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KEY NOTES

- ① REMOVE EXISTING BARD UNITS SHOWN HATCHED. EXISTING DUCTWORK TO REMAIN FOR CONNECTION TO NEW DUCTWORK.
- ② CONNECT NEW BARD UNITS TO EXISTING DUCTWORK.
- ③ REBALANCE EXISTING AIR OUTLET/INLET TO AIR QUANTITY SHOWN.

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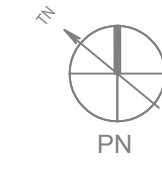
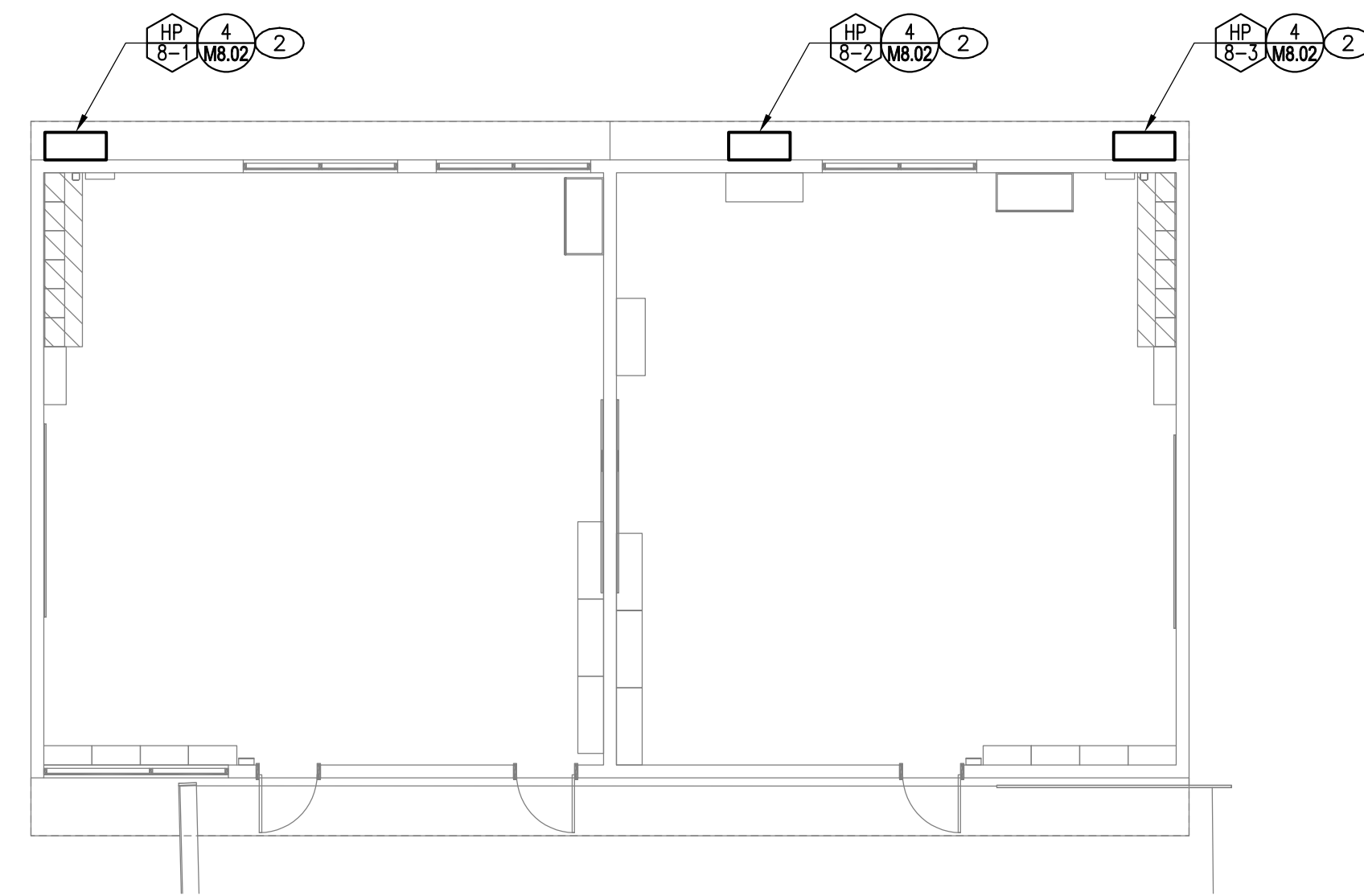


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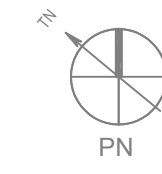
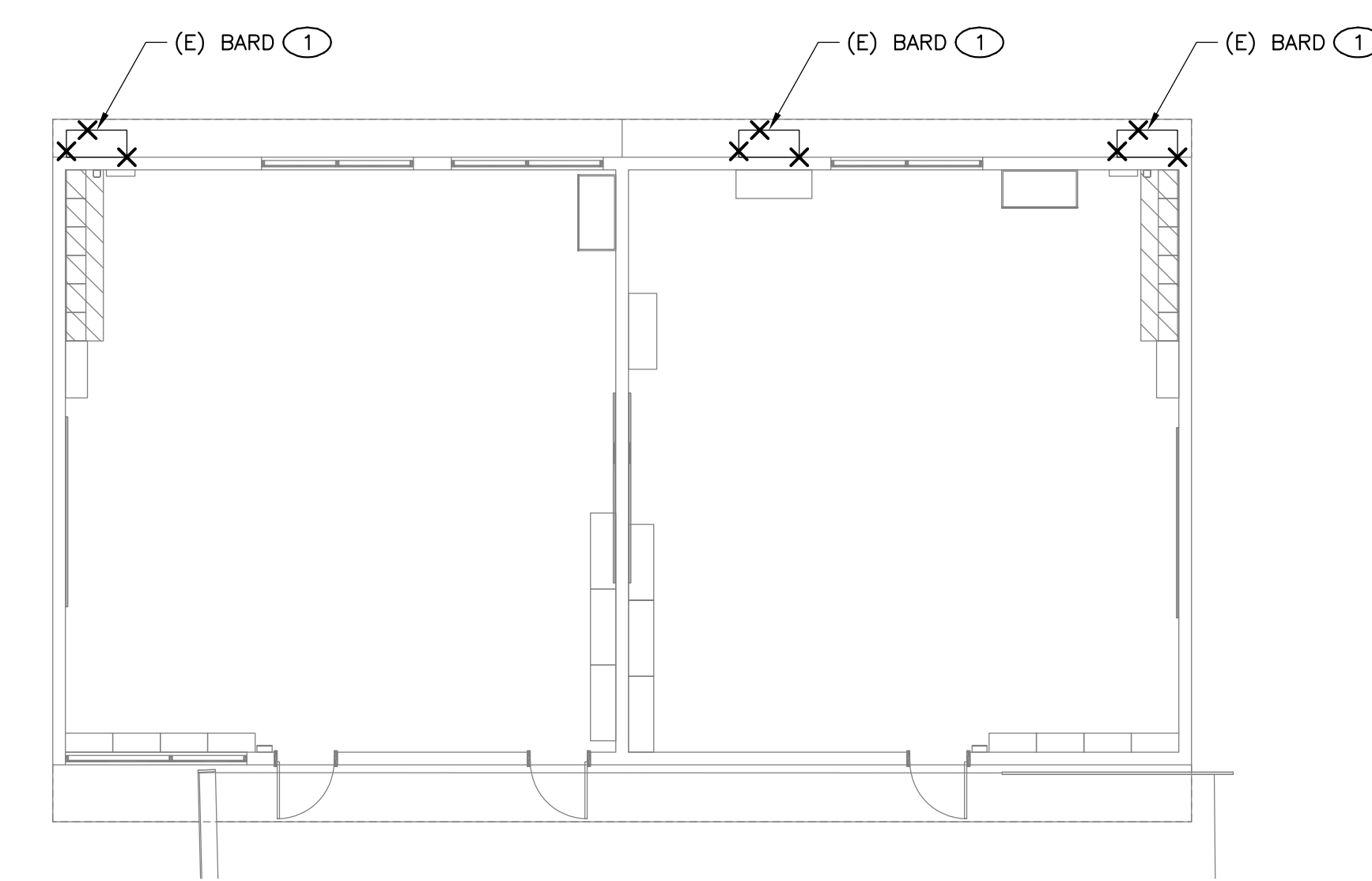
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1	ADDENDUM #1	03/01/2024



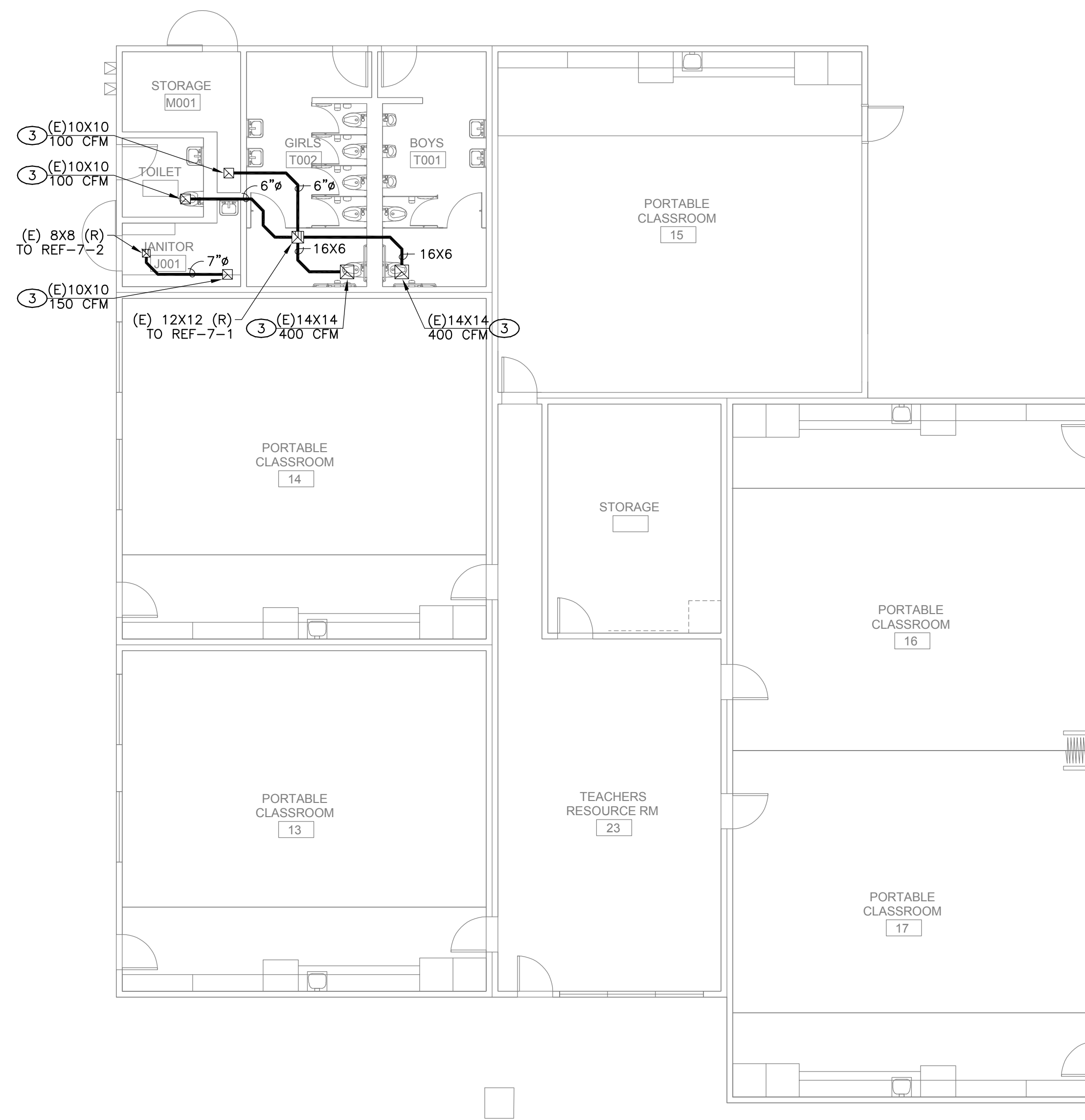
MECHANICAL IMPROVEMENT FLOOR PLAN - BLDG 8 **4**
1/8" = 1'-0"



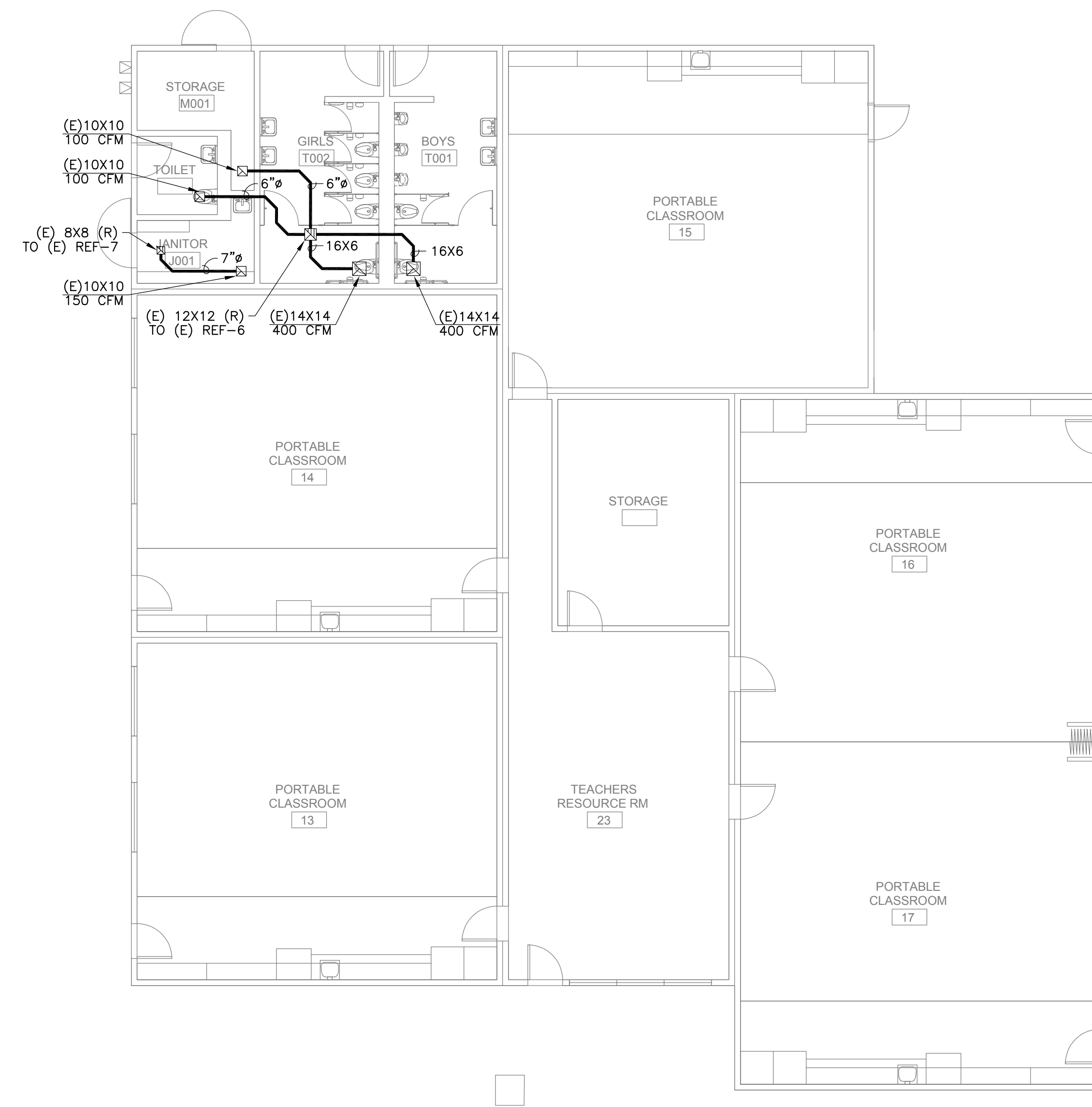
MECHANICAL DEMOLITION FLOOR PLAN - BLDG 8 **3**
1/8" = 1'-0"

GENERAL NOTES

- 1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.



MECHANICAL IMPROVEMENT FLOOR PLAN - BLDG 7 **2**
1/8" = 1'-0"



MECHANICAL DEMOLITION FLOOR PLAN - BLDG 7 **1**
1/8" = 1'-0"

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No. 41413
Exp. 03-31-25

FACILITY:
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7680 WINDBRIDGE DR.
SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL DEMOLITION AND IMPROVEMENT FLOOR PLANS - BLDG 7, 8

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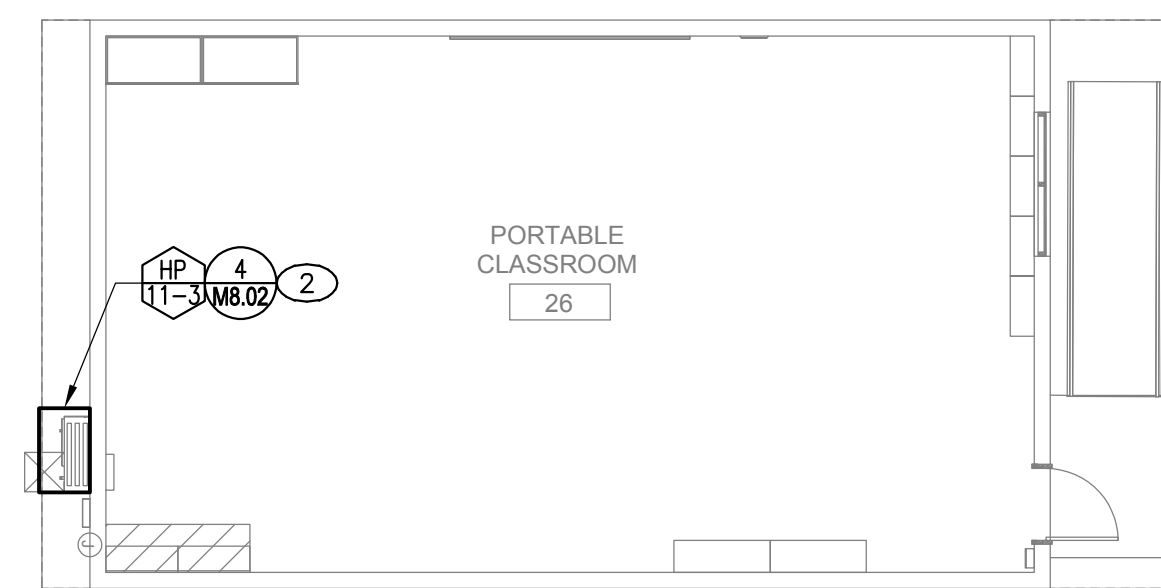
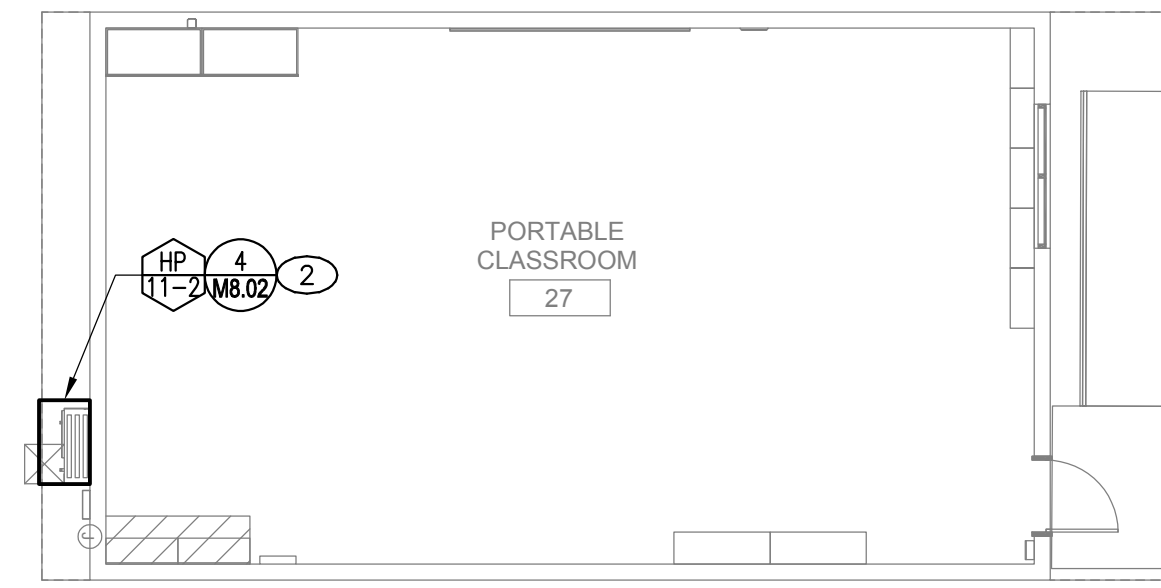
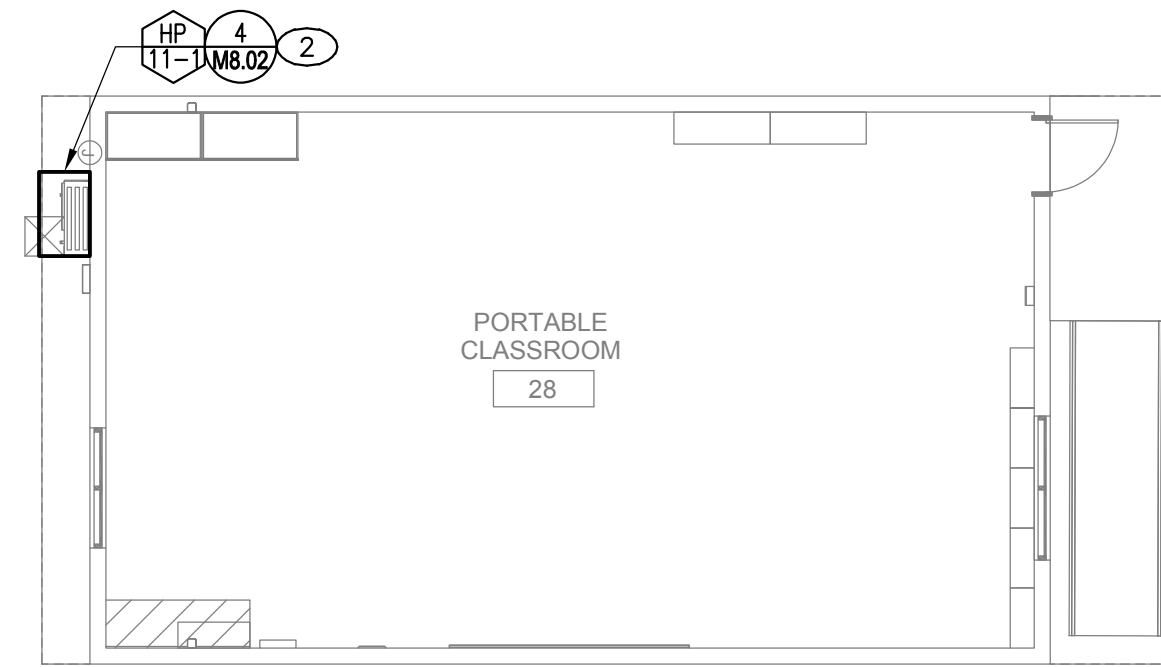
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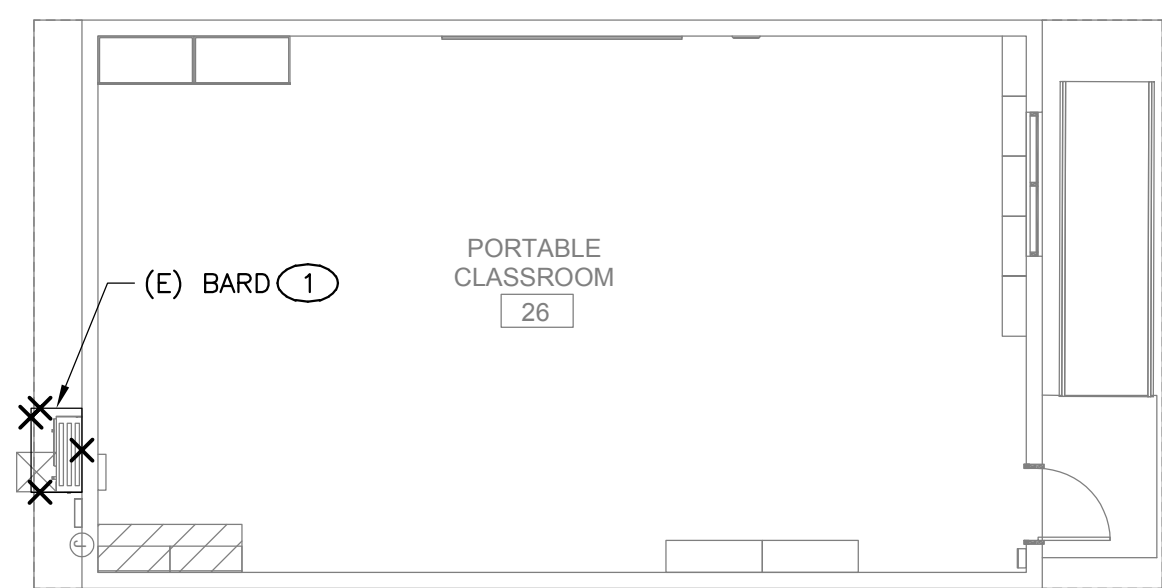
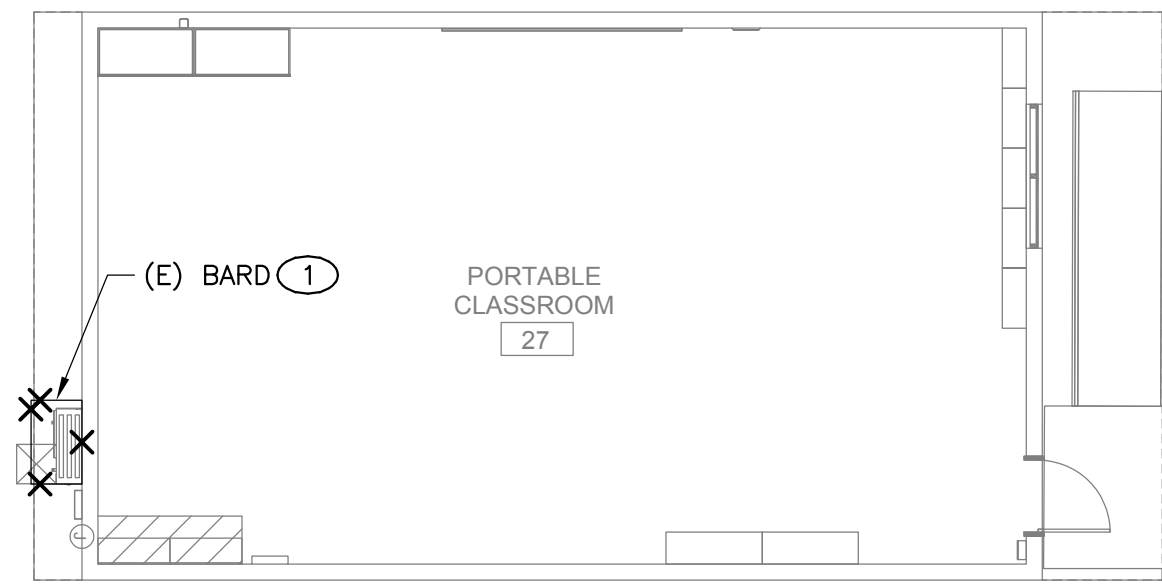
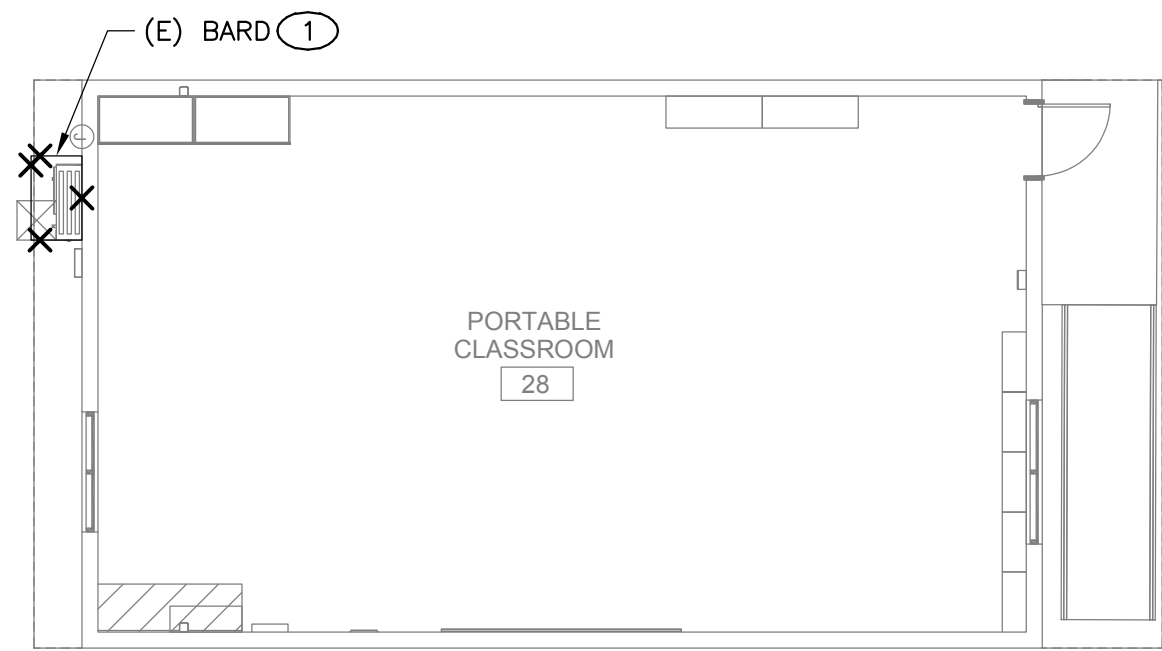
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ALL LINE WORK SHOWN IN THIS DOCUMENT IS TO BE CONSIDERED AS A PRELIMINARY DESIGN. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION.

