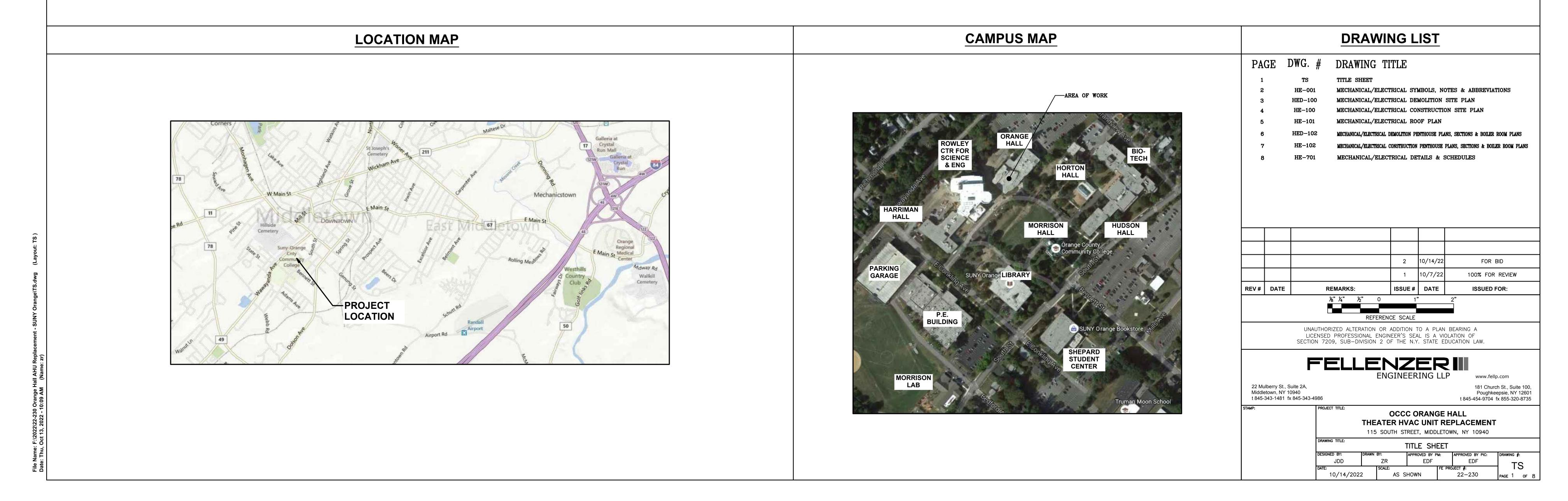
## ORANGE COUNTY COMMUNITY COLLEGE MIDDLETOWN CAMPUS

115 SOUTH STREET, MIDDLETOWN NY

# OCCC ORANGE HALL THEATER HVAC UNIT REPLACEMENT COUNTY JOB NUMBER: OCCC-2023-20



#### GENERAL ELECTRICAL NOTES

ON PLANS.

- ALL CONDUITS ARE SHOWN DIAGRAMMATICALLY, EXACT RUNS SHALL BE DETERMINED IN FIELD EXCEPT WHERE SPECIFICALLY DIMENSIONED ON CONDUIT LAYOUTS. CONTRACTOR SHALL FOLLOW MINIMUM SPACING REQUIREMENTS TO REDUCE ELECTROMAGNETIC INTERFERENCE. COORDINATE CONDUIT ROUTING WITH ALL OTHER TRADES.
- 2. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL TO BUILDING WALLS AND BEAMS EXCEPT WHERE OTHERWISE SHOWN. CONTRACTOR SHALL
- INSTALL CONDUIT IN SUCH A MANNER TO AVOID ALL INTERFERENCES. 3. DEFLECTION/EXPANSION FITTINGS SHALL BE PROVIDED WHERE RIGID
- METAL CONDUIT CROSSES STRUCTURAL EXPANSION JOINTS. 4. EXPOSED CONDUIT SHALL BE SUPPORTED ON WALLS OR CEILINGS BY
- SHALL BE SUPPORTED AT LEAST EVERY EIGHT (8) FEET. 5. ALL SPARE CONDUITS SHALL BE TERMINATED AS SHOWN ON CONDUIT

APPROVED HANGERS OF ANGLE OR CHANNEL CONSTRUCTION. CONDUITS

- LAYOUTS AND SHALL BE CAPPED 3" ABOVE FINISHED FLOOR. 6. NO CONDUIT SHALL BE SMALLER THAN ¾" UNLESS NOTED OTHERWISE
- '. THE NUMBER OF WIRES SHOWN ON THE DRAWINGS IS NOT NECESSARILY THE CORRECT NUMBER REQUIRED. THE CONTRACTOR SHALL INSTALL AS
- MANY AS ARE NECESSARY FOR PROVIDING A COMPLETE ELECTRICAL SYSTEM IN EACH CASE.
- 8. EQUIPMENT FURNISHED BY OTHERS SHALL BE INSTALLED & ENERGIZED BY THE ELECTRICAL CONTRACTOR.
- 9. THE ELECTRICAL CONTRACTOR SHALL NOT ENDANGER THE STABILITY OF THE STRUCTURE OR ANY PART THEREOF BY CUTTING, DRILLING OR OTHERWISE, AND SHALL NOT IN ANY WAY CUT OR ALTER THE WORK OF ANY OTHER CONTRACTOR, EXCEPT WITH THE WRITTEN CONSENT OF AND UNDER THE DIRECTION OF THE ENGINEER AND/OR GENERAL
- 10. THE ELECTRICAL CONTRACTOR SHALL SECURE ALL APPROVALS AND CERTIFICATES AND PAY ALL FEES FOR ALL THE WORK INSTALLED. CERTIFICATES SHALL BE DELIVERED TO THE GENERAL CONTRACTOR BEFORE FINAL PAYMENT WILL BE MADE.
- 11. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE VERSION OF THE NEC AS WELL AS ALL STATE AND LOCAL
- 12. THE DRAWINGS INDICATE AND THE SPECIFICATIONS DESCRIBE THE GENERAL ARRANGEMENTS AND LOCATION OF OUTLET BOXES, ETC. THE CONTRACTOR SHALL, WITHOUT EXTRA COST TO THE OWNER, MAKE ALL REASONABLE MODIFICATIONS IN THE WORK AS MAY BE REQUIRED TO PREVENT CONFLICT WITH EXISTING CONDITIONS, THE WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF THE WORK.
- 13. PRIOR TO SUBMISSION OF BID PROPOSAL, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE CAREFULLY THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL BE INCURRED DURING THE PERFORMANCE
  - A. VERIFY & COORDINATE CONDUIT ROUTING.
  - B. VERIFY & COORDINATE SCOPE OF DEMOLITION WORK.
  - C. VERIFY & COORDINATE SCOPE OF WORK INVOLVING CONNECTIONS
  - TO EXISTING BASE BUILDING SYSTEMS. D. VERIFY SCOPE OF WORK THAT HAS TO BE DONE WITH EXISTING FIRE ALARM SYSTEM AS REQUIRED TO ACCOMMODATE ALL ADDED
  - DEVICES E. VERIFY WITH GENERAL CONTRACTOR SCOPE OF WORK ASSOCIATED WITH RIGGING OF EQUIPMENT TO BE PREPURCHASED.
- F. COORDINATE WITH THE BUILDING ENGINEER AND GENERAL CONTRACTOR SHUT DOWNS OF EXISTING FACILITIES.
- 14. ARRANGE FOR SITE VISIT WITH THE BLDG. OWNER REPRESENTATIVE AND 15. CLAIMS FOR ADDITIONAL COMPENSATION ARISING DUE TO THE FAILURE
- OF THE CONTRACTOR TO FULLY UNDERSTAND THE SITE CONDITIONS SHALL NOT BE PAID FOR BY ANY OTHER PARTY. 16. CONNECTIONS TO EXISTING WORK:
- A. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES.
- B. TEMPORARY SHUTDOWNS OF EXISTING SERVICES:
- a. AT NO ADDITIONAL CHARGES. b. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF
- c. ONLY WITH WRITTEN CONSENT OF THE GENERAL
- CONTRACTOR AND/OR BUILDING OWNERS REPRESENTATIVE. ALARM AND EMERGENCY SYSTEMS: ALARMS NEED TO BE TAKEN OFFLINE ON A DAILY BASIS WHILE WORK IS COMPLETED. CONTRACTOR SHALL CONTACT SECURITY WHEN AN ALARM IS TO BE TURNED OFF AND AT THE END OF THE DAY WHEN WORK IS
- D. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK.
- E. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING
- F. PRIOR TO DEMOLITION OF AN EXISTING POWER PANEL, THE CONTRACTOR SHALL SEARCH OUT ALL EXISTING CIRCUITS FED FROM THE PANEL TO PREVENT ANY ACCIDENTAL SERVICE
- 17. LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS. CONDUIT OVER 10 FEET IN WHICH WIRING IS NOT INSTALLED-FURNISH

#### 18. DO NOT PULL THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F (0 DEG C). PROVIDE CABLE SUPPORTS FOR WIRE IN RISER CONDUITS AS REQUIRED BY CODE.

- 19. JUNCTION & PULL BOXES: DO NOT LOCATE EXPOSED IN FINISH SPACES UNLESS REQUIRED BY NEC. WHERE NECESSARY, REROUTE CONDUIT OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. PROVIDE PULL BOXES AS INDICATED AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATE LOCATIONS WITH OTHER TRADES. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE. FOR EMPTY CONDUITS, INSTALL PULL BOXES EVERY 100 FEET AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER TRADES.
- 20. SUPPORT PANEL, JUNCTION & PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON CONDUIT.
- 21. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ENGINEER PRIOR TO INSTALLATION.
- 22. FOR EACH LOCATION OF OTHER TRADES EQUIPMENT, SEE RESPECTIVE TRADE DRAWINGS. 23. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED
- ON DETAILS SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE WORKABLE SYSTEM. 24. USE OF ISOLATED TYPE GROUNDING CONDUCTOR FOR IG TYPE RECEPTACLES, PLUG MOLDS & EQUIPMENT DOES NOT RELIEVE REQUIREMENT FOR GROUNDING CONDUIT SYSTEM, DEVICES AND EQUIPMENT AS REQUIRED BY ALL APPLICABLE CODES. PROVIDE AND

INSTALL GROUNDING FITTING, EQUIPMENT GROUND WIRING ETC. AS

- 25. ALL CONDUITS, TRANSFORMERS ETC. SHALL BE SUPPORTED FROM STRUCTURAL STEEL ONLY. COORDINATE WITH GENERAL CONTRACTOR.
- 26. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT IN ELECTRICAL AND SERVICE SWITCHBOARD ROOM SHALL BE INSTALLED ON 4" CONCRETE PAD AS REQUIRED TO SUPPORT EACH SECTION OF EQUIPMENT. COORDINATE WITH GENERAL CONTRACTOR.

