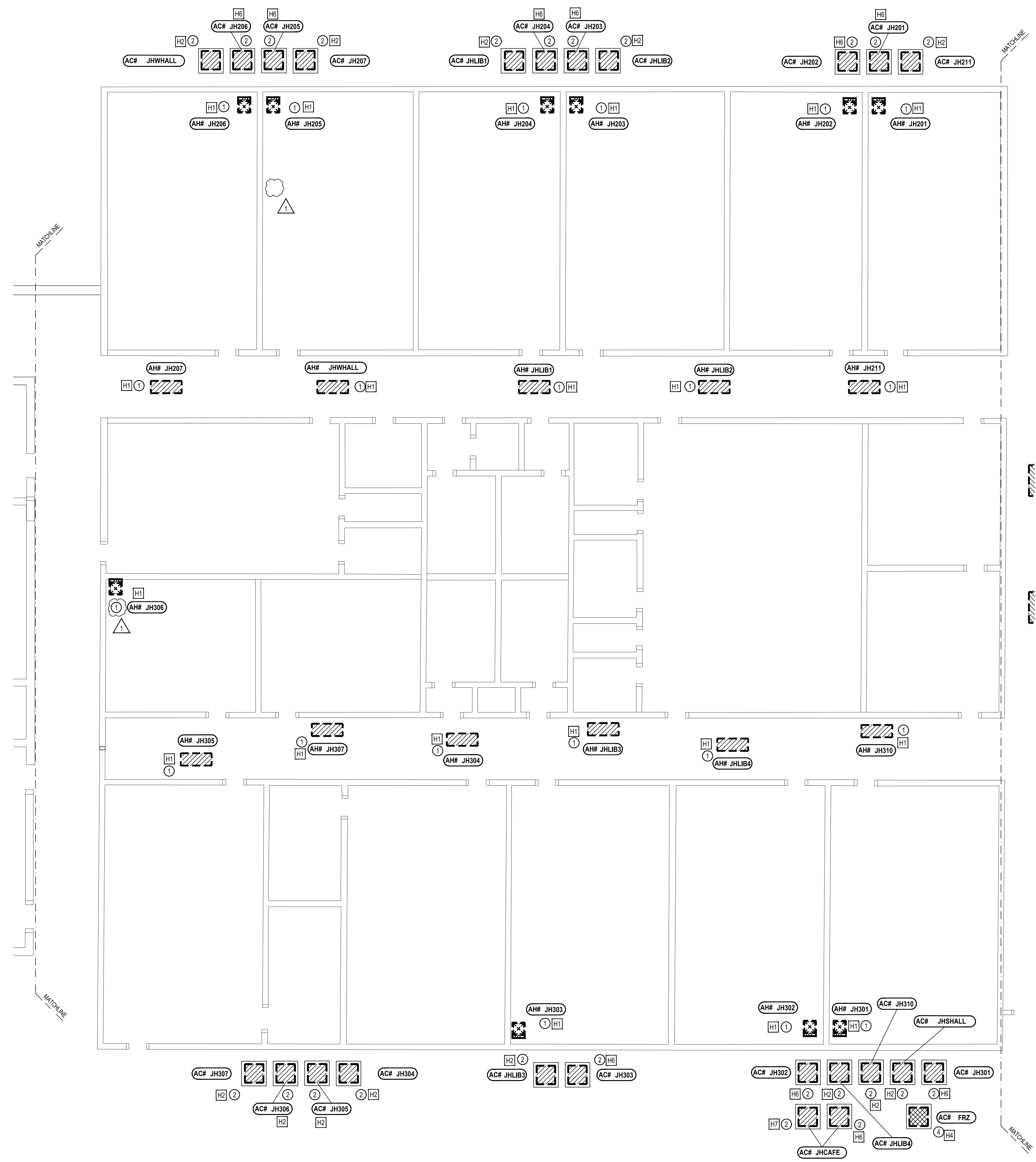
**SHEET MEP7.2**

- A. Refer to the attached sheet for detail corrections.

**SHEET MEP8.1**

- A. Refer to the attached sheet for revisions to schedules for the inclusion of Vocational Ag building equipment.

**END OF ADDENDUM ITEMS**



**MECHANICAL DEMOLITION PLAN NOTES**

- 1 REMOVE AND DISCARD EXISTING AIR HANDLER. EXISTING DUCTWORK AND CONDENSATE PIPING TO REMAIN. NEW AIR HANDLER TO BE MOUNTED IN EXISTING LOCATION. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- 2 REMOVE AND DISCARD EXISTING CONDENSER AND ASSOCIATED REFRIGERANT PIPING.
- 3 EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- 4 EXISTING CONDENSER UNIT TO REMAIN IN PLACE AND OPERATIONAL.
- 5 REMOVE EXISTING VISIBLE CHILLED WATER PIPING AND FITTINGS IN EXPOSED CEILING AREAS. PATCH PENETRATIONS AS REQUIRED TO MATCH EXISTING.

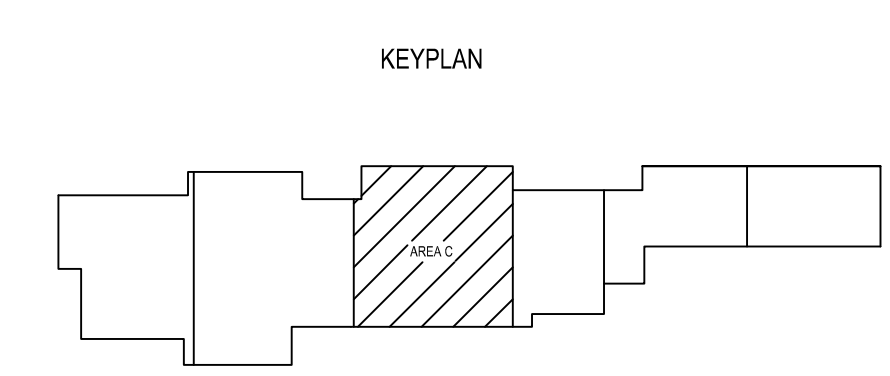
REFER TO SHEET MH7.2 FOR GENERAL DEMOLITION NOTES.

**ELECTRICAL DEMOLITION GENERAL NOTES**

1. UNLESS NOTED ON DRAWINGS, ALL LIGHTING, SWITCHES, OUTLETS AND OTHER ELECTRICAL DEVICES ARE TO REMAIN.
2. REFER TO SPECIFICATION SECTION 26 05 11, ELECTRICAL DEMOLITION REMODELING, FOR GENERAL DEMOLITION REQUIREMENTS.
3. ALL MATERIAL REMOVED AND NOT RETAINED BY THE OWNER SHALL BE DISPOSED OF OFF SITE IN A LAWFUL MANNER.
4. BEFORE DEMOLISHING PANELS, TRACE ALL BRANCH CIRCUITS TO CONFIRM THAT EXISTING LOADS HAVE BEEN RELOCATED TO NEW PANELS. IF A LOAD EXISTS THAT HAS NOT BEEN RELOCATED TO NEW PANELS, CONTACT THE ENGINEER FOR INSTRUCTIONS.

**HVAC DEMOLITION PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- H1 EXISTING AIR HANDLER TO BE REMOVED AND REPLACED. EXISTING CIRCUIT SHALL BE USED TO PROVIDE POWER TO NEW AIR HANDLER AT THE SAME LOCATION.
- H2 EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. EXISTING CIRCUIT SHALL BE USED TO PROVIDE POWER TO NEW AIR CONDENSER AT THE SAME LOCATION.
- H3 EXISTING AIR HANDLER TO REMAIN IN PLACE AND OPERATIONAL.
- H4 EXISTING AIR CONDENSER TO REMAIN IN PLACE AND OPERATIONAL.
- H5 EXISTING AIR HANDLER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H6 EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- H7 EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.



1 MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - AREA C  
1/8"=1'-0"



EMA Engineering and Consulting  
Tyler | Austin | Houston | El Paso  
DFW | San Antonio | Shreveport  
TBPE Firm Registration No. F-893  
www.EMAEngineer.com  
Phone: 1.800.933.0538



01-25-2022  
ISSUE DATE  
01-25-2022

REVISION DATE  
ADDENDUM 1 02-04-2022

2022 HVAC RENOVATION  
**RAINS JUNIOR HIGH SCHOOL**  
 RAINS INDEPENDENT SCHOOL DISTRICT  
 EMORY, TX

EMA JOB #: 1-001-0959-001  
DRAWN BY: LRU  
CHECKED: QS

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SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.

MECHANICAL/ELECTRICAL/  
PLUMBING  
DEMOLITION  
FLOOR PLAN  
AREA C  
SHEET NUMBER

**MEPD1.3**

**MECHANICAL DEMOLITION  
PLAN NOTES**

- ① REMOVE AND DISCARD EXISTING AIR HANDLER. EXISTING DUCTWORK AND CONDENSATE PIPING TO REMAIN. NEW AIR HANDLER TO BE MOUNTED IN EXISTING LOCATION. REMOVE EXISTING THERMOSTAT AND CONTROL WIRING TIED TO UNIT AND REPLACE WITH NEW THERMOSTAT IN SAME LOCATION.
- ② REMOVE AND DISCARD EXISTING CONDENSER AND ASSOCIATED REFRIGERANT PIPING.
- ③ EXISTING UNIT HEATER TO REMAIN IN PLACE AND OPERATIONAL.
- ④ REMOVE AND DISCARD EXISTING WALL MOUNTED EXHAUST FAN.

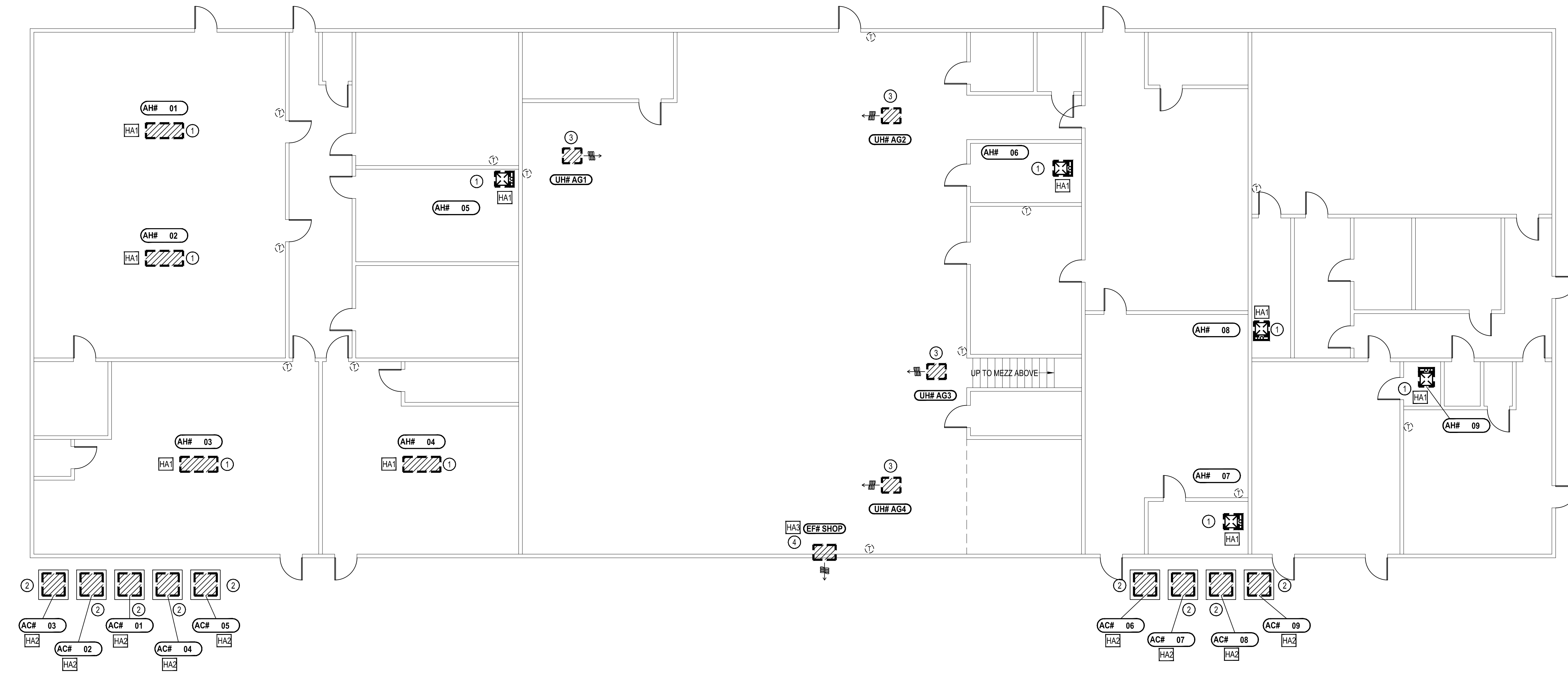
REFER TO SHEET MHT.2 FOR GENERAL DEMOLITION NOTES.

**ELECTRICAL DEMOLITION GENERAL NOTES**

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- 2. REFER TO SPECIFICATION SECTION 26 05 11, ELECTRICAL DEMOLITION REMODELING, FOR GENERAL DEMOLITION REQUIREMENTS.
- 3. ALL MATERIAL REMOVED AND NOT RETAINED BY THE OWNER SHALL BE DISPOSED OF OFF SITE IN A LAWFUL MANNER.
- 4. BEFORE DEMOLISHING PANELS, TRACE ALL BRANCH CIRCUITS TO CONFIRM THAT EXISTING LOADS HAVE BEEN RELOCATED TO NEW PANELS. IF A LOAD EXISTS THAT HAS NOT BEEN RELOCATED TO NEW PANELS, CONTACT THE ENGINEER FOR INSTRUCTIONS.

**HVAC ALTERNATE DEMOLITION PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- HA1 EXISTING AIR HANDLER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- HA2 EXISTING AIR CONDENSER TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.
- HA3 EXISTING FAN TO BE REMOVED AND REPLACED. REMOVE EXISTING CONDUIT AND WIRING BACK TO SOURCE. TAG BREAKER AS SPARE.



① MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION FLOOR PLAN - VOCATIONAL AG  
1/8"=1'-0"



ISSUE DATE  
**01-25-2022**

REVISION	DATE
ADDENDUM 1	02-04-2022

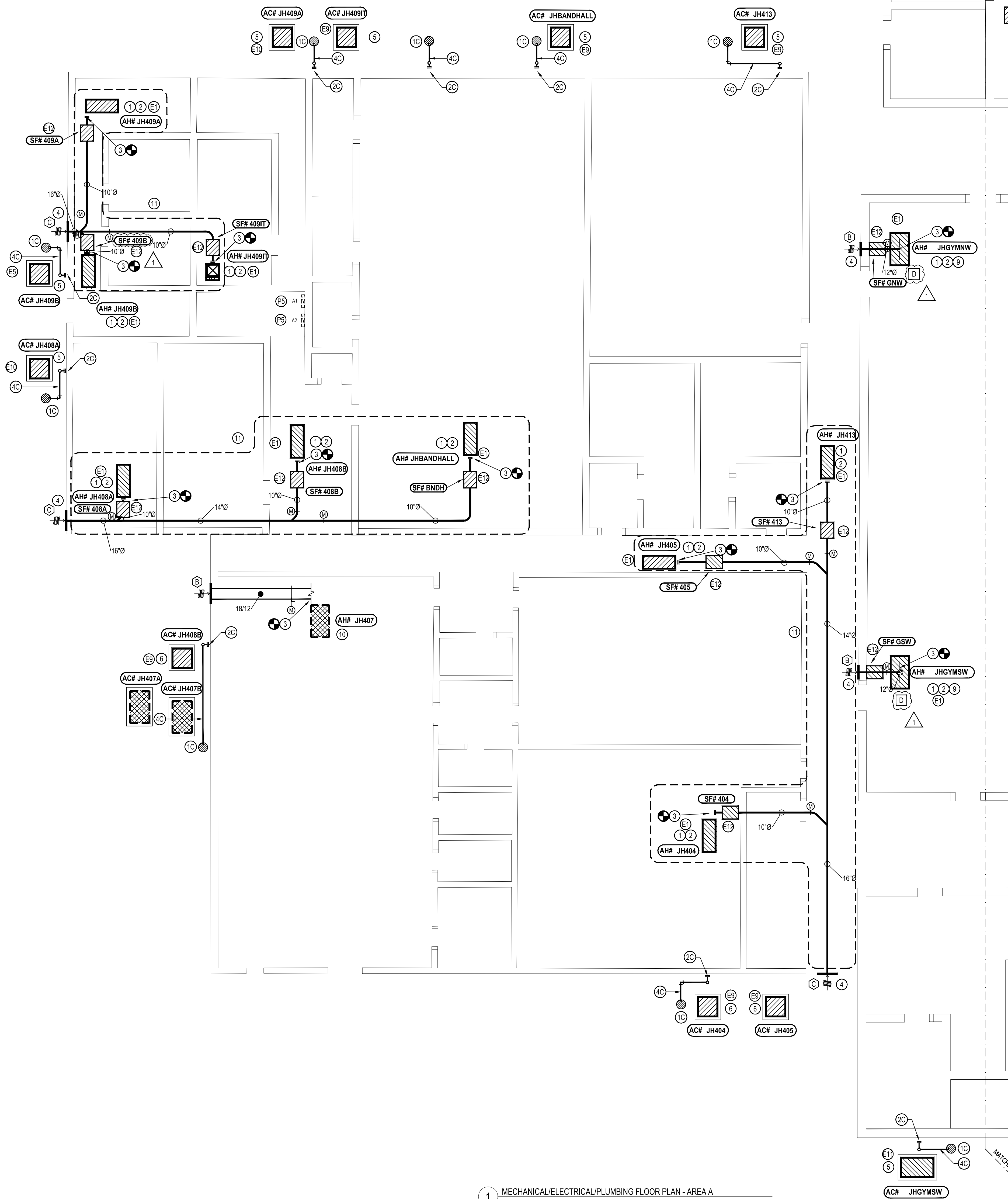
**2022 HVAC RENOVATION**  
**RAINS JUNIOR HIGH SCHOOL**  
 RAINS INDEPENDENT SCHOOL DISTRICT  
 EMORY, TX

EMA JOB #:	1-001-0959-001
DRAWN BY:	LRU
CHECKED:	QS

MECHANICAL/ELECTRICAL/  
PLUMBING  
DEMOLITION  
FLOOR PLAN  
VOCATIONAL AG  
SHEET NUMBER

SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.





1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA A  
1/8"=1'-0"

### ELECTRICAL GENERAL NOTES

(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP.7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

### ELECTRICAL PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

### ELECTRICAL PANELBOARD PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4/0, 1-4/4 GRN, 2 1/2" COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" WITH 4-#3/0, 1-#3 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #6 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS. AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

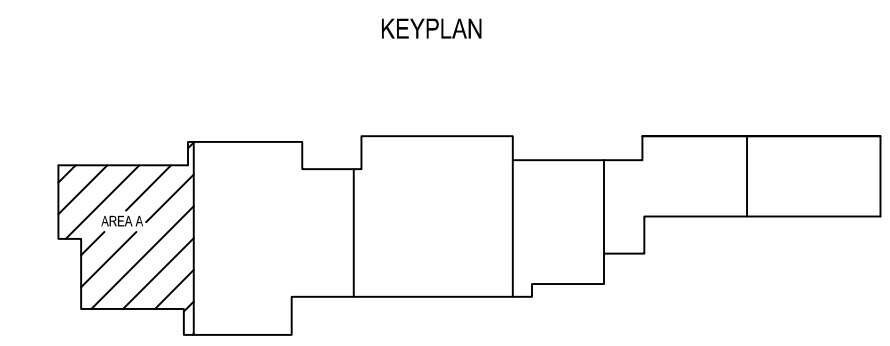
### MECHANICAL PLAN NOTES

- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. REINFORCING JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

### CONDENSATE PIPING PLAN NOTES

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MH.7.2 FOR GENERAL NOTES.



ISSUE DATE  
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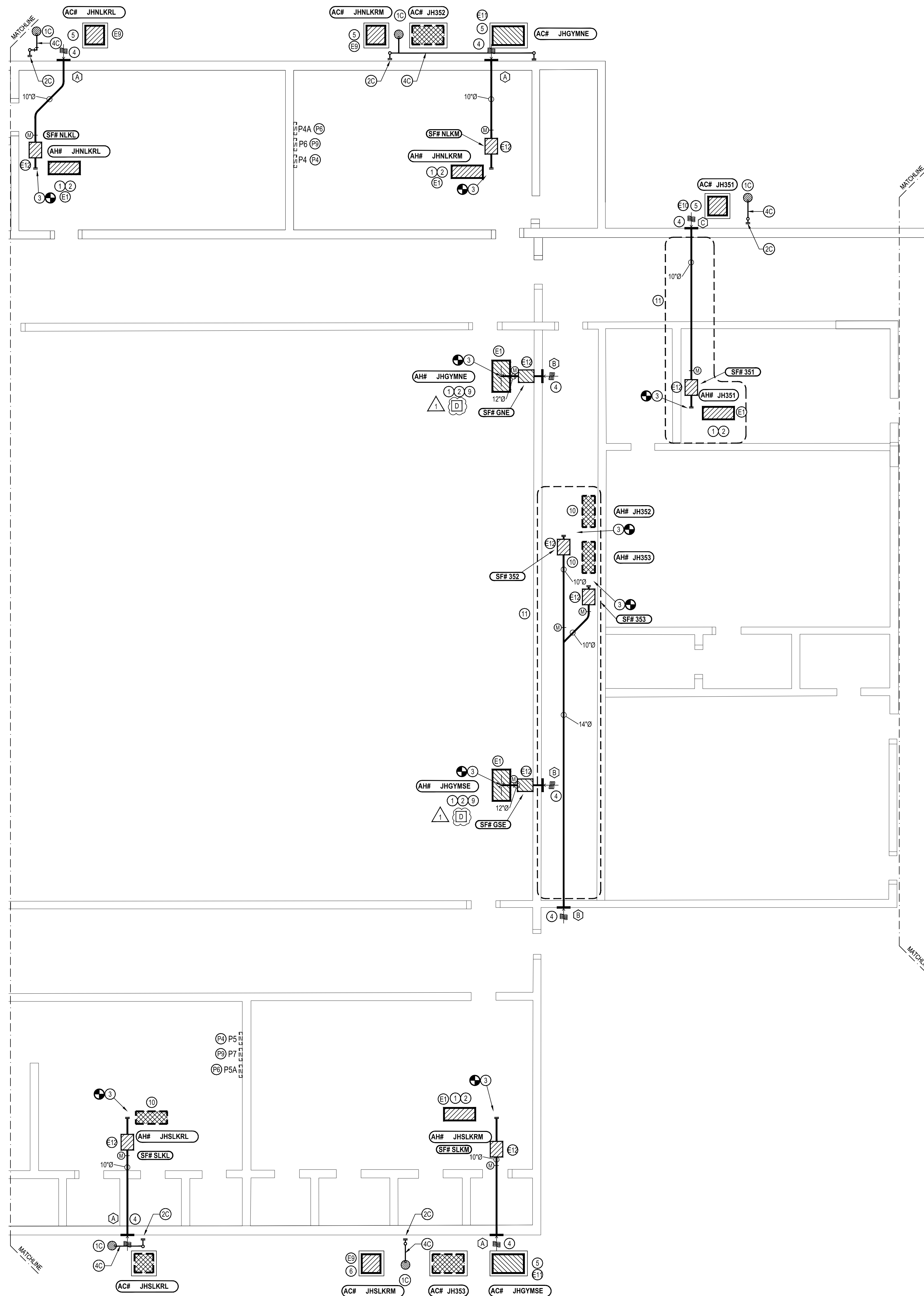
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MECHANICAL/ELECTRICAL/  
PLUMBING  
FLOOR PLAN  
AREA A

SHEET NUMBER  
**MEP1.1**

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1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA B  
1/8"=1'-0"

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(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP.7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.
- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
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- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
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- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

**ELECTRICAL PANELBOARD PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4# GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #6 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400MCM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

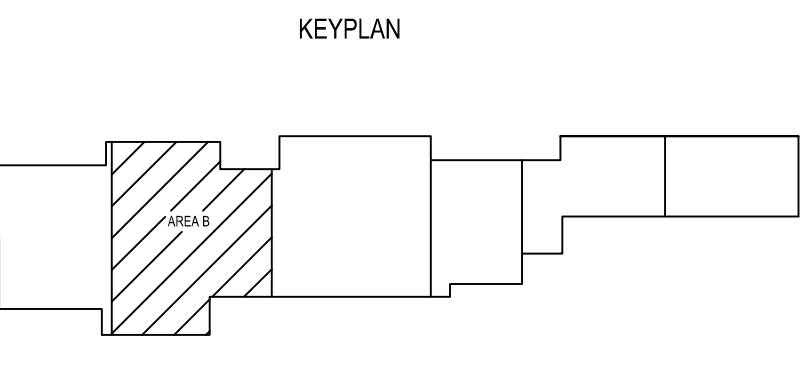
**MECHANICAL PLAN NOTES**

- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOBSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

**CONDENSATE PIPING PLAN NOTES**

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MHT.2 FOR GENERAL NOTES.



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ISSUE DATE  
**01-25-2022**  
REVISION DATE  
ADDEDUMUM 1 02-04-2022

2022 HVAC RENOVATION  
**RAINS JUNIOR HIGH SCHOOL**  
RAINS INDEPENDENT SCHOOL DISTRICT  
EMORY, TX

EMA JOB #: 1-001-0959-001  
DRAWN BY: LRU  
CHECKED: QS

MECHANICAL/ELECTRICAL/  
PLUMBING  
FLOOR PLAN  
AREA B

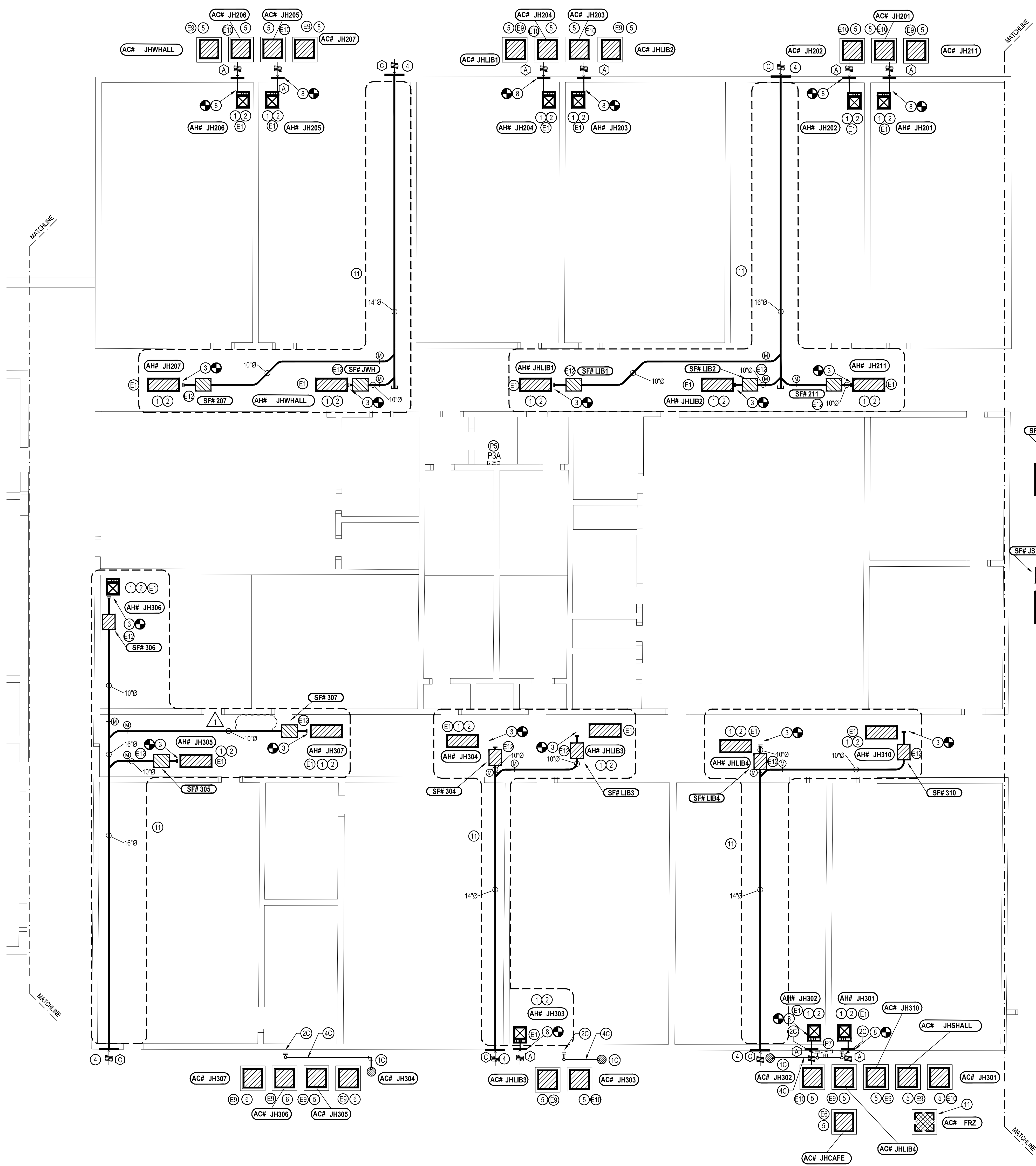
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SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.