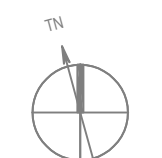
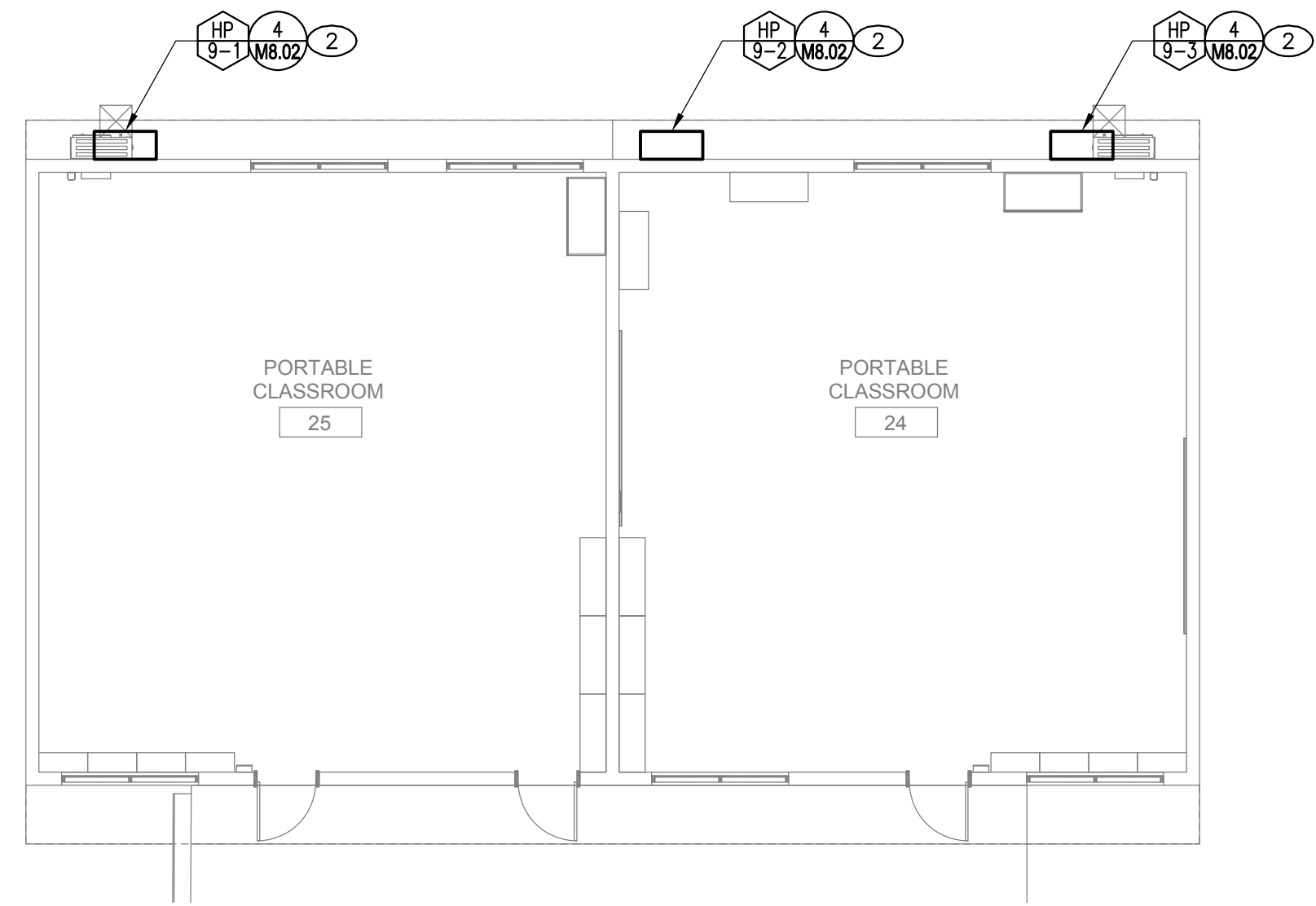
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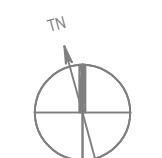
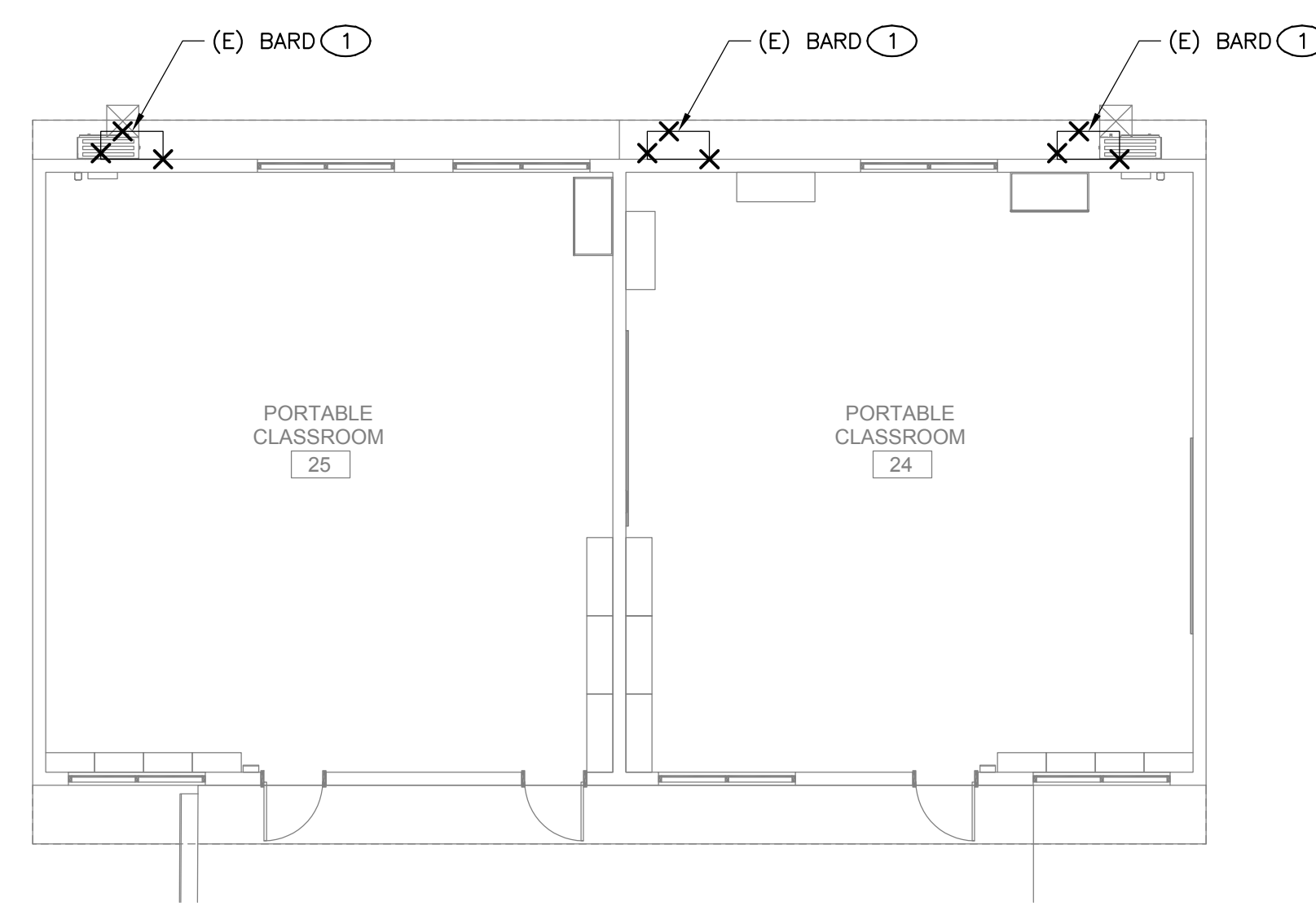
MECHANICAL IMPROVEMENT FLOOR PLAN - BLDG 11 **4**
1/8" = 1'-0"



MECHANICAL DEMOLITION FLOOR PLAN - BLDG 11 **3**
1/8" = 1'-0"



MECHANICAL IMPROVEMENT FLOOR PLAN - BLDG 9 **2**
1/8" = 1'-0"



MECHANICAL DEMOLITION FLOOR PLAN - BLDG 9 **1**
1/8" = 1'-0"

KEY NOTES

- ① REMOVE EXISTING BARD UNITS SHOWN HATCHED. EXISTING DUCTWORK TO REMAIN FOR CONNECTION TO NEW DUCTWORK.
- ② CONNECT NEW BARD UNITS TO EXISTING DUCTWORK.

GENERAL NOTES

- 1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.

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SHEET NAME:
MECHANICAL DEMOLITION AND IMPROVEMENT FLOOR PLANS - BLDG 9, 11

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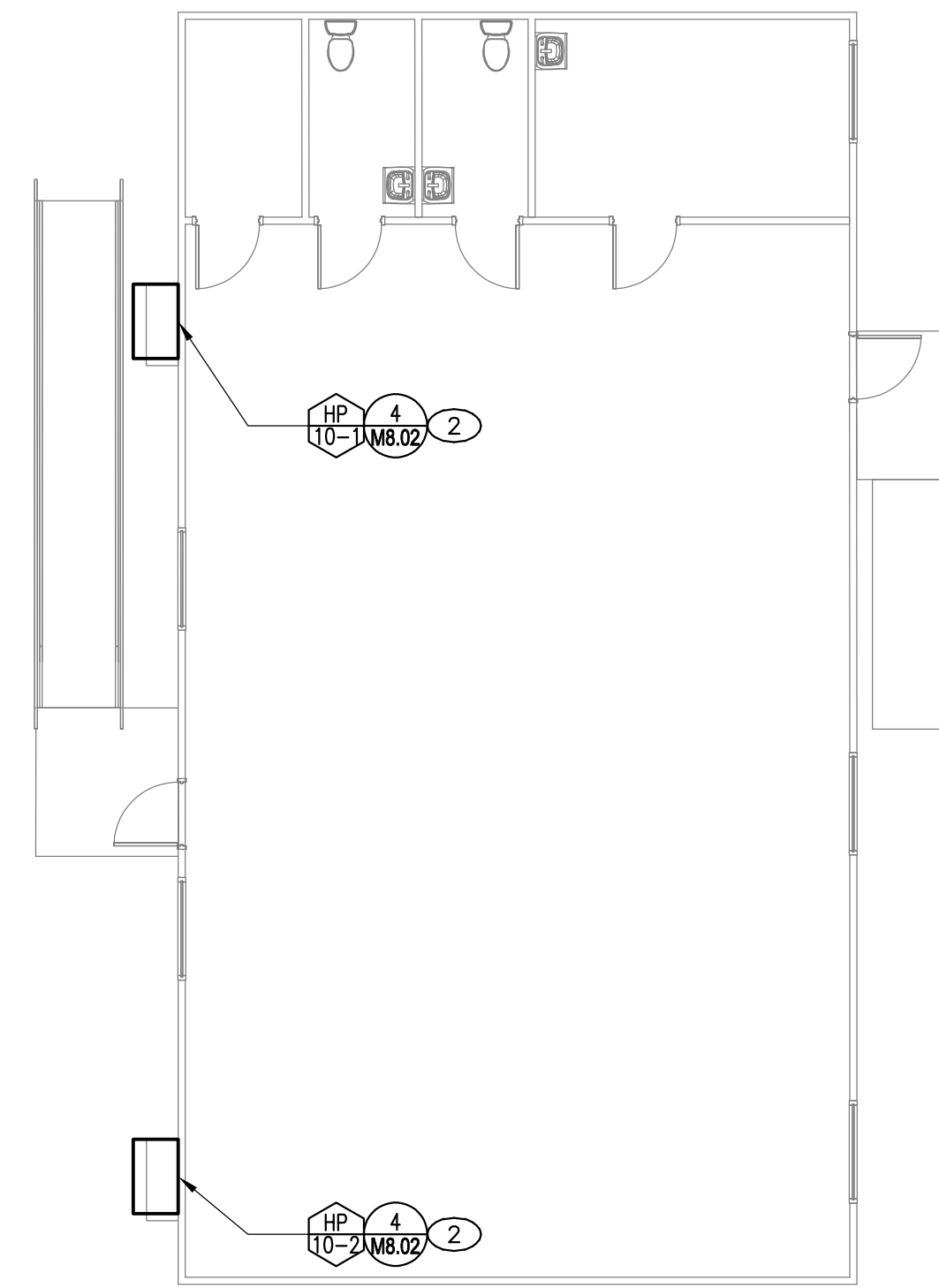
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KEY NOTES

- ① REMOVE EXISTING BARD UNITS SHOWN HATCHED. EXISTING DUCTWORK TO REMAIN FOR CONNECTION TO NEW DUCTWORK.
- ② CONNECT NEW BARD UNITS TO EXISTING DUCTWORK.

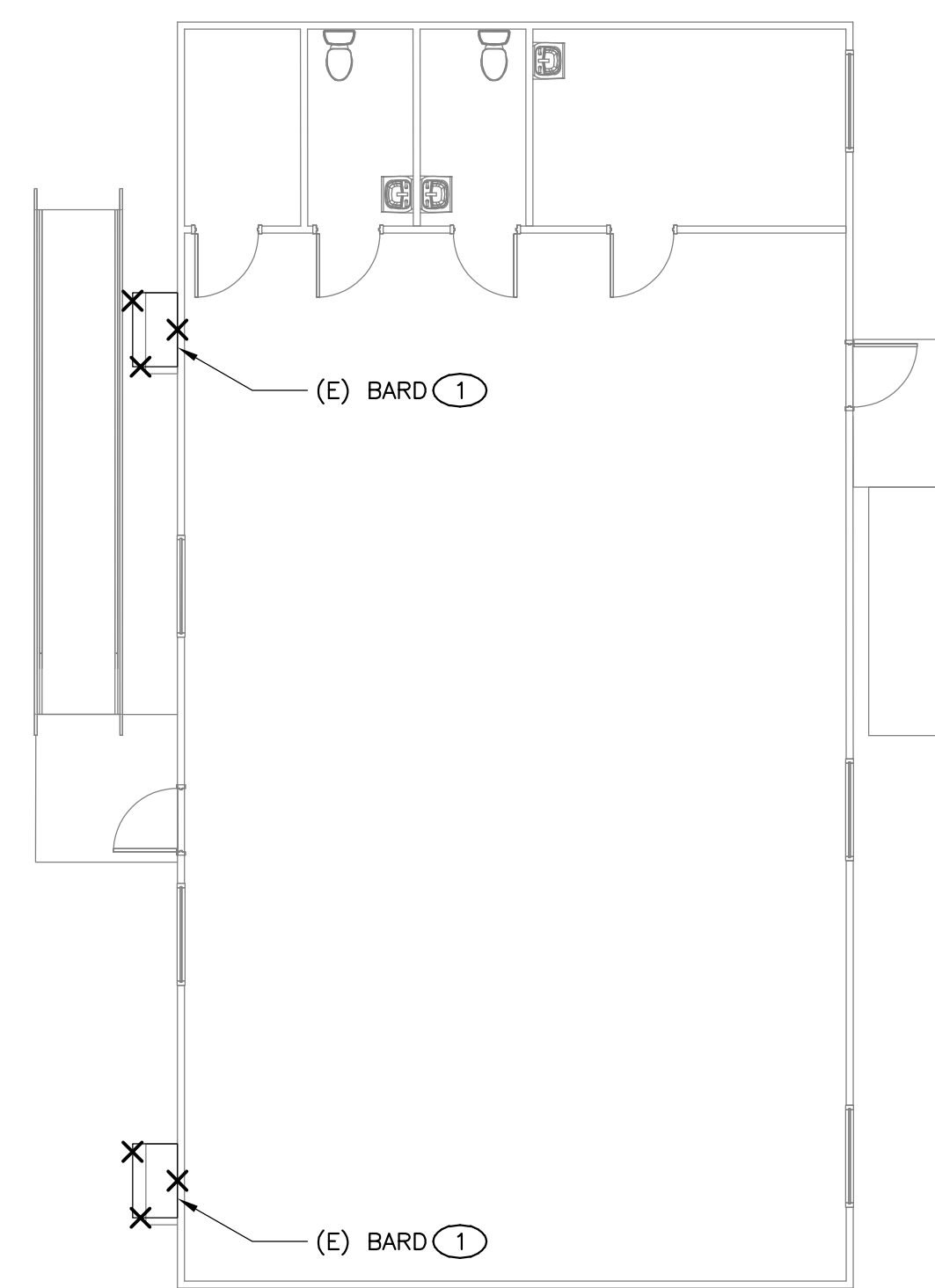


MECHANICAL IMPROVEMENT FLOOR PLAN - BLDG 10

2
1/8" = 1'-0"

GENERAL NOTES

- 1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.



MECHANICAL DEMOLITION FLOOR PLAN - BLDG 10

1
1/8" = 1'-0"

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MECHANICAL DEMOLITION AND IMPROVEMENT FLOOR
PLANS - BLDG 10

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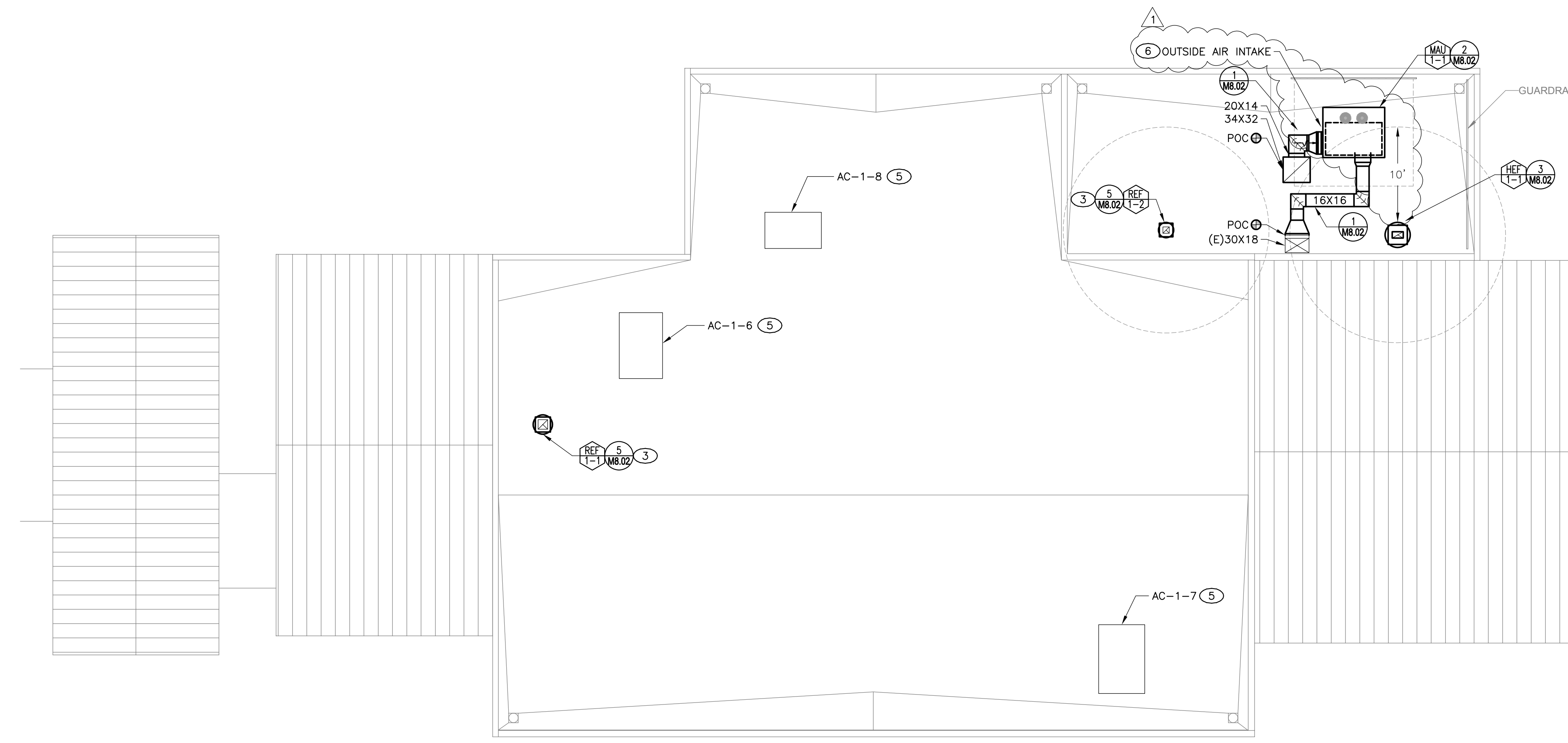
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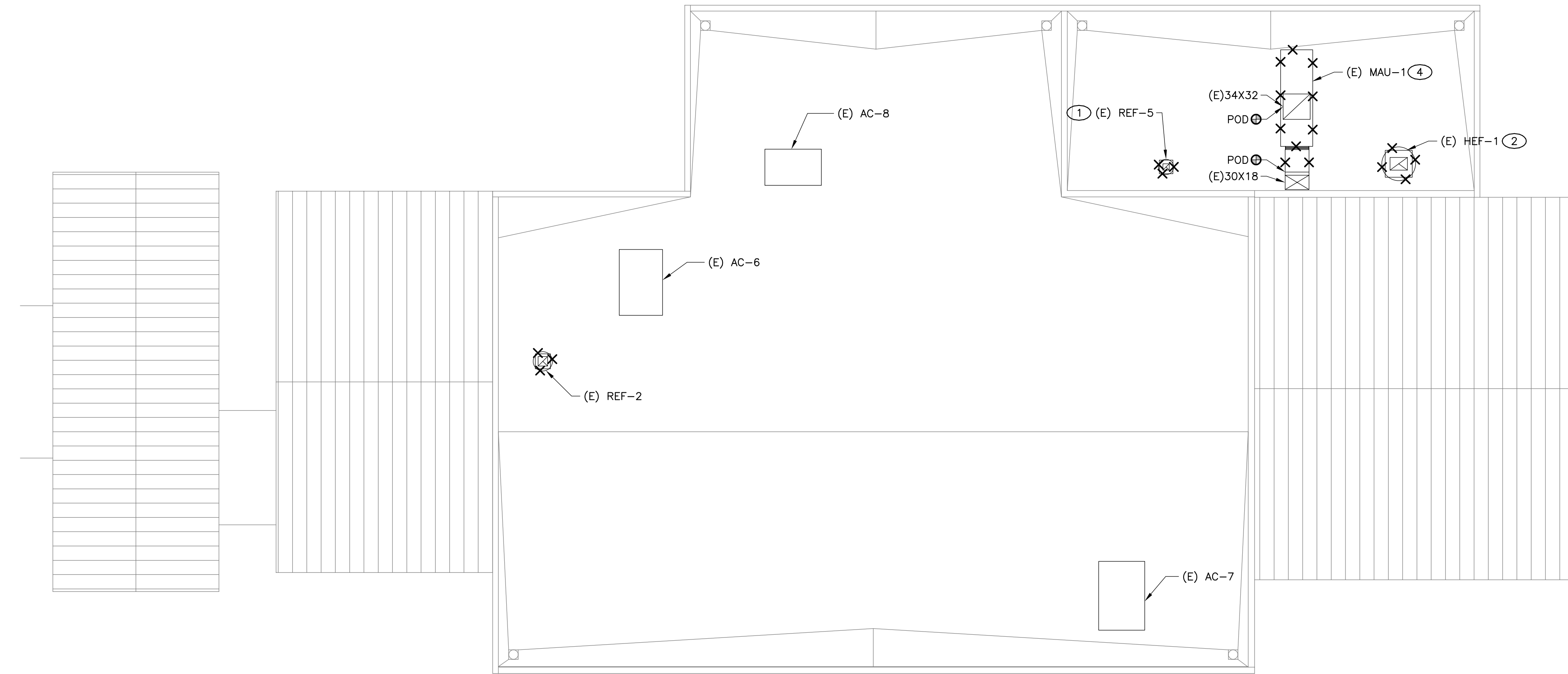
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MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 1

2
1/8" = 1'-0"



MECHANICAL DEMOLITION ROOF PLAN - BLDG 1

1
1/8" = 1'-0"

KEY NOTES

- 1 REMOVE EXISTING EXHAUST FAN SHOWN HATCHED. EXISTING CURB TO REMAIN.
- 2 REMOVE EXISTING ROOF EXHAUST FAN AND RELATED CURB, DUCTWORK AND APPURTENANCES.
- 3 MOUNT NEW EXHAUST FAN ON ADAPTER CURB.
- 4 REMOVE EXISTING MECHANICAL UNIT, CURB AND RELATED APPURTENANCES. DUCT DROPS TO REMAIN FOR CONNECTION TO NEW DUCTWORK.
- 5 RELABEL EXISTING HVAC UNIT AS SHOWN WITH NEW NAMEPLATE.
- 6 MAINTAIN MINIMUM 10 FEET BETWEEN EXHAUST AND ANY OUTSIDE AIR INTAKE.

GENERAL NOTES

- 1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.