28. PAINT AND RUST PROOF ALL HARDWARE & CONDUITS ON ROOF AND IN

- 27. PROVIDE BARRIERS IN ALL PULL BOXES FOR CONDUIT SETS.
- 29. NUMBER SHOWN ADJACENT TO LIGHTING FIXTURES, RECEPTACLES, OUTLETS, JUNCTION BOXES ETC. INDICATES CIRCUIT NUMBER.
- 30. ALL GROUND CONNECTIONS TO THE BUILDING STEEL SHALL BE EXOTHERMIC WELDED.

NEW UNLESS OTHERWISE NOTED.

EXPOSED AREAS AS DIRECTED BY GENERAL CONTRACTOR.

- 31. FLEXIBLE CONNECTIONS IN EXPOSED AREAS SHALL NOT EXCEED 18"
- 32. ALL EQUIPMENT DEVICES, WIRING, ETC. SHOWN ON THE DRAWINGS IS
- 33. ELECTRICAL CONTRACTOR SHALL PROVIDE SLEEVES/ OPENINGS FOR ALL CONDUIT RISERS PENETRATING WALLS, ROOF & FLOOR SLABS. ALL ROOF AND MECH. ROOMS SLAB PENETRATIONS SHALL BE WATERPROOF. METHOD OF PENETRATIONS & FIRE/WATER WATER PROOFING SHALL BE APPROVED BY ENGINEER, COORDINATE WITH GENERAL CONTRACTOR.
- 34. ELECTRICAL CONTRACTOR SHALL BECOME FAMILIAR AND COMPLY WITH OWNERS BUILDING STANDARDS FOR CONSTRUCTION.
- 35. ALL FINAL CONNECTIONS TO VIBRATING EQUIPMENT (MOTORS, GENERATORS ETC.) SHALL BE THROUGH A LIQUID TIGHT FLEXIBLE METAL
- 36. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
- 37. THE TERMS "PROVIDE" OR "FURNISH". AS USED ON THESE PLANS. INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL TH REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
- 38. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER AND HVAC STAFF; DEMONSTRATING OPERATION OF SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL
- 39. IT IS THE INTENTION THAT THESE SPECIFICATIONS, AND DRAWINGS ACCOMPANYING SAME. SHALL PROVIDE FOR THE FURNISHING AND INSTALLING OF THE ELECTRICAL SYSTEMS. COMPLETE AS SPECIFIED AND SHOWN. ANY WORK SHOWN ON THE DRAWINGS AND NOT PARTICULARLY DESCRIBED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY WORK CHANGES WHICH MAY BE EVIDENTLY NECESSARY TO COMPLETE THE INSTALLATION SHALL BE FURNISHED BY THIS CONTRACTOR.
- 40. IT IS THE INTENT AND PURPOSE OF THESE SPECIFICATIONS AND DRAWINGS TO INCLUDE AND PROVIDE FOR ALL MATERIALS, APPLIANCES AND LABOR TO PROPERLY COMPLETE AND LEAVE IN PERFECT WORKING CONDITION THE ENTIRE SYSTEM HEREINAFTER SPECIFIED. ANY MATERIAL. LABOR OR APPLIANCE NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS, BUT NECESSARY FOR A COMPLETE INSTALLATION MUST BE FURNISHED BY THIS CONTRACTOR.
- 41. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT. CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

#### **ELECTRICAL DEMOLITION NOTES:**

- 1. COORDINATE WITH DEMOLITION PLANS FOR EXACT AREAS TO BE DEMOLISHED.
- 2. DISCONNECT AND REMOVE ALL DEVICES, FIXTURES, DATA/TEL. OUTLETS, POWER CONNECTIONS TO HVAC EQUIPMENT AND DISCONNECT SWITCHES, CONDUIT & WIRING FROM ALL WALLS/CFILINGS BEING REMOVED, WITHIN THIS AREA BACK TO POWER PANEL OF ORIGIN.
- 3. ALL EXISTING DEVICES SCHEDULED TO REMAIN SHALL BE EXTENDED/RE-CIRCUITED AS REQUIRED TO MAINTAIN CONTINUITY OF CIRCUIT/DEVICES.
- 4. REMOVALS SHALL INCLUDE, BUT NOT BE LIMITED TO DEVICES, FIXTURES, FIRE ALARM DEVICES, DATA/TEL. OUTLETS, POWER CONNECTIONS TO HVAC EQUIPMENT AND DISCONNECT SWITCHES, CONDUIT & WIRING.
- 5. ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY WORK AND/OR MATERIALS TO RENDER EXISTING SYSTEM OPERATIONAL DURING ALL PHASES OF CONSTRUCTION IN ALL OCCUPIED SPACES INCLUDING BUT NOT LIMITED TO. POWER. DATA. LIGHTING. EMERGENCY COMPONENTS & ALARMS. COORDINATE WITH ALL TRADES, OWNER AND OVERALL
- 6. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

CONSTRUCTION PHASING SCHEDULE.

- 7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT. FURNITURE, SUPPLIES, ETC. THAT MAY BE LOCATED IN THE AREA OF WORK.
- 8. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

## **HVAC LINE TYPES**

-/-/-/- or ----- EXISTING EQUIPMENT/DUCT TO BE REMOVED — EXISTING EQUIPMENT/DUCT TO REMAIN NEW EQUIPMENT / DUCT HOT WATER RETURN PIPING HOT WATER SUPPLY PIPING CONDENSATE DRAIN PIPING

#### FIRE ALARM NOTES

ALL CHANGES TO THE FIRE ALARM SYSTEM SHALL BE BY JCI. WHO WILL BE RETAINED BY THE COLLEGE. CONTACT MARK TASIK AT (845)-537-7269 FOR COORDINATION.

— ×— ×— ×— CHAIN LINK FENCE

- 2. ALL FIRE ALARM WIRING SHALL BE IN TEFLON WIRE AND SHALL BE CONCEALED IN CEILING SPACES & WALLS.
- 3. CONTRACTOR IS RESPONSIBLE FOR ALL FILING AND FINAL INSPECTION AS PER THE LOCAL AUTHORITY HAVING JURISDICTION.
- 4. CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY MODULES, INTERFACE MODULES AND DEVICES REQUIRED TO PROVIDE AN OPERABLE ALARM SYSTEM IN COMPLIANCE WITH ALL CODES.
- 5. ACTIVATION OF THE SMOKE DETECTORS SHALL CAUSE A GENERAL ALARM AFTER THE SMOKE DETECTOR PERFORMS VERIFICATION.
- UPON ENTERING THE PANEL ALARM MODE. THE ALARM INDICATING DEVICE SHALL BE ACTIVATED, AND THE SUPPLY FANS SHALL SHUT-DOWN AND THE DIGITAL COMMUNICATOR SHALL NOTIFY THE CENTRAL RECEIVING STATION.
- . CONTRACTOR SHALL PROVIDE ALL NECESSARY ADDITIONAL RELAY DEVICES OR POWER TRANSFORMERS FOR PROPER OPERATION OF THE FAN SHUT-DOWN UNITS AND OTHER RELATED DEVICES.
- 8. BATTERY BACKUP SHALL PROVIDE A MINIMUM OF 24 HRS. OPERATION WITH A 15 MINUTE ALARM AT THE END OF 24 HRS.
- NEW FIRE ALARM SYSTEM SHALL BE TESTED IN ACCORDANCE WITH NFPA CODES 70, 70E, 72, BCNYS, FCNYS, LSC101 (2000)-CH.32 NEW BOARD AND CARE OCCUPANCY AS WELL AS ALL LOCAL AND STATE CODE REQUIREMENTS.
- 10. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL APPURTENANCES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. MODEL NUMBERS GIVEN MAY NOT INCLUDE ALL SPECIFIC REQUIRED ACCESSORIES FOR COMPLETE INSTALLATION.
- 11. ENTIRE FIRE DETECTION AND ALARM SYSTEM SHALL BE FURNISHED AND INSTALLED BY A N.Y. STATE LICENSED ALARM CONTRACTOR.
- 12. ALL AIR HANDLING SYSTEMS RATED 2,000 CFM OR MORE SHALL BE PROVIDED WITH DUCT SMOKE DETECTORS FAN SHUTDOWNS CONNECTED TO THE FIRE ALARM SYSTEM.

## **DUCTWORK SYMBOLS** AxB DUCTWORK DOUBLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH. DUCTWORK SINGLE LINE REPRESENTATION: "A" INDICATES DUCT WIDTH; "B" INDICATES DUCT DEPTH. SUPPLY AIR DUCT UP SUPPLY AIR DUCT DOWN RETURN AIR DUCT UP RETURN AIR DUCT DOWN EXHAUST AIR DUCT UP EXHAUST AIR DUCT DOWN FLEXIBLE DUCTWORK **~~~~** SUPPLY AIR FLOW RETURN/EXHAUST AIR FLOW VOLUME DAMPER SUPPLY AIR TERMINAL RETURN/EXHAUST AIR TERMINAL EXHAUST AIR TERMINAL

GENERAL SYMBOLS

AND EXISTING WORK

POINT OF DISCONNECT

- INDICATES SECTION LETTER

POWER SYMBOLS

SPECIAL PURPOSE CONNECTION.

UNLESS OTHERWISE NOTED.

CABLE QUANTITY AND SIZE.

DOUBLE HOME RUN

TRIPLE HOME RUN

POINT OF CONNECTION BETWEEN NEW

-INDICATES DRAWING NUMBER WHERE LOCATED

3P, FUSED DISCONNECT SWITCH, FURNISHED

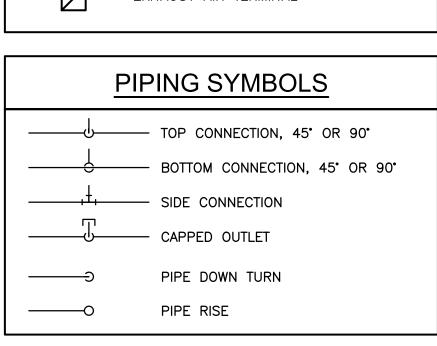
AND INSTALLED BY ELECTRICAL CONTRACTOR.