1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA C  
1/8"=1'-0"

**ELECTRICAL GENERAL NOTES**  
(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

**ELECTRICAL PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #8 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

**ELECTRICAL PANELBOARD PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHP. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4# GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHP AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHP FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHP SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
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- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

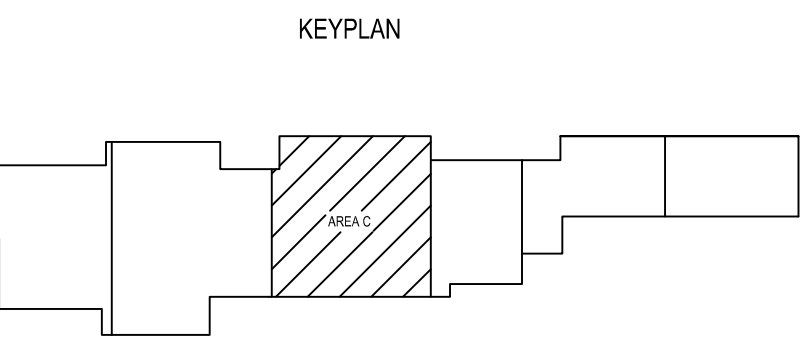
**MECHANICAL PLAN NOTES**

- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXISTING WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- COVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY). CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

**CONDENSATE PIPING PLAN NOTES**

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MH7.2 FOR GENERAL NOTES.



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2022 HVAC RENOVATION  
**RAINS JUNIOR HIGH SCHOOL**  
RAINS INDEPENDENT SCHOOL DISTRICT  
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EMA JOB #: 1-001-0959-001  
DRAWN BY: LRU  
CHECKED: QS

MECHANICAL/ELECTRICAL/  
PLUMBING  
FLOOR PLAN  
AREA C

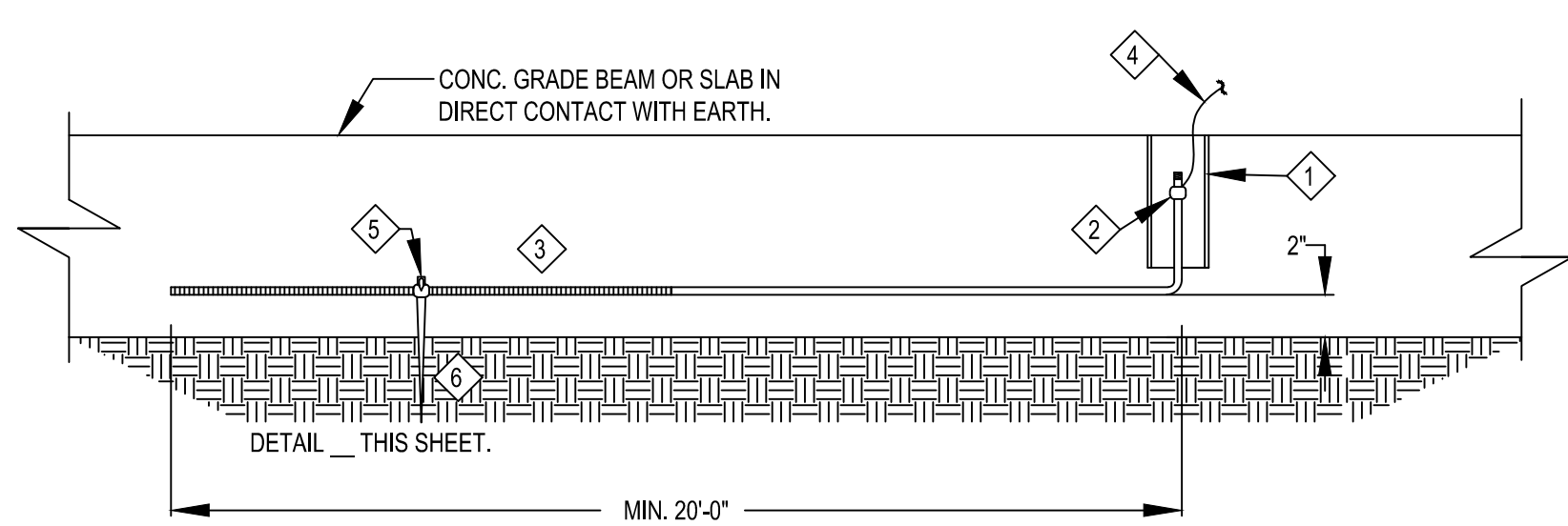
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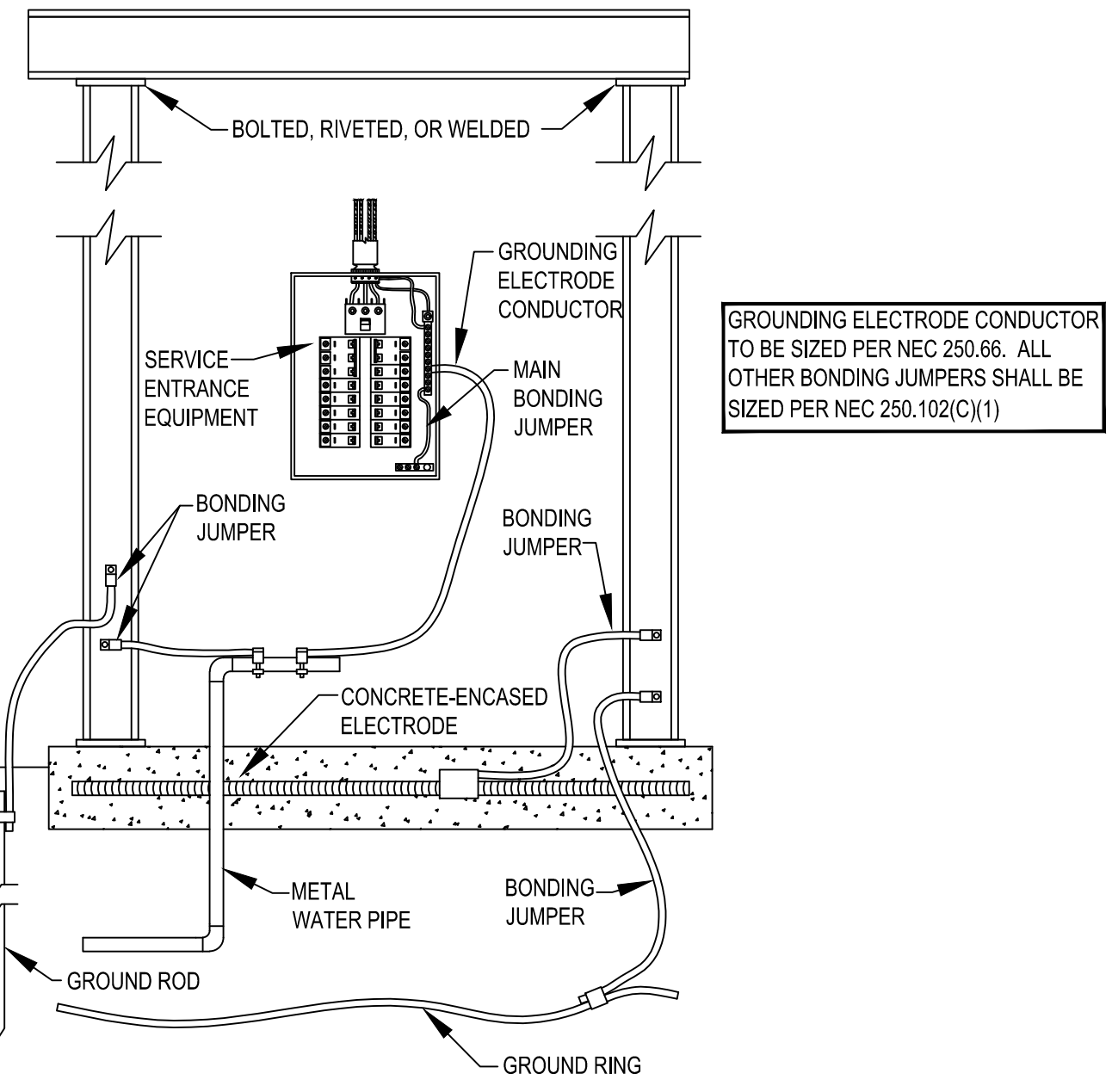
SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.



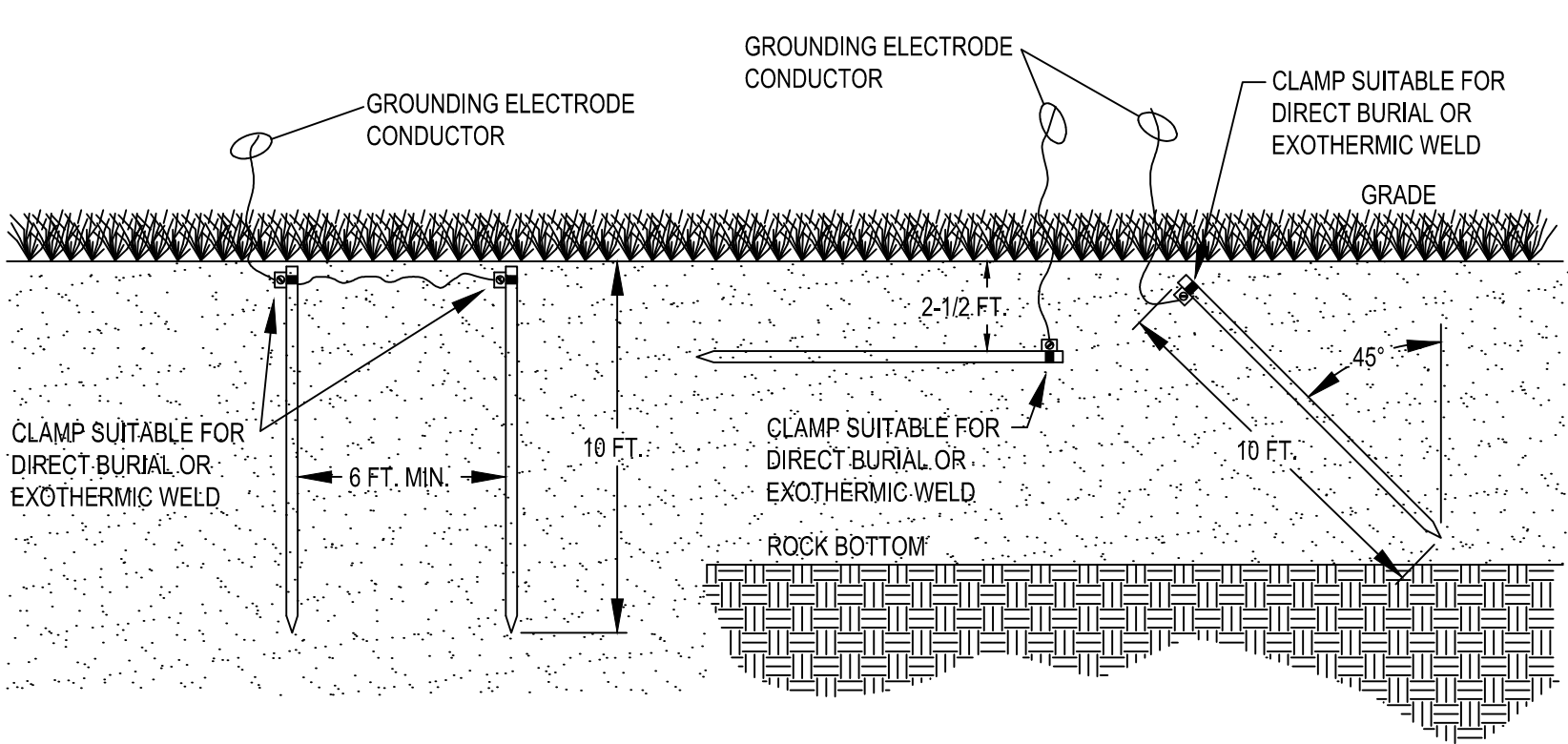


- NOTE BY SYMBOL " "
- 1 4" PVC SLEEVE FOR PROTECTION OF GROUND LEAD IN SWITCH GEAR
  - 2 COPPER WELD OR EQUAL 2-BOLT GROUND CLAMP
  - 3 COPPER GROUNDING CONDUCTOR
  - 4 COPPER GROUNDING ELECTRODE CONDUCTOR
  - 5 CRIMP CONNECTION, CADWELD TYPE "GY" OR EQUIVALENT
  - 6 3/4"x1/2" COPPER-CLAD GROUND ROD, FURNISH AS REQUIRED BY LOCAL SOIL CONDITIONS TO ACHIEVE MINIMUM RESISTANCE PER NETA 7.13

2 ELECTRICAL BUILDING GROUNDING ELECTRODE SYSTEM  
N.T.S.

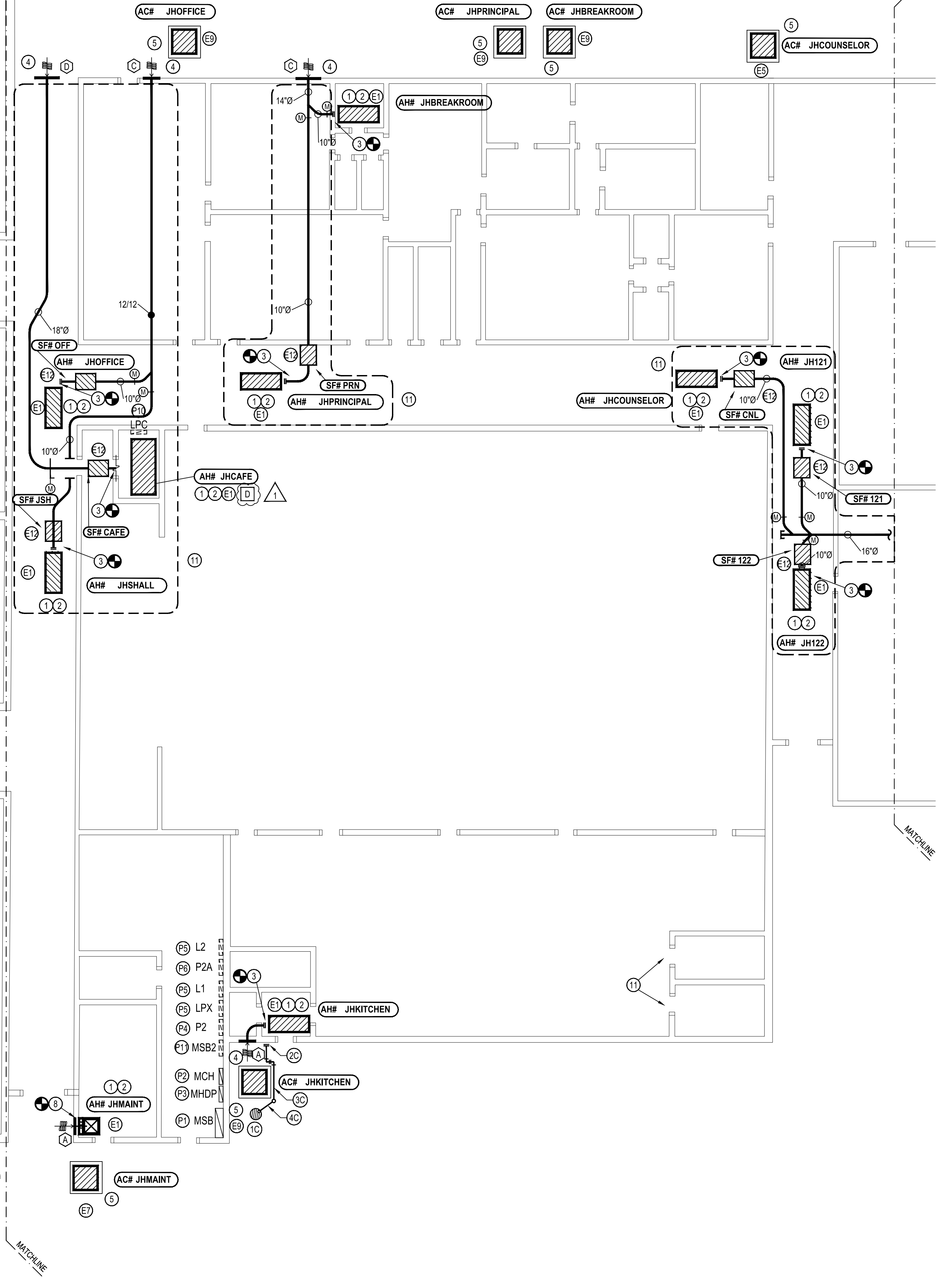


3 GROUNDING ELECTRODE SYSTEM  
N.T.S.



NOTE: ALL PIPE AND ROD ELECTRODES MUST HAVE 8 FEET OF LENGTH IN CONTACT WITH SOIL REGARDLESS OF ROCK BOTTOM IN ORDER TO ENSURE THAT THE UPPER END OF THE ELECTRODE IS FLUSH WITH OR BELOW GROUND LEVEL UNLESS THE ABOVEGROUND PORTION IS PROTECTED FROM PHYSICAL DAMAGE.