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PROJECT:
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SHEET NAME:
MECHANICAL DEMOLITION AND IMPROVEMENT ROOF PLANS - BLDG 1

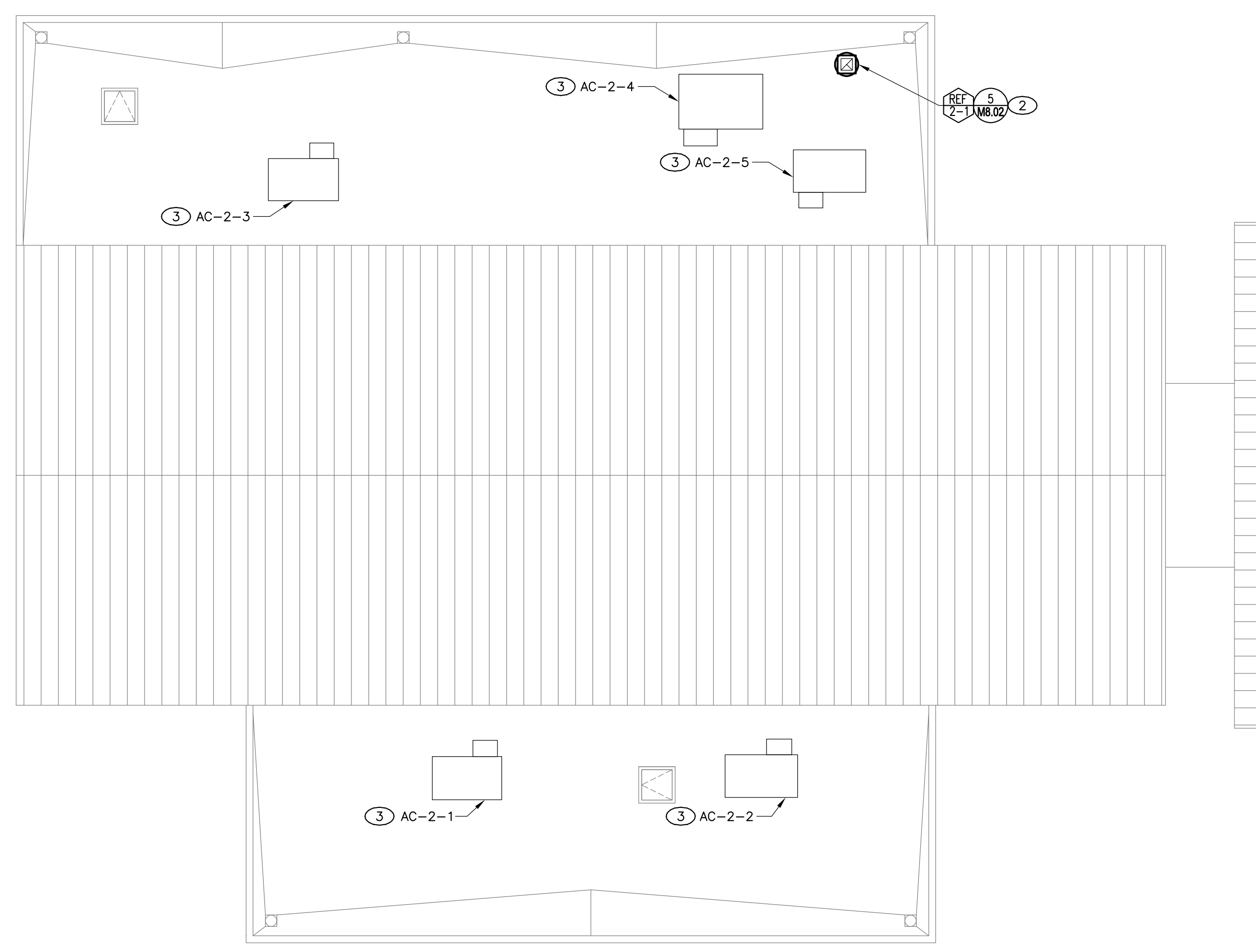
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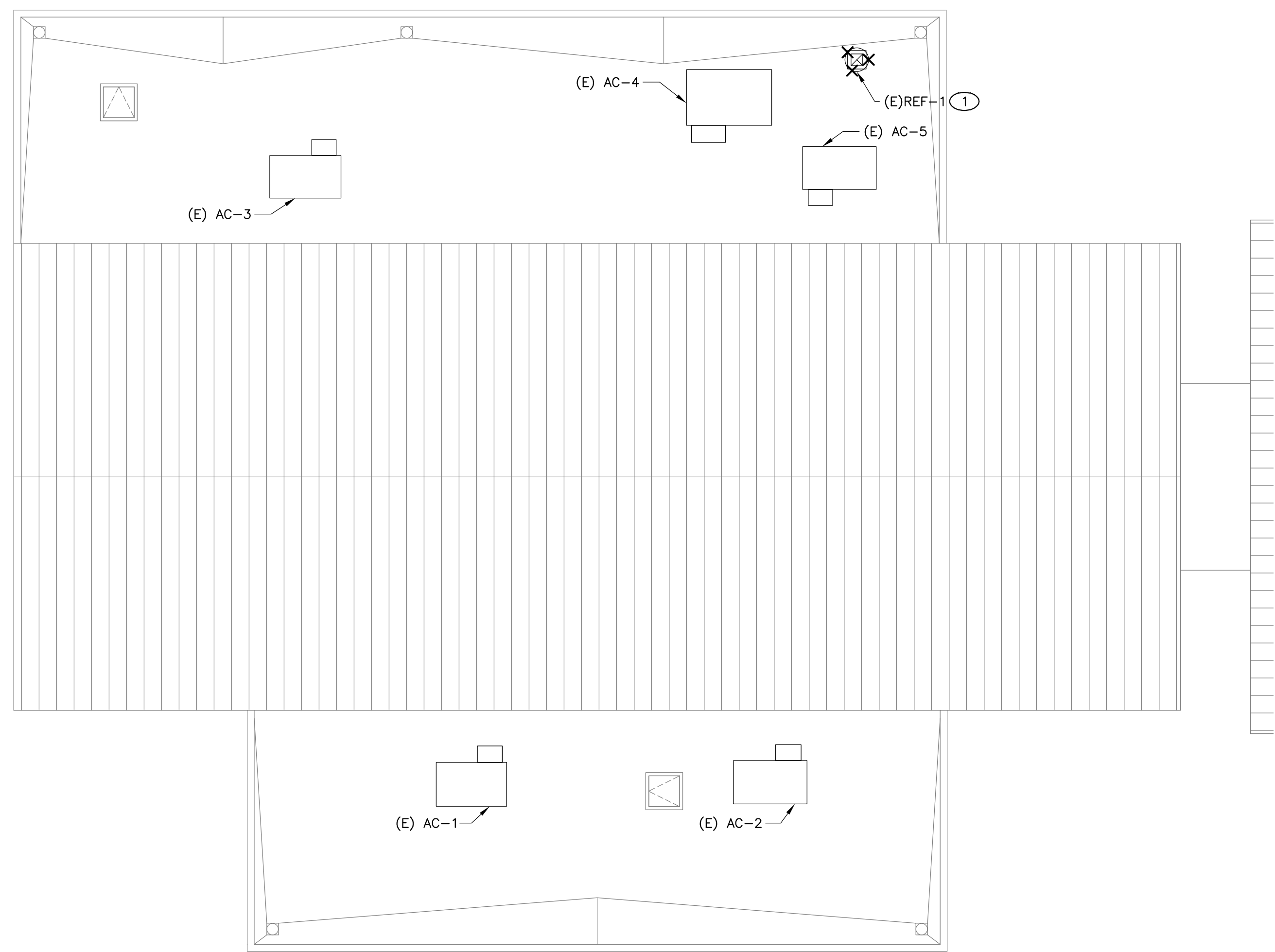
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MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 2

2
1/8" = 1'-0"



MECHANICAL DEMOLITION ROOF PLAN - BLDG 2

1
1/8" = 1'-0"

KEY NOTES

- ① REMOVE EXISTING EXHAUST FAN SHOWN HATCHED. EXISTING CURB TO REMAIN.
- ② MOUNT NEW EXHAUST FAN ON ADAPTER CURB.
- ③ RELABEL EXISTING HVAC UNIT AS SHOWN WITH NEW NAMEPLATE.

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GENERAL NOTES

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- 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.

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MECHANICAL DEMOLITION AND IMPROVEMENT ROOF PLANS - BLDG 2

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KEY NOTES

- ① RELABEL EXISTING HVAC UNIT AS SHOWN WITH NEW NAMEPLATE.

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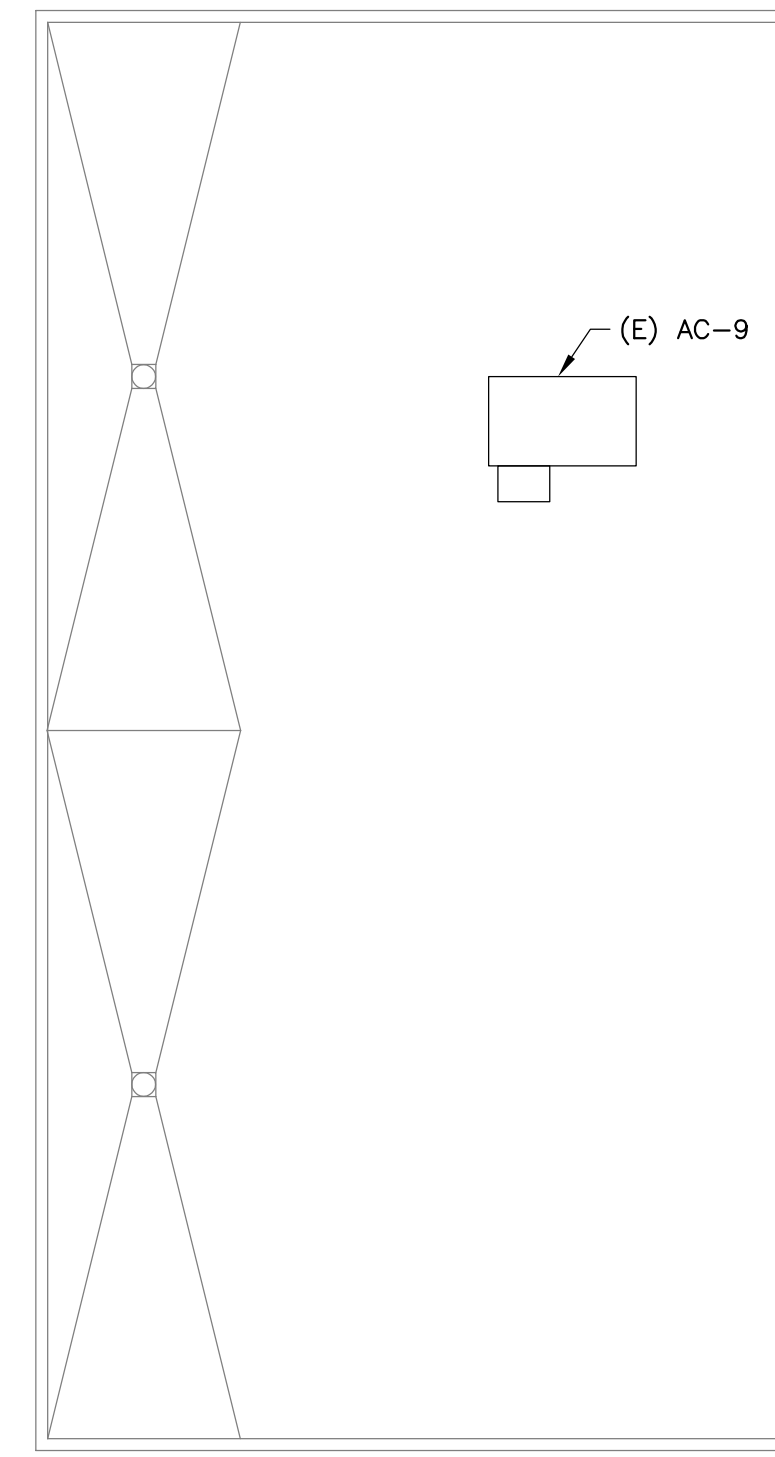
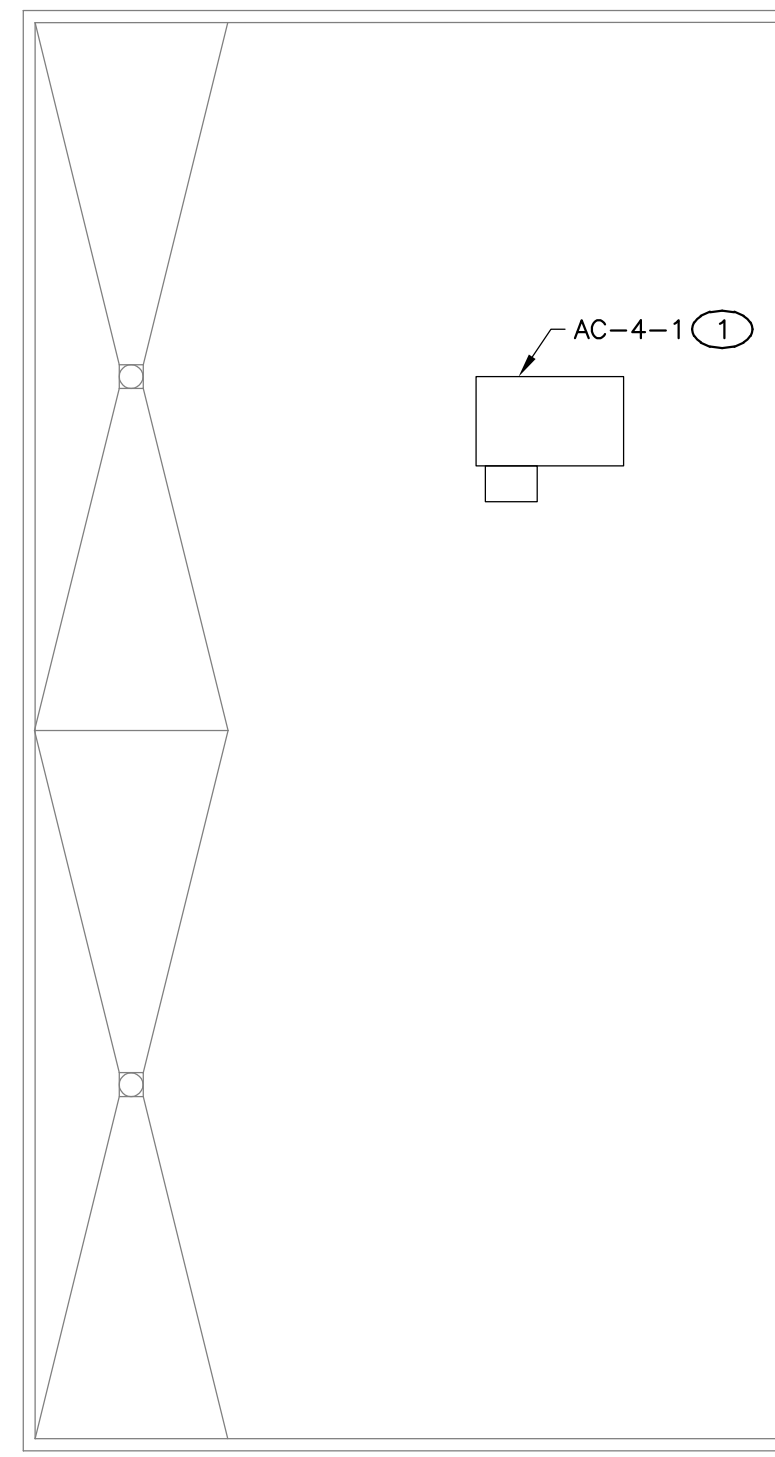


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MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 4

4
1/8" = 1'-0"

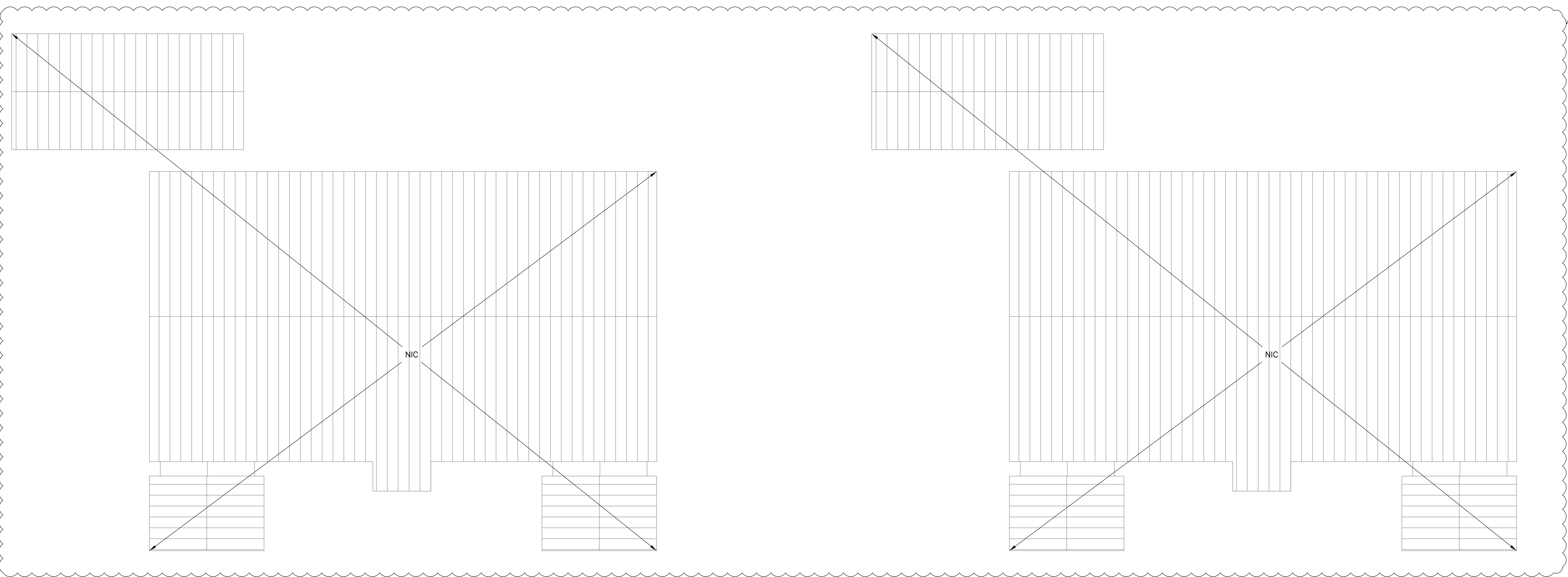


MECHANICAL DEMOLITION ROOF PLAN - BLDG 4

3
1/8" = 1'-0"

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.



MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 3

2
1/8" = 1'-0"



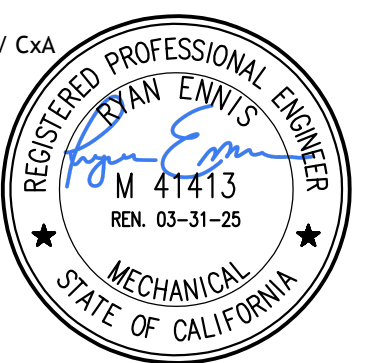
MECHANICAL DEMOLITION ROOF PLAN - BLDG 3

1
1/8" = 1'-0"

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MECHANICAL DEMOLITION AND IMPROVEMENT ROOF PLANS - BLDG 3, 4

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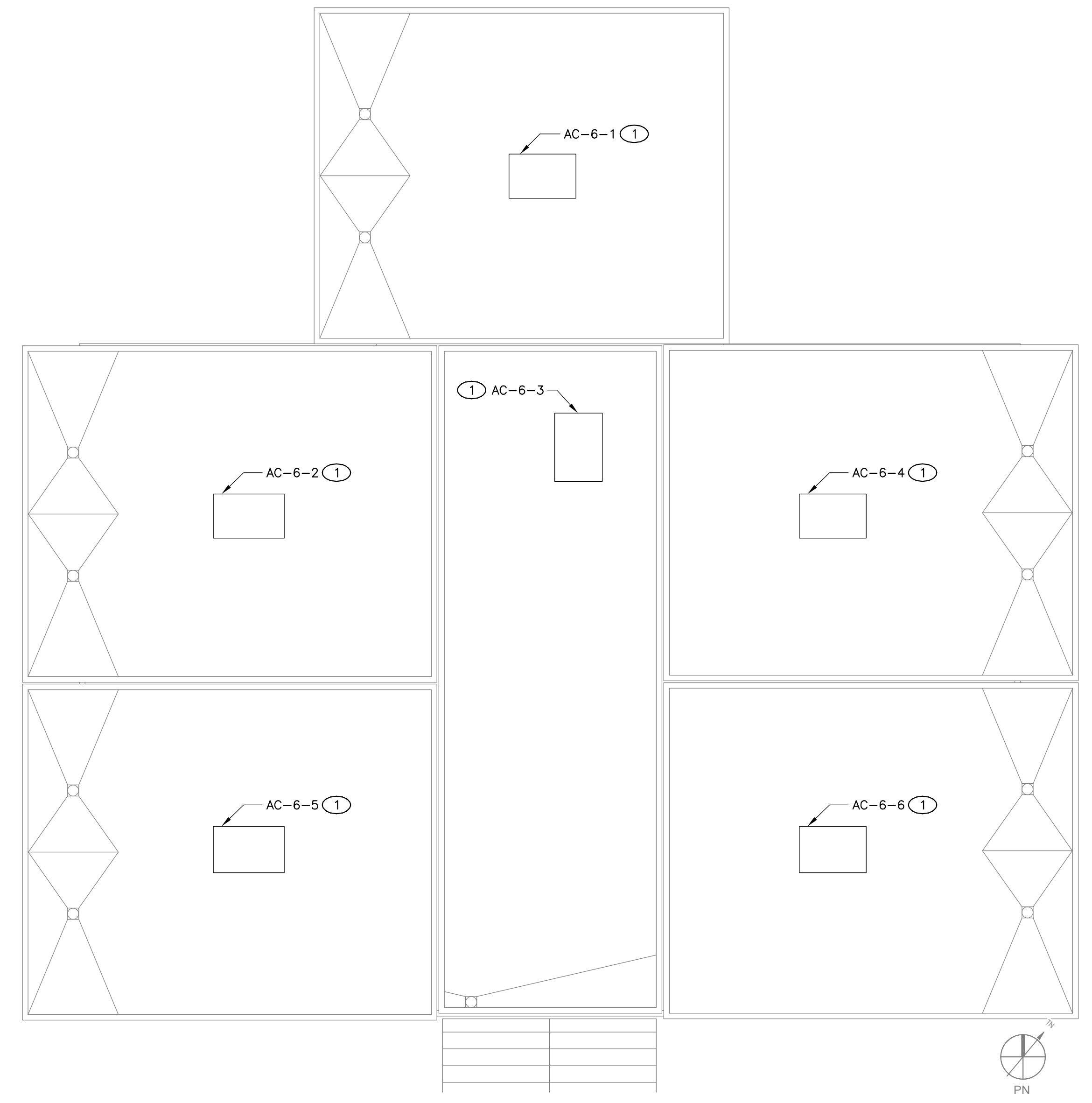
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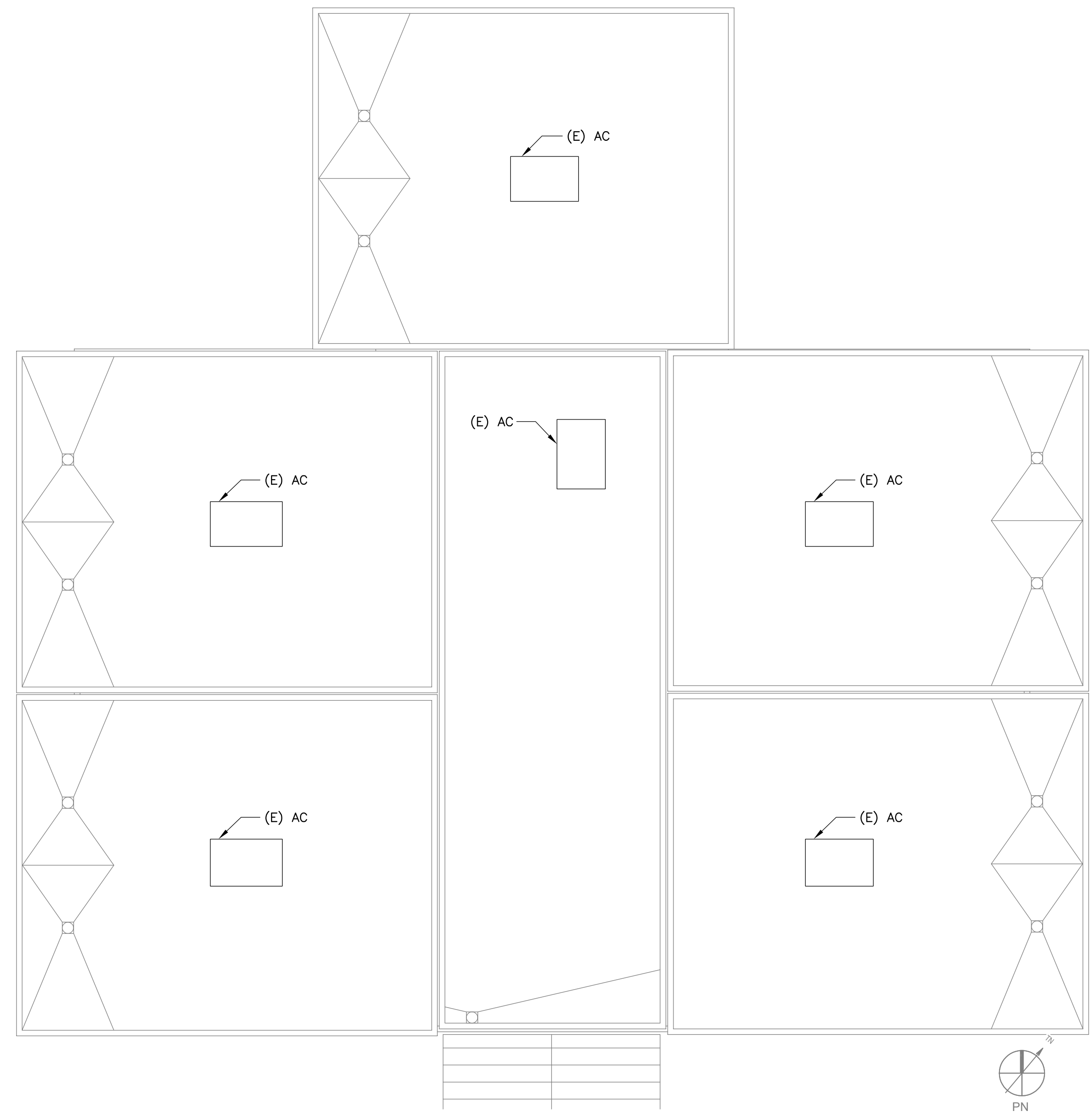
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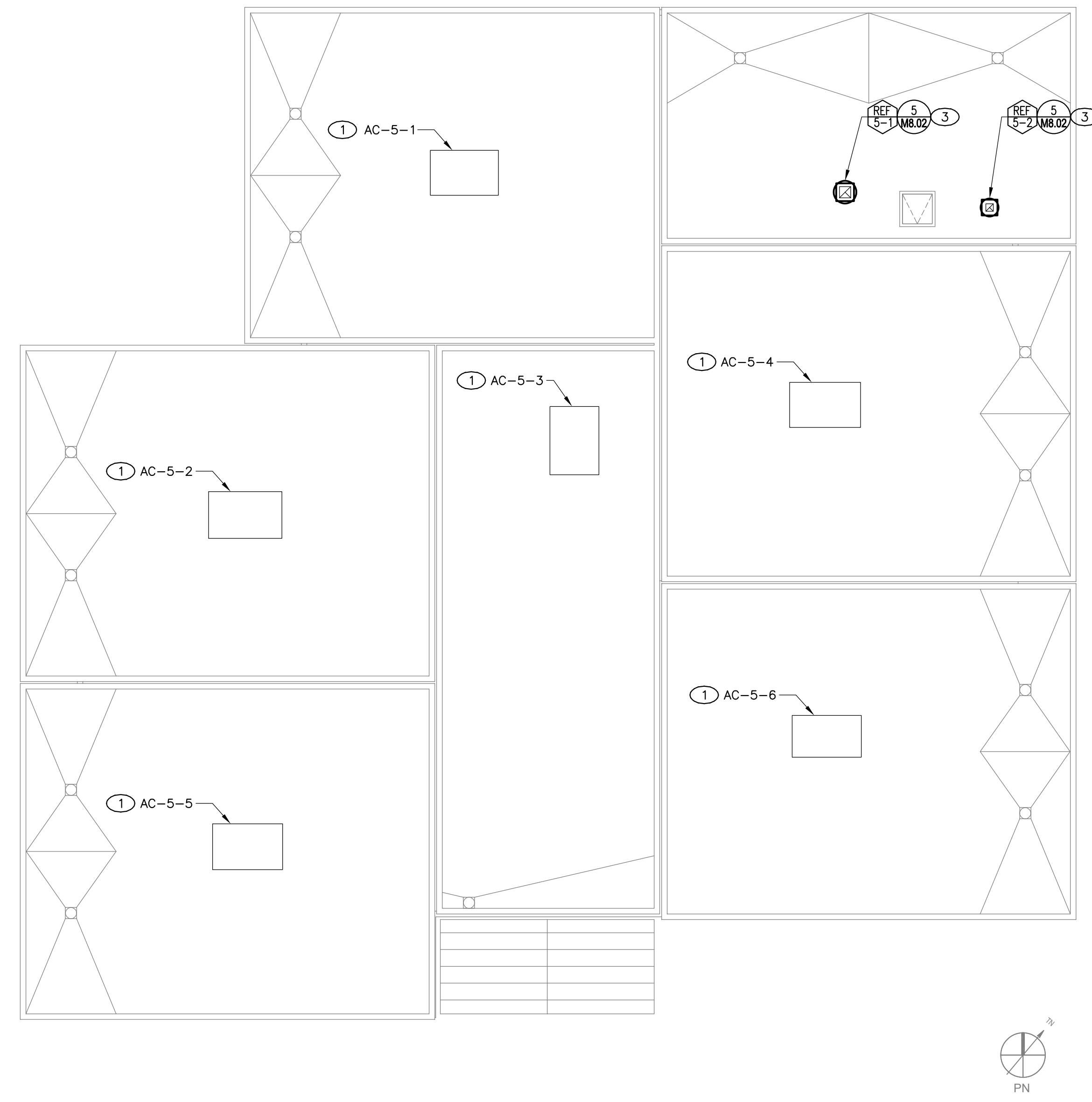
MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 6

4
1/8" = 1'-0"



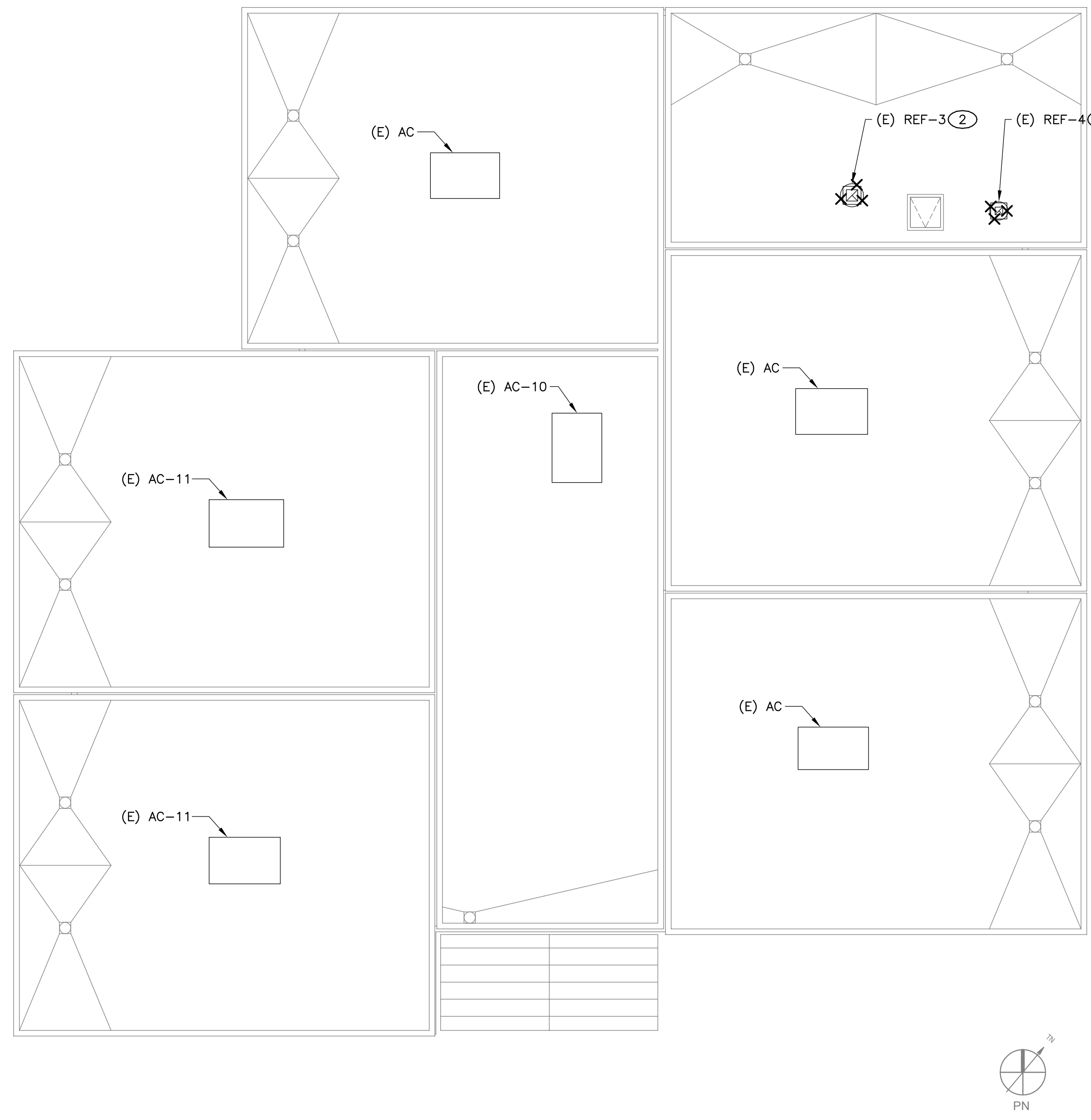
MECHANICAL DEMOLITION ROOF PLAN - BLDG 6

3
1/8" = 1'-0"



MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 5

2
1/8" = 1'-0"



MECHANICAL DEMOLITION ROOF PLAN - BLDG 5

1
1/8" = 1'-0"

- KEY NOTES**
- ① RELABEL EXISTING HVAC UNIT AS SHOWN WITH NEW NAMEPLATE.
 - ② REMOVE EXISTING EXHAUST FAN SHOWN HATCHED. EXISTING CURB TO REMAIN.
 - ③ MOUNT NEW EXHAUST FAN ON ADAPTER CURB.