SHALL HAVE THE SAME # OF POLES &

AMPERE RATING AS CONNECTING CIRCUIT

CONDUIT HOME RUN TO DESIGNATED PANEL

REFER TO PANEL SCHEDULE FOR CONDUIT &



#### **GENERAL HVAC NOTES**

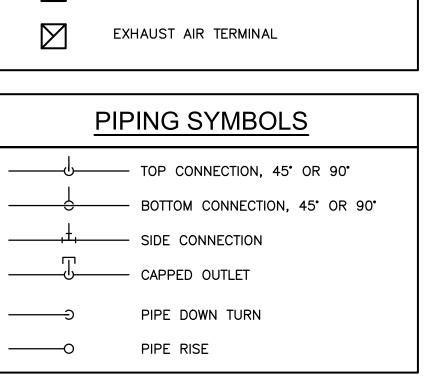
- 1. THE DRAWINGS ON THESE PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR IS THE ONLY CONTRACTOR. THIS CONTRACTOR EXTRA PAYMENTS WILL BE AUTHORIZED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO LACK OF COORDINATION WITH OTHER SYSTEMS.
- 2. THE SCOPE OF THIS PROJECT INCLUDES THE REPLACEMENT OF AHU-A. CU-1 AND RU-1.
- 3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF WALLS, FLOORS AND CEILINGS AS
- 4. ACCESS PANELS SHALL BE PROVIDED IN CEILINGS, WALLS, FLOORS, ETC., AS REQUIRED TO MAINTAIN ACCESSIBILITY TO VALVES, DAMPERS, TRAPS, COILS, ETC.
- 5. PROVIDE DUCT ACCESS DOORS AT ALL MOTORIZED DAMPERS, FIRE DAMPERS, AND SMOKE DAMPERS.
- 7. ALL DUCTWORK PASSING THROUGH A FIRE RATED PARTITION SHALL BE PROVIDED WITH A FIRE DAMPER TO MAINTAIN THE
- 8. FLEXIBLE DUCT CONNECTIONS SHALL BE LIMITED TO A MAXIMUM LENGTH OF FIVE (5) FEET AND SUPPORTED AT
- 10. PROVIDE SHUT-OFF VALVES AT ALL PIPING BRANCH TAKE-OFFS AND AT ALL CONNECTIONS TO EQUIPMENT.
- 11. PROVIDE DRAINS WITH HOSE ADAPTERS AND CAPS ON PIPING AT ALL LOW POINTS, PROVIDE MANUAL VENTS ON PIPING AT
- 12. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL
- 13. ALL MOTOR STARTERS SHALL BE FURNISHED BY THE HVAC CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE CONTROLS CONTRACTOR FOR INSTALLATION. 15. PRIOR TO ANY WORK, THE CONTRACTOR SHALL INSPECT THE ROOF AND REPORT ANY DEFECTS TO THE ENGINEER AND SUNY ORANGE REPRESENTATIVES. THE CONTRACTOR SHALL PROTECT THE ROOF FROM BEING DAMAGED DURING DEMOLITION
- 16. THE TERMS "PROVIDE" OR "FURNISH", AS USED ON THESE PLANS, INDICATE THAT THE CONTRACTOR IS TO FURNISH AND INSTALL THE REFERENCED EQUIPMENT OR SYSTEMS IN THEIR ENTIRETY AS REQUIRED FOR A COMPLETE AND OPERABLE
- 17. CONTRACTOR SHALL PROVIDE AND INSTALL ALL COMPONENTS INDICATED ON DETAIL SHEETS, PLANS, SPECIFICATIONS AND ALL PERTINENT EQUIPMENT REQUIRED FOR A COMPLETE AND WORKABLE SYSTEM.
- SYSTEMS AND THAT ALL SPECIFICATIONS HAVE BEEN MET TO THE SATISFACTION OF ALL PARTIES.
- 19. IT IS THE INTENTION THAT THESE SPECIFICATIONS, AND DRAWINGS ACCOMPANYING SAME, SHALL PROVIDE FOR THE FURNISHING AND INSTALLING OF THE HVAC SYSTEMS COMPLETE AS SPECIFIED AND SHOWN. ANY WORK SHOWN ON THE DRAWINGS AND NOT PARTICULARLY DESCRIBED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY WORK CHANGES WHICH MAY BE EVIDENTLY NECESSARY TO COMPLETE THE INSTALLATION SHALL BE FURNISHED BY THIS CONTRACTOR.
- OR SHOWN ON THE DRAWINGS, BUT NECESSARY FOR A COMPLETE INSTALLATION MUST BE FURNISHED BY THIS CONTRACTOR.

### **GENERAL ROOFING NOTES:**

- 1. ALL ROOFING WORK SHALL BE PERFORMED IN ACCORDANCE WITH EXISTING MATERIALS AND CONFORM WITH EXISTING
- 2. THIS CONTRACTOR SHALL RETAIN ONE OF THE FOLLOWING APPROVED CONTRACTORS TO PERFORM ALL ROOFING WORK:

HYGRADE INSULATORS P: (908)-454-1865 F: BOBJR@HYGRADEINSULATORS.COM

P: (570)-558-0932 E: JRBB740@AOL.COM

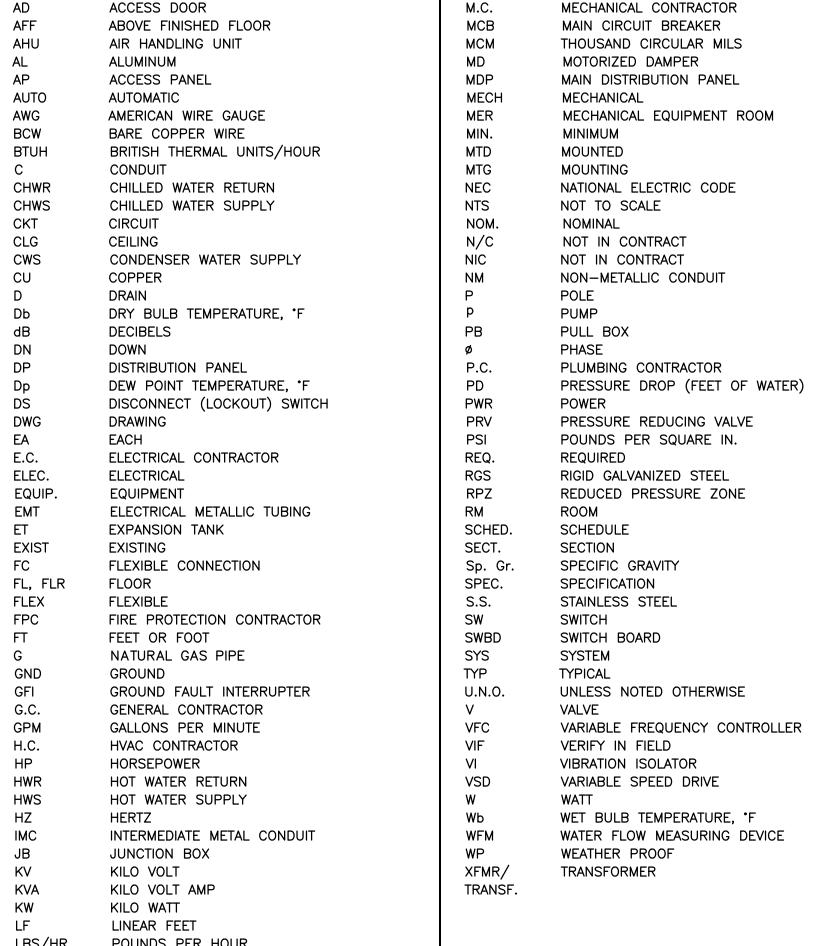


- SHALL BE RESPONSIBLE FOR COORDINATING ALL HVAC WORK WITH OTHER TRADES AND THE BUILDING STRUCTURE. NO
- REQUIRED FOR INSTALLATION OF HIS WORK.

- 6. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS SHALL BE SEALED FIRE AND SMOKE TIGHT WITH AN APPROPRIATE U.L. LISTED FIRESTOPPING MATERIAL AND OR SYSTEM.
- FIRE RATING OF THE PARTITION.
- MID-POINT.
- ALL SUPPLY & RETURN AIR DUCTWORK SHALL BE INSULATED.
- ALL HIGH POINTS.
- CONTRACTOR.
- 14. UNIT CONTROLS SHALL BE PROVIDED BY THE COLLEGE'S CONTROLS CONTRACTOR AND PAID FOR BY THE COLLEGE. THIS
- AND CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE. ANY ROOF REPAIRS SHALL BE PERFORMED BY THE COLLEGE'S ROOFING CONTRACTOR.
- 18. CONTRACT CLOSE OUT: IN THE PRESENCE OF THE OWNER, ENGINEER OR ARCHITECT; DEMONSTRATING OPERATION OF
- 20. IT IS THE INTENT AND PURPOSE OF THESE SPECIFICATIONS AND DRAWINGS TO INCLUDE AND PROVIDE FOR ALL MATERIALS, APPLIANCES AND LABOR TO PROPERLY COMPLETE AND LEAVE IN PERFECT WORKING CONDITION THE ENTIRE SYSTEM HEREINAFTER SPECIFIED. ANY MATERIAL, LABOR OR APPLIANCE NOT SPECIFICALLY MENTIONED IN THESE SPECIFICATIONS
- 21. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO PROVIDE ALTERATIONS AND/OR NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS TO PROVIDE COMPLETE NEW SYSTEMS IN EVERY RESPECT, CAPABLE OF OPERATING AS DESIGNED. IT IS NOT INTENDED THAT EVERY FITTING, MINOR DETAIL OR FEATURE BE SHOWN ON DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DETAIL NECESSARY FOR COMPLETION OF THESE SYSTEMS IN ACCORDANCE WITH GOOD PRACTICE.

CONTACT PERSON: ROBERT PICCIONE

<u>A-Z COATINGS</u> CONTACT PERSON: GERALD ROBB



**ABBREVIATIONS** 

ACOUSTIC CEILING TILE

MBH

MAXIMUM

ONE THOUSAND BTUH

		LBS/HR POUNDS P							
ſ	LOAD	CONDUCTORS	C.B. C.B.	CONDUCTORS	LOAD				
Ī		EXISTING CONDUCTORS	110 1 2 20	EXISTING CONDUCTORS					
	DO NOT USE		3 1 4 4		DO NOT USE				
			5 6						
	EXISTING PENTHOUSE		25 7 8 25 10 10 10 10 10 10 10 10 10 10 10 10 10						
*	HEAT EXCHANGER <u>RU-1</u> TO BE REPLACED		9 11 12 12		ROOM 32 STORAGE				
ł	10 52 112/ 21025		20 13 14 20						
	PIANO ROOM A/C		15 16		MUSIC ROOM A/C				
	1,410 110 110 11	•	17 18	•					
Ì	SPACE	<u>'</u> 	19 20		SPACE				
Ī			21 22						
			23		<b>y</b>				
	EXISITNG OUTDOOR	EXISTING CONDUCTORS	100 25 26 25	EXISTING CONDUCTORS	EXISTING PENTHOUSE AIR				
	COMPRESSOR/CONDENSER CU-1 TO BE REPLACED		27 28 30 30	<b>V</b>	HANDLER <u>AHU</u> TO BE REPLACED	*			

## **EXISTING POWER PANEL - (MI)**

SQUARE D RATING: 277/480V, 3ø, 4W MAINS: 200 AMPERE MAIN LUGS BRANCHES: 14000 A.I.C. THERMAL MAGNETIC CIRCUIT BREAKERS

NEMA 1 SURFACE MOUNT

ENCLOSURE:

POLES:

1. ALL NEW WIRE SHALL BE DUAL RATED THHN/THWN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. 2. ALL NEW CIRCUITS SHALL HAVE FULL SIZE INSULATED GREEN GROUND UNLESS OTHERWISE NOTED. \* REMOVE AND REPLACE EXISTING CIRCUIT BREAKER WITH NEW

SIZE SHOWN. DISCONNECT AND

RECONNECT TO EXISTING WIRING.