4 NEC GROUNDING ROD DETAILS  
N.T.S.



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA D  
1/8"=1'-0"

**ELECTRICAL GENERAL NOTES**  
(SOME NOTES MAY NOT BE USED)

- 1. SEE SHEET EP.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

**ELECTRICAL PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- 1 NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- 2 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 3 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 4 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- 5 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 6 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 7 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 8 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- 9 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- 10 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 11 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #8 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- 12 NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- 13 NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

**ELECTRICAL PANELBOARD PLAN NOTES**  
(SOME NOTES MAY NOT BE USED)

- 14 PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHDP. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- 15 PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4 GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- 16 PROVIDE NEW PANEL MHDP AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHDP FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#8 GRN IN EACH COPPER FEEDER. NEW PANEL MHDP SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- 17 EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- 18 EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- 19 EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- 20 EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #6 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- 21 EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- 22 EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- 23 EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

CONTRACTOR TO TEST EXISTING GROUNDING ELECTRODE SYSTEM FOR THIS BUILDING PER REQUIREMENTS OF SPEC SECTION 26 08 11 TESTING OF ELECTRICAL SYSTEM. IF EXISTING SYSTEM DOES NOT MEET THE SPEC REQUIREMENTS, PROVIDE ADDITIONAL GROUND RODS UNTIL IT DOES MEET THE SPEC.

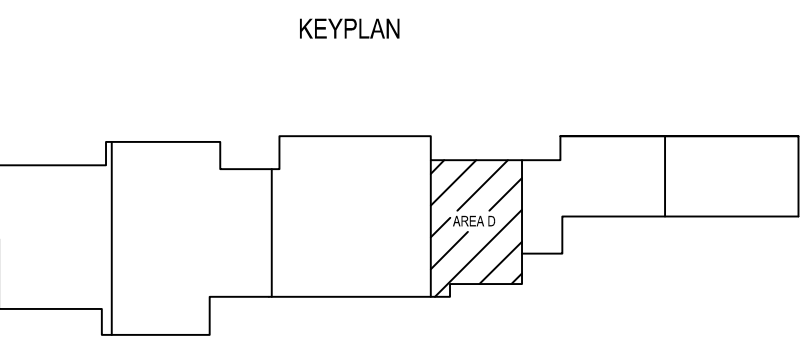
**MECHANICAL PLAN NOTES**

- 1 INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOBSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- 2 PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- 3 TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- 4 INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- 5 INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- 6 INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- 7 PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- 8 INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10" DUCT AND MOTORIZED DAMPER.
- 9 REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- 10 CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- 11 OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

**CONDENSATE PIPING PLAN NOTES**

- 12 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 13 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 14 1" CONDENSATE DRAIN ABOVE GRADE.
- 15 1" CONDENSATE DRAIN BELOW GRADE

REFER TO SHEET MH7.2 FOR GENERAL NOTES.



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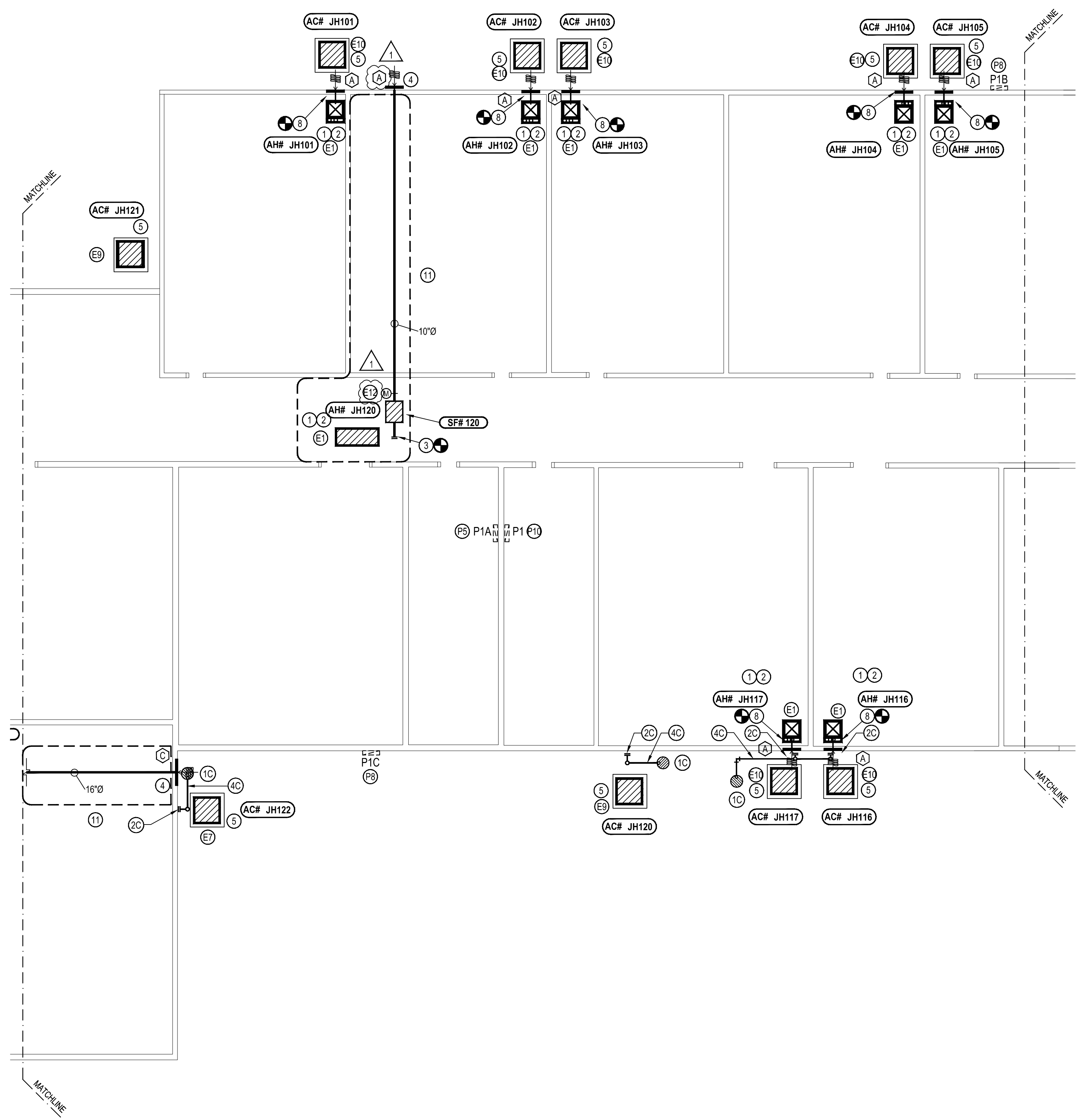
ISSUE DATE  
**01-25-2022**  
REVISION DATE  
ADDED/REVISED 1 02-04-2022

EMA JOB #: 1-001-0959-001  
DRAWN BY: LRU  
CHECKED: QS

MECHANICAL/ELECTRICAL/  
PLUMBING  
FLOOR PLAN  
AREA D

SHEET NUMBER

SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - AREA E  
1/8"=1'-0"

### ELECTRICAL GENERAL NOTES

(SOME NOTES MAY NOT BE USED)

- SEE SHEET EP7.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

### ELECTRICAL PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- NEW AIR HANDLER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 30A DISC. AND FUSES PER MANUFACTURER'S RECOMMENDATIONS. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 25A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 30A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 30A BREAKER. USE #10 WIRE. PROVIDE NEW 30A DISC. W/ 30A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 35A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 60A BREAKER. USE #4 WIRE. PROVIDE NEW 60A DISC. W/ 60A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 45A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 60A DISC. W/ 60A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 15A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 40A BREAKER. USE #6 WIRE. PROVIDE NEW 60A DISC. W/ 35A FUSES.
- NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER USING EXISTING CIRCUIT WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 30A DISC. W/ 20A FUSES. EXTEND ELECTRICAL AS REQUIRED.
- NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER. UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.

### ELECTRICAL PANELBOARD PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- PROVIDE NEW PANEL MSB AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MSB. PROVIDE POWER TO NEW PANEL FROM EXISTING FEEDER. ANY REMAINING LOADS FROM DEMOLISHED PANEL MSB SHALL BE RE-POWERED FROM NEW PANEL MSB AND MHPD. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MCH AT THIS APPROXIMATE LOCATION TO REPLACE DEMOLISHED MCC. PROVIDE NEW 4-4#10, 1-4# GRN, 2 1/2" C. COPPER FEEDER FROM PANEL MSB. ANY REMAINING LOADS FROM DEMOLISHED PANEL MCC SHALL BE RE-POWERED FROM NEW PANEL MCH. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- PROVIDE NEW PANEL MHPD AT THIS APPROXIMATE LOCATION. PROVIDE POWER TO NEW MHPD FROM PANEL MSB. PROVIDE NEW 2-2" C. WITH 4-#10, 1-#3 GRN IN EACH COPPER FEEDER. NEW PANEL MHPD SHALL RE-POWER REMAINING LOADS FROM DEMOLISHED PANEL MSB. SEE PANEL SCHEDULES FOR MORE INFORMATION. PROVIDE NEW BREAKERS AS REQUIRED. EXTEND ELECTRICAL AS REQUIRED.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #1 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #3 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #5 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 120/208V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #8 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING 277/480V 3PH 4W PANEL AT THIS APPROXIMATE LOCATION. PROVIDE A NEW #4 INSULATED GROUNDING CONDUCTOR FOR THIS PANEL'S FEEDER. STRAP IT TO THE OUTSIDE OF THE EXISTING FEEDER CONDUIT BETWEEN THIS PANEL AND ITS PARENT PANEL. FIELD VERIFY EXACT EXISTING FEEDER LENGTH. PROVIDE NEW KNOCK OUT IN EXISTING PANELS AND CONNECT NEW GROUND WIRE TO EXISTING GROUND BUS. IF EXISTING GROUND BUS IS NOT BONDED TO THE PANEL CAN, THEN PROVIDE A BONDING JUMPER FROM GROUND BUS TO PANEL CAN.
- EXISTING SERVICE ENTRANCE PANEL MSB2 AT THIS APPROXIMATE LOCATION. ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW GROUNDING BONDING JUMPER FROM MSB TO MSB2 SIZE AT 400CM. BONDING JUMPER SHALL CONNECT THE GROUND BUS AND THE ENCLOSURE OF EACH SWITCHGEAR TOGETHER.

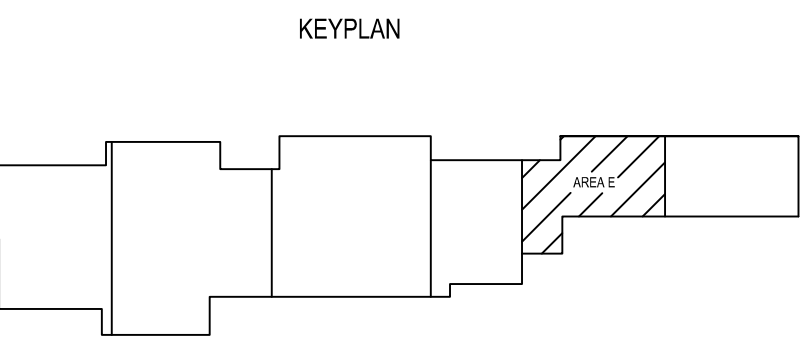
### MECHANICAL PLAN NOTES

- INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER GLOSET PLATFORM OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN. CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- INSTALL NEW CONDENSER UNIT ON NEW 4" HOUSEKEEPING WITH WELDED WIRE MESH FOR REINFORCING. EXPANSION JOINT MATERIAL TO BE USED WHERE THE NEW PAD ABUTS THE EXISTING BUILDING.
- PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL AND CONNECT INTO EXISTING PLENUM BOX WITH 10"Ø DUCT AND MOTORIZED DAMPER.
- REUSE EXISTING WALL SUPPORTS FOR NEW EQUIPMENT.
- CONNECT EXISTING AIR HANDLER TO NEW EMCS.
- OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

### CONDENSATE PIPING PLAN NOTES

- 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 1" CONDENSATE DRAIN ABOVE GRADE.
- 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MH7.2 FOR GENERAL NOTES.



ISSUE DATE  
**01-25-2022**  
REVISION DATE  
ADDEDUMUM 1 02-04-2022

EMA JOB #: 1-001-0959-001  
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MECHANICAL/ELECTRICAL/  
PLUMBING  
FLOOR PLAN  
AREA E

SHEET NUMBER  
**MEP1.5**



### CONDENSATE PIPING PLAN NOTES

- 1) 1" CONDENSATE DRAIN DOWN TO CONDENSATE PIT.
- 2) 1" CONDENSATE DRAIN TIE-IN TO EXISTING CONDENSATE DRAIN.
- 3) 1" CONDENSATE DRAIN ABOVE GRADE.
- 4) 1" CONDENSATE DRAIN BELOW GRADE.

REFER TO SHEET MH7.2 FOR GENERAL NOTES.