- GENERAL NOTES**
1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.

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MECHANICAL DEMOLITION AND IMPROVEMENT ROOF PLANS - BLDG 5, 6

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KEY NOTES

- ① NO WORK. FOR REFERENCE ONLY.
- ② REMOVE EXISTING EXHAUST FAN SHOWN HATCHED. EXISTING CURB TO REMAIN.
- ③ MOUNT NEW EXHAUST FAN ON ADAPTER CURB.
- ④ RELABEL EXISTING HVAC UNIT AS SHOWN WITH NEW NAMEPLATE.

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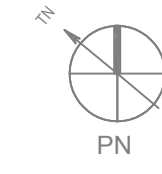
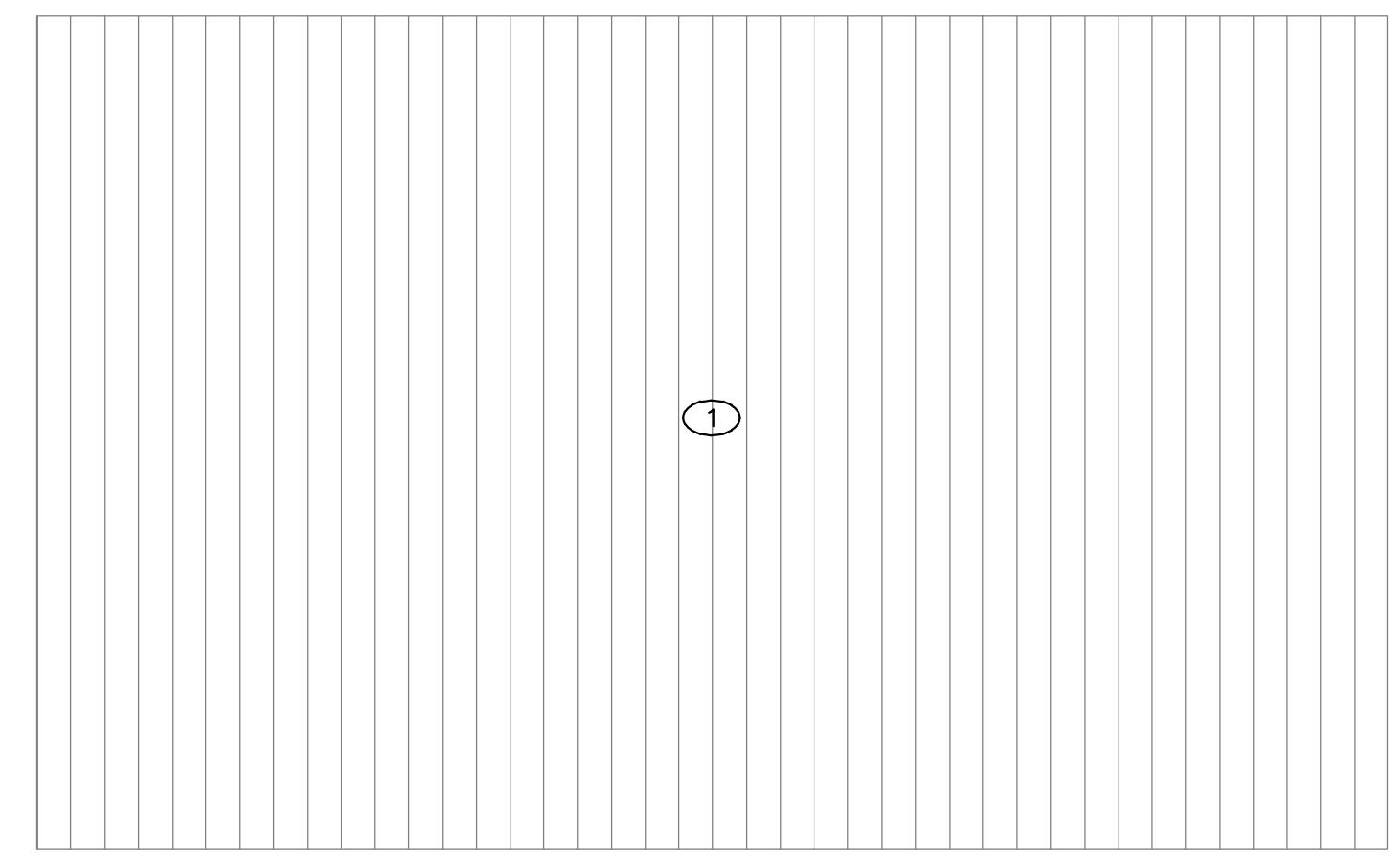


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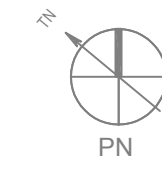
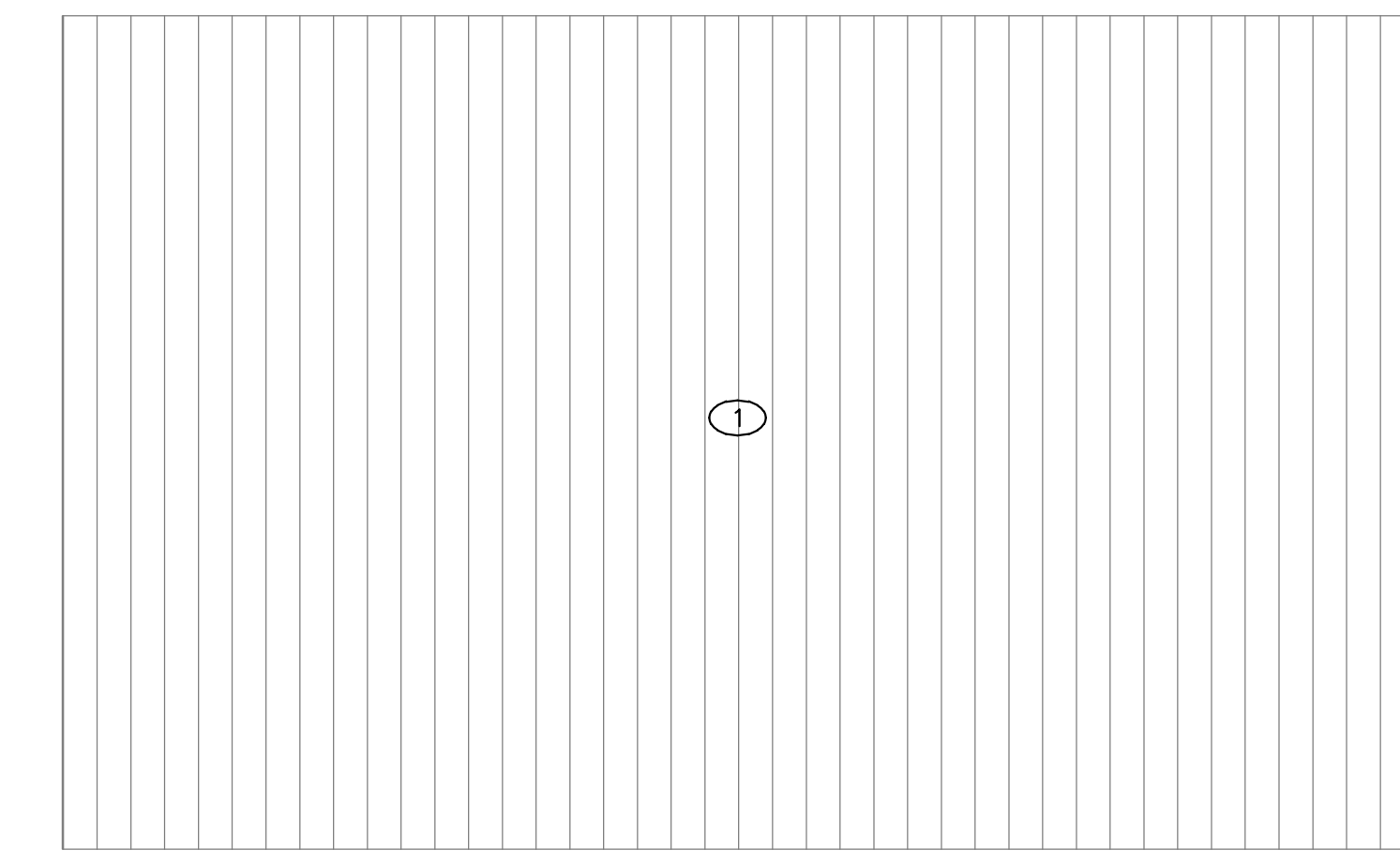
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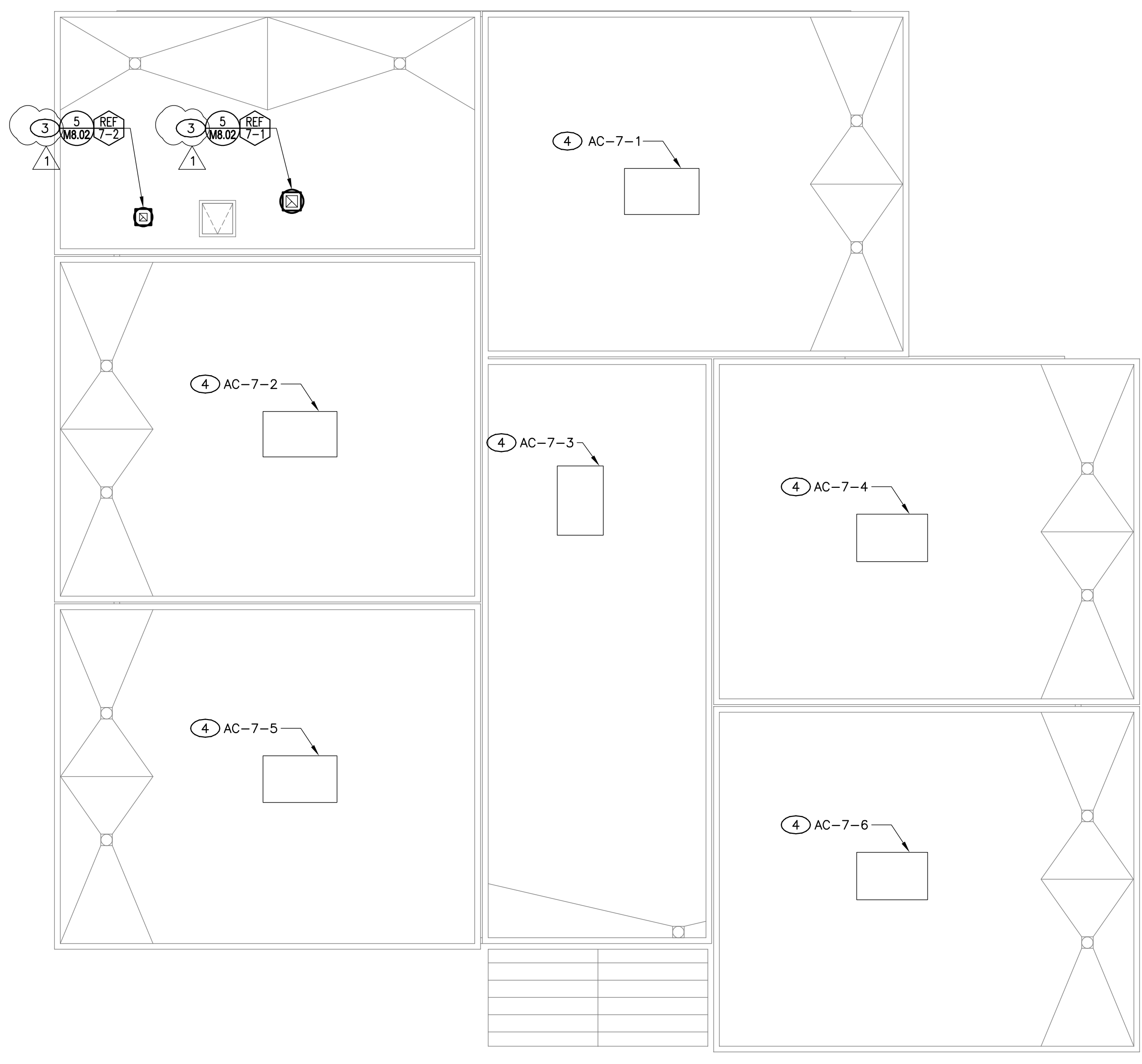
MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 8 | 4
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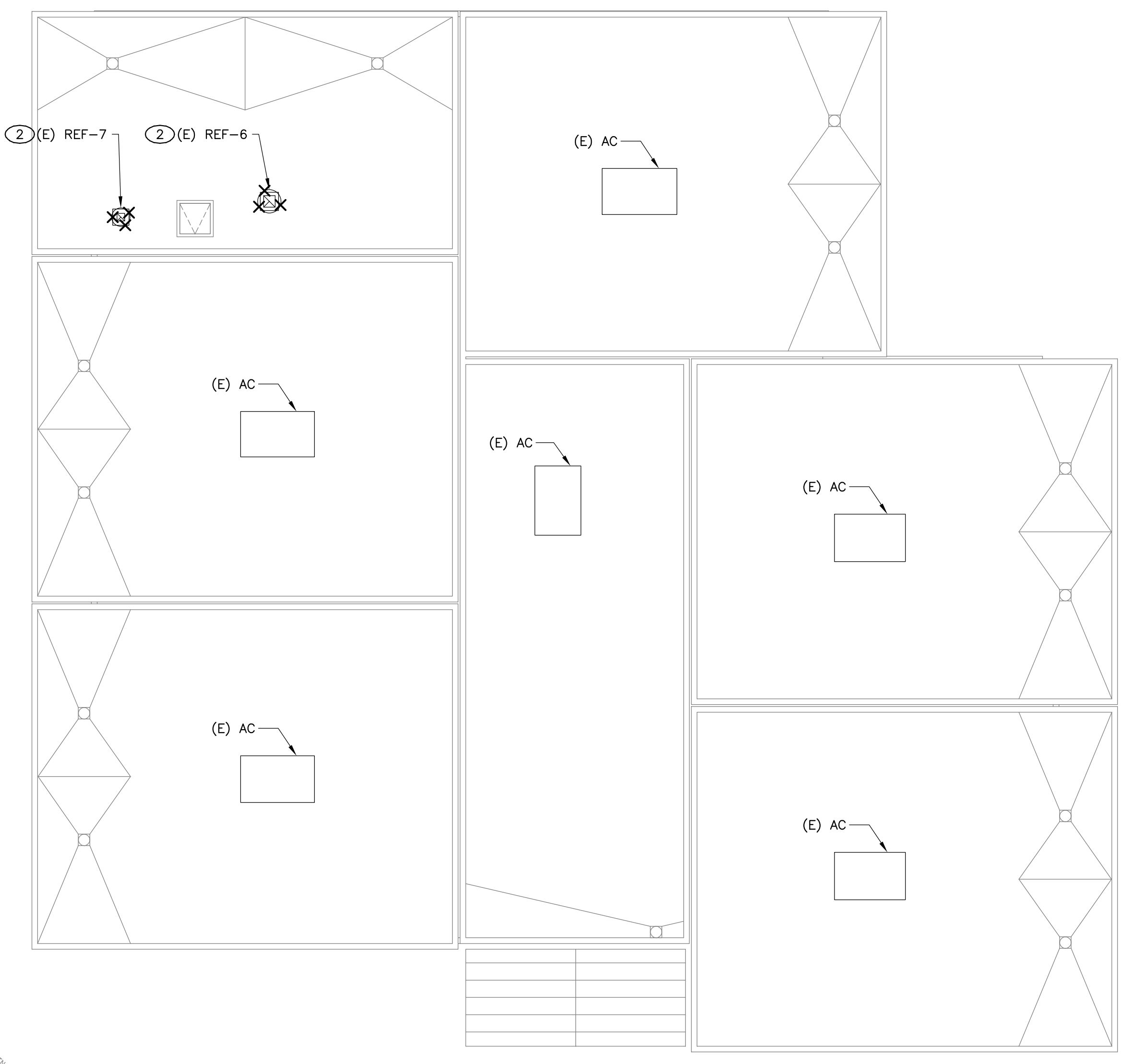
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1/8" = 1'-0"

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MECHANICAL IMPROVEMENT ROOF PLAN - BLDG 7 | 2
1/8" = 1'-0"



MECHANICAL DEMOLITION ROOF PLAN - BLDG 7 | 1
1/8" = 1'-0"

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MATSUYAMA ELEMENTARY SCHOOL
7680 WINDBRIDGE DR.
SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL DEMOLITION AND IMPROVEMENT ROOF PLANS - BLDG 7, 8

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000
SHEET:

M4.15

KEY NOTES

- ① REMOVE EXISTING KITCHEN HOOD, DUCTWORK AND RELATED APPURTENANCES. REPLACE WITH NEW HOOD IN SAME LOCATION.
- ② REBALANCE EXISTING AIR OUTLET/INLET TO AIR QUANTITY SHOWN.

AGENCY
 APPROVAL:

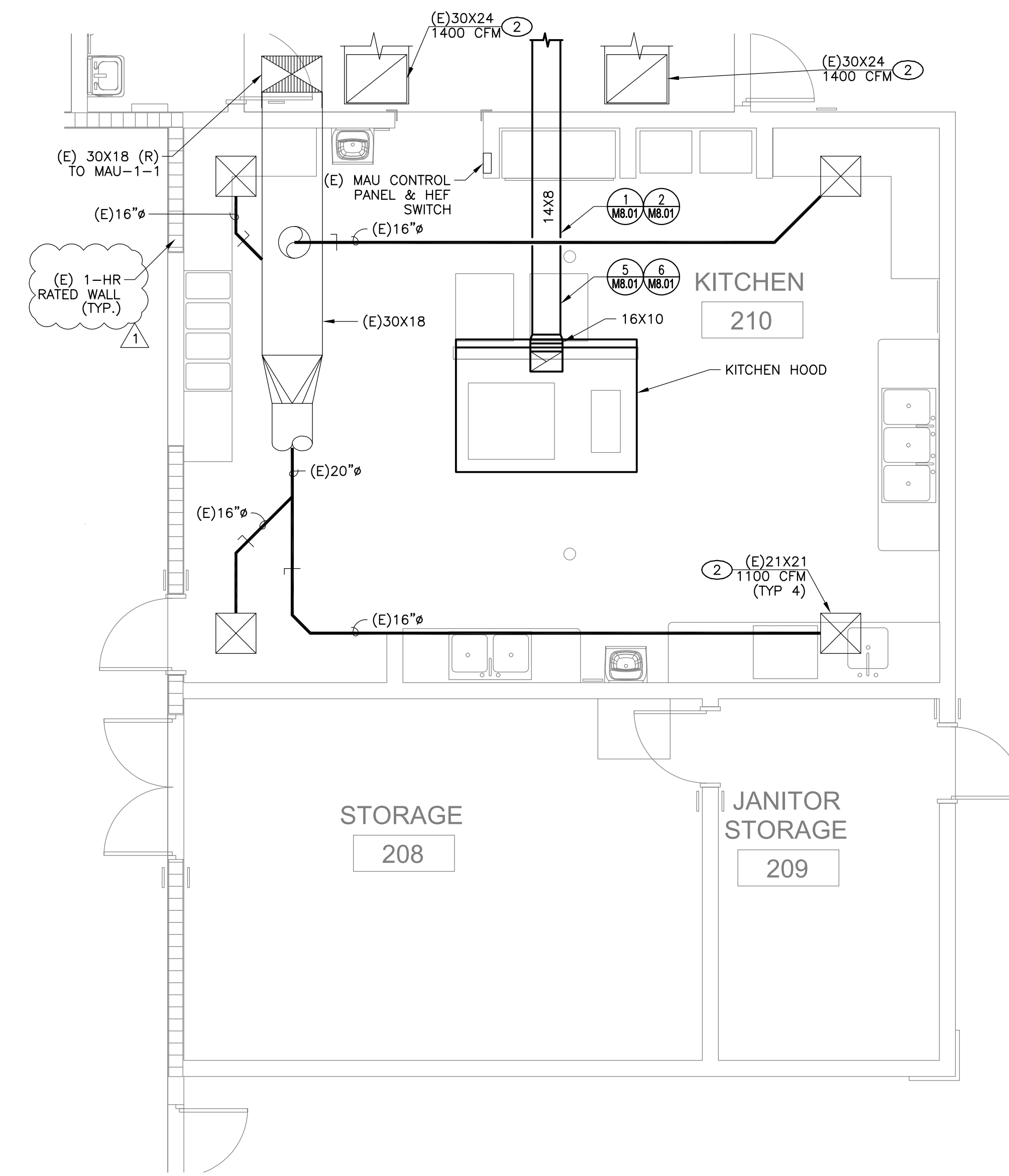


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3186-070-000

2101 CAPITOL AVENUE, SUITE 100,
 SACRAMENTO, CA 95816
 916 368 7990 / www.hmcarchitects.com

ISSUE		DATE
Δ DESCRIPTION		
1 ADDENDUM #1		03/01/2024



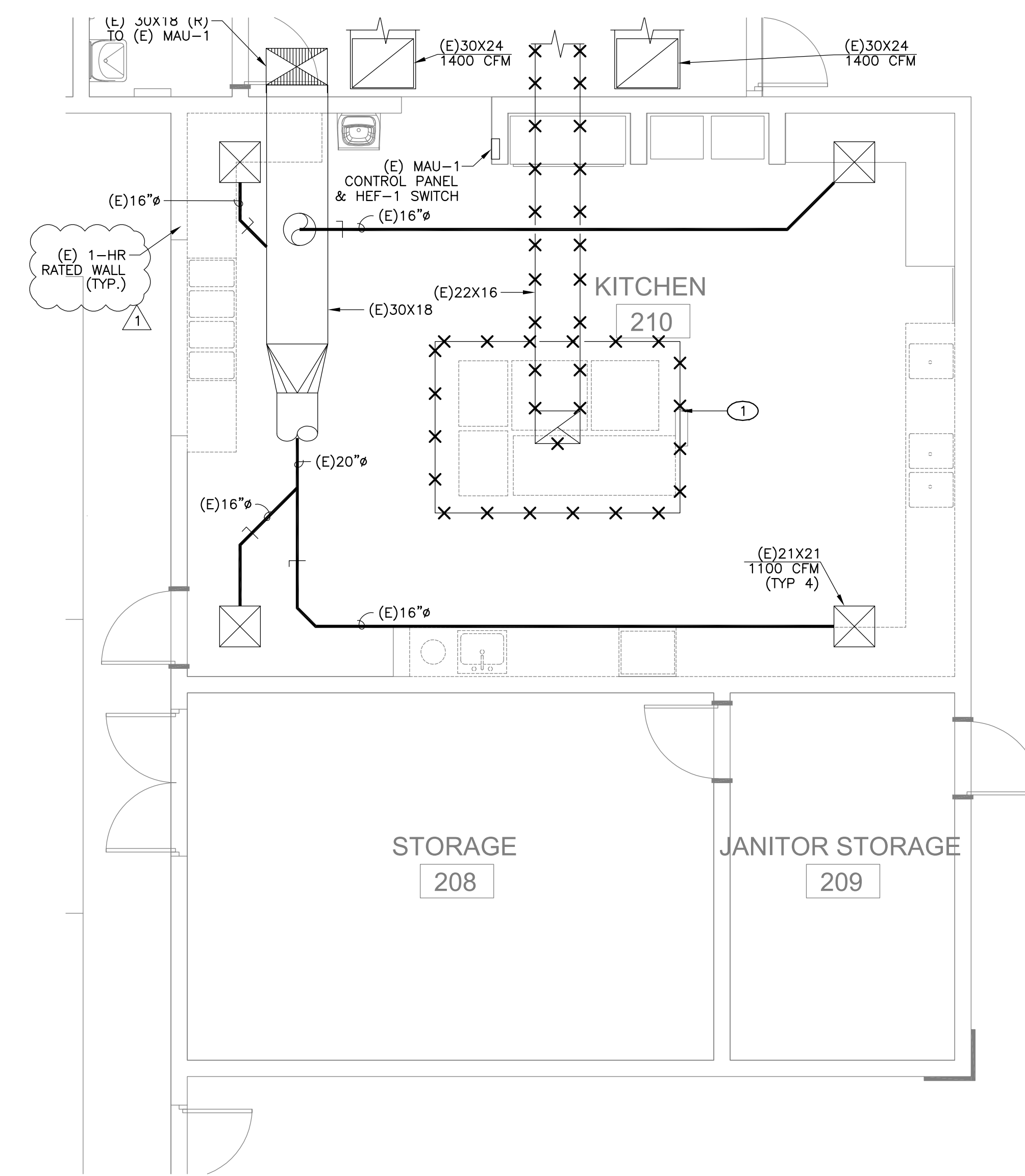
MECHANICAL IMPROVEMENT ENLARGED FLOOR PLAN - BLDG 1 KITCHEN

2

1/4" = 1'-0"

GENERAL NOTES

- 1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
- 2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.



MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - BLDG 1 KITCHEN

1

1/4" = 1'-0"



FACILITY:
MATSUYAMA ELEMENTARY SCHOOL
 7680 WINDBRIDGE DR.
 SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL ENLARGED FLOOR PLANS - BLDG 1 KITCHEN

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

SHEET:

M5.11

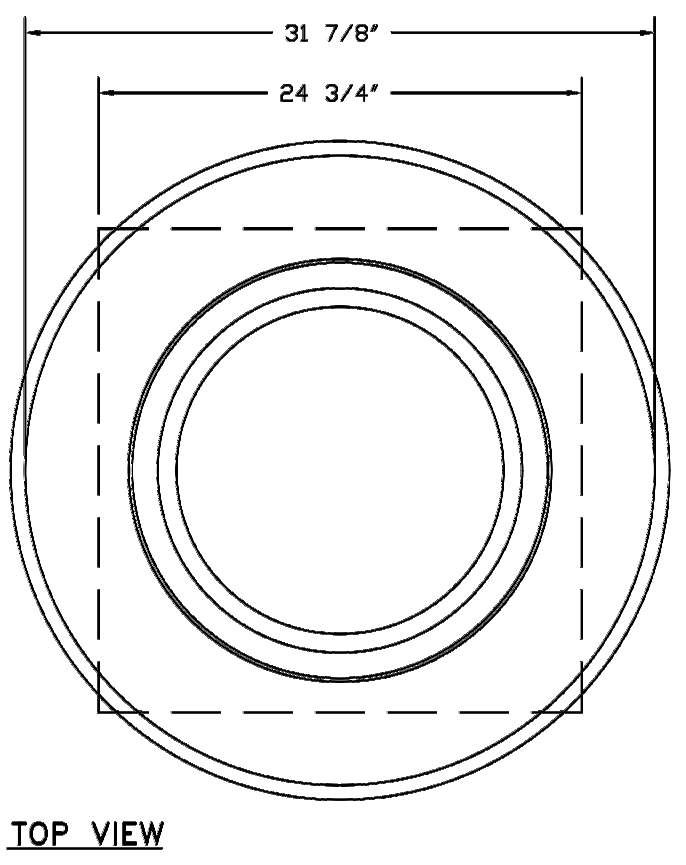
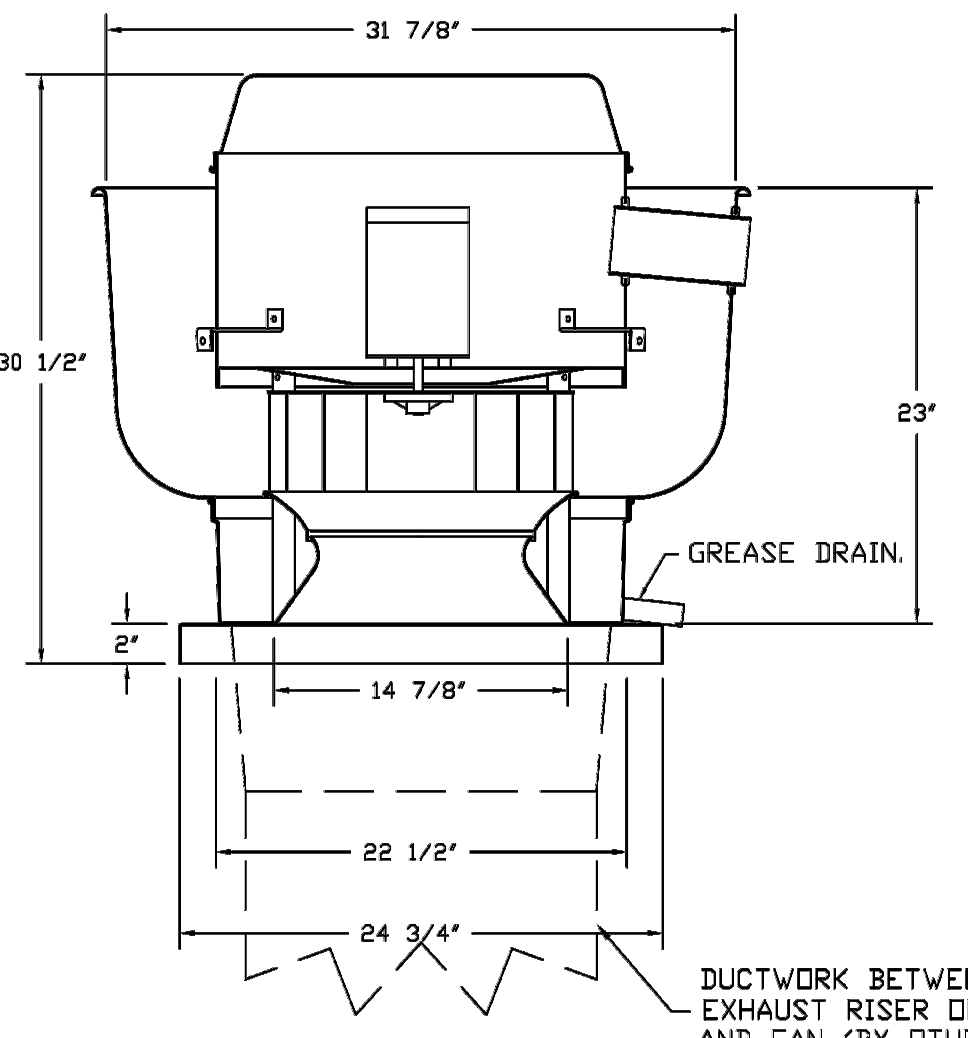
THE LINE SHOWN ABOVE IS EXACTLY AS SHOWN ON THE SHEET ORIGINAL PAGE SIZE

FOR QUESTIONS, CALL THE
 Northern California Office
 REGION 92
 PHONE: (925) 966 - 1999
 EMAIL: reg92@captiveaire.com

EXHAUST FAN INFORMATION - JOB#6379759

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL.	HP	BHP	PHASE	VOLTS	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SDNES
1		1	DUBSHFA	CAPTIVEAIRE	1575	1.000	1260	TEAD-ECM	1.000	0.3970	1	115	11.6	498 FPM	93	9.9

FAN #1 DUBSHFA - EXHAUST FAN

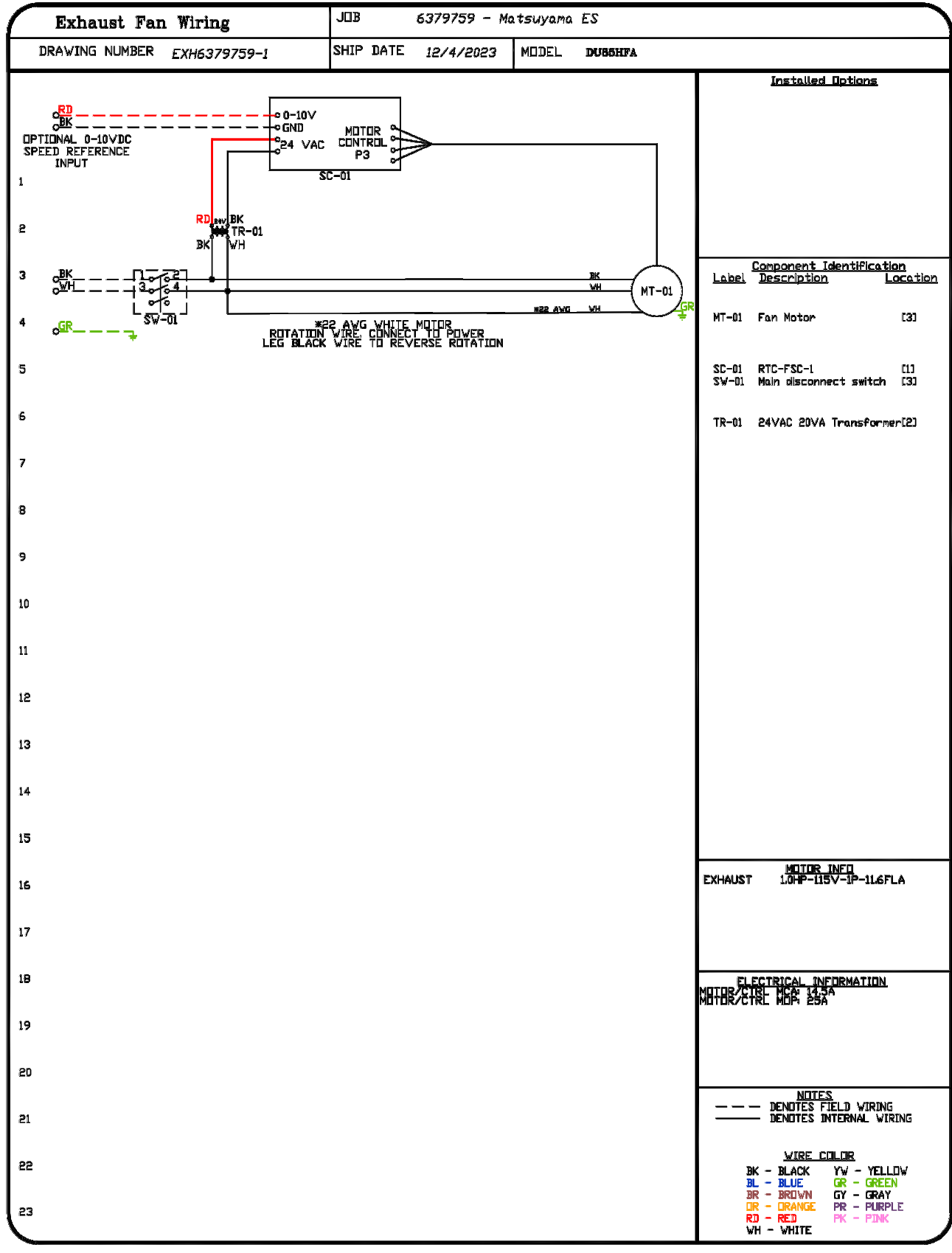
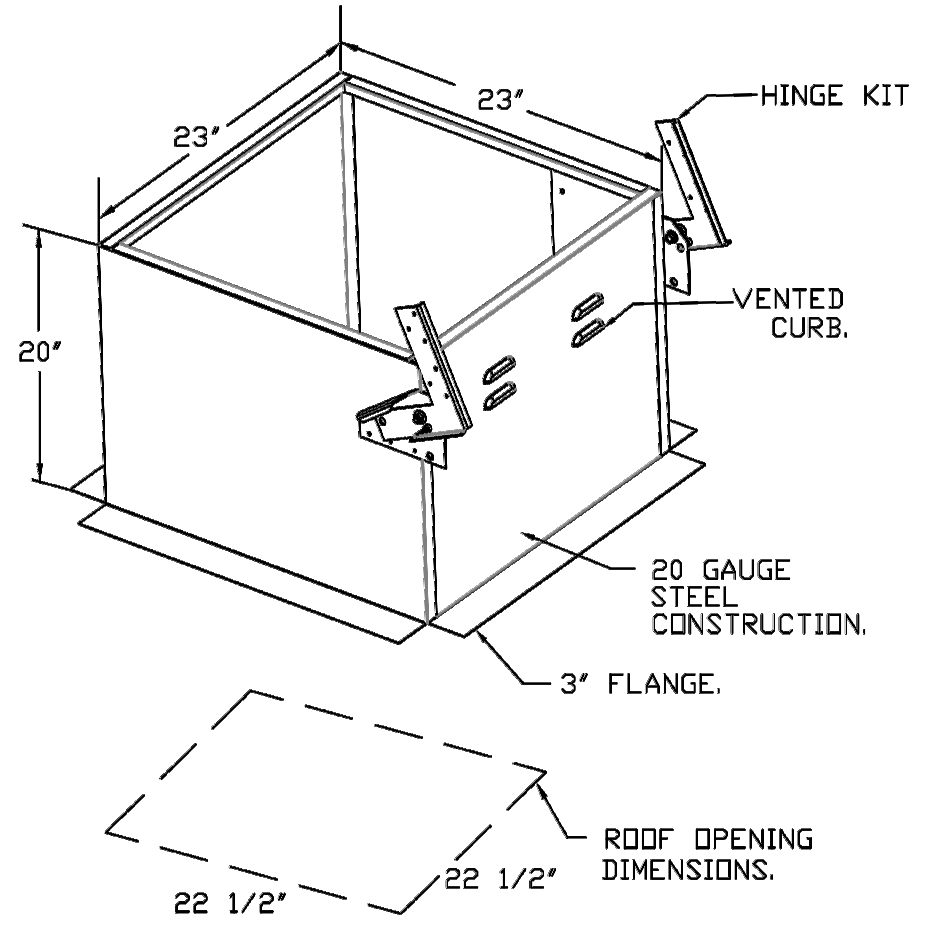


- FEATURES:**
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
 - ROOF MOUNTED FANS.
 - RESTAURANT MODEL.
 - UL705 AND UL762 AND ULC-S645
 - VARIABLE SPEED CONTROL.
 - INTERNAL WIRING.
 - THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
 - HIGH HEAT OPERATION 300°F (149°C).
 - GREASE CLASSIFICATION TESTING.
 - NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

- OPTIONS:**
- GREASE BOX.
 - ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL.
 - "RETC" (TELED MOTOR), CCM ROTATION.
 - 2 YEAR PARTS WARRANTY.



REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	03/01/2024



Matsuyama ES
 Sacramento, CA, 95831

DATE: 12/4/2023
DWG.#: 6379759
DRAWN BY: MRE
SCALE: 3/4" = 1'-0"
MASTER DRAWING
SHEET NO. 1

AGENCY APPROVAL:



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3186-070-000

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ISSUE

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	03/01/2024



FACILITY:
 MATSUYAMA ELEMENTARY SCHOOL
 7680 WINDBRIDGE DR.
 SACRAMENTO, CA 95831

PROJECT:
 MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
 MECHANICAL KITCHEN EQUIPMENT DRAWINGS

DSA SUBMITTAL

DATE: 01/04/2024
CLIENT PROJ NO: 3186-070-000

SHEET:

M6.01

Autodesk Docs:J18607000 - SCUSD Matsuyama ES Modernization:318607000-A-MATSUYAMA-MOD.rvt
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ISSUE		DATE
1	ADDENDUM #1	03/01/2024

DDAS/RTU FAN SCHEDULE - JOB#6392758																																			
FAN UNIT NO	TAG	QTY	FAN INFORMATION				ELECTRICAL INFORMATION				COOLING INFORMATION				REHEAT INFORMATION				GAS HEAT INFORMATION				NOTES												
			DDAS/RTU MODEL #	MANUFACTURER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL WEIGHT (LBS)	ESP	HP	PHASE	VOLTS	NCA	MDCP	OUTSIDE AIR DB	MIXED AIR DB	LEAVING AIR DB	VP	TOTAL CAPACITY	SEER	ISSR%	DISCHARGE DB	VB		DESIRED DB	MAX DB	MOISTURE REMOVAL RATE	GAS TYPE	INPUT BTU/H	OUTPUT BTU/H	TEMP RISE	REQUIRED INPUT GAS PRESSURE				
F		1	CASRTU-1125-15-6T	CAPTIVEAIR	15P-1	0	1575	1575	1278	1.000	2.00	3	460	16.3A	20A	57.0°F	69.0°F	57.0°F	52.0°F	77.0	73.4	19.3	9.2	70.0°F	59.7°F	31.8	36	3.3	LBS/HR	NATURAL	982E1	74690	41°F	7 IN. W.C. - 14 IN. W.C.	1,2,3,4,5,6,7,8,9,10,11,12,13,14

NOTES:

- INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL.
- DIRECT DRIVE BLIND BLOWER. BLT BLIND BLOWERS ARE NOT ACCEPTABLE.
- INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER.
- REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.
- EC MOTOR CONDENSING FANS.
- ELECTRONIC EXPANSION VALVE. TVV NOT ACCEPTABLE.
- SUCTION LINE ACCUMULATOR.
- FACTORY COMPRESSION WITH 5 YEAR PARTS WARRANTY. 25 YEAR WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.
- AVERAGING INTAKE, EVAP AND DISCHARGE TEMPERATURE SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT).
- 80% EFFICIENT FURNACE WITH MODULATING BURNER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FURNACE RANGE.
- SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
- FULLY INSULATING HOT GAS RETURN.
- EXTERIOR WALL-VAL CONSTRUCTION W/ R-43 INSULATION-MINIMUM 24GA EXTERIOR W/ 1/8GA BASE.
- SIDE DISCHARGE/SIDE RETURN.

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX
1		1	0-10V WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR). DCV ROTATION
1		1	5 YEAR PARTS WARRANTY
1		1	INLET PRESSURE GAUGE, 0-25"
1		1	HANDLED PRESSURE GAUGE, 0 TO 10" W.C. 1 FURNACE
1		1	RTU TOTAL CFM MONITORING
1		1	INTAKE FIRESTAT SET TO 135°F
1		1	FIRESTAT
1		1	DISCHARGE FIRESTAT SET TO 240°F
1		1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU. 750VA TRANSFORMER USED IF A NON-DCV PREVIEW CONTROLS THIS UNIT. THE R08, R47, P46, OR C27 PREVIEW OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREVIEW.
1		1	CHARLON BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
1		1	1" MERV 13 FILTERS FOR RTU(S) QTY. 4)
1		1	1" MERV 8 FILTERS FOR RTU(S) QTY. 4)
1		1	OVERHEAT STAT
1		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
1		1	REMOTE TEMPERATURE AND HUMIDITY SPACE SENSOR
1		1	RTU SIZE DISCHARGE
1		1	COMMERCIAL SMOKE DETECTOR/ALARM INTERLOCK - ALARM SUPPLIED BY OTHERS
1		1	EVAIC FIRE INPUT
1		1	CLOSED FILTER SWITCH - NOTIFICATION ON HMI
1		1	DISCUPTED SCHEDULING
1		1	RTU INTAKE/RETURN DAMPER - MANUAL CONTROL VIA HMI
1		1	VAV PACKAGE W/ 0-10VDC INPUT CONTROL (37) VFD INCLUDED)
1		1	LOAD REACTOR MOUNTED IN FAN
1		1	5 TON MODULATING COILING OPTION, 460/480V, R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECON CONDENSING FANS
1		1	5 TON MODULATING REHEAT OPTION - SPACE SEVPOINT CONTROL
1		1	RTU SIZE RETURN
1		1	RTU CURB DUCT HANGER
1		1	5 YEAR ENTIRE UNIT PARTS WARRANTY. 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIR SERVICE CONTRACT. 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS).

FAN #2 CASRTU1-1125-15-6T - HEATER

- NOTES:**
- DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
 - C DENOTES CORNER WEIGHT.
 - ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 15.5" x 19.25".