10/14/22 FOR BID 100% FOR REVIEW REV# DATE REMARKS: ISSUE # | DATE **ISSUED FOR:** *1*/8" *1*/4" *1*/2" 0

> REFERENCE SCALE UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW.

**FELLENZER III** 22 Mulberry St., Suite 2A, Middletown, NY 10940

10/14/2022

t 845-343-1481 fx 845-343-4986

t 845-454-9704 fx 855-320-8735 OCCC ORANGE HALL THEATER HVAC UNIT REPLACEMENT 115 SOUTH STREET, MIDDLETOWN, NY 10940

AS SHOWN

MECHANICAL/ELECTRICAL SYMBOLS, NOTES & ABBREVIATIONS EDF EDF JDD ZR

22-230

181 Church St., Suite 100,

Poughkeepsie, NY 12601

#### 10. IT IS THE RESPONSIBILITY OF THE HVAC CONTRACTOR FOR THE DRAINING, FILLING & CHEMICAL WATER TREATMENT PER BOILER MANUFACTURER'S REQUIREMENTS.

PULL STRING.

**HVAC DEMOLITION NOTES** 

CONTROL NOTES

3. EXISTING AHU-A CONTROLS POINT LIST:

RETURN AIR TEMPERATURE RUN INDICATOR

HOT WATER VALVE OPEN

ALL CONTROLS WORK SHALL BE BY DAY AUTOMATION, WHO WILL BE RETAINED BY THE COLLEGE. CONTACT SCOTT SULLIVAN AT (518)-729-6919 FOR COORDINATION.

2. ALL NEW EQUIPMENT SHALL OPERATE UNDER ITS OWN OPERATING AND SAFETY PROTOCOLS, AND SHALL BE FACTORY EQUIPPED WITH THE REQUIRED HARDWARE FOR CONNECTION TO THE EXISTING BMS.

COORDINATE DEMOLITION WORK WITH THE CONSTRUCTION PLANS.

8. THE PLANS ARE INTENDED TO CONVEY THE EXTENT AND SCOPE OF THE DEMOLITION WORK. EVERY ITEM INTENDED FOR REMOVAL MAY NOT BE SHOWN. THE CONTRACTOR IS ADVISED TO SURVEY THE PROJECT SITE BEFORE SUBMITTING A BID FOR DEMOLITION WORK.

LOCATED IN THE AREA OF WORK.

SPACE TEMPERATURE CHANGE OVER

MIX AIR DAMPER OPEN

9. THE SCOPE OF THIS PROJECT INCLUDES THE REPLACEMENT OF AHU-A, CU-1 AND RU-1.

DISCHARGE AIR TEMPERATURE

INPUT INPUT INPUT INPUT OUTPUT

OUTPUT OUTPUT OUTPUT

REMOVE ALL EQUIPMENT, DUCTWORK AND PIPING AS INDICATED ON PLAN. REMOVALS SHALL INCLUDE ALL SUPPORTS AND

ATTENTION OF THE ARCHITECT OR ENGINEER. ANY DEMOLITION WORK WHICH MAY BE QUESTIONABLE DUE TO UNFORESEEN

FIELD CONDITIONS SHALL NOT BE REMOVED UNTIL REVIEWED BY THE ARCHITECT, ENGINEER OR BUILDING FACILITIES

RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF DEMOLITION ITEMS OFF-SITE, UNLESS OTHERWISE NOTED.

7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO REMOVE ANY LOOSE EQUIPMENT, FURNITURE, SUPPLIES, ETC. THAT MAY BE

HANGERS, HOUSEKEEPING PADS, DAMPERS, VALVES, FITTINGS, CONTROLS AND ASSOCIATED LOW VOLTAGE WIRING, AND

3. ANY DISCREPANCIES BETWEEN THE DEMOLITION PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE

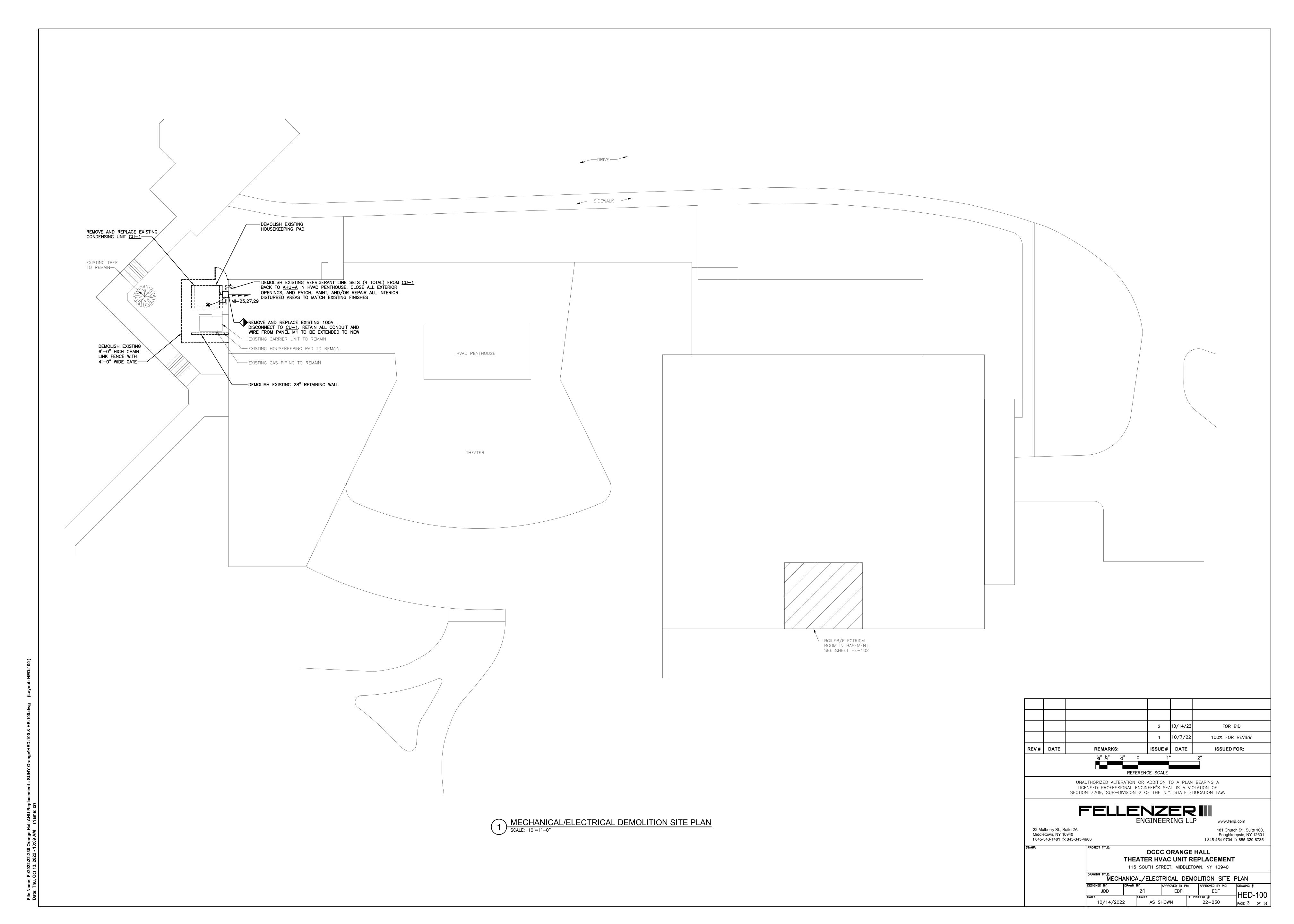
4. DEMOLITION WORK SHALL INCLUDE THE PREPARATION OF EXISTING EQUIPMENT FOR CONNECTION TO NEW EQUIPMENT.

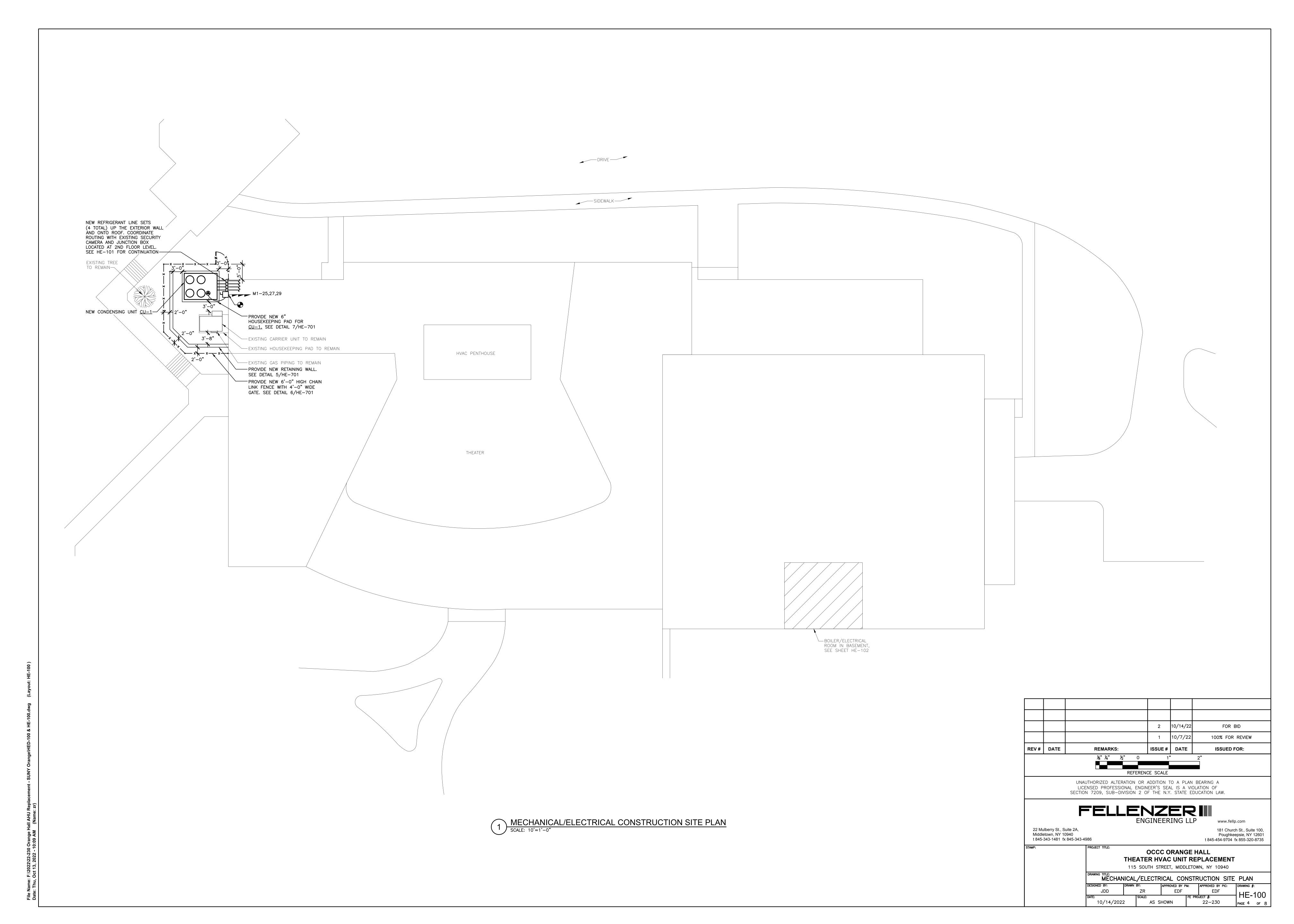
5. ALL EQUIPMENT REMOVALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR. THIS CONTRACTOR SHALL BE