### MECHANICAL PLAN NOTES

- 1) INSTALL NEW AIR HANDLER UNIT IN EXISTING LOCATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW AIR HANDLER. EXISTING AIR HANDLER CLOSET, PLATFORM, OUTSIDE AIR, RETURN AIR, ETC. TO REMAIN IN PLACE AND OPERATIONAL. INSTALL NEW THERMOSTAT IN EXISTING LOCATION AND PATCH WALL AS REQUIRED TO MATCH EXISTING.
- 2) PROVIDE NEW P-TRAP AT NEW UNIT AND CONNECT TO EXISTING CONDENSATE PIPING. CONNECT UNIT TO EXISTING DUCTWORK. COORDINATE ORIENTATION OF UNIT WITH EXISTING DUCTWORK. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE TRANSITIONS AS NECESSARY TO ADAPT SIZE OF EXISTING DUCT FOR TIE-IN.
- 3) TIE IN NEW OUTSIDE AIR DUCT INTO EXISTING RETURN DUCT. ADD NEW BALANCING DAMPER TO RETURN, CONTRACTOR TO VERIFY EXISTING RETURN DUCT ROUTING ABOVE CEILING.
- 4) INSTALL NEW OUTSIDE AIR LOUVER IN EXTERIOR WALL.
- 5) INSTALL NEW CONDENSER UNIT ON EXISTING SLAB AND EXTEND/MODIFY EXISTING HOUSEKEEPING PAD AS REQUIRED. CONDENSERS TO RECEIVE NEW REFRIGERANT PIPING. NEW PIPING SHOULD TO BE INCLUDED AND EXTENDED ABOVE THE EXISTING CEILING. PAINT TO MATCH EXISTING BRICK.
- 6) PROVIDE NEW GAS VALVE AND PRESSURE REGULATOR. RECONNECT TO EXISTING CONDENSATE LINES AND EXISTING GAS PIPING. REFER TO PLUMBING DETAILS FOR CONDENSATE TRAP AND GAS CONNECTION. INSTALL NEW CONCENTRIC FLUE ON ROOF.
- 7) OVER LOCATIONS WHERE NEW OUTSIDE AIR DUCTWORK IS INSTALLED (OUTLINED BY DASHED LINES FOR CLARITY), CONTRACTOR SHALL REMOVE EXISTING CEILING GRID AND TILE FOR INSTALLATION OF NEW DUCTWORK AND REPLACE AFTER COMPLETION OF INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.
- 8) INSTALL NEW WALL-MOUNTED EXHAUST FAN IN EXISTING WALL PENETRATION. FIELD VERIFY ALL REQUIREMENTS FOR INSTALLATION OF NEW EXHAUST FAN. PATCH AS REQUIRED TO MATCH EXISTING.
- 9) 8"Ø EXHAUST DUCT UP TO TYPE "F" EXHAUST RELIEF ON ROOF.
- 10) CONNECT NEW SUPPLY DUCTWORK TO EXISTING SUPPLY TRUNK. REBALANCE SYSTEM AS REQUIRED TO SUPPLY NEW RESTROOM GRILLES.

### ELECTRICAL GENERAL NOTES

(SOME NOTES MAY NOT BE USED)

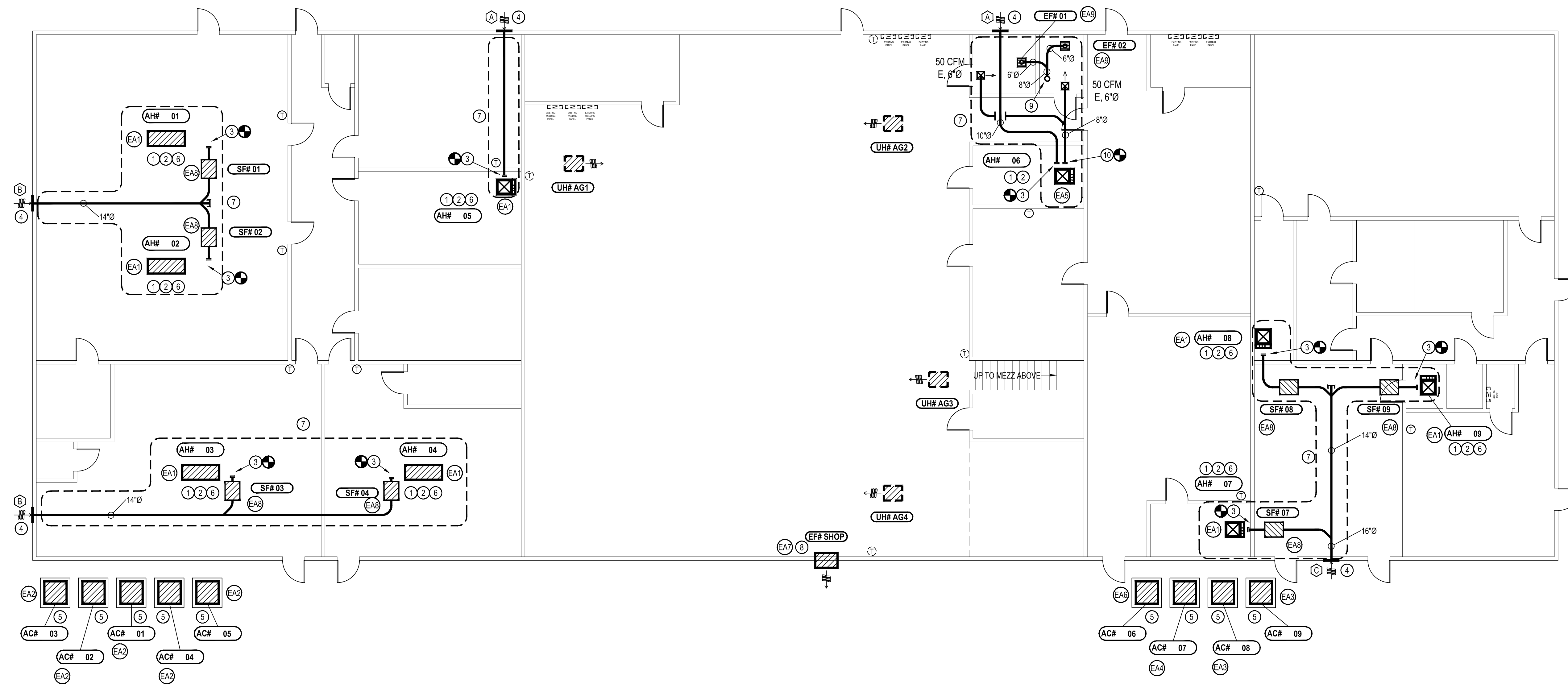
1. SEE SHEET EPT.1 FOR GENERAL NOTES AND PLAN NOTES APPLICABLE TO THE ENTIRE DRAWING SET.

### ELECTRICAL ALTERNATE PLAN NOTES

(SOME NOTES MAY NOT BE USED)

- EA1) NEW AIR HANDLER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER TO NEW UNIT FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 1P 20A BREAKER, USE #12 WIRE. PROVIDE NEW 30A DISC. WITH 15A FUSES AT THE UNIT.
- EA2) NEW AIR CONDENSER SHALL REPLACE EXISTING AIR HANDLER AT THE SAME LOCATION. PROVIDE POWER TO NEW UNIT FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 2P 40A BREAKER, USE #8 WIRE. PROVIDE NEW 60A DISC. WITH 35A FUSES AT THE UNIT.
- EA3) NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER TO NEW UNIT FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 50A BREAKER, USE #6 WIRE. PROVIDE NEW 60A DISC. WITH 45A FUSES AT THE UNIT.
- EA4) NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER TO NEW UNIT FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 3P 20A BREAKER, USE #12 WIRE. PROVIDE NEW 30A DISC. WITH 15A FUSES AT THE UNIT.
- EA5) NEW AIR HANDLER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER TO NEW UNIT FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR HANDLER. PROVIDE NEW 2P 50A BREAKER, USE #10 WIRE. PROVIDE NEW 30A DISC. WITH 25A FUSES AT THE UNIT.
- EA6) NEW AIR CONDENSER SHALL REPLACE EXISTING AIR CONDENSER AT THE SAME LOCATION. PROVIDE POWER TO NEW UNIT FROM EXISTING PANEL WHICH PROVIDED POWER TO THE DEMOLISHED AIR CONDENSER. PROVIDE NEW 2P 20A BREAKER, USE #12 WIRE. PROVIDE NEW 30A DISC. WITH 15A FUSES AT THE UNIT.
- EA7) NEW FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER, USE #12 WIRE.
- EA8) NEW SUPPLY FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER FROM NEAREST ACCEPTABLE 120V PANEL. PROVIDE NEW 1P 20A BREAKER, UP TO 4 NEW SUPPLY FANS MAY BE TIED INTO THE SAME CIRCUIT.
- EA9) NEW FAN AT THIS APPROXIMATE LOCATION. PROVIDE POWER BY TYING IN TO NEAREST ACCEPTABLE 120V CIRCUIT. USE #12 WIRE.

UNLESS OTHERWISE NOTED, EXISTING CONDUIT AND WIRING FOR HVAC UNITS SHALL BE REUSED IF IT IS EQUIVALENT OR LARGER THAN THE NEW CIRCUIT SPECIFIED. CIRCUITS MUST BE IN GOOD CONDITION AND MEET THIS PROJECT'S REQUIREMENTS IN ORDER TO BE REUSED.



1 MECHANICAL/ELECTRICAL/PLUMBING FLOOR PLAN - VOCATIONAL AG  
1/8"=1'-0"

# EMA

DESIGN SOLVE ENHANCE

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01-25-2022

ISSUE DATE

01-25-2022

REVISION DATE  
ADDENDUM 1 02-04-2022

## 2022 HVAC RENOVATION RAINS JUNIOR HIGH SCHOOL RAINS INDEPENDENT SCHOOL DISTRICT EMORY, TX

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

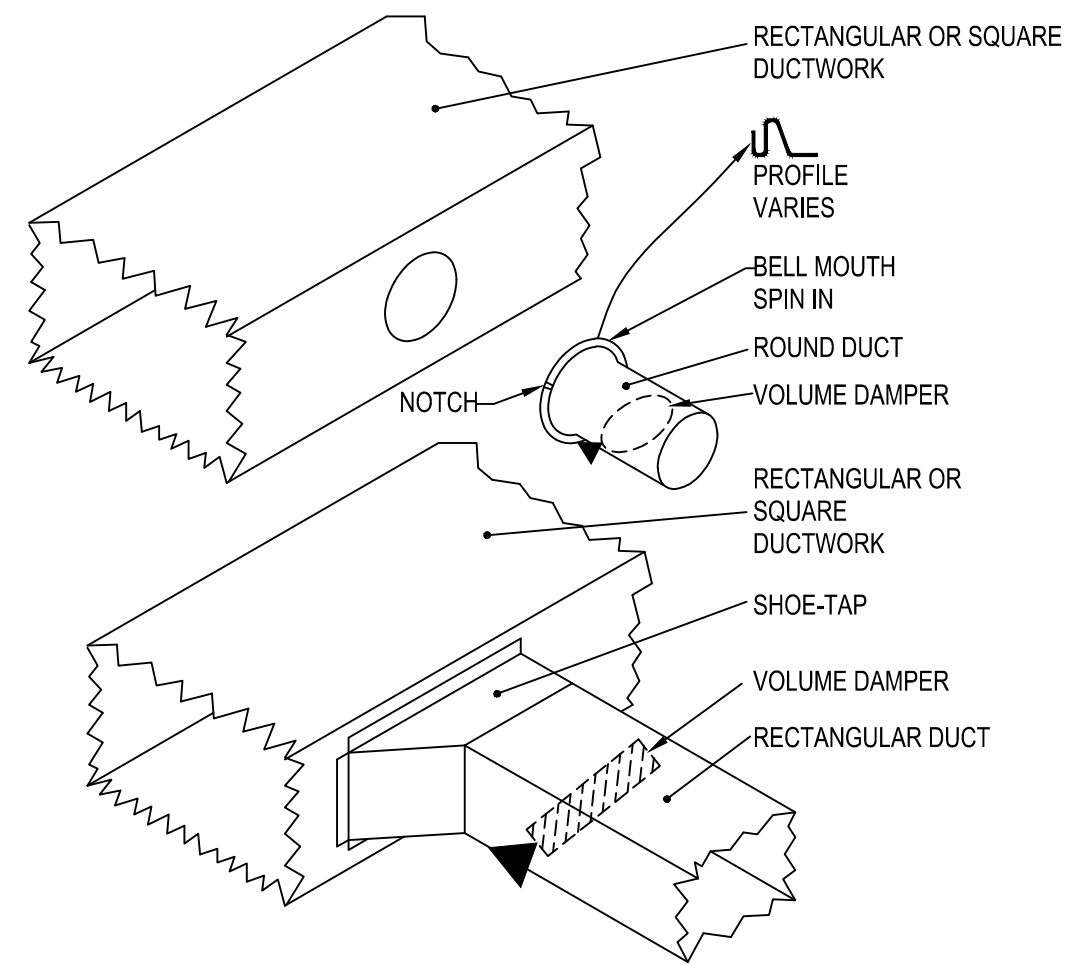
MECHANICAL/ELECTRICAL/  
PLUMBING  
FLOOR PLAN  
VOCATIONAL AG