FAN ACCESSORIES

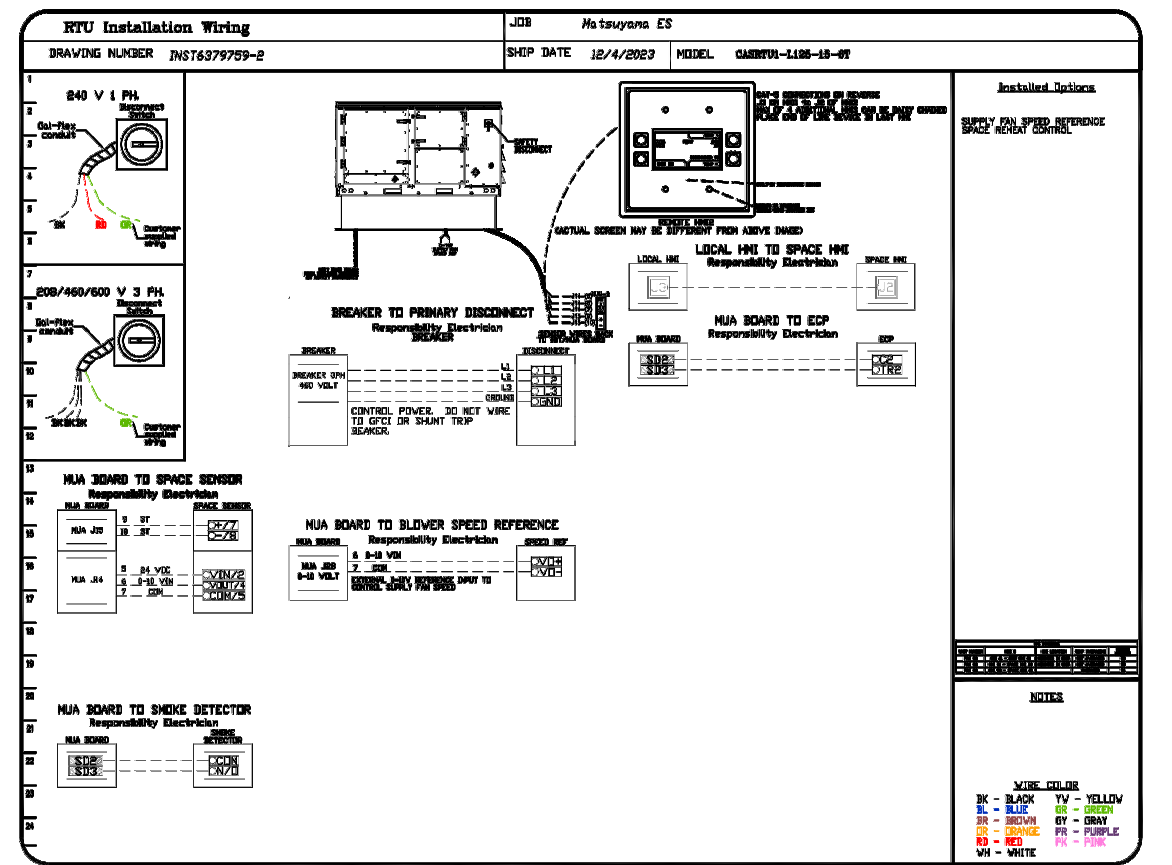
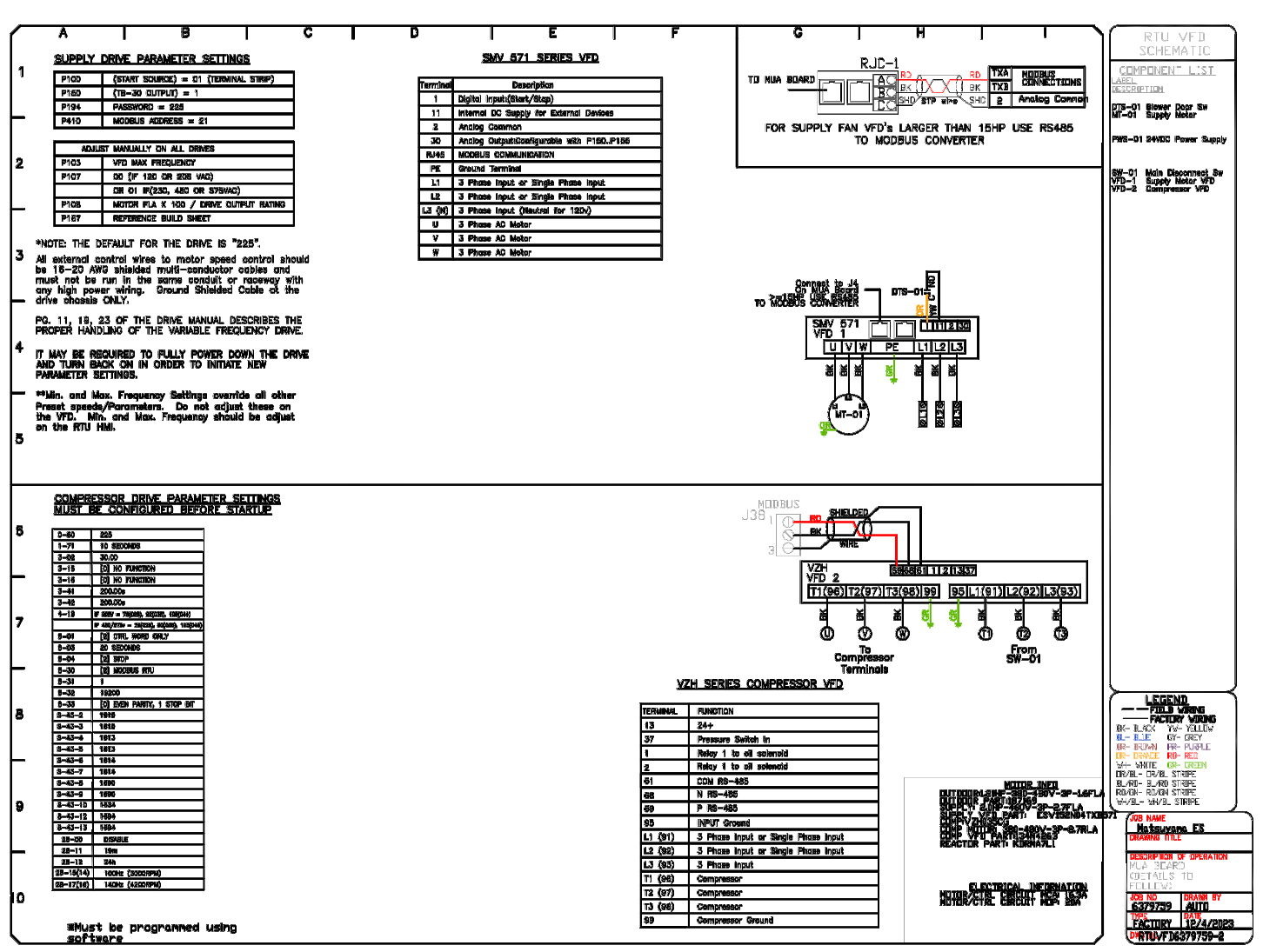
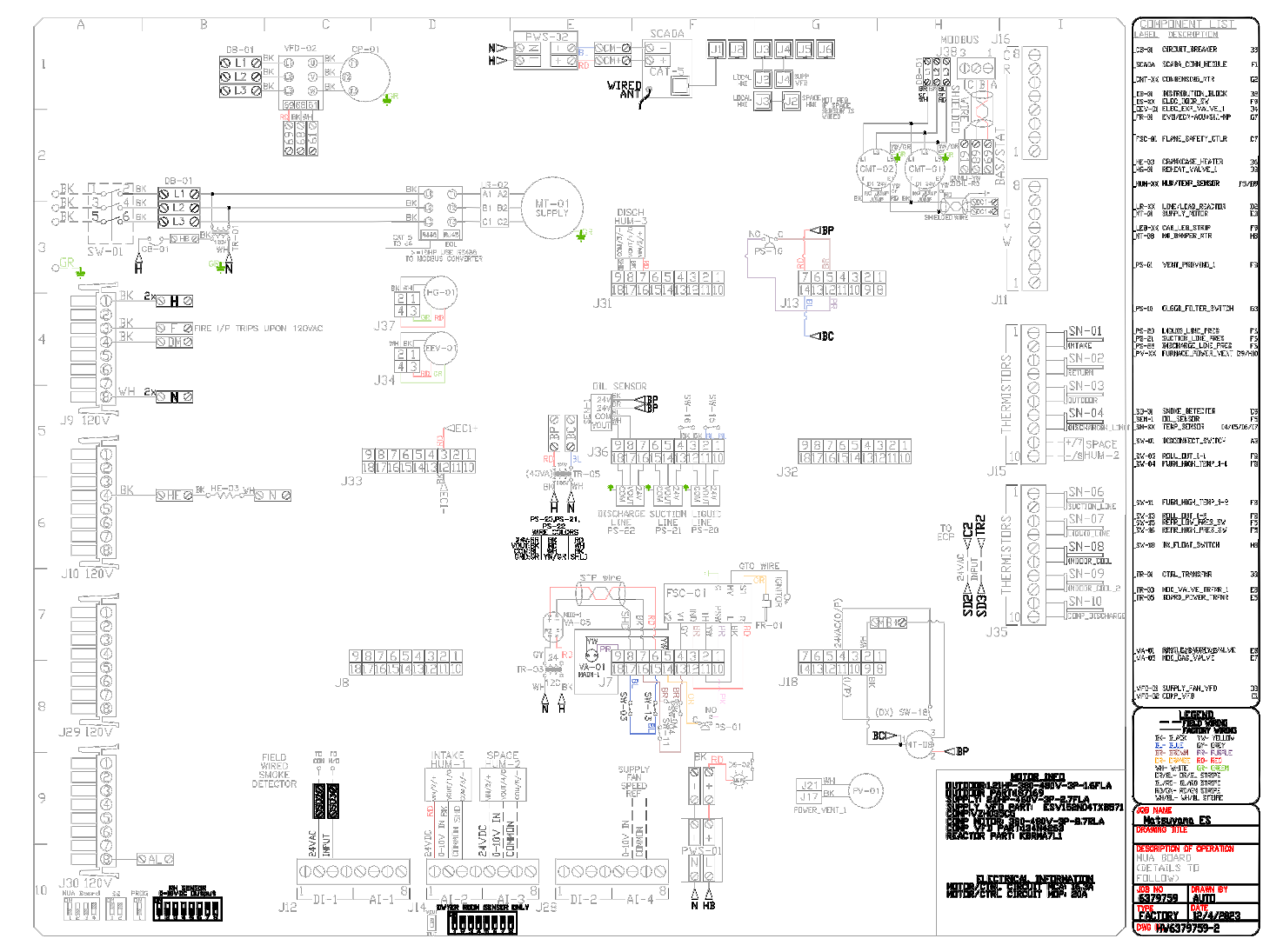
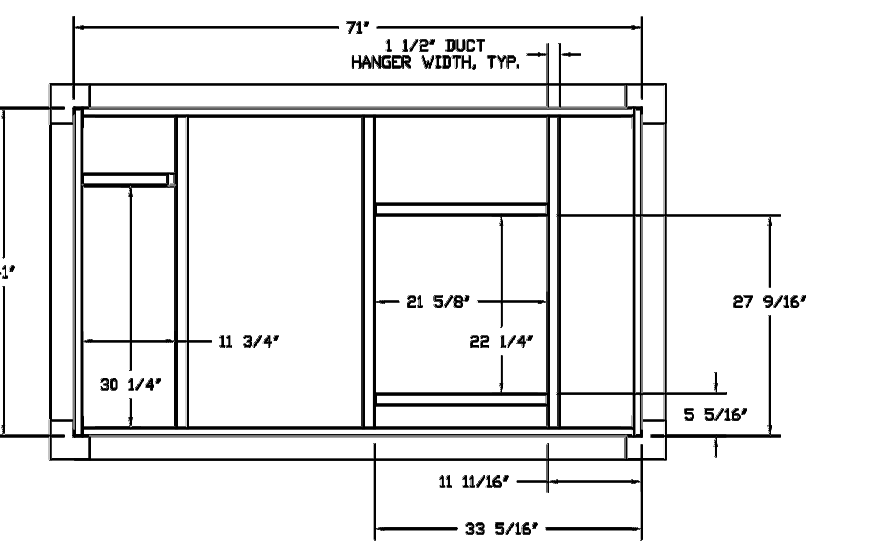
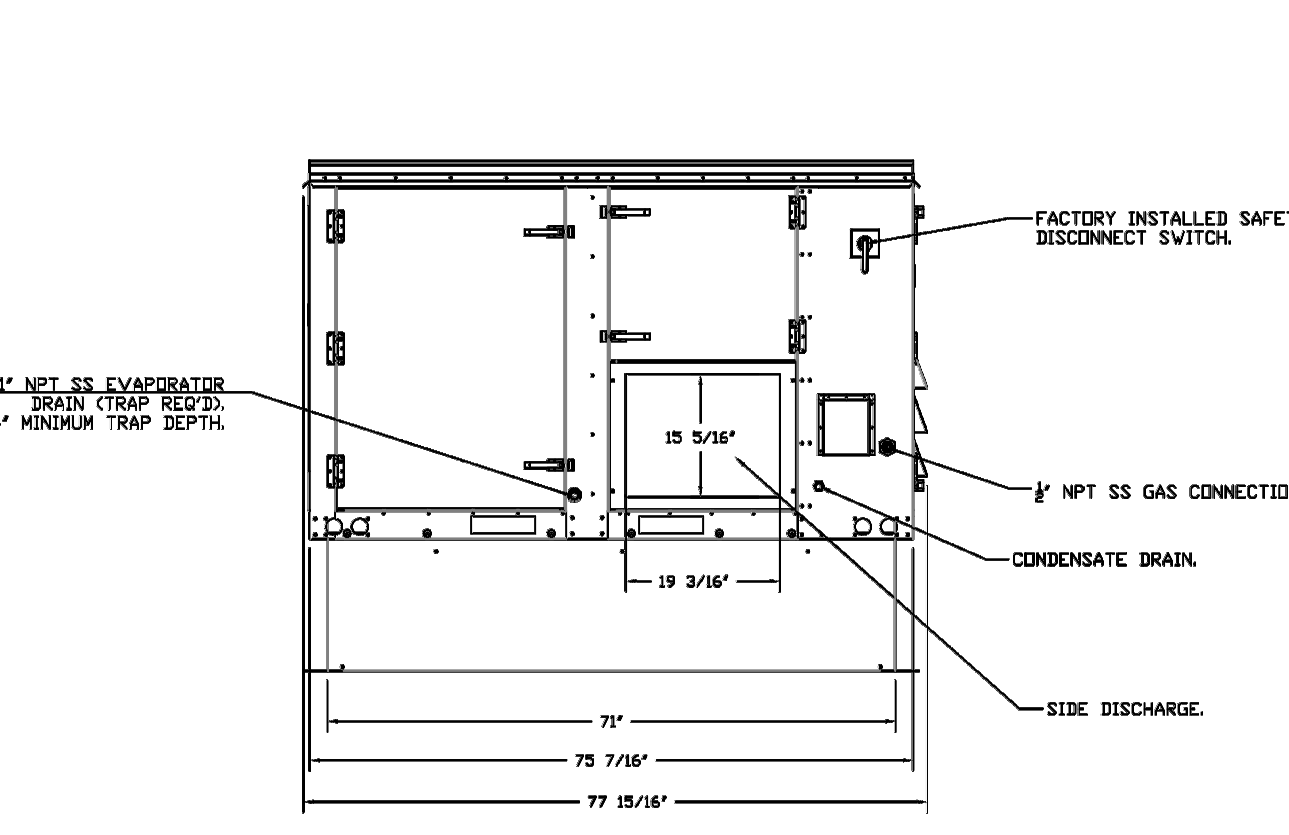
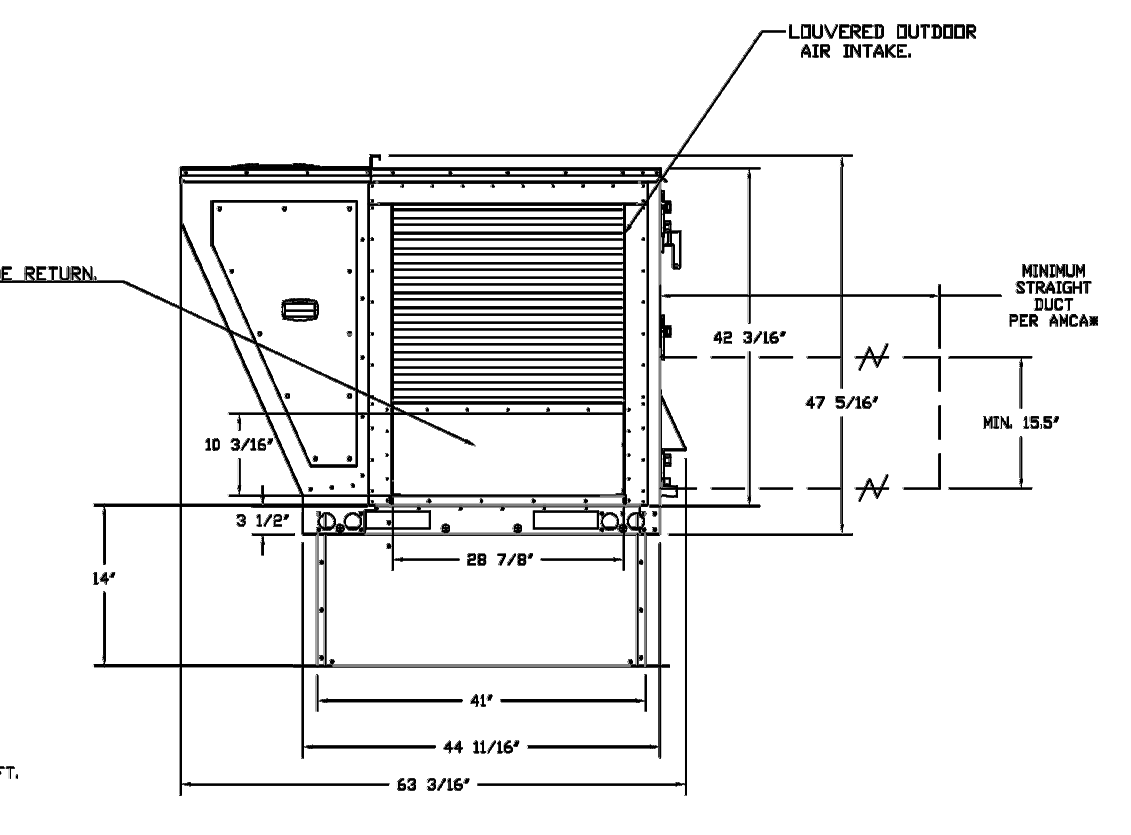
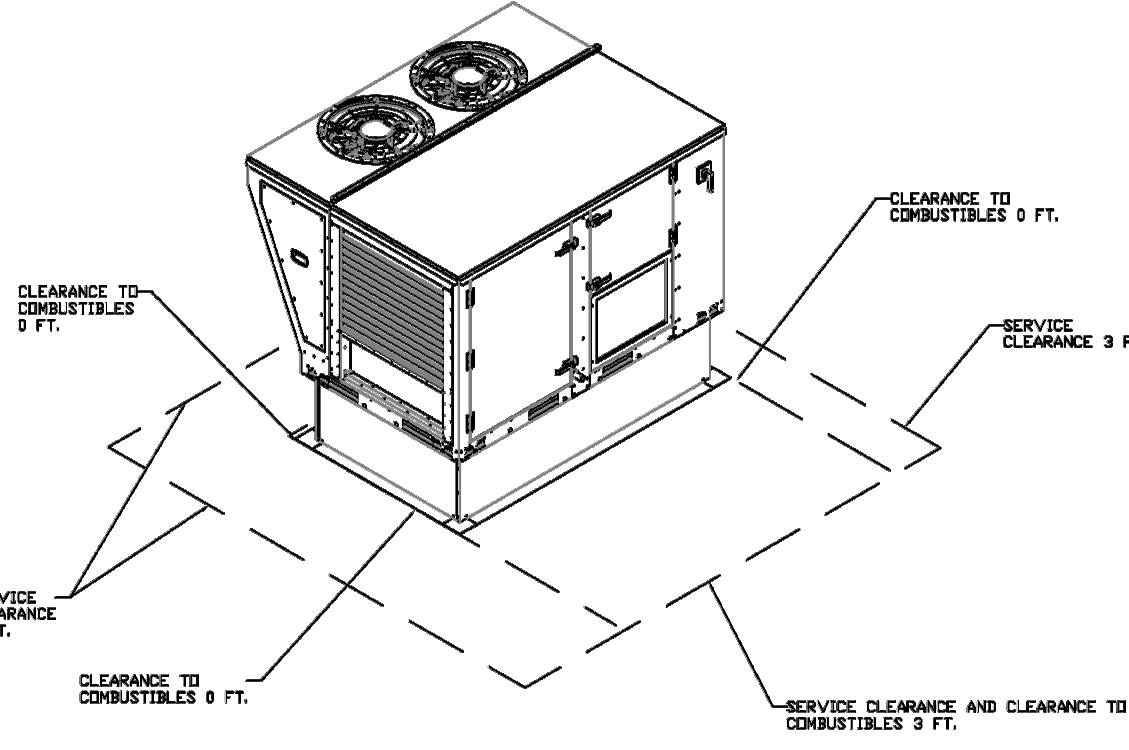
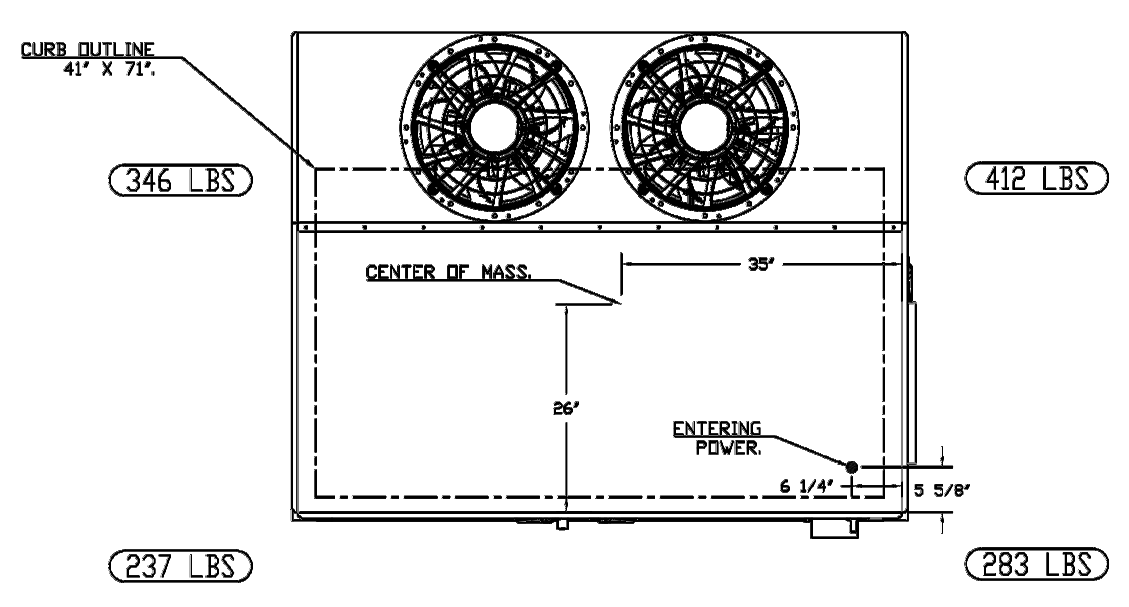
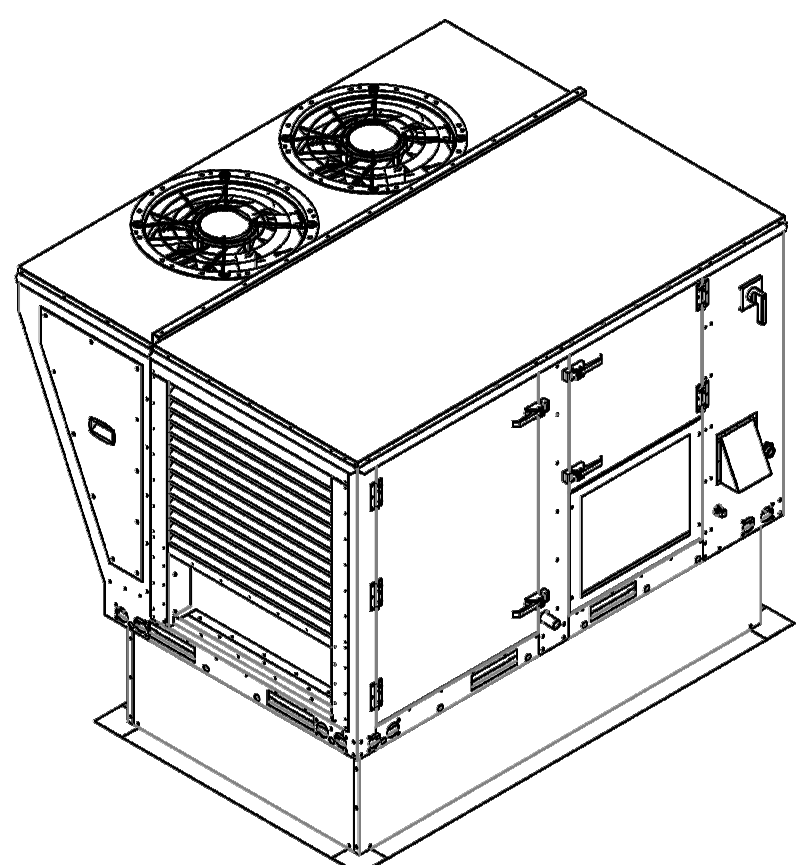
FAN UNIT NO	TAG	EXHAUST	SUPPLY
1		GREASE TRAY, WALL MOUNT	WALL MOUNT, DAMPER
1		YES	YES

CURB ASSEMBLIES

NO	QTY	WEIGHT	ITEM	SIZE
1	1	36 LBS	CURB	23.000" W X 23.000" H X 20.000" D VENTED HINGED
2	1	92 LBS	CURB	41.000" W X 71.000" H X 14.000" D INSULATED

HMI SCHEDULE

UNIT NUMBER	HMI #	HMI LOCATION	TEMP AVERAGING	MODBUS ADDRESS
FAN #2	HMI #1 - UNIT HMI #1	MOUNTED IN UNIT	NOT AVERAGED	30
FAN #2	HMI #1 - SPACE HMI #0	MOUNTED IN UNIT	NOT AVERAGED	30
FAN #2	HMI #2 - SPACE HMI #1	AVERAGED	AVERAGED	56



DDAS unit to accept 0-10V from demand control ventilation system and track the exhaust fan. When DCV is off the DDAS unit will open its recirculation damper and heat and cool the space

DDAS unit needs a HMI mounted in the space to measure temperature and humidity. Cat5 cable needs to be run between HMI and DDAS unit. 4 low voltage wires will need to be run between DDAS unit and DCV on the hood. 2 give it and occupied/unoccupied signal and 2 give it a 0-10V speed reference

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM #1	03/01/2024

CAPTIVE
Northern California Office
1110 Burnett Ave, Suite G, Concord, CA, 94503 PHONE: (925) 982-1999 FAX: 925-666-6865 EMAIL: ng@captivewest.com

Matsuyama ES
Sacramento, CA, 95831

DATE: 12/4/2023
DWG.#: 6379759
DRAWN BY: MRE
SCALE: 1/2" = 1'-0"
MASTER DRAWING

SHEET NO. 2



FACILITY:
MATSUYAMA ELEMENTARY SCHOOL
7680 WINDBRIDGE DR.
SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL KITCHEN EQUIPMENT DRAWINGS

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

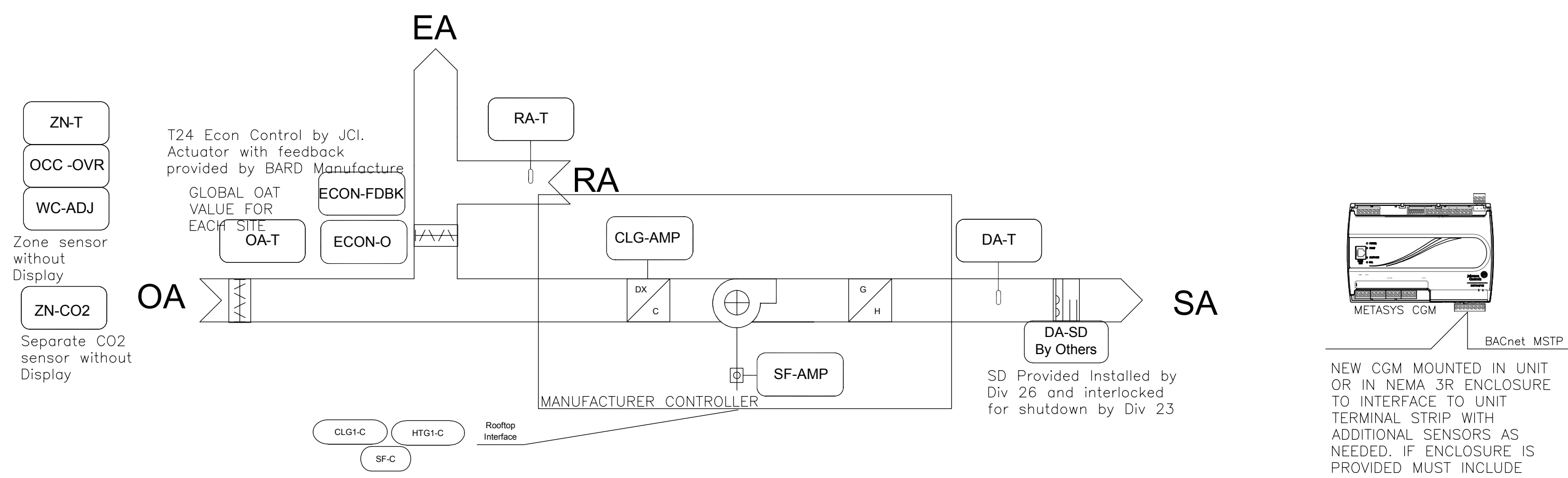


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1	DESCRIPTION	03/01/2024
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SUPPLY FAN CONTROL:
The supply fan (SF-C) will be started based on occupancy schedule. When the supply fan status (SF-AMP) indicates the fan started, the control sequence will be enabled. Upon a loss of airflow (SF-AMP), the supply fan will attempt to automatically restart until positive status is received.

SINGLE ZONE VAV CONTROL:
Upon a call for cooling - the manufacture control board shall stage the supply fan in sequence with the cooling per the single zone VAV guidelines in ASHRAE 90.1

ECONOMIZER CONTROL:
The BMS contractor shall provide the Title 24 FDD economizer control with associated sensors and logic for a functional system. This includes global outside air temp (OA-T, unique to the site), return air temp (RA-T), discharge air temp (DA-T) and a damper actuator/command (ECON-O) and damper actuator feedback (ECON-FDBK) for typical dry bulb control. The BMS will generate the faults as per the T24 code and display them as an alarm at the OWS. The faults are to be 1. Air temperature sensor failure/fault 2. Not economizing when it should 3. Economizing when it should not 4. Dampers not modulating 5. Excess outdoor air. The economizer will be enabled whenever the OAT is lower than the Econ Enable Set point.

TEMPERATURE CONTROL:
The unit will control to maintain the locally adjustable zone temperature setpoint (ZN-SP) (WC-ADJ) as sensed by the zone temperature (ZN-T) sensor.

OCCUPIED MODE:
The occupancy mode will be controlled via a network input (OCC-SCHEDULE). The occupancy mode can also be overridden by a network input (OCC-OVERRIDE). It can also be overridden by a temporary occupancy button (OCC-OVR) on the zone sensor will place the unit in occupied mode for an adjustable time - user adjustable initially set for 2 hours. When in occupied mode the fan fan will run continuously.

UNOCCUPIED MODE:
The unit will cycle to maintain unoccupied zone setpoints (CLGUNOCC-SP & HTGUNOCC-SP) during unoccupied periods. The fan will only be on when there is a call for cooling or heating and a compressor or heater is enabled. The fan will be off at all other times.

COOLING COIL:
The cooling coil (CLG-C) will be staged in sequence to maintain the temperature setpoint initially set at 73 and variable at the zone from 73-77.

HEAT PUMP CONTROL:
When the zone temperature (ZN-T) falls below the zone temperature setpoint (ZN-SP) the reversing valve (s) (REV-C) will be indexed to provide heating when the compressor is running. When the zone temperature (ZN-T) rises above the zone temperature setpoint (ZN-SP) the reversing valve (s) (REV-C) will be indexed to provide cooling when the compressor is running.

HEAT PUMP HEATING:
The reheat coil (HTG-C) will be staged in sequence to maintain the temperature setpoint initially set at 69 and variable at the zone from 65-69. If the unit is supplied with KW heat strips it will control them per the manufacture SOO for defrost or supplemental heat to meet heating requests from the BMS.

UNOCCUPIED SETPOINTS:
When unoccupied the cooling set point is 90F (fixed value with no range, user adjustable)
When unoccupied the heating set point is 50F (fixed value with no range, user adjustable)

LOAD SHED PROGRAM:
The AC unit will be part of the utility Load Shed Program. Whenever the utility company sends the network level command to shed load, the BMS will reset the zone cooling set point UP by 2F while maintaining the same range for warm cool adjust (IE - from 75-79F). This load shed event will continue until the utility releases the load shed event command. When the utility releases the load shed event, the BMS will revert to normal set points 5 units at a time per site every 3 min until 100% of the units are back at the normal set point.

CO2 VENTILATION:
The BMS will utilize a zone CO2 sensor sensor to monitor space CO2 value. The BMS will alarm if the zone CO2 value ever rises above 1,000 PPM. After alarming, the BMS will modulate the OSA damper for the common plenum open 10% every 5 min until the zone CO2 set point falls below the set point of 1,000 :M at which point the OSA damper will revert back to its default position. This SOO will be applicable if any of the connected systems is above set POI.

VIRUS MODE:
Via the user interface, the BMS will be able to send a global command to all controlled economizer damper actuators and supply fans. In this mode the economizer actuator is to stroke 100% open to introduce the maximum amount of OSA. The supply fan will be commanded on 24/7 regardless of occupancy schedule. Temperature control will remain per the occupied/unoccupied setpoints above and existing schedule. The Virus mode will take secondary priority to smoke mode.

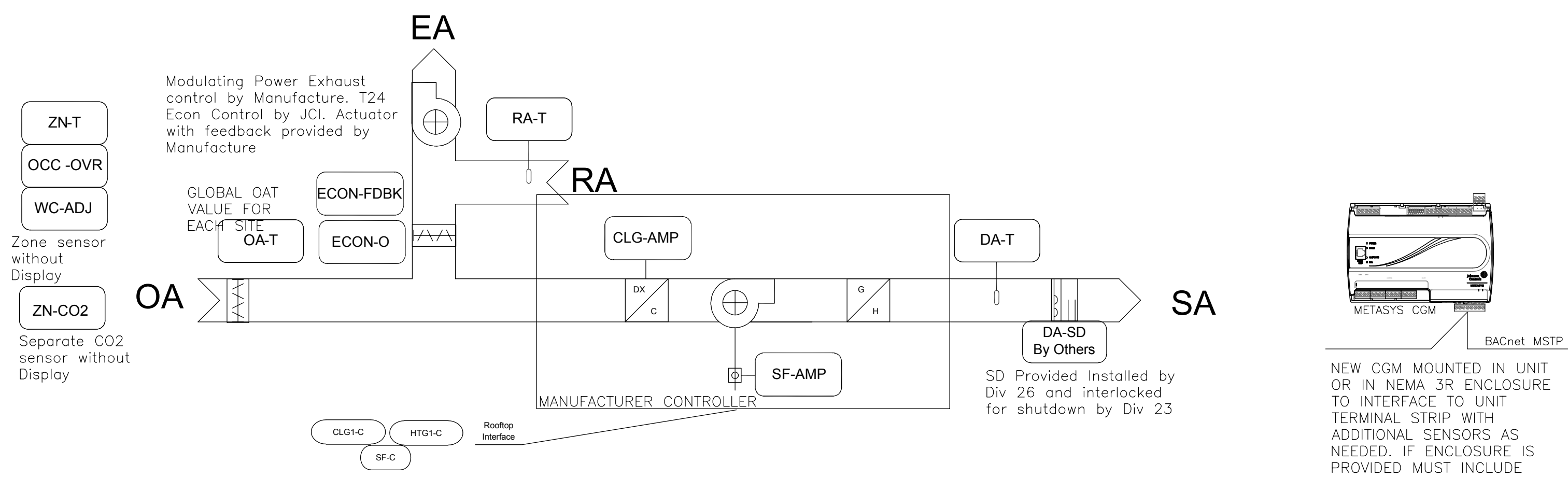
SMOKE MODE:
Via the user interface, the BMS will be able to send a global command to all controlled economizer damper actuators to stroke an (adj.) amount closed and limit OSA. Additionally - this command will change the supply fan control from continuous during occupied to cycled with a call for cooling. The occupied cooling temperature setpoint will change to a fixed value at 74F; the unoccupied setpoint will remain the same at 90F. Heating setpoints remain unchanged. This SOO will remain active as long as the global command is active and will take priority over Virus mode.

OPTIMIZED START/STOP:
JCI will leverage the JCI standard optimized start/stop logic block to provide micro-adjustments to the unit enable command in the morning and disable in the evening. Leveraging global outside air temp, zone temp, zone set point and schedule the BMS will enable/disable unit at different times each day to hit the setpoints when the schedule switches from occupied to unoccupied or visa versa.

ALARMS
The BMS system shall generate an alarm if:
-The zone temperature is 6 degrees away from set point.
-The fan command does not match its status
-The cooling command does not match its status

The BMS will disable ALL alarms during unoccupied mode.

ADDITIONAL POINTS MONITORED BY THE FMS:
Supply Fan Amperage (SF-AMP)
Discharge Air Temperature (DA-T)
Compressor Amperage (CLG-AMP)
Return Air Temperature Sensor (RA-T)
Zone CO2 - (ZN-CO2)
Economizer Position Feedback (ECON-FDBK)



SUPPLY FAN CONTROL:
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SINGLE ZONE VAV CONTROL:
Upon a call for cooling - the manufacture control board shall stage the supply fan in sequence with the cooling per the single zone VAV guidelines in ASHRAE 90.1

ECONOMIZER CONTROL:
The BMS contractor shall provide the Title 24 FDD economizer control with associated sensors and logic for a functional system. This includes global outside air temp (OA-T, unique to the site), return air temp (RA-T), discharge air temp (DA-T) and a damper actuator/command (ECON-O) and damper actuator feedback (ECON-FDBK) for typical dry bulb control. The BMS will generate the faults as per the T24 code and display them as an alarm at the OWS. The faults are to be 1. Air temperature sensor failure/fault 2. Not economizing when it should 3. Economizing when it should not 4. Dampers not modulating 5. Excess outdoor air. The economizer will be enabled whenever the OAT is lower than the Econ Enable Set point.