6. ALL CUTTING AND PATCHING NECESSARY FOR THE DEMOLITION WORK SHALL BE THE RESPONSIBILITY OF THIS

ANY OTHER ASSOCIATED ACCESSORIES WHICH PERTAIN TO THE EQUIPMENT TO BE REMOVED.

2. REMOVAL OF ALL POWER CONNECTIONS TO DEMOLITION ITEMS SHALL BE BY THE HVAC CONTRACTOR.

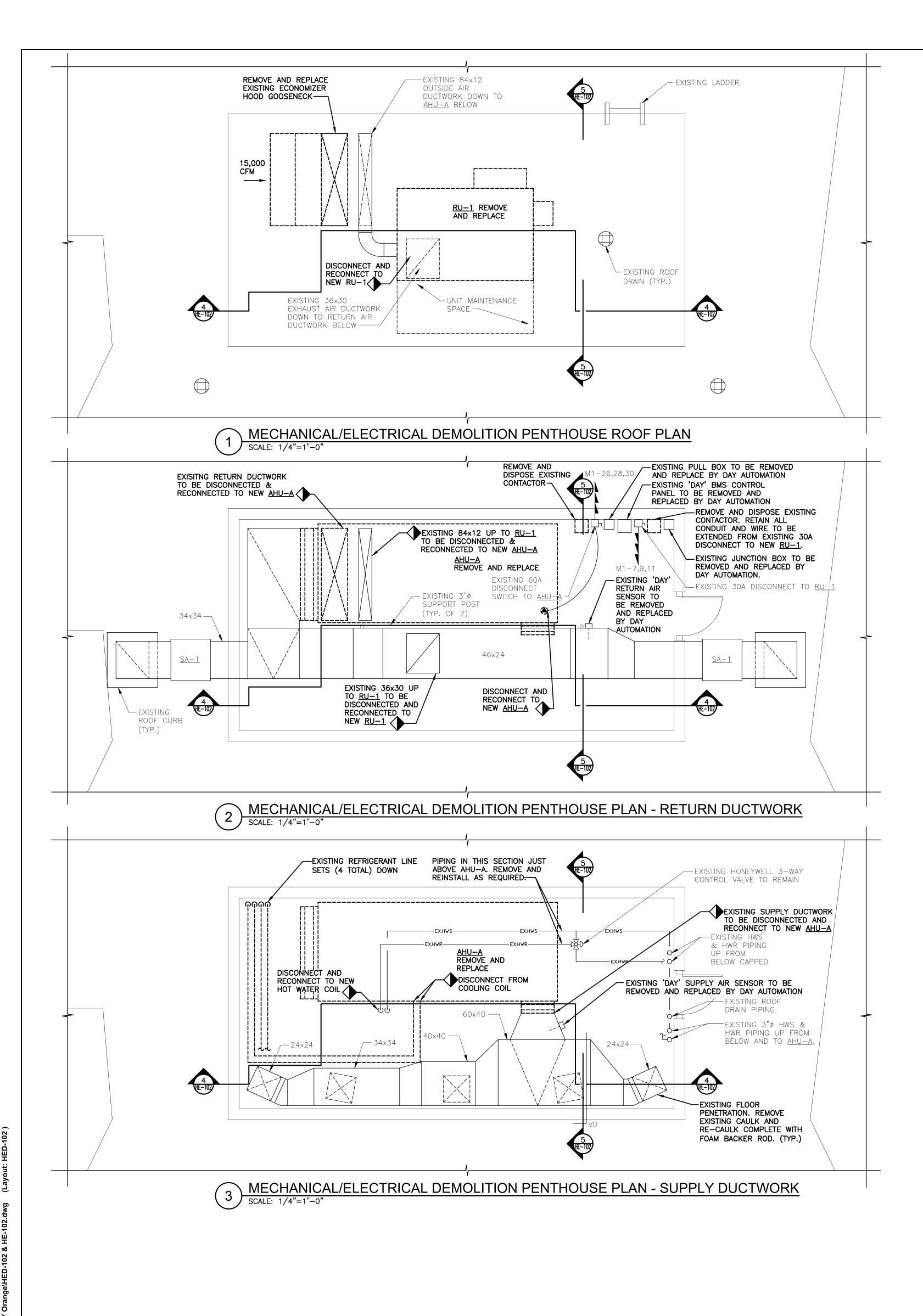


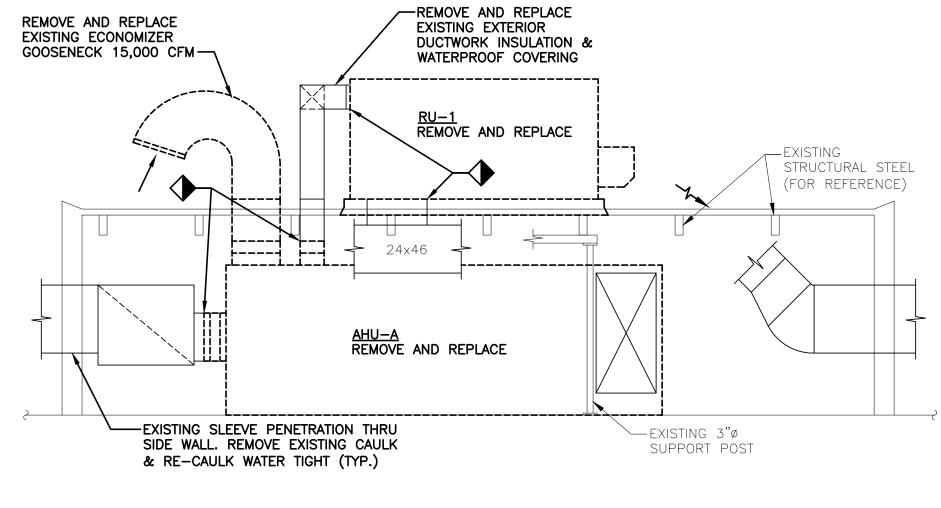


FOR BID 100% FOR REVIEW REV# DATE REFERENCE SCALE UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING A LICENSED PROFESSIONAL ENGINEER'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2 OF THE N.Y. STATE EDUCATION LAW. FELLENZER III
ENGINEERING LLP 181 Church St., Suite 100, Poughkeepsie, NY 12601 t 845-454-9704 fx 855-320-8735 22 Mulberry St., Suite 2A, Middletown, NY 10940 t 845-343-1481 fx 845-343-4986 OCCC ORANGE HALL THEATER HVAC UNIT REPLACEMENT 115 SOUTH STREET, MIDDLETOWN, NY 10940 MECHANICAL/ELECTRICAL ROOF PLAN EDF JDD EDF AS SHOWN