SHEET NUMBER

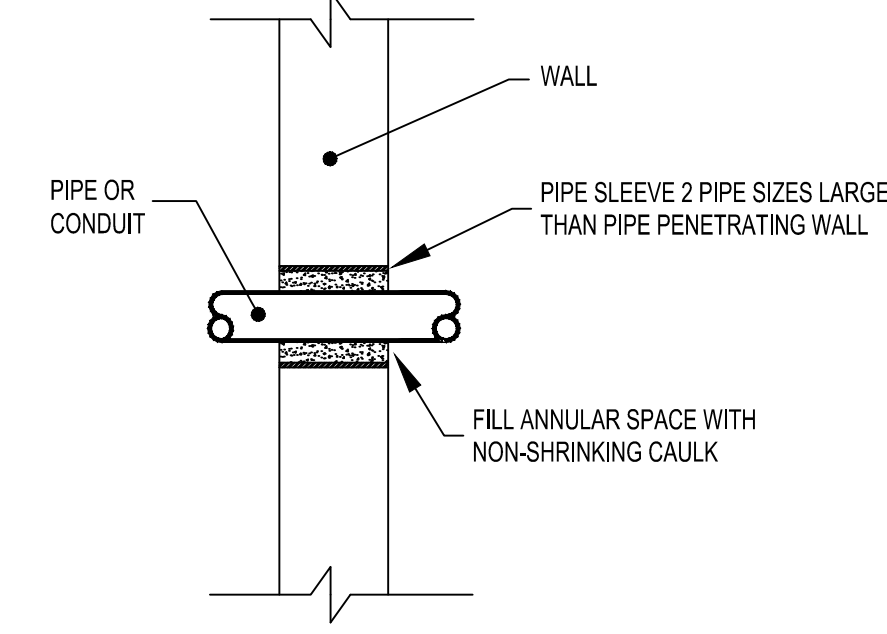
MEP1.7

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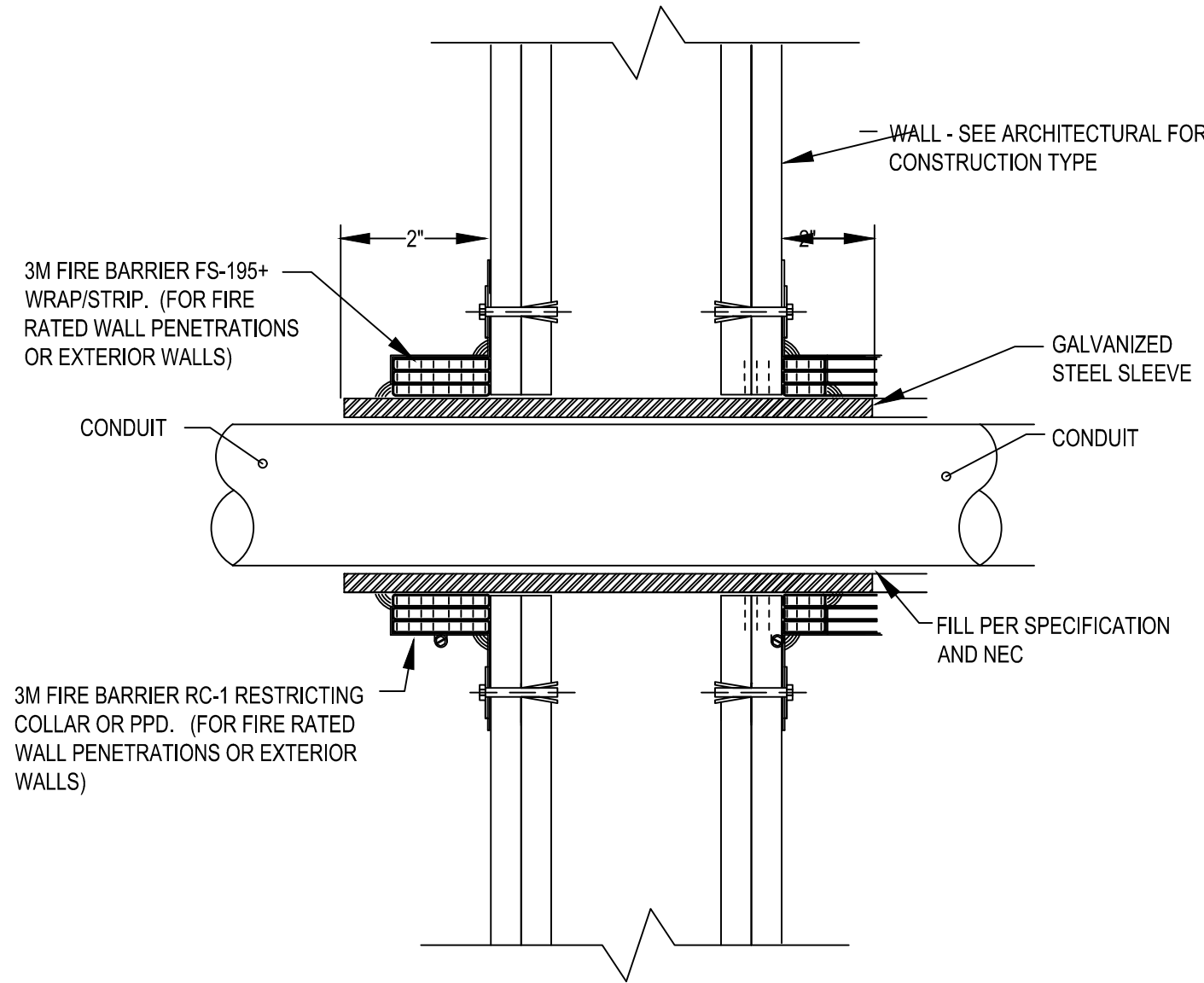
SUBMISSION OF BID WILL BE CONSIDERED ACKNOWLEDGMENT THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS VERIFIED ALL EXISTING JOB CONDITIONS AND INCLUDED ANY NECESSARY MODIFICATION TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND WORKING SYSTEM.



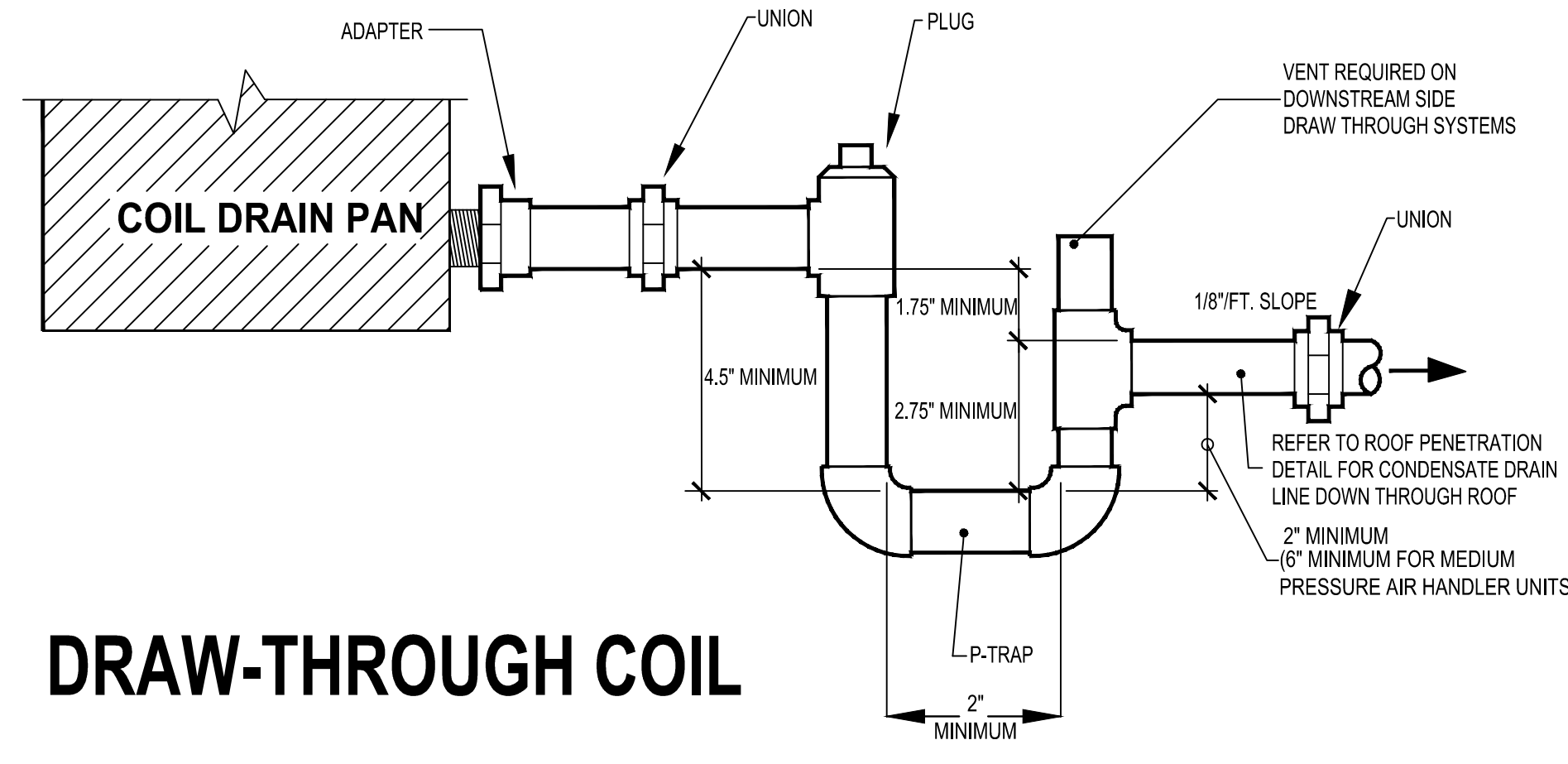
1 DUCT TAKEOFF  
N.T.S.



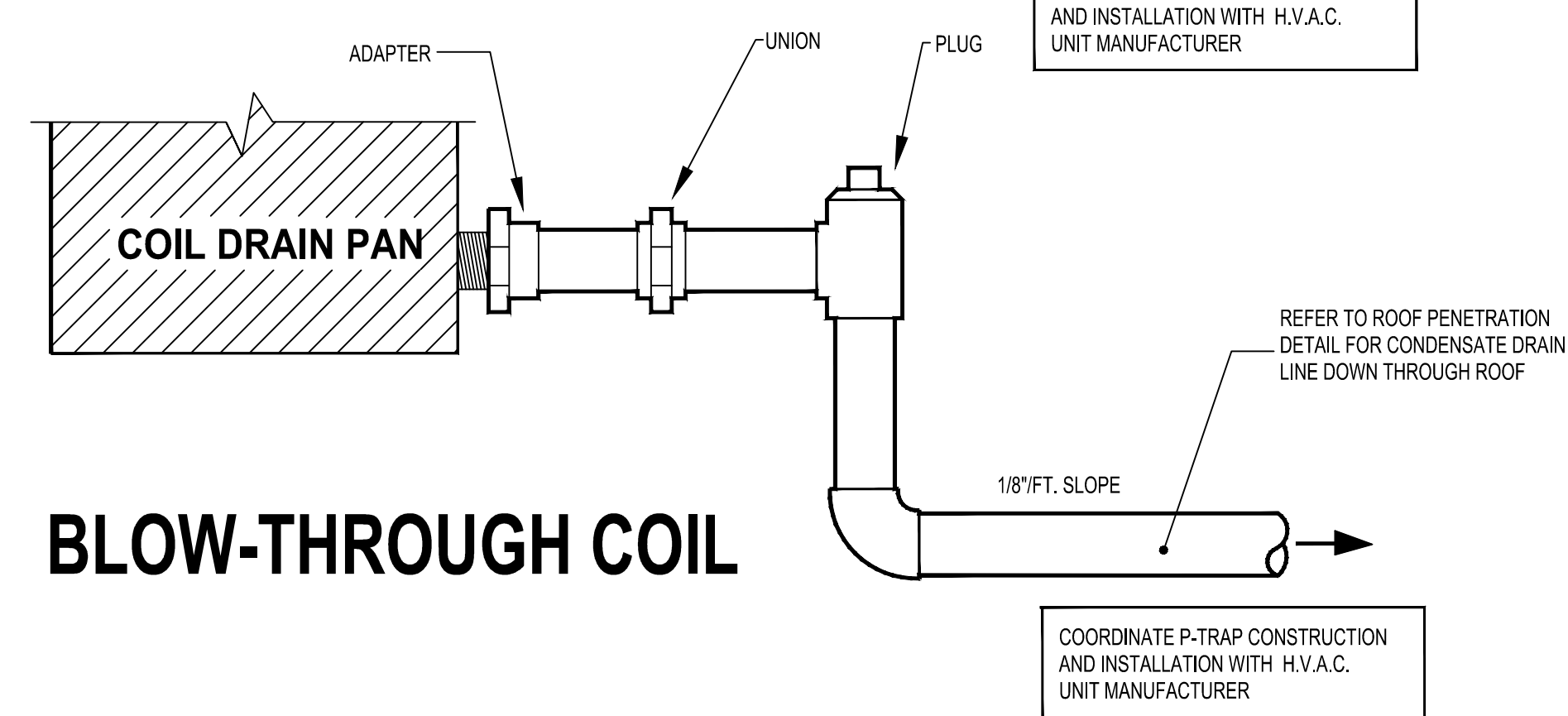
2 EXTERIOR WALL PIPE PENETRATION  
N.T.S.



3 WALL PENETRATION  
N.T.S.



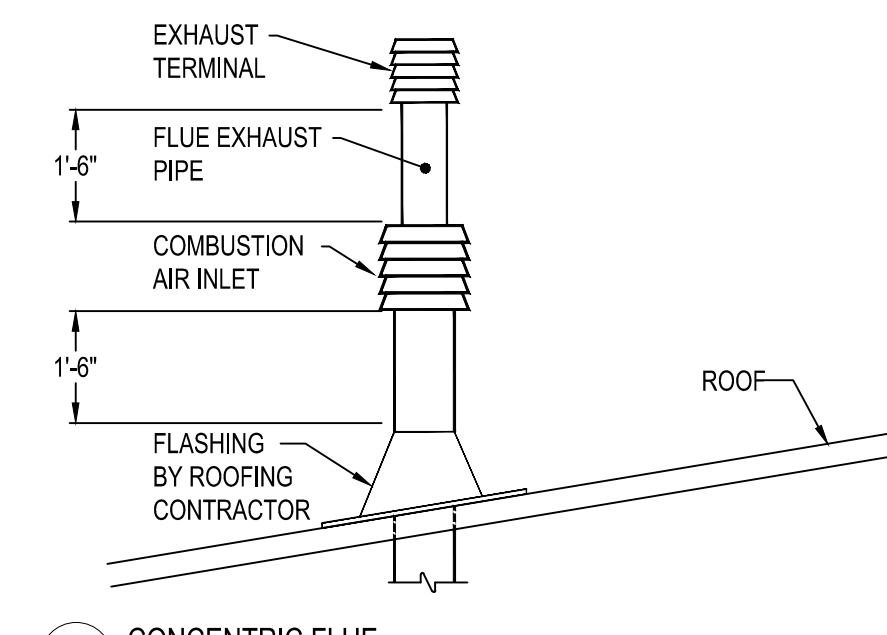
DRAW-THROUGH COIL



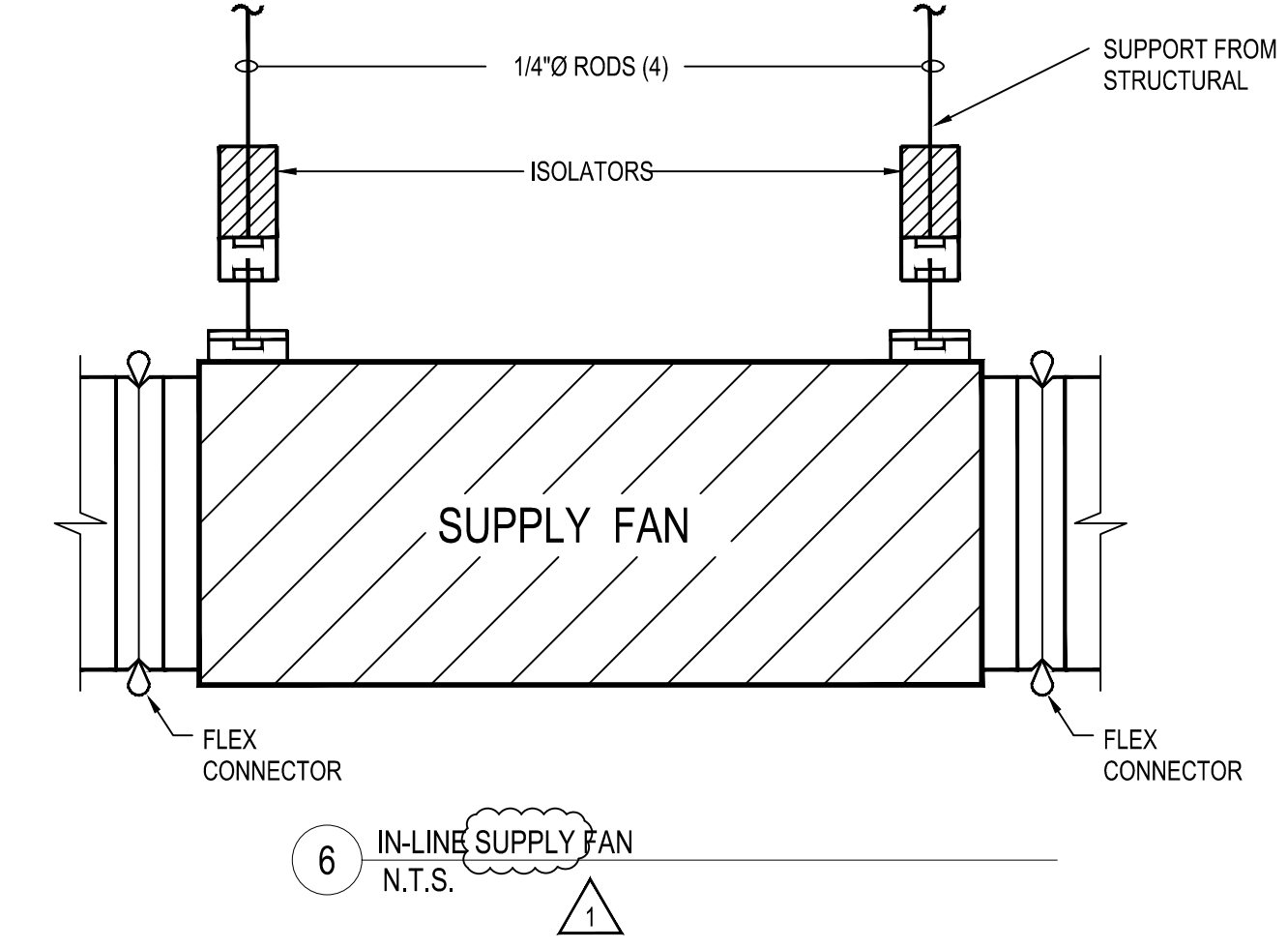
BLOW-THROUGH COIL

NOTES:  
1 PROVIDE CLEANOUT AT FIRST CONNECTION, AT INCREASE IN PIPE SIZE, EVERY 100'-0", AND EVERY CHANGE IN DIRECTION, WHETHER SHOWN ON PLAN OR NOT.