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The occupancy mode will be controlled via a network input (OCC-SCHEDULE). The occupancy mode can also be overridden by a network input (OCC-OVERRIDE). It can also be overridden by a temporary occupancy button (OCC-OVR) on the zone sensor will place the unit in occupied mode for an adjustable time - user adjustable initially set for 2 hours. When in occupied mode the supply fan will run continuously.

UNOCCUPIED MODE:
The unit will cycle to maintain unoccupied zone setpoints (CLGUNOCC-SP & HTGUNOCC-SP) during unoccupied periods. The fan will only be on when there is a call for cooling or heating and a compressor or heater is enabled. The fan will be off at all other times.

COOLING COIL:
The cooling coil (CLG-C) will be staged in sequence to maintain the temperature setpoint initially set at 73 and variable at the zone from 73-77.

GAS FURNACE HEATING COIL:
The reheat coil (HTG-C) will be staged in sequence to maintain the temperature setpoint initially set at 69 and variable at the zone from 65-69. If the unit is supplied with KW heat strips it will control them per the manufacture SOO for defrost or supplemental heat to meet heating requests from the BMS.

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When unoccupied the cooling set point is 90F (fixed value with no range, user adjustable)
When unoccupied the heating set point is 50F (fixed value with no range, user adjustable)

ZONE PRESSURE CONTROL:
The AC units are equipped with a modulating power exhaust economizer. The modulating power exhaust economizer with factory provided controller will modulate the exhaust fan to maintain the zone pressure setpoint. The controls contractor is to run the pressure tubing to ensure factory provided modulating power exhaust controller is reading accurate values.

LOAD SHED PROGRAM:
The AC unit will be part of the utility Load Shed Program. Whenever the utility company sends the network level command to shed load, the BMS will reset the zone cooling set point UP by 2F while maintaining the same range for warm cool adjust (IE - from 75-79F). This load shed event will continue until the utility releases the load shed event command. When the utility releases the load shed event, the BMS will revert to normal set points 5 units at a time per site every 3 min until 100% of the units are back at the normal set point.

CO2 VENTILATION:
The BMS will utilize a zone CO2 sensor sensor to monitor space CO2 value. The BMS will alarm if the zone CO2 value ever rises above 1,000 PPM. After alarming, the BMS will modulate the OSA damper for the common plenum open 10% every 5 min until the zone CO2 set point falls below the set point of 1,000 :M at which point the OSA damper will revert back to its default position. This SOO will be applicable if any of the connected systems is above set POI.

VIRUS MODE:
Via the user interface, the BMS will be able to send a global command to all controlled economizer damper actuators and supply fans. In this mode the economizer actuator is to stroke 100% open to introduce the maximum amount of OSA. The supply fan will be commanded on 24/7 regardless of occupancy schedule. Temperature control will remain per the occupied/unoccupied setpoints above and existing schedule. The Virus mode will take secondary priority to smoke mode.

SMOKE MODE:
Via the user interface, the BMS will be able to send a global command to all controlled economizer damper actuators to stroke an (adj.) amount closed and limit OSA. Additionally - this command will change the supply fan control from continuous during occupied to cycled with a call for cooling. The occupied cooling temperature setpoint will change to a fixed value at 74F; the unoccupied setpoint will remain the same at 90F. Heating setpoints remain unchanged. This SOO will remain active as long as the global command is active and will take priority over Virus mode.

OPTIMIZED START/STOP:
JCI will leverage the JCI standard optimized start/stop logic block to provide micro-adjustments to the unit enable command in the morning and disable in the evening. Leveraging global outside air temp, zone temp, zone set point and schedule the BMS will enable/disable unit at different times each day to hit the setpoints when the schedule switches from occupied to unoccupied or visa versa.

ALARMS
The BMS system shall generate an alarm if:
-The zone temperature is 6 degrees away from set point.
-The fan command does not match its status
-The cooling command does not match its status

The BMS will disable ALL alarms during unoccupied mode.

ADDITIONAL POINTS MONITORED BY THE FMS:
Supply Fan Amperage (SF-AMP)
Discharge Air Temperature (DA-T)
Compressor Amperage (CLG-AMP)
Return Air Temperature Sensor (RA-T)
Zone CO2 - (ZN-CO2)
Economizer Position Feedback (ECON-FDBK)

FACILITY:
MATSUYAMA ELEMENTARY SCHOOL
7680 WINDBRIDGE DR.
SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL CONTROLS

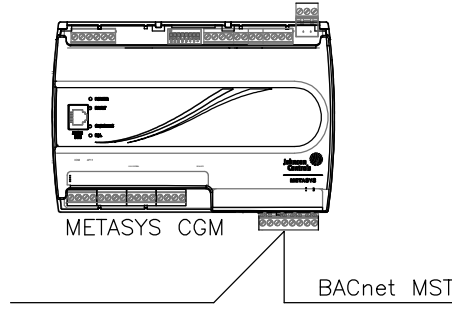
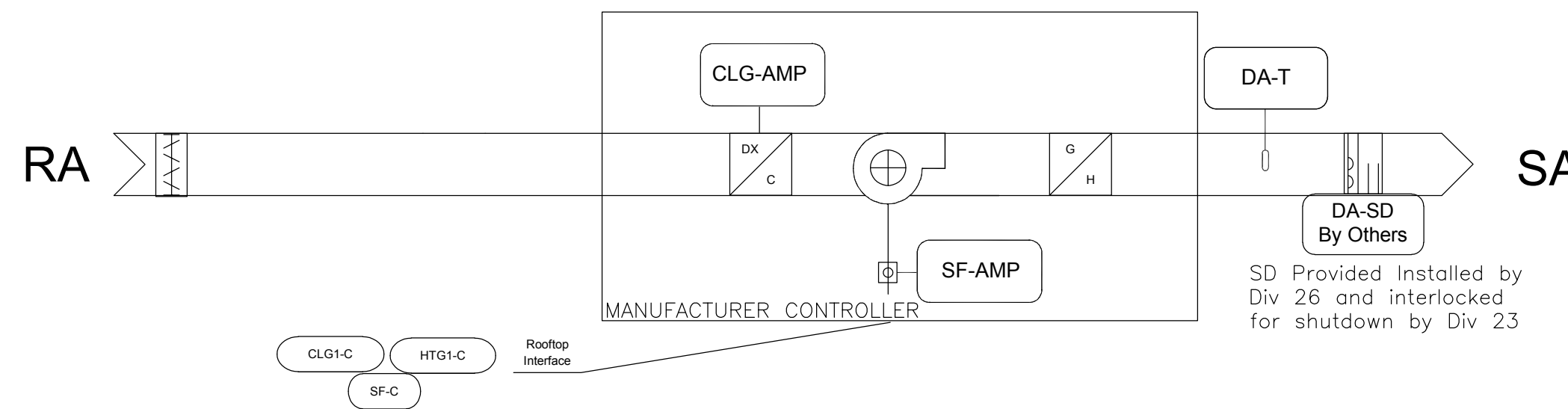
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DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

SHEET:

M7.01

- ZN-T
- OCC-OVR
- WC-ADJ
- Zone sensor without Display
- ZN-CO2
- Separate CO2 sensor without Display



NEW CGM MOUNTED IN UNIT OR IN NEMA 3R ENCLOSURE TO INTERFACE TO UNIT TERMINAL STRIP WITH ADDITIONAL SENSORS AS NEEDED. IF ENCLOSURE IS PROVIDED MUST INCLUDE LOCK KEYS

SUPPLY FAN CONTROL:
The supply fan (SF-C) will be started based on occupancy schedule. When the supply fan status (SF-AMP) indicates the fan started, the control sequence will be enabled. Upon a loss of airflow (SF-S), the supply fan will attempt to automatically restart until positive status is received.

SINGLE ZONE VAV CONTROL:
Upon a call for cooling - the manufacture control board shall stage the supply fan in sequence with the cooling per the single zone VAV guidelines in ASHRAE 90.1

TEMPERATURE CONTROL:
The unit will control to maintain the locally adjustable zone temperature setpoint (ZN-SP) (WC-ADJ) as sensed by the zone temperature (ZN-T) sensor.

OCCUPIED MODE:
The occupancy mode will be controlled via a network input (OCC-SCHEDULE). The occupancy mode can also be overridden by a network input (OCC-OVERRIDE). It can also be overridden by a temporary occupancy button (OCC-OVR) on the zone sensor will place the unit in occupied mode for an adjustable time - user adjustable initially set for 2 hours. When in occupied mode the supply fan will run continuously.

UNOCCUPIED MODE:
The unit will cycle to maintain unoccupied zone setpoints (CLGUNOCC-SP & HTGUNOCC-SP) during unoccupied periods. The fan will only be on when there is a call for cooling or heating and a compressor or heater is enabled. The fan will be off at all other times.

COOLING COIL:
The cooling coil (CLGx-C) will be staged in sequence to maintain the temperature setpoint initially set at 73 and variable at the zone from 73-77.

GAS FURNACE HEATING COIL:
The reheat coil (HTGx-C) will be staged in sequence to maintain the temperature setpoint initially set at 69 and variable at the zone from 65-69. If the unit is supplied with KW heat strips it will control them per the manufacture SOO for defrost or supplemental heat to meet heating requests from the BMS.

UNOCCUPIED SETPOINTS:
When unoccupied the cooling set point is 90F (fixed value with no range, user adjustable)
When unoccupied the heating set point is 50F (fixed value with no range, user adjustable)

LOAD SHED PROGRAM:
The AC unit will be part of the utility Load Shed Program. Whenever the utility company sends the network level command to shed load, the BMS will reset the zone cooling set point UP by 2F while maintaining the same range for warm cool adjust (IE - from 75-79F). This load shed event will continue until the utility releases the load shed event command. When the utility releases the load shed event, the BMS will revert to normal set points 5 units at a time per site every 3 min until 100% of the units are back at the normal set point.

CO2 VENTILATION:
The BMS will utilize a zone CO2 sensor sensor to monitor space CO2 value. The BMS will alarm if the zone CO2 value ever rises above 1,000 PPM.

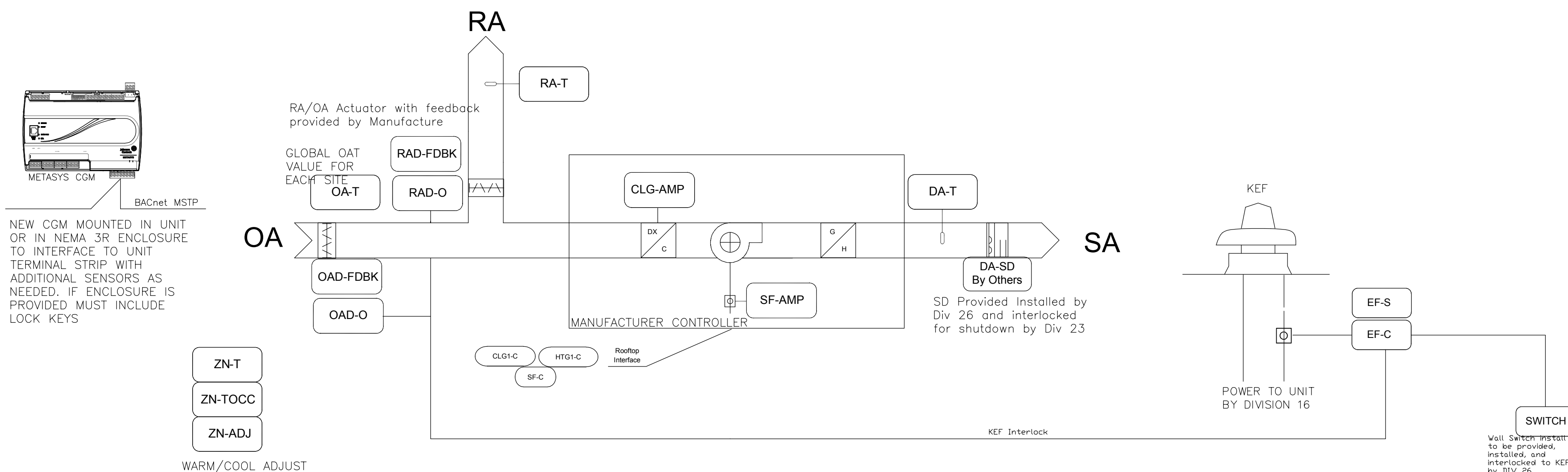
OPTIMIZED START/STOP:
JCI will leverage the JCI standard optimized start/stop logic block to provide micro-adjustments to the unit enable command in the morning and disable in the evening. Leveraging global outside air temp, zone temp, zone set point and schedule the BMS will enable/disable unit at different times each day to hit the setpoints when the schedule switches from occupied to unoccupied or visa versa.

ALARMS
The BMS system shall generate an alarm if:
-The zone temperature is 6 degrees away from set point.
-The fan command does not match its status
-The cooling command does not match its status

The BMS will disable ALL alarms during unoccupied mode.

ADDITIONAL POINTS MONITORED BY THE FMS:
Supply Fan Amperage (SF-AMP)
Discharge Air Temperature (DA-T)
Compressor Amperage (CLG-AMP)
Zone CO2 - (ZN-CO2)

FURNACE CONTROL | **2**
NO SCALE



Sequence of Operation

COMFORT CONDITIONING (STANDARD) CONTROL:

The supply fan (SF-C) will be started based on occupancy schedule. When the supply fan status (SF-S) indicates the fan started, the control sequence will be enabled. The OA damper is to actuate fully closed and the RA damper is to actuate 100% open. Upon a loss of airflow (SF-S), the supply fan will attempt to automatically restart until positive status is received.

TEMPERATURE CONTROL:
The unit will control to maintain the locally adjustable zone temperature setpoint (ZN-ADJ) as sensed by the zone temperature w/c adjust (ZN-T) sensor.

OCCUPIED MODE:
The occupancy mode will be controlled via a network input (OCC-SCHEDULE). The occupancy mode can also be overridden by a network input (OCC-OVERRIDE). A temporary occupancy button (ZN-TOCC) on the zone sensor will place the unit in occupied mode for an adjustable time.

UNOCCUPIED MODE:
The unit will cycle to maintain unoccupied zone setpoints (CLGUNOCC-SP & HTGUNOCC-SP) during unoccupied periods.

COOLING COIL:
The cooling coil will be staged in sequence to maintain the temperature setpoint.

HEATING COIL:
The heating coil will be staged in sequence to maintain the temperature setpoint.

KITCHEN EXHAUST FAN INTERLOCK:
The make up air unit is interlocked to the kitchen exhaust fan. Whenever the KEF fan is commanded on (EF-C), the OA damper will modulate 100% open and the RA damper will modulate fully closed. The two fans will run in tandem to maintain a slight positive pressure in the space as determined during the system balance. When the kitchen exhaust fan is not in service, the MAU shall operate per standard sequencing (referenced above).

ADDITIONAL POINTS MONITORED BY THE BMS:

- Supply Fan Amperage (SF-S)
- Discharge Air Temperature (DA-T)
- Compressor Amperage (CLG-S)

Alarms:
-If the zone temperature (ZN-T) rises 5F above or below the cooling and heating set points.
-If the fan command does not match the fan status.
- The controller shall alarm if the unit cooling command does not match the cooling status

MAKE UP AIR UNIT, KITCHEN EXHAUST FAN | **1**
NO SCALE

AGENCY APPROVAL:



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3186-070-000

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ISSUE		DATE
1	DESCRIPTION	03/01/2024
1	ADDENDUM #1	



FACILITY:
MATSUYAMA ELEMENTARY SCHOOL
7680 WINDBRIDGE DR.
SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL CONTROLS

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

SHEET:

M7.02

AGENCY APPROVAL:

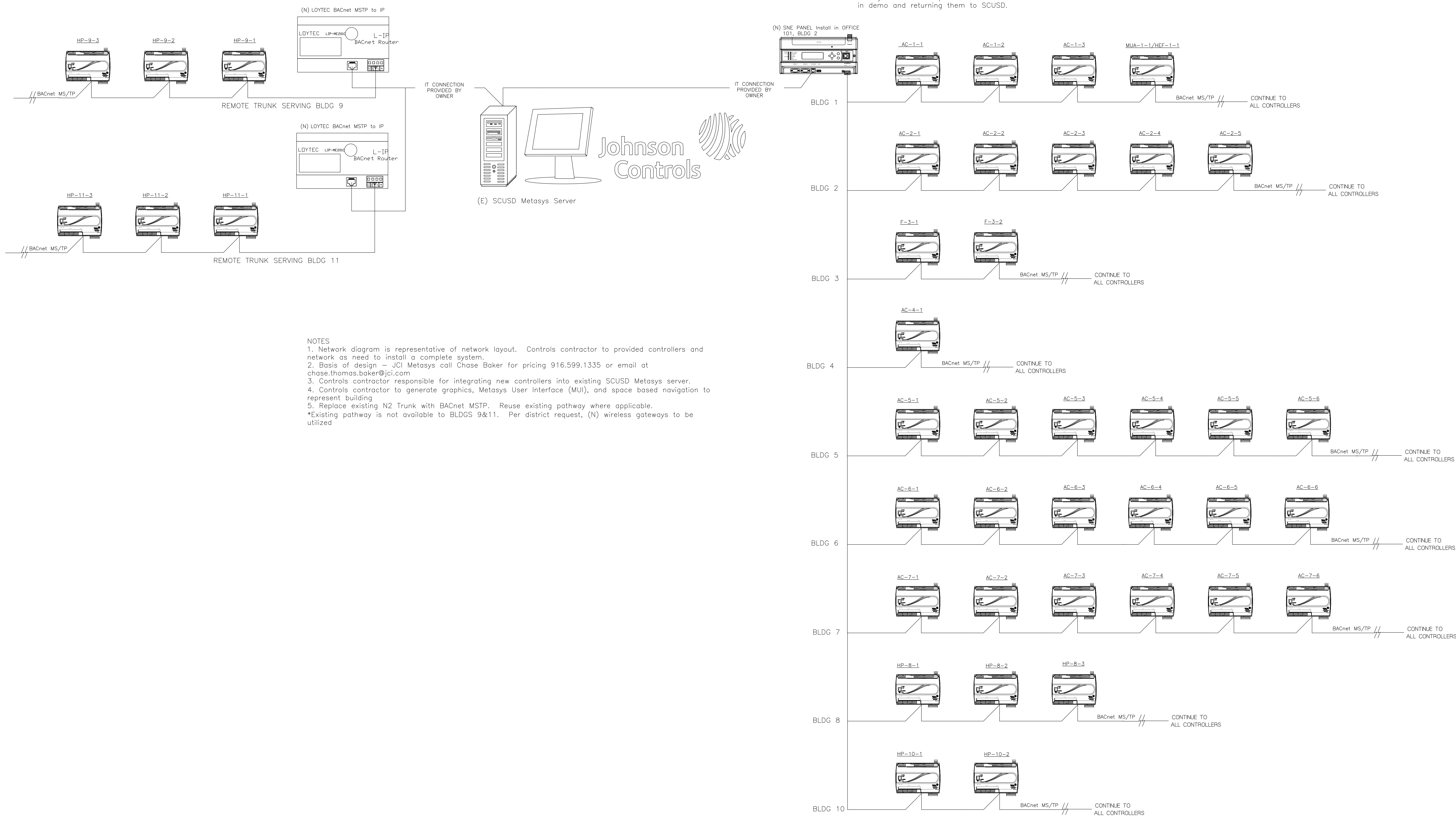


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- NOTES
1. Network diagram is representative of network layout. Controls contractor to provided controllers and network as need to install a complete system.
 2. Basis of design - JCI Metasys call Chase Baker for pricing 916.599.1335 or email at chase.thomas.baker@jci.com
 3. Controls contractor responsible for integrating new controllers into existing SCUSD Metasys server.
 4. Controls contractor to generate graphics, Metasys User Interface (MUI), and space based navigation to represent building
 5. Replace existing N2 Trunk with BACnet MSTP. Reuse existing pathway where applicable.
- *Existing pathway is not available to BLDGS 9&11. Per district request, (N) wireless gateways to be utilized

NETWORK RISER DIAGRAM- (SCUSD) MATSUYAMA

1
NO SCALE

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

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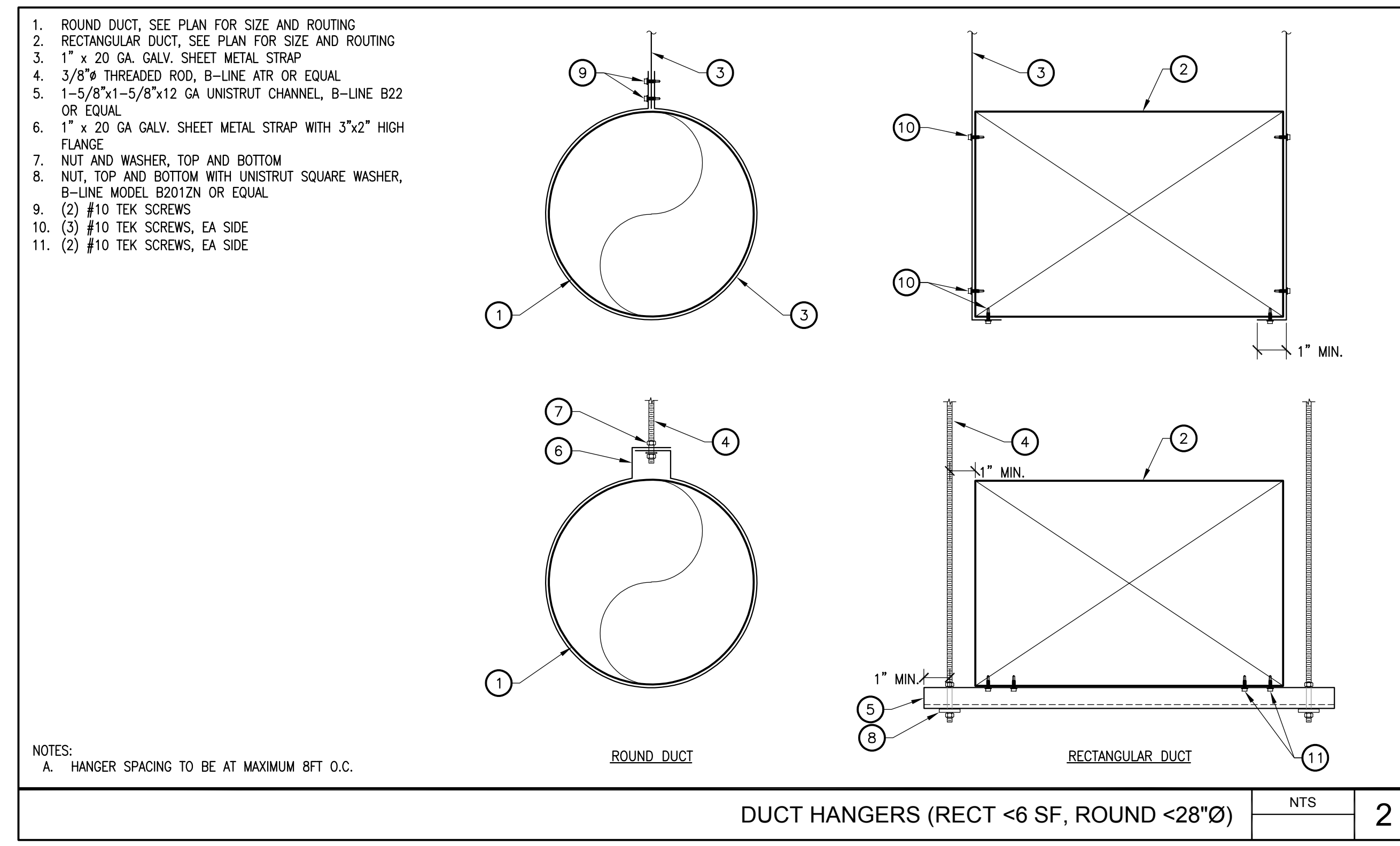
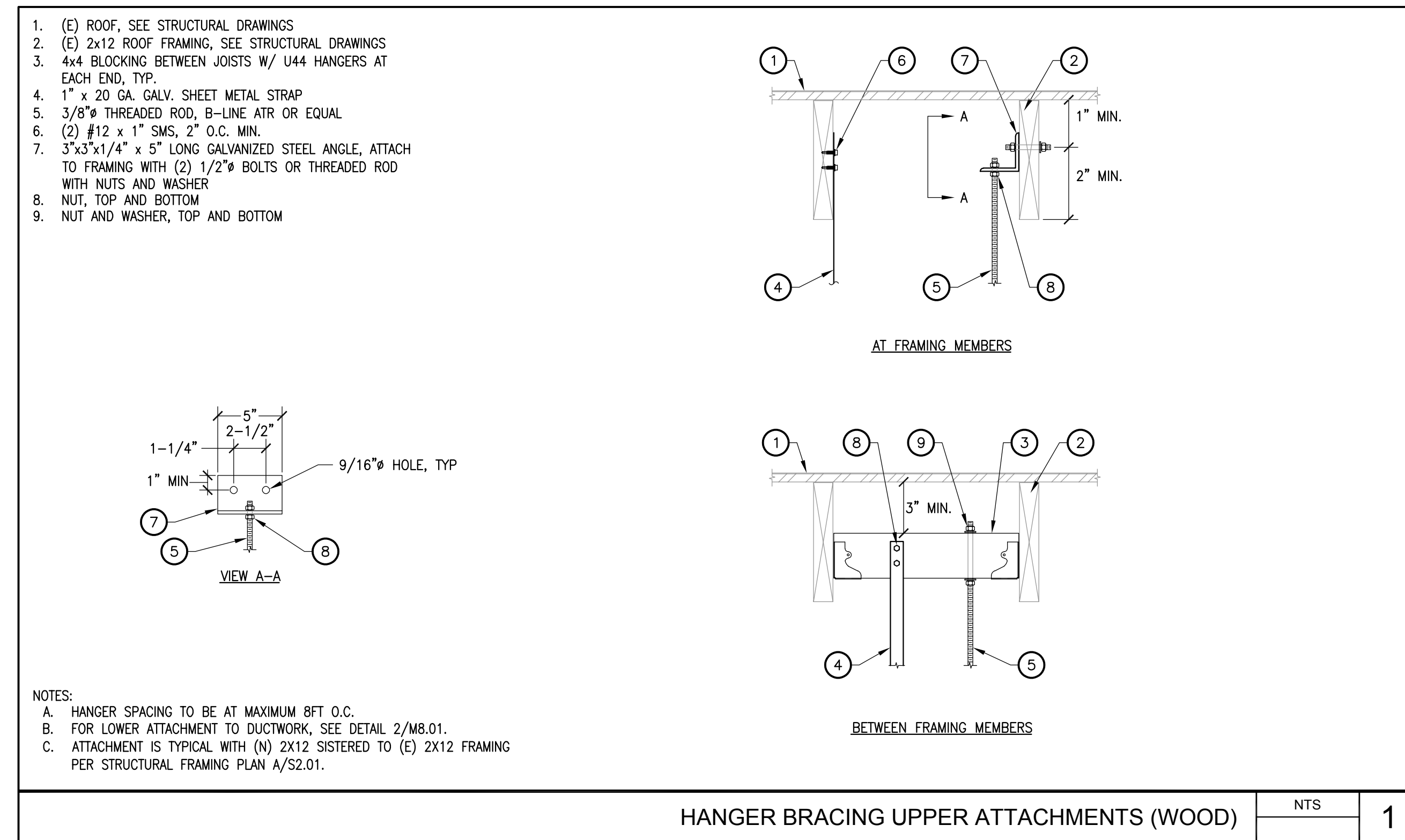
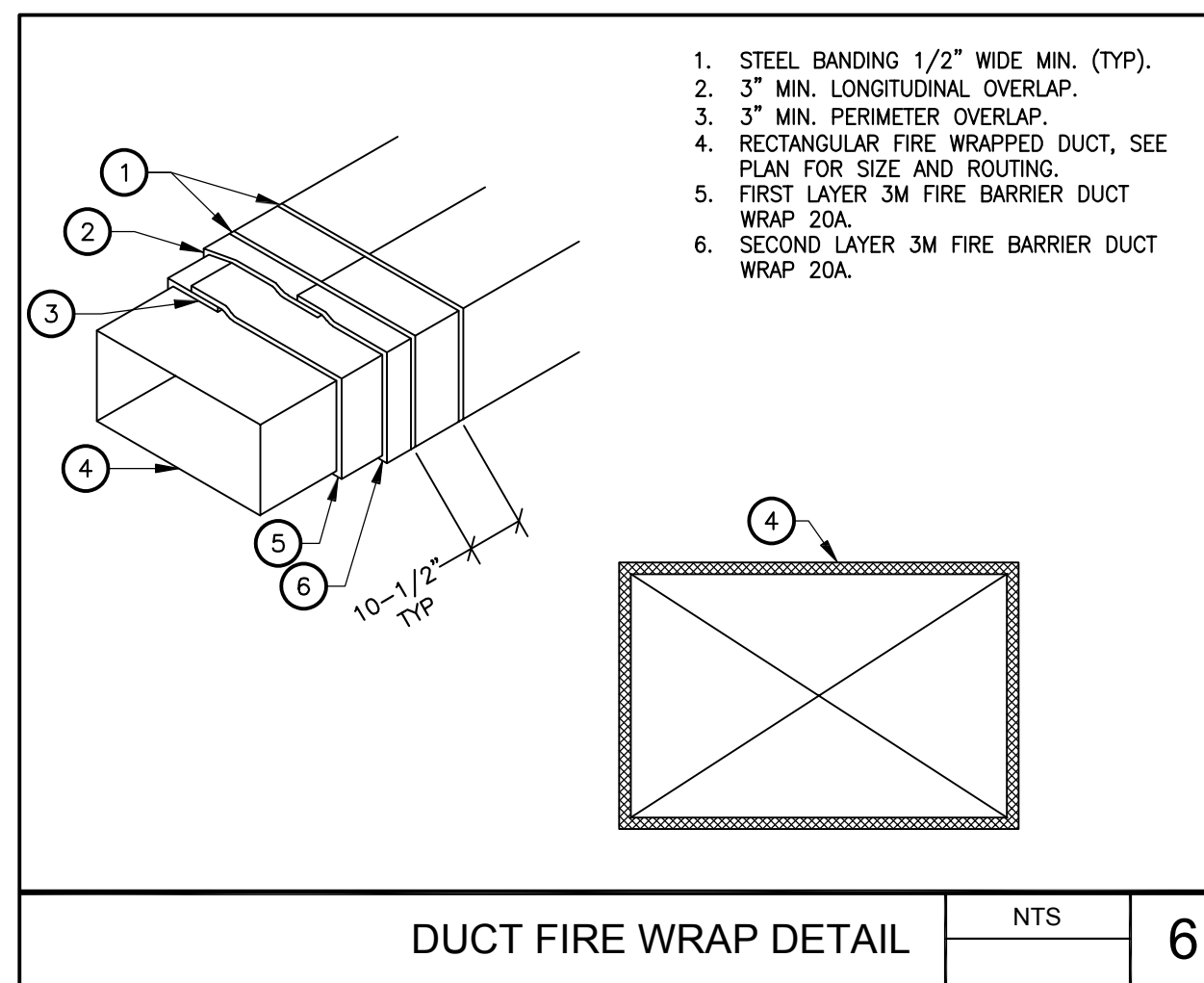
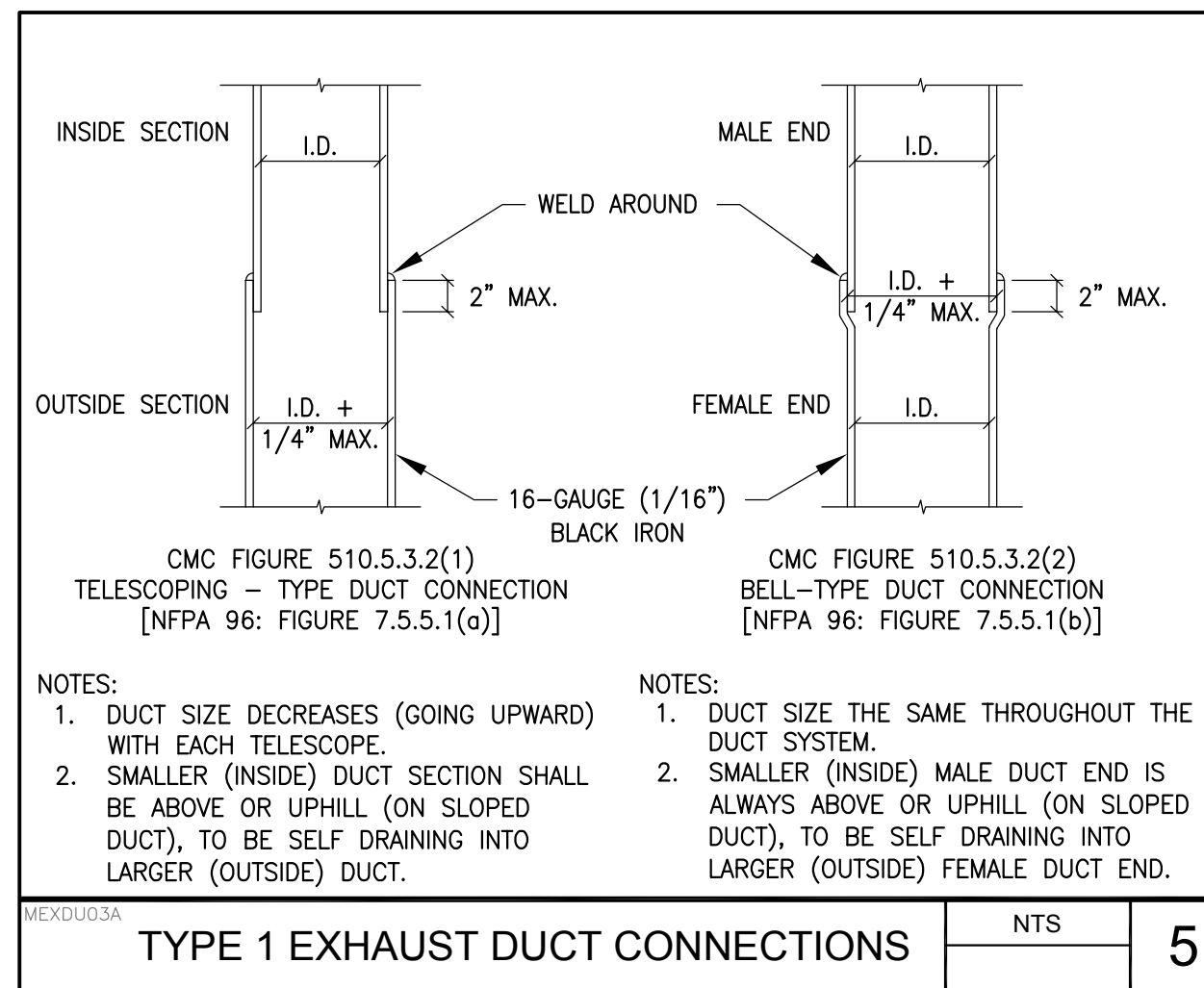
PROJECT: MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