22-230

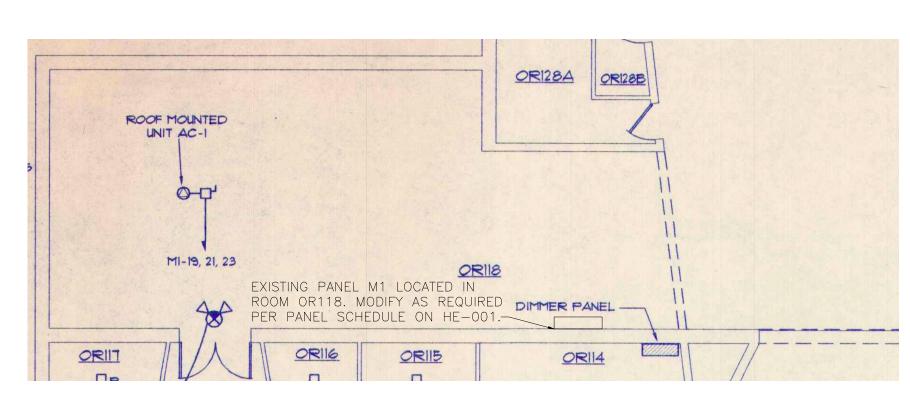
10/14/2022



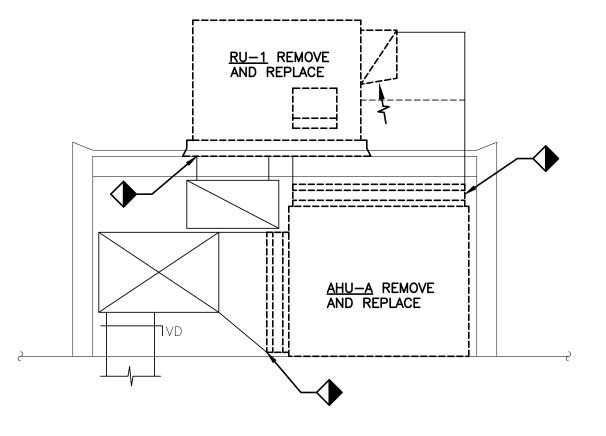


MECHANICAL/ELECTRICAL DEMOLITION PENTHOUSE SECTION A

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

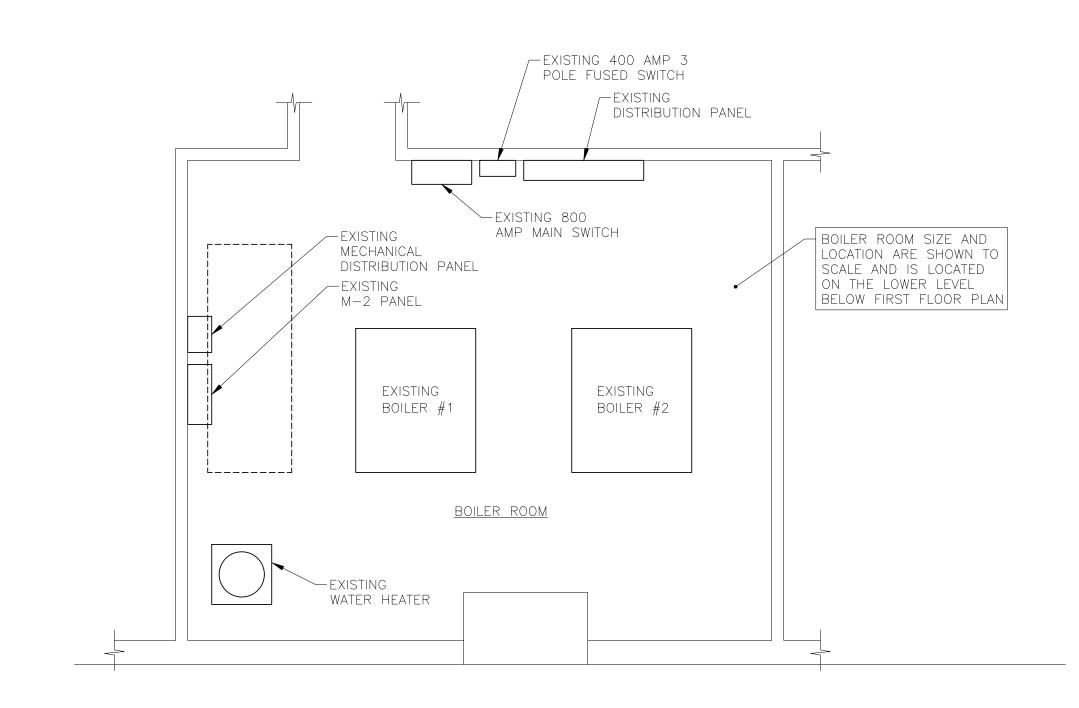


7 MECHANICAL/ELECTRICAL PARTIAL FLOOR PLAN
SCALE: 1/8"=1'-0"

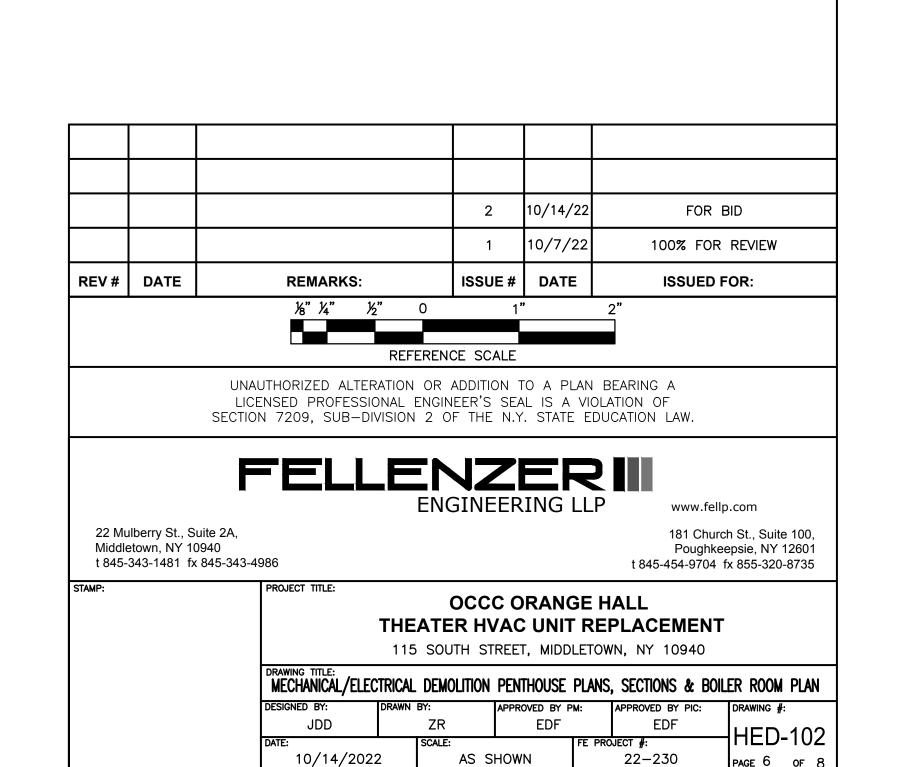


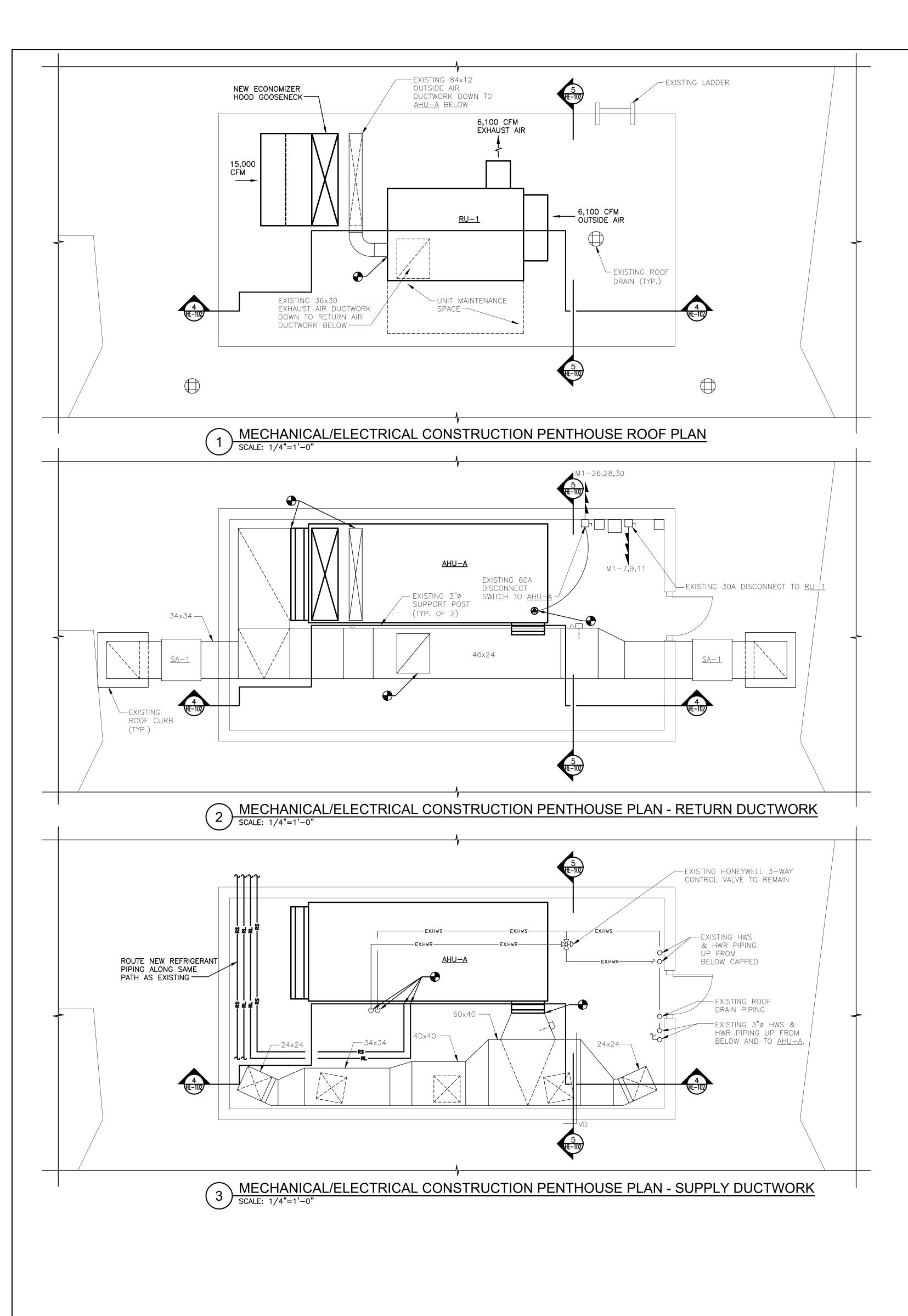
MECHANICAL/ELECTRICAL DEMOLITION PENTHOUSE SECTION B

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



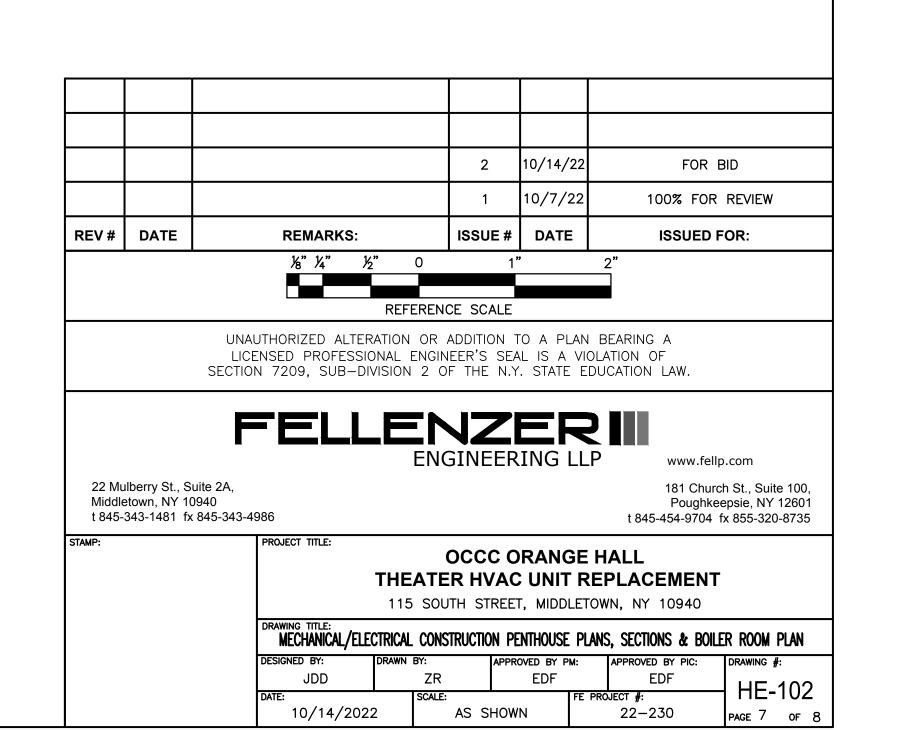
6 MECHANICAL/ELECTRICAL BOILER/ELECTRICAL ROOM (FOR REFERENCE ONLY)
SCALE: 1/4"=1'-0"





MECHANICAL/ELECTRICAL BOILER/ELECTRICAL ROOM (FOR REFERENCE ONLY)

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



MECHANICAL/ELECTRICAL CONSTRUCTION PENTHOUSE SECTION A

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

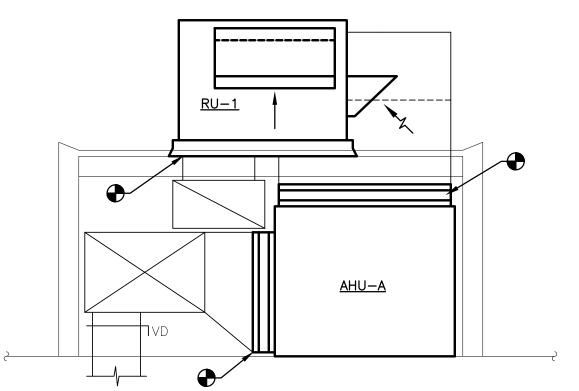
EXISTING 3"Ø SUPPORT POST

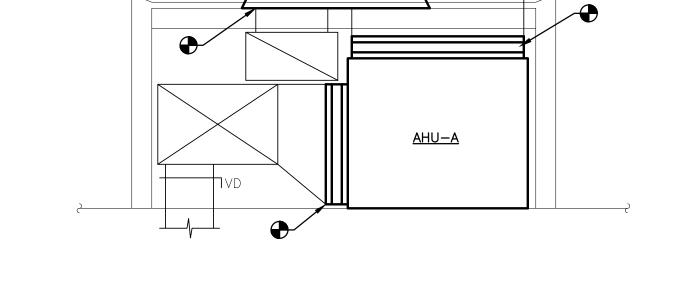
EXISTING STRUCTURAL STEEL

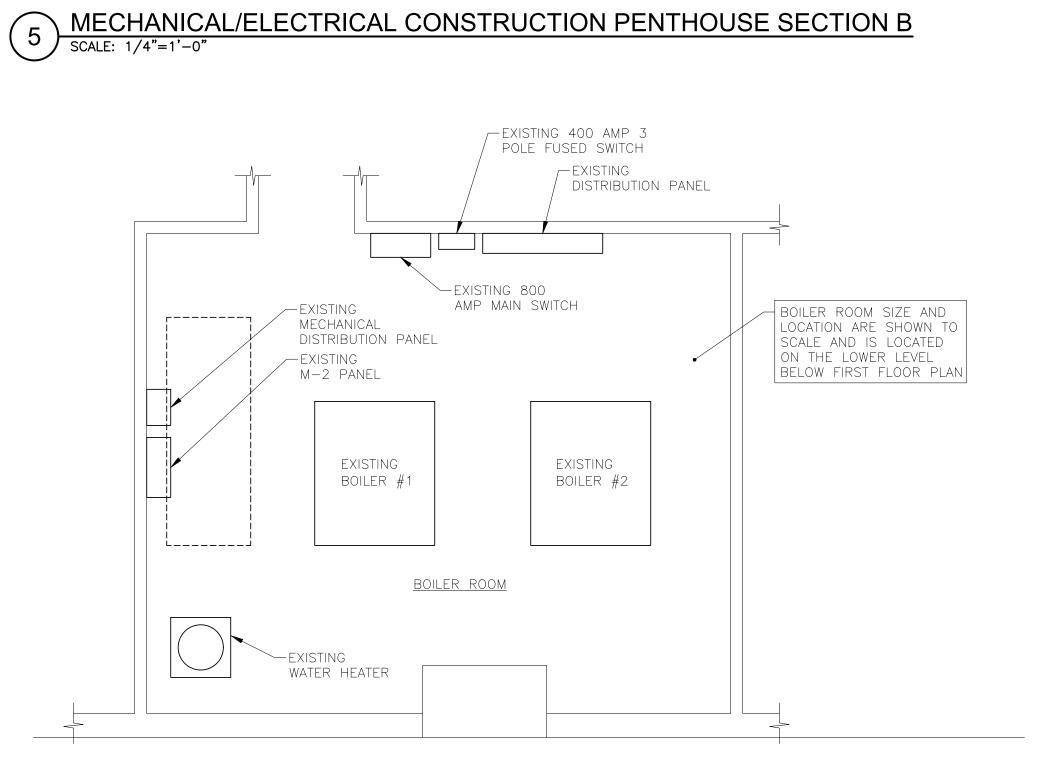
(FOR REFERENCE)

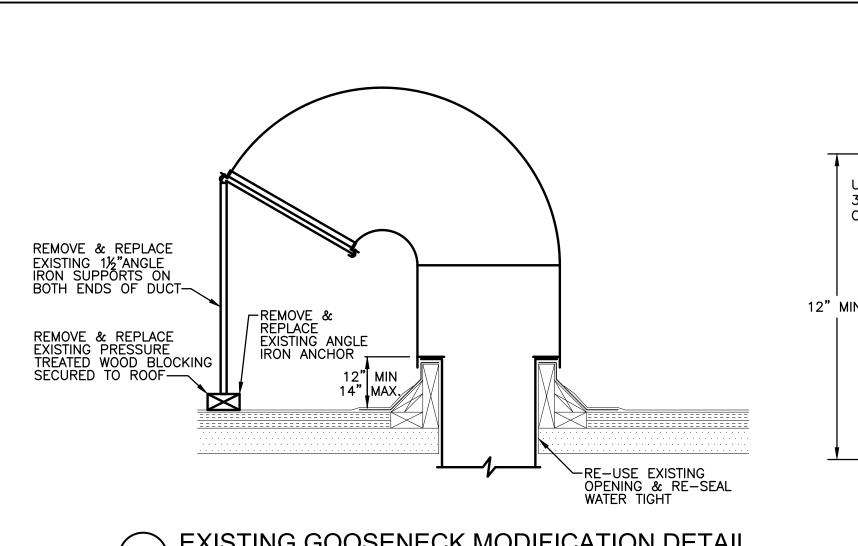
NEW ECONOMIZER HOOD GOOSENECK 15,000 CFM —

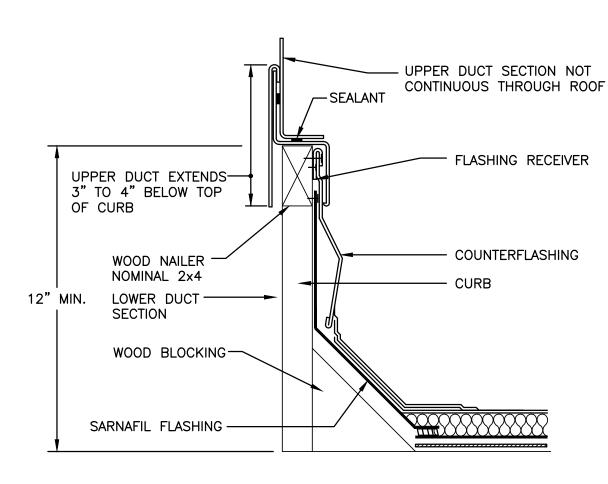
DOWN THRU EXISTING OPENING. RE-SEAL WATER TIGHT











	ENERGY RECOVERY VENTILATOR SCHEDULE																BASED ON "GREENHECK" OR APPROVED EQUAL									
	GENERAL DATA																									
UNIT TAG	LOCATION	SERVICE	MODEL NO.	CONFIGURATION		EXHAUST	SUPPLY AIR E.S.P.	EXHAUST AIR E.S.P.	MODE	SUPPLY PERFORMAN E.A.T. L.			EXHAUST PE E.A.T.		ERFORMANCE L.A.T.		TOTAL EFFECTIVENESS	SUPPLY MOTOR POWER	EXHAUST MOTOR POWER	VOLTAGE	PHASE	HZ	MCA	MOCP	REMARKS	
					CFM	CFM	IN. WC.	IN. WC.		Db (°F)	Wb (°F)	Db (°F)	Wb (°F)	Db (°F)	Wb (°F)	Db (°F)	Wb (°F)	%	HP	HP				AMPS	AMPS	
RU-1	PENTHOUSE ROOF	۸۱۱۱۸	ERV-90-30L	ENERGY RECOVERY WHEEL	6 100	6 100	1	1	SUMMER	95	78	78.6	66.1	75	62.5	91.2	75.2	78.6	<i>-</i>	5	460	3	60	40.4	25	SEE NOTES
		AHU-A	EL/ 1-30-20L		6,100	6,100				18	14.8	60	49.1	70	55.6	27.5	24.9	79.8	ა 					19.1	25	

GENERAL DATA

1. PROVIDE WITH 2" MERV 13 OUTSIDE AIR AND EXHAUST AIR FILTERS, AND A SET OF SPARE FILTERS.

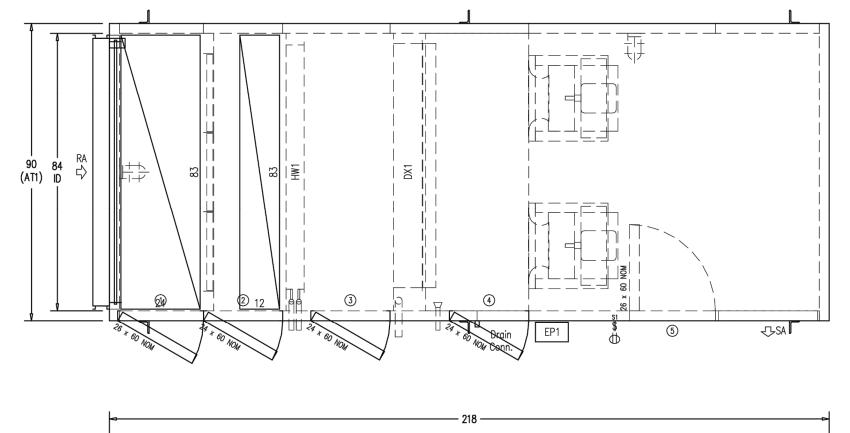
2. PROVIDE DOUBLE WALL UNIT CONSTURCTION AND HINGED ACCESS DOORS.

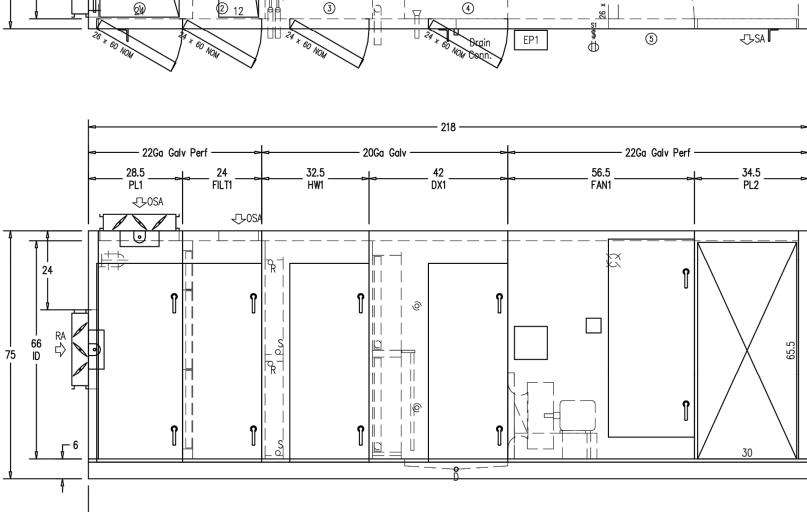
3. PROVIDE EACH FAN WITH A VFD. 4. PROVIDE STANDARD UNIT CONTROLS. INTEGRATION INTO EXISTING BMS BY DAY AUTOMATION. COORDINATE ALL REQUIREMENTS.

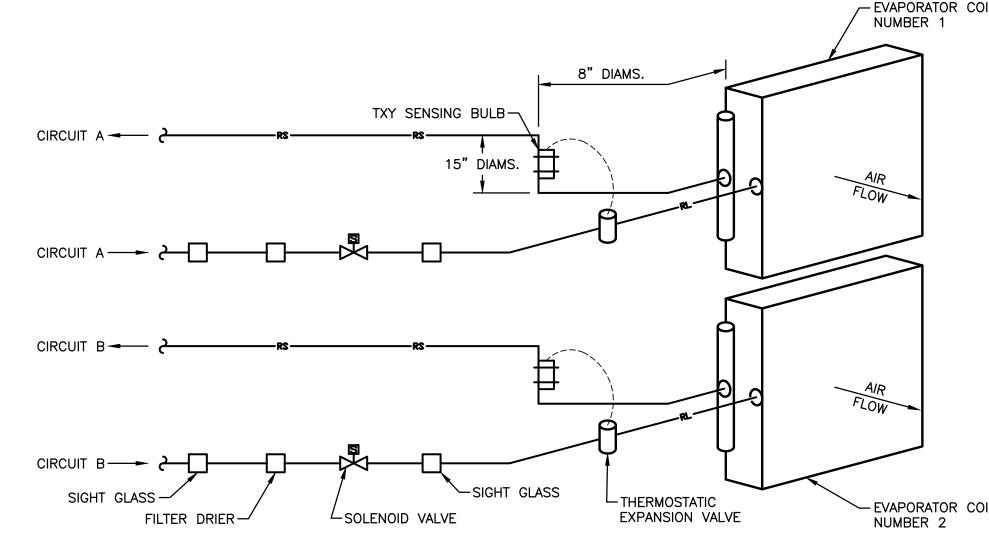
**5. PROVIDE DIRTY FILTER SENSORS.** 6. PROVIDE MODULATING WHEEL FROST CONTROL

7. PROVIDE LOW LEAKEAGE RETURN AIR DAMPER. 8. PROVIDE ROOF CURB TO MATCH EXISTING

## **EXISTING GOOSENECK MODIFICATION DETAIL**

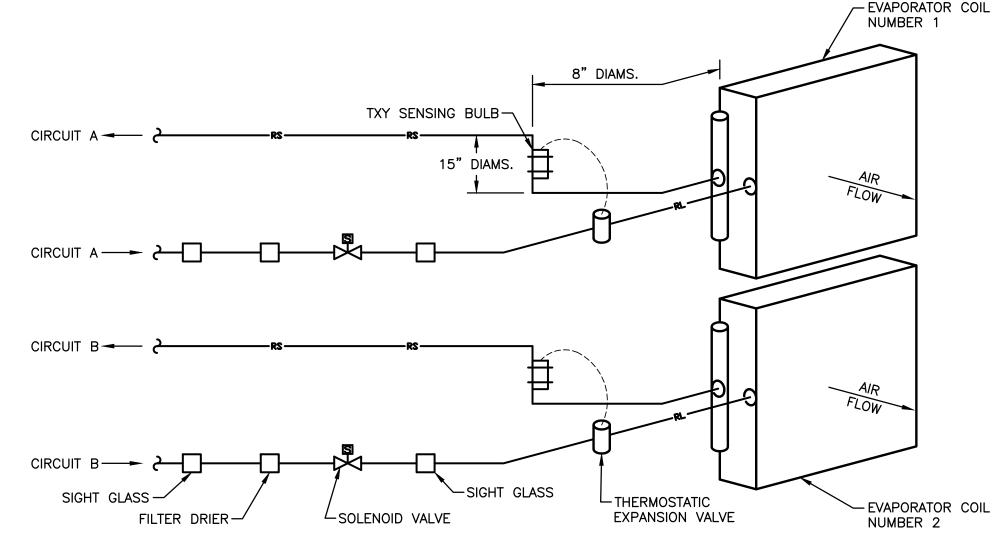




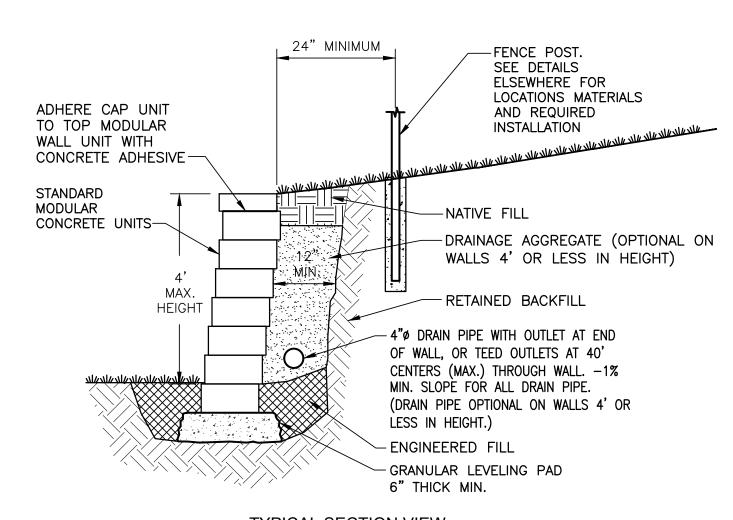




ANCHOR

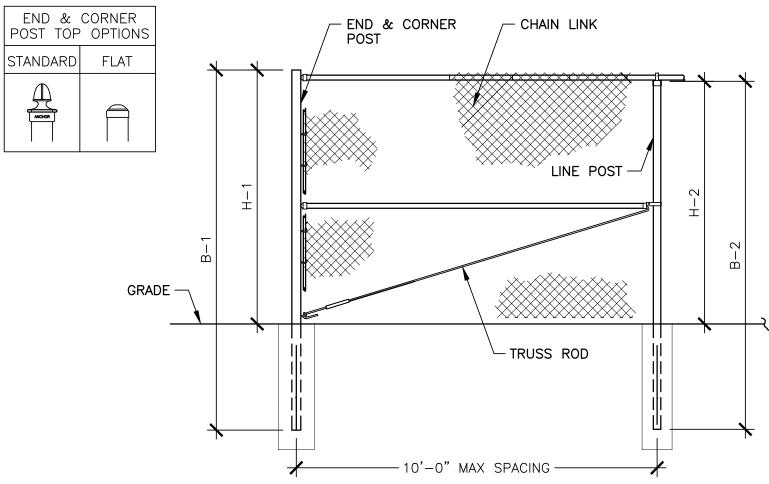


## 3 AIR HANDLER DETAIL N.T.S.



TYPICAL SECTION VIEW MODULAR CONCRETE BLOCK RETAINING WALL

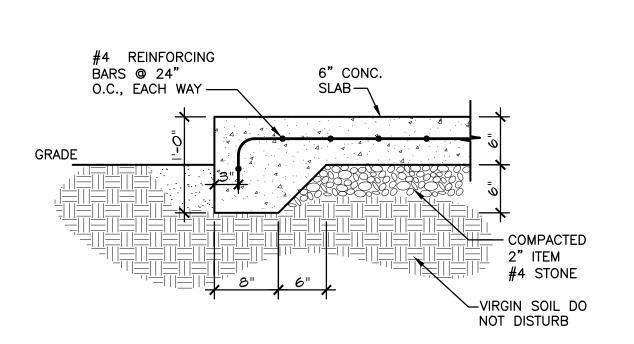
N.T.S.



## TYPICAL FENCE SECTION ELEVATION

FENCE HEIGHT	END &	CORNER POSTS	L	INE POSTS
NOMINAL HEIGHT	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE	B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE
6'-0"	9'-0"	6'-0 %"	8'-8"	5'-8 %"

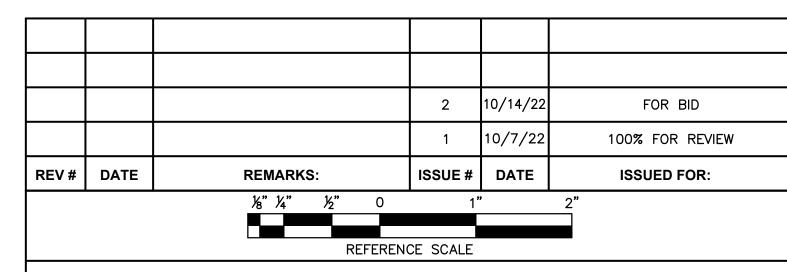
1. FOOTING WIDTH TO BE (4)X POST WIDTH. 6 TYPICAL CHAIN LINK FENCE



1. REINFORCING STEEL SHALL BE ASTM A-165 GRADE 60. 2. CONCRETE SHALL BE TYPE "C", AIR-ENTRAINED, 4,000 P.S.I. 7 CU-1 SLAB ON GRADE DETAIL

UNIT TAG	LOCATION	SERVICE	MODEL NO.	CAPACITY	TEMP	J 2	CONDENSER FANS	QTY.	RLA (EA.)	LRA (EA.)	X L X H)	WEIGHT LBS.	VOLTAGE	PHASE	HZ	MCA AMPS	MOCP AMPS	REMARKS
RU-1	PAD MOUNTED OUTSIDE	AHU-A D/X COOLING COIL	YJ-50C00AWGAB2	576	95	4	4	4	48.1	245	89 x 129 x 58	2345	460	3	60	90.7	100	SEE NOTES
NOTES:  1. PROVIDE WITH SINGLE POINT POWER CONNECTION AND PHASE MONITOR. 2. PROVIDE WITH COPPER TUBE/ALUMINUM FIN CONDESNER COIL 3. PROVIDE WITH SMART EQUIPMENT CONTROLLER. INTERGARTION INTO EXISTING BMS BY DAY AUTOMATION. COORDINATE ALL REQUIREMENTS.																		

AIR COOLED CONDENSING UNIT SCHEDULE



BASED ON "FRASER-JOHNSTON"

OR APPROVED EQUAL

ELECTRICAL DATA

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OCCC ORANGE HALL THEATER HVAC UNIT REPLACEMENT 115 SOUTH STREET, MIDDLETOWN, NY 10940 MECHANICAL/ELECTRICAL DETAILS & SCHEDULES EDF 22-230 10/14/2022 AS SHOWN