4 CONDENSATE DRAIN DETAIL  
N.T.S.



5 CONDENSATE PIT DETAIL  
N.T.S.



6 IN-LINE SUPPLY FAN  
N.T.S.

7 CONCENTRIC FLUE  
N.T.S.

PLUMBING SYMBOLS

SS	SS	SANITARY SEWER LINE
ES	ES	EXISTING SANITARY SEWER LINE
V	V	VENT LINE
EV	EV	EXISTING VENT LINE
CW	CW	COLD WATER LINE
ECW	ECW	EXISTING COLD WATER LINE
HW	HW	HOT WATER LINE
EHW	EHW	EXISTING HOT WATER LINE
COND	COND	CONDENSATE LINE
EC	EC	EXISTING CONDENSATE LINE
G	G	GAS LINE
EG	EG	EXISTING GAS LINE
AW	AW	EXISTING FIRE RATED WALL A FIRE DAMPER IS TO BE PROVIDED AND INSTALLED.
A	A	EXISTING ACID WASTE LINE
CUT-OFF VALVE		
CHECK VALVE		
HOSE BIBB		
CAP		
DRAIN		
GAS METER		
FLOOR SINK / O.S.D.		
SPRINKLER HEAD		
PLUMBING RISER		
WATER METER		
GAS COCK (VALVE)		
PRIMARY / OVERFLOW ROOF DRAIN		
V.T.R.		VENT THROUGH ROOF
F	F	EXISTING SPRINKLER LINE
EF	EF	EXISTING SPRINKLER LINE
RD	RD	PRIMARY ROOF DRAIN LINE
ERD	ERD	EXISTING PRIMARY ROOF DN. LN.
ORD	ORD	OVERFLOW ROOF DRAIN LINE
EORD	EORD	EXISTING OVERFLOW RF. DN. LN.
SD	SD	STORM DRAIN
ESD	ESD	EXISTING STORM DRAIN LINE
INDICATES SAWCUT SLAB AND PATCH TO MATCH AFTERWARDS		

NOTE: NOT ALL SYMBOLS ARE USED

MECHANICAL DEMOLITION GENERAL NOTES

- CONTRACTOR TO VISIT SITE AND BE FAMILIAR WITH BUILDING MECHANICAL AND ELECTRICAL LAYOUTS.
- IF ASBESTOS IS FOUND CONTACT OWNER IMMEDIATELY. DO NOT WORK IN ANY AREA SUSPECTED TO CONTAIN ASBESTOS.
- ALL EXISTING EQUIPMENT SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY.
- DO NOT RELEASE ANY REFRIGERANT TO ATMOSPHERE. DISPOSE OF IN A LAWFUL MANNER.
- ALL REUSED EXISTING MECHANICAL EQUIPMENT SHALL BE INSPECTED AND CLEANED FOR PROPER OPERATION.
- PROVIDE AND INSTALL A FIRE DAMPER WHERE NEW DUCTWORK CROSSES AN EXISTING FIRE RATED WALL. IF ANY EXISTING DUCTWORK CROSSES A NEW FIRE RATED WALL A FIRE DAMPER IS TO BE PROVIDED AND INSTALLED.
- ALL MATERIAL, EQUIPMENT, DUCTS, PIPE, ETC. TO BE REMOVED SHALL BE DISPOSED OF OFF SITE IN A LEGAL AND LAWFUL MANNER.
- ALL EXISTING FIRE DAMPERS OR SMOKE DAMPERS BEING REUSED SHALL REMAIN IN PLACE AND OPERATIONAL.
- REMOVE ONLY CEILING TILE NECESSARY TO ACCOMPLISH DEMOLITION AND NEW WORK, DUCT, ELECTRICAL, ETC. REPLACE ALL BROKEN TILES WITH NEW TILES TO MATCH EXISTING WHERE REQUIRED. REUSE EXISTING TILES.
- CAP ANY UNUSED PIPE AT FLOOR, WALL, CEILING. REMOVE MATERIAL NOT BEING REUSED.
- WHERE REMOVING HVAC AND PIPING, PATCH ALL WALLS WITH 5/8 SHEET ROCK ON EACH SIDE OF WALL. PAINT TO MATCH.
- LEAVE ANY DOMESTIC WATER HEATER IN PLACE AND OPERATIONAL.
- LEAVE ALL EXISTING EXHAUST FANS IN PLACE AND OPERATIONAL, UNLESS DRAWINGS SHOW TO REPLACE OR ADD EXHAUST FANS.
- REMOVE ALL CONDENSATE DRAIN PIPING FROM UNITS THAT ARE TO BE REPLACED. EACH AIR HANDLER UNIT HAS CONDENSATE PIPING.
- ALL AIR HANDLER BEING REINSTALLED TO MAINTAIN FILTER ACCESS. COORDINATE FILTER ACCESS DOORS WITH STRUCTURE.
- FOR ALL UNITS ABOVE THE CEILING THE CONTRACTOR SHALL REMOVE THE EXISTING CEILING GRID AND TILE FOR DEMOLITION AND REPLACE UPON INSTALLATION OF NEW EQUIPMENT. CONTRACTOR IS RESPONSIBLE FOR BROKEN TILE AND GRID.

MECHANICAL GENERAL NOTES

- MECHANICAL CONTRACTOR TO PROVIDE TO THE PLUMBING CONTRACTOR THE RECOMMENDED AC MANUFACTURERS DATA FOR CONDENSATE TRAPS PER EACH TYPE OF UNIT.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OR ADJUSTMENT OF ALL HOLD DOWN BOLTS ON COMPRESSORS AT HVAC EQUIPMENT TO ALLOW FOR PROPER VIBRATION ISOLATION.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL ABANDONED SCREWS, PIPING, TAPE, PAPERS, PACKING PRODUCTS, ETC.
- ALL EQUIPMENT SHALL BE PROPERLY LABELED PER SPECIFICATIONS.
- CLOSE ALL OUTSIDE AIR DAMPERS UPON INSTALLATION AND KEEP ALL OUTSIDE AIR DAMPERS CLOSED UNTIL THE "TEST AND BALANCE" IS PERFORMED.
- SEAL WITH FIRE RETARDING SEALANT AROUND PIPE THROUGH ANY PENETRATION OF FIRE WALLS.
- ALL GRILLES ARE SHOWN IN APPROXIMATE LOCATION. FIELD VERIFY PLACEMENT WITH CEILING GRID.
- ALL DIFFUSERS/FLEX CONNECTIONS SHALL HAVE A RIGID METAL ELBOW UNLESS COMING DIRECTLY DOWN FROM A UNIT OR HEIGHT OF CEILING IS EXTREME. ALL FLEX DUCT TO HAVE AT LEAST ONE SUPPORT STRAP.
- THE SPACE AROUND DUCTS AND PENETRATING ITEMS OF SMOKE PARTITION WALLS SHALL BE FILLED WITH AN IBC APPROVED MATERIAL LIMITING THE FREE PASSAGE OF SMOKE.
- INSTALL CONDENSERS PER MANUFACTURER CLEARANCES.
- MECHANICAL CONTRACTOR SHALL SUBMIT TO ENGINEER REFRIGERANT LINE SET DESIGN AND ROUTING PER MANUFACTURER FOR REVIEW BEFORE INSTALLATION BEGINS.
- THE MECHANICAL CONTRACTOR SHALL APPLY ULTRA-VIOLET PROTECTIVE COATING OVER REFRIGERANT INSULATION PER MANUFACTURER.
- COORDINATE ALL UNITS, DUCTWORK, GRILLES, AND NEW REFRIGERANT LINES WITH ALL TRADES BEFORE INSTALLING.
- ALL HORIZONTAL AIR HANDLERS ABOVE CORRIDOR CEILINGS SHALL BE LOCATED TO POSITION SERVICE ACCESS PANELS TO FACE TOWARD CENTER OF CORRIDOR.
- ALL AIR HANDLERS: NO PIPING, CONDUITS, DUCTS, WIRING, DISCONNECTS, ETC. WILL BE ALLOWED TO BE INSTALLED CLOSER THAN 3'-0" (THREE FEET) IN FRONT OF THE SERVICE ACCESS PANEL.
- PROVIDE AND INSTALL 18 GAUGE 2" DEEP GALVANIZED DRAIN PAN UNDER EACH AIR HANDLER (PER DETAIL).
- ALL THERMOSTAT WIRING TO A/C UNITS SHALL BE SECURED TO REFRIGERANT LINES UTILIZING TEFLON TY-WRAPS.

PLUMBING GENERAL NOTES

- PLUMBING CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR A.D.A. PLUMBING FIXTURE AND STANDARD MOUNTING HEIGHTS.
- PLUMBING CONTRACTOR TO COORDINATE ALL PIPING ROUTING ABOVE WITH MECHANICAL AND ELECTRICAL CONTRACTORS BEFORE INSTALLING.
- ALL VALVES SHALL BE INSTALLED NO HIGHER THAN 2'-0" ABOVE THE CEILING. ACCESS DOORS TO BE INSTALLED AT ALL HARD CEILING LOCATIONS.
- ALL PIPING PENETRATIONS SHALL BE SLEEVED. COMPLETELY GROUT AROUND OUTSIDE OF SLEEVE AND FILL SLEEVE VOID AROUND PIPE WITH FIBERFRAX FIBRE-PUTTY.
- AT ALL DISSIMILAR METAL CONNECTIONS, PROVIDE AND INSTALL DIELECTRIC UNIONS IMMEDIATELY TO MINIMIZE USE OF GALVANIZED PIPE MATERIAL.
- PLUMBING CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR MOUNTING HEIGHTS OF ALL AIR HANDLERS TO GUARANTEE POSITIVE DRAINAGE OF ALL CONDENSATE DRAINS (1/8" PER FT. SLOPE - MINIMUM).
- MECHANICAL CONTRACTOR TO PROVIDE TO THE PLUMBING CONTRACTOR THE RECOMMENDED AC MANUFACTURERS' DATA FOR CONDENSATE TRAPS PER EACH TYPE OF UNIT.
- ALL CONCEALED EXISTING PIPING SHOWN IS BASED ON EXISTING M.E.P. DRAWINGS. FIELD VERIFY AS NECESSARY.
- PLUMBING CONTRACTOR TO COORDINATE ROUTING OF ANY NEW SEWER PIPING UNDER EXISTING BUILDINGS WITH STRUCTURAL ENGINEER TO AVOID PIERS.



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2022 HVAC RENOVATION  
**RAINS JUNIOR HIGH SCHOOL**  
RAINS INDEPENDENT SCHOOL DISTRICT  
EMORY, TX

EMA JOB #: 1-001-0959-001

DRAWN BY: LRU

CHECKED: QS

MECHANICAL/PLUMBING  
DETAILS  
& NOTES

SHEET NUMBER

MEP7.2



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**GAS/ELEC SPLIT SYSTEM**

MARK	NOM. TONS	HIGH SPEED CFM	LOW SPEED CFM	OA CFM MAX	OA CFM MIN	MANUFACTURER USED IN DESIGN: TRAINE MODEL NO.	EXTERNAL STATIC PRESSURE (IN. W.C.)	SEER/ EER	ELECTRICAL		DX COOLING		HEATING		UNIT WEIGHT (LB.)	REMARKS
									VOLTAGE/ PHASE	MCA/ MOCP	TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)	HEAT OUTPUT (MBTUH)	AUX. HEAT INPUT (KW)		
A	2.0	800	540	250	150	AH - 4TXCB004D53 FURNACE - SVV2B060U4PSB AC - 4TTA7024A1	0.5	17.3/13.3	AH - 120V, 1Ø AC - 208V, 1Ø	AH - 8/15 AC - 18/20	22.5	17.2	24.6	N/A	AH - 150 AC - 250	1, 2, 3, 4, 5, 6, 7, 8, 9
B	3.0	1200	800	350	200	AH - 4TXCB006D53 FURNACE - SVV2B080U4PSB AC - 4TTA7036A1	0.5	17.3/12.7	AH - 120V, 1Ø AC - 208V, 1Ø	AH - 12/15 AC - 24/35	34.9	27.7	32.8	N/A	AH - 200 AC - 250	1, 2, 3, 4, 5, 6, 7, 8, 9
C	3.0	1200	800	350	200	AH - 4TXCB006D53 FURNACE - SVV2B060U4PSB AC - 4TTA7036A3	0.5	17.5/12.5	AH - 120V, 1Ø AC - 208V, 1Ø	AH - 12/15 AC - 15/25	34.9	27.7	32.8	N/A	AH - 200 AC - 250	1, 2, 3, 4, 5, 6, 7, 8, 9
D	4.0	1600	1100	350	200	AH - 4TXCB008D53 FURNACE - SVV2D120U5PSB AC - 4TTA7048B1	0.5	17.0/13.0	AH - 120V, 1Ø AC - 208V, 1Ø	AH - 14/15 AC - 28/45	46.4	35.4	47.5	N/A	AH - 200 AC - 300	1, 2, 3, 4, 5, 6, 7, 8, 9
E	4.0	1600	1100	350	200	AH - 4TXCD009D53 FURNACE - SVV2C100U5PSB AC - 4TTA7048A3	0.5	17.0/13.0	AH - 120V, 1Ø AC - 208V, 1Ø	AH - 14/15 AC - 18/30	46.4	35.4	47.5	N/A	AH - 200 AC - 300	1, 2, 3, 4, 5, 6, 7, 8, 9
F	5.0	1990	1300	400	200	AH - 4TXCD010D53 FURNACE - SVV2C100U5PSB AC - 4TTA7060A4	0.5	17.0/12.5	AH - 120V, 1Ø AC - 480V, 3Ø	AH - 14/15 AC - 10/15	54.8	42.3	55.0	N/A	AH - 200 AC - 300	1, 2, 3, 4, 5, 6, 7, 8, 9