FACILITY: MATSUYAMA ELEMENTARY SCHOOL
7680 WINDBRIDGE DR.
SACRAMENTO, CA 95831

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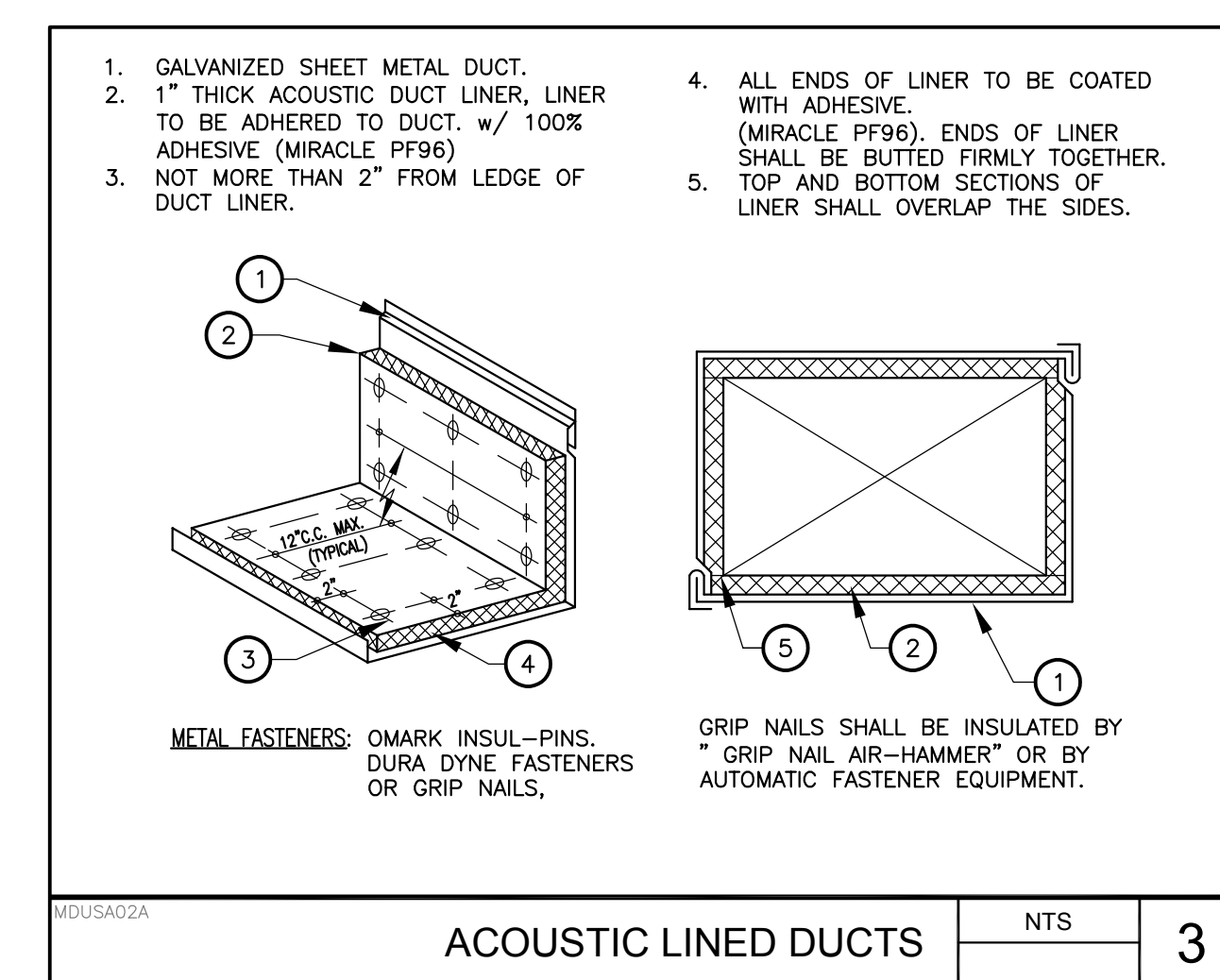
M7.03



DIMENSION OF LONGEST SIDE INCHES	SHEET METAL GAGE (ALL FOUR SIDES)	MINIMUM REINFORCING ANGLE SIZE AND MAXIMUM LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS &/OR INTERMEDIATE REINFORCING	TRANSVERSE REINFORCING (1)				
			AT JOINTS				
			DRIVE SLIP	HEMMED S SLIP	ALTERN. BAR SLIP	REINFORCED BAR SLIP	
			MIN. HT. IN.	RECOM-MENDED GAGE	RECOM-MENDED GAGE	RECOM-MENDED GAGE	RECOM-MENDED GAGE
UP THRU 12	26	NONE REQUIRED	1	26	26	24	24
13 - 18	24	NONE REQUIRED	1	24	24	24	24
19 - 30	24	1" x 1" x 1/8" Ø 60 IN.	1		24	24	24
31 - 42	22	1" x 1" x 1/8" Ø 60 IN.	1			22	22

(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.

DUCT CONSTRUCTION STANDARDS NTS 4



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 www.lpengineers.com
 Job #: 23-2274

REGISTERED PROFESSIONAL ENGINEER
 M 41413
 EBN 03-31-25
 MECHANICAL
 STATE OF CALIFORNIA

FACILITY:
MATSUYAMA ELEMENTARY SCHOOL
 7680 WINDBRIDGE DR.
 SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL DETAILS

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000
 SHEET:

M8.01

AGENCY
 APPROVAL:

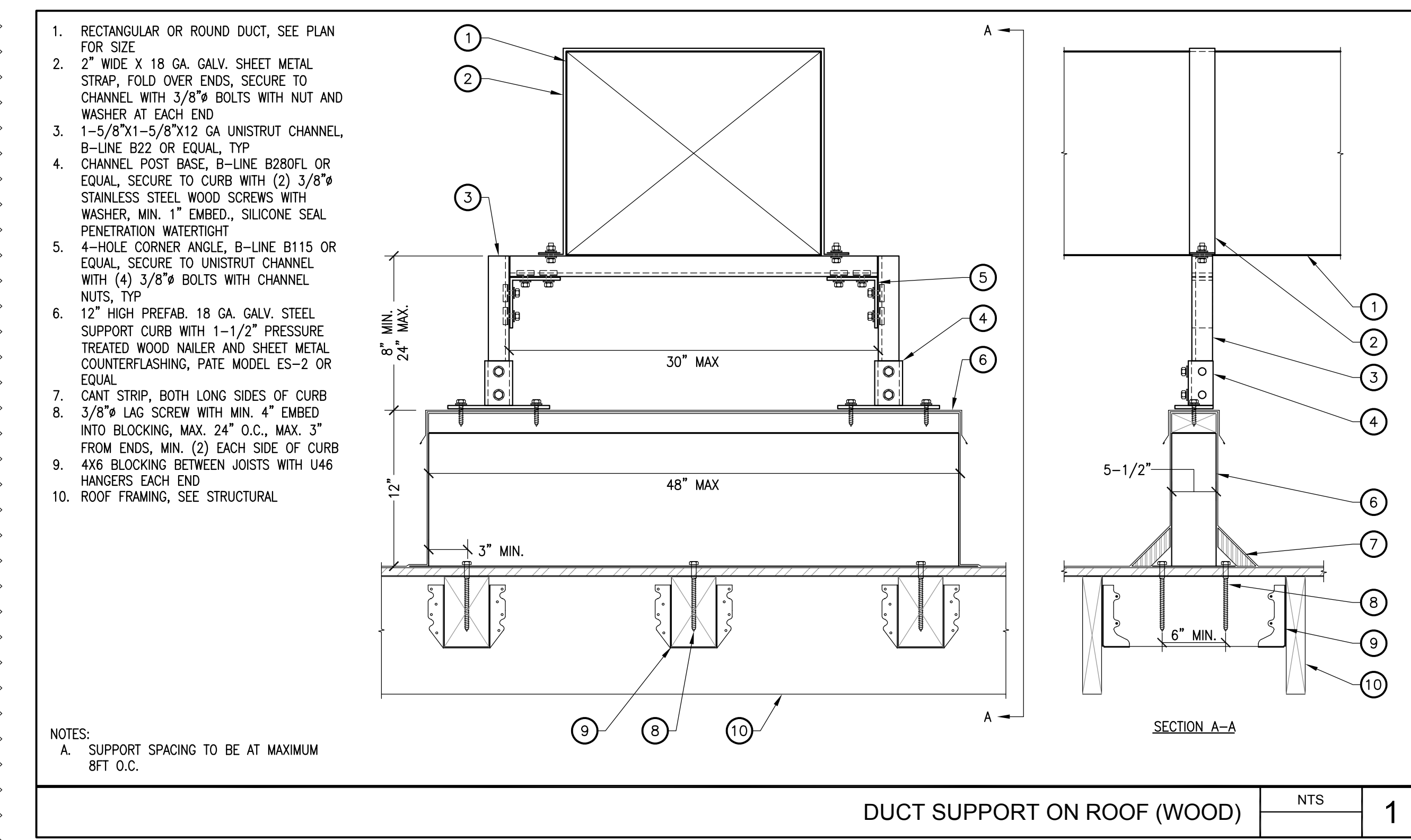


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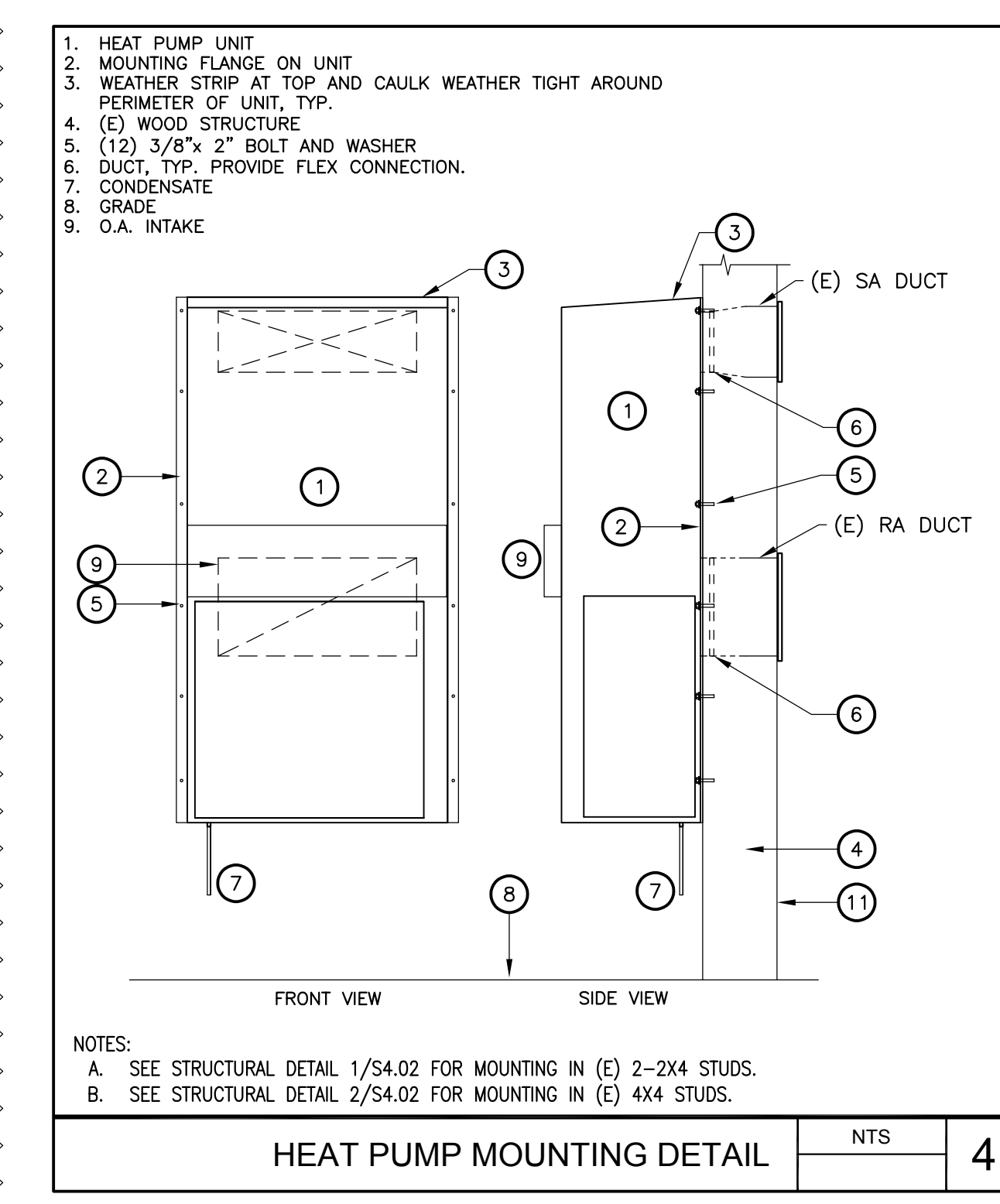
ISSUE		DATE
1	DESCRIPTION	03/01/2024
1	ADDENDUM #1	



1. RECTANGULAR OR ROUND DUCT, SEE PLAN FOR SIZE.
2. 2" WIDE X 18 GA. GALV. SHEET METAL STRAP, FOLD OVER ENDS, SECURE TO CHANNEL WITH 3/8" BOLTS WITH NUT AND WASHER AT EACH END.
3. 1-5/8"x1-5/8"x12 GA UNISTRUT CHANNEL, B-LINE B22 OR EQUAL, TYP.
4. CHANNEL POST BASE, B-LINE B230FL OR EQUAL, SECURE TO CURB WITH (2) 3/8" STAINLESS STEEL WOOD SCREWS WITH WASHER, MIN. 1" EMBED, SILICONE SEAL PENETRATION WATER TIGHT.
5. 4-HOLE CORNER ANGLE, B-LINE B115 OR EQUAL, SECURE TO UNISTRUT CHANNEL WITH (4) 3/8" BOLTS WITH CHANNEL NUTS, TYP.
6. 12" HIGH PREFAB. 18 GA. GALV. STEEL SUPPORT CURB WITH 1-1/2" PRESSURE TREATED WOOD NAILER AND SHEET METAL COUNTERFLASHING, PATE MODEL ES-2 OR EQUAL.
7. CANT STRIP, BOTH LONG SIDES OF CURB.
8. 3/8" LAG SCREW WITH MIN. 4" EMBED INTO BLOCKING, MAX. 24" O.C., MAX. 3" FROM ENDS, MIN. (2) EACH SIDE OF CURB.
9. 4X4 BLOCKING BETWEEN JOISTS WITH U46 HANGERS EACH END.
10. ROOF FRAMING, SEE STRUCTURAL.

NOTES:
 A. SUPPORT SPACING TO BE AT MAXIMUM 8FT O.C.

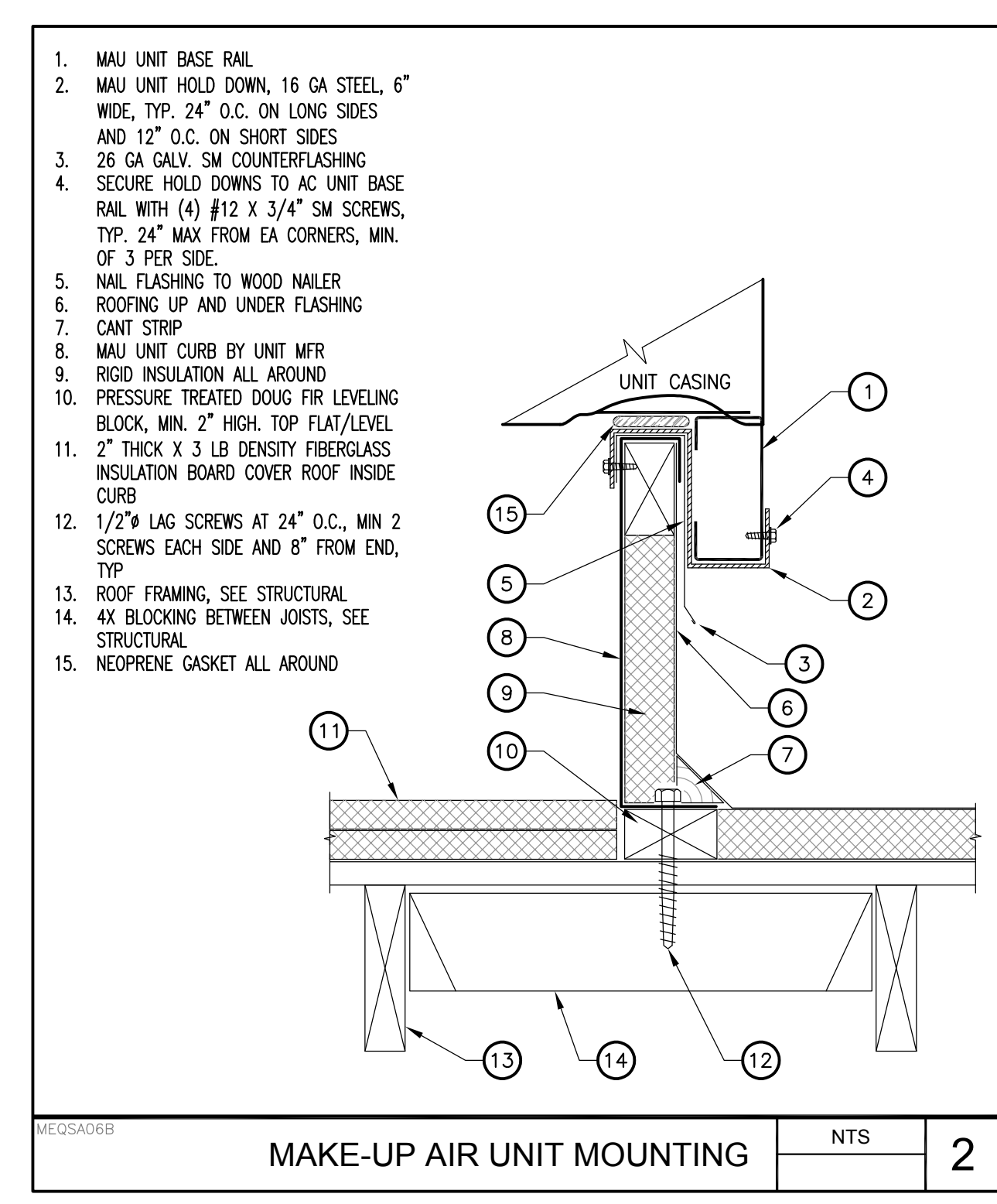
DUCT SUPPORT ON ROOF (WOOD) NTS 1



1. HEAT PUMP UNIT
2. MOUNTING FLANGE ON UNIT
3. WEATHER STRIP AT TOP AND CAULK WEATHER TIGHT AROUND PERIMETER OF UNIT, TYP.
4. (E) WOOD STRUCTURE
5. (12) 3/8" X 2" BOLT AND WASHER
6. DUCT, TYP. PROVIDE FLEX CONNECTION.
7. CONDENSATE
8. GRADE
9. O.A. INTAKE

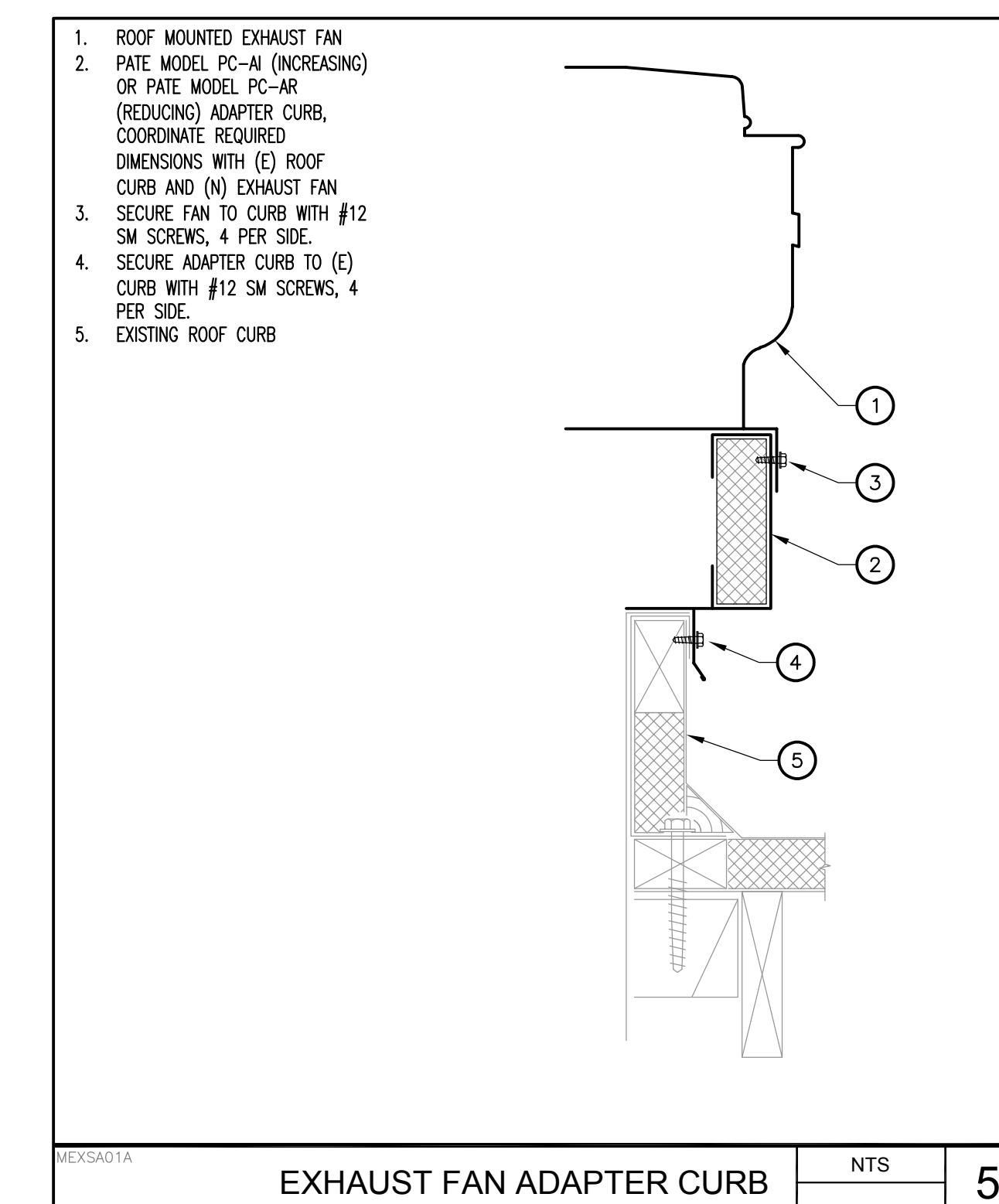
NOTES:
 A. SEE