- A 05
- B 01, 02, 03, 04
- C JH106, JH112, JH113
- D 06, 09
- E JH109, JH110, JH111
- F 07

Remarks:  
 1. 2" EXTERNAL FILTER RACK W/ MERV 8 FILTERS  
 2. THERMAL EXPANSION VALVE  
 3. HAIL COIL GUARD  
 4. MOTORIZED OUTSIDE AIR DAMPER  
 5. R410-A REFRIGERANT  
 6. TWO STAGE COMPRESSOR  
 7. MULTIPLE COMPRESSORS  
 8. BIPOLAR IONIZATION  
 9. SINGLE POINT POWER

SUPPLY FAN SCHEDULE							
MARK	CFM @ E.S.P.	MOTOR HP/W	MANUFACTURER MODEL	ELECTRICAL DATA	SONES	CONTROL	ACCESSORIES- PROVIDE
A	350 0.25	1/8 HP	COOK 100-SQN-D	120V, 1Ø	3.1	EMCS	
B	400 0.25	1/8 HP	COOK 100-SQN-D	120V, 1Ø	3.4	EMCS	
C	600 0.25	1/8 HP	COOK 120-SQN-D	120V, 1Ø	4.4	EMCS	
D	1600 0.25	1/4 HP	COOK 150-SQN-D	120V, 1Ø	8.3	EMCS	

A SF# CNL, JWH, JSH, LIB1, LIB2, LIB3, LIB4, NLKL, NLKM, OFF, PRN, 120, 122, 207, 211, 304, 305, 306, 307, 310, 351, 404, 405, 408A, 408B, 409A, 409B, 409T, 01, 02, 03, 04, 05, 06, 08, 09  
 B SF# BNDH, SLKL, SLKM, 121, 352, 353, 413, 07  
 C SF# GSE, GSW, GNE, GNV  
 D SF# CAFE

EXHAUST FAN SCHEDULE							
MARK	CFM @ E.S.P.	MOTOR HP/W	MANUFACTURER MODEL	ELECTRICAL DATA	SONES	CONTROL	ACCESSORIES- PROVIDE
A	75 0.25	60 W	COOK GC-240	120V, 1Ø	1.3	LIGHTS	FACTORY INSTALLED SPEED CONTROLLER, GEMINI DELUXE ALUMINUM GRILLE - WHITE
B	2500 0.25	1/2 HP	COOK AWB-24ASB	120V, 1Ø	20.0	SWITCH	FACTORY INSTALLED SPEED CONTROLLER, WIRE GUARD, WALL COLLAR, GSS WALL SHUTTER, WEATHER HOOD

A EF# 01, 02  
 B EF# SHOP

**HEAT PUMP SPLIT SYSTEM - 208V, 1Ø**

MARK	NOM. TONS	HIGH SPEED CFM	LOW SPEED CFM	OA CFM MAX	OA CFM MIN	MANUFACTURER USED IN DESIGN: TRAINE MODEL NO.	EXTERNAL STATIC PRESSURE (IN. W.C.)	SEER/ EER	ELECTRICAL		DX COOLING		HEATING		UNIT WEIGHT (LB.)	REMARKS
									VOLTAGE/ PHASE	MCA/ MOCP	TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)	HEAT OUTPUT (MBTUH)	AUX. HEAT INPUT (KW)		
A	1.5	600	400	150	100	AH - TEM6A0B18 AC - 4TWR60B18	0.5	16.0/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 21/25 AC - 12/20	17.6	13.6	16.8	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
B	3.0	1200	800	350	200	AH - TEM6A0B36 AC - 4TWR7036	0.5	17.0/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 23/25 AC - 21/35	34.9	27.7	32.0	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
C	4.0	1600	1100	350	200	AH - TEM6A0B48 AC - 4TWR7048	0.5	17.0/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 26/30 AC - 28/45	46.4	35.4	46.5	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
D	5.0	1990	1300	400	200	AH - TEM6A0B60 AC - 4TWR7060	0.5	16.5/-	AH - 208V, 1Ø AC - 208V, 1Ø	AH - 26/30 AC - 37/60	54.8	42.3	54.5	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9

- A 05
- B JHCounselor, JH101, JH102, JH103, JH104, JH105, JH106, JH107, JH114, JH115, JH116, JH117, JH201, JH202, JH203, JH204, JH205, JH206, JH301, JH302, JH303, JH351, JH408A, JH409A, JH409B
- C JHMaint, JH122
- D JH409IT

Remarks:  
 1. 2" EXTERNAL FILTER RACK W/ MERV 8 FILTERS  
 2. THERMAL EXPANSION VALVE  
 3. HAIL COIL GUARD  
 4. MOTORIZED OUTSIDE AIR DAMPER  
 5. R410-A REFRIGERANT  
 6. TWO STAGE COMPRESSOR  
 7. MULTIPLE COMPRESSORS  
 8. BIPOLAR IONIZATION  
 9. SINGLE POINT POWER

**HEAT PUMP SPLIT SYSTEM - 460V, 3Ø**

MARK	NOM. TONS	HIGH SPEED CFM	LOW SPEED CFM	OA CFM MAX	OA CFM MIN	MANUFACTURER USED IN DESIGN: TRAINE MODEL NO.	EXTERNAL STATIC PRESSURE (IN. W.C.)	SEER/ EER	ELECTRICAL		DX COOLING		HEATING		UNIT WEIGHT (LB.)	REMARKS
									VOLTAGE/ PHASE	MCA/ MOCP	TOTAL CAPACITY (MBTUH)	SENSIBLE CAPACITY (MBTUH)	HEAT OUTPUT (MBTUH)	AUX. HEAT INPUT (KW)		
A	3.0	1200	800	350	200	AH - TEM6A0C36 AC - 4TW7036A4	0.5	17.0/-	AH - 208V, 1Ø AC - 460V, 3Ø	AH - 23/25 AC - 8/15	35.6	28.3	33.6	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
B	4.0	1600	1100	350	200	AH - TEM6A0C48 AC - 4TW7048A4	0.5	17.0/-	AH - 208V, 1Ø AC - 460V, 3Ø	AH - 26/30 AC - 9/15	46.4	35.4	47.5	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
C	5.0	1990	1300	400	200	AH - TEM6A0C60 AC - 4TW7060A4	0.5	16.5/-	AH - 208V, 1Ø AC - 460V, 3Ø	AH - 26/30 AC - 10/15	54.8	42.3	55.0	2.88 KW @208V	AH - 200 AC - 200	1, 2, 3, 4, 5, 6, 7, 8, 9
D	7.5	3000	2000	600	200	AH - TEM6A0C36 AC - 4TW7036A4	0.5	- / 12.8	AH - 460V, 3Ø AC - 460V, 3Ø	AH - 12/15 AC - 15/20	92.8	74.2	52.8	5.00 KW @460V	AH - 360 AC - 420	1, 2, 3, 4, 5, 6, 7, 8, 9
E	20.0	8000	5300	1600	200	AH - TEM6A0C60 AC - 4TW7060A4	0.5	- / 12.8	AH - 460V, 3Ø AC - 460V, 3Ø	AH - 23/25 AC - 46/60	248.6	196.0	150.3	10.01 KW @460V	AH - 900 AC - 850	1, 2, 3, 4, 5, 6, 7, 8, 9

- A JHBreakRoom, JHUB1, JHUB2, JHUB3, JHUB4, JHNLKRL, JHNKRLM, JHOffice, JHPPrincipal, JHSHall, JHWHall, JH408B, JH207, JH211, JH304, JH305, JH306, JH307, JH310, JH404, JH405
- B JH120
- C JHBandHall, JHkitchen, JHSLKRM, JH121, JH413
- D JHGYMSE, JHGymSW, JHGymNW, JHGymNW
- E JHCafe

Remarks:  
 1. 2" EXTERNAL FILTER RACK W/ MERV 8 FILTERS  
 2. THERMAL EXPANSION VALVE  
 3. HAIL COIL GUARD  
 4. MOTORIZED OUTSIDE AIR DAMPER  
 5. R410-A REFRIGERANT  
 6. TWO STAGE COMPRESSOR  
 7. MULTIPLE COMPRESSORS  
 8. BIPOLAR IONIZATION  
 9. SINGLE POINT POWER

**AIR IONIZER SCHEDULE**

SYSTEM CFM	MANUFACTURER	MODEL	REMARKS
0 - 1400	BIOLIMATIC	IGDN-1	BULB-LESS DESIGN, 24V POWER
1400 - 2800	BIOLIMATIC	IGDN-2	BULB-LESS DESIGN, 24V POWER
2800 - 4200	BIOLIMATIC	IGDN-3	BULB-LESS DESIGN, 24V POWER
4200 - 6000	BIOLIMATIC	IGDN-4	BULB-LESS DESIGN, 24V POWER
6000 - 7200	BIOLIMATIC	IGDNR-6	BULB-LESS DESIGN, 24V POWER
7200 - 8400	BIOLIMATIC	IGDNR-7	BULB-LESS DESIGN, 24V POWER. 8000 CFM+ REQUIRE 2 IONIZERS

NOTE: UNITS RECEIVING IONIZERS SHALL HAVE 2 POSITION DAMPERS (OPEN AND CLOSED)

**GRILLE SCHEDULE**

CFM	DESCRIPTION	MODEL	FINISH	NECK	REMARKS: PROVIDE
0 - 1400	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	12"x12"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.
1400 - 2800	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	18"x12"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.
2800 - 4200	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	24"x18"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.
4200 - 6000	OUTSIDE AIR INTAKE LOUVER	POTTORFF EXD-645	BAKED ENAMEL	36"x18"	MOTORIZED DAMPER TO CLOSE WHEN UNIT IS OFF, FINISH COLOR TO BE DETERMINED BY OWNER.
6000 - 7200	CEILING SUPPLY DIFFUSER	PRICE SCVD	WHITE	10"x10"	MODULE SIZE 12"x12", CONCEALED FASTENERS, (FLUSH MOUNT ADD TRIM FRAME AND ADJUSTABLE DAMPER)

NOTE: EXACT LOCATIONS OF ALL SIDEWALL GRILLES TO BE COORDINATED WITH ARCHITECT.

**COMcheck Software Version 4.1.5.1  
 Mechanical Compliance Certificate**

Project Information  
 Energy Code: 2015 IECC  
 Project Title: Rains JH HVAC Renovations  
 Location: Emory, Texas  
 Climate Zone: 3a  
 Project Type: Alteration  
 Construction Site: Rains, TX  
 Owner/Agent: Rains ISO  
 Designer/Contractor: EMA Engineering & Consulting, 320 S Broadway, Tyler, TX 75702

Quantity	System Type & Description
21	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 4603 - 3T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 34 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 36 kBtu/h, Proposed Efficiency = 16.90 SEER, Required Efficiency = 14.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
1	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 4603 - 4T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 48 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 46 kBtu/h, Proposed Efficiency = 16.90 SEER, Required Efficiency = 14.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
25	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 2081 - 3T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 32 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 35 kBtu/h, Proposed Efficiency = 17.00 SEER, Required Efficiency = 14.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
2	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 2081 - 4T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 47 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 46 kBtu/h, Proposed Efficiency = 17.00 SEER, Required Efficiency = 14.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
1	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 2081 - 5T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 55 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 55 kBtu/h, Air Economizer Proposed Efficiency = 16.90 SEER, Required Efficiency = 14.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes

Quantity	System Type & Description
6	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 4603 - 5T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 55 kBtu/h, Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF Cooling Mode: Capacity = 55 kBtu/h, Air Economizer Proposed Efficiency = 16.90 SEER, Required Efficiency = 14.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
4	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 4603 - 7.5T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 53 kBtu/h, Proposed Efficiency = 8.20 COP, Required Efficiency = 3.30 COP Cooling Mode: Capacity = 93 kBtu/h, Air Economizer Proposed Efficiency = 14.00 EER, Required Efficiency = 11.00 EER + 12.0 IEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
1	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade HP: 4603 - 20T (Single Zone): Split System Heat Pump Heating Mode: Capacity = 150 kBtu/h, Proposed Efficiency = 8.20 COP, Required Efficiency = 3.30 COP Cooling Mode: Capacity = 249 kBtu/h, Air Economizer Proposed Efficiency = 14.00 EER, Required Efficiency = 9.50 EER + 10.0 IEER Fan System: Supply Fan 20 Ton – Compliance (Motor nameplate HP method) : Passes
1	Fans: FAN 1 Supply, Constant Volume, 8000 CFM, 3.0 motor nameplate hp, 0.0 fan efficiency grade GAS/ELEC - 2T (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 25 kBtu/h Proposed Efficiency = 80.00% EI, Required Efficiency: 80.00% EI or 78% AFUE Cooling: 1 each - Split System, Capacity = 23 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 17.00 SEER, Required Efficiency: 13.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes

Quantity	System Type & Description
7	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade GAS/ELEC - 3T (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 33 kBtu/h Proposed Efficiency = 80.00% EI, Required Efficiency: 80.00% EI or 78% AFUE Cooling: 1 each - Split System, Capacity = 35 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 17.00 SEER, Required Efficiency: 13.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
6	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade GAS/ELEC - 4T (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 48 kBtu/h Proposed Efficiency = 80.00% EI, Required Efficiency: 80.00% EI or 78% AFUE Cooling: 1 each - Split System, Capacity = 47 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 17.00 SEER, Required Efficiency: 13.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes
1	Fans: FAN 1 Supply, Constant Volume, 1200 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade GAS/ELEC - 5T (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 55 kBtu/h Proposed Efficiency = 80.00% EI, Required Efficiency: 80.00% EI or 78% AFUE Cooling: 1 each - Split System, Capacity = 55 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 17.00 SEER, Required Efficiency: 13.00 SEER Fan System: Supply Fan 1/2 HP – Compliance (Motor nameplate HP method) : Passes

Mechanical Compliance Statement  
 Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.  
 Liam Urwiler - Mechanical Designer  
 Signature: [Signature]  
 Date: 02/03/2022

Project Title: Rains JH HVAC Renovations  
 Data filename: Z:\EMARAIN\01\_001\_0959\_001\JH HVAC RENOV\COMcheck 1\_001\_0959\_001\Rains JH HVAC REN COMCHECK.cck  
 Report date: 02/03/22

Project Title: Rains JH HVAC Renovations  
 Data filename: Z:\EMARAIN\01\_001\_0959\_001\JH HVAC RENOV\COMcheck 1\_001\_0959\_001\Rains JH HVAC REN COMCHECK.cck  
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**MECHANICAL SYMBOLS**

THERMOSTAT/SENSOR (PER SPEC.)	T
CO2 SENSOR	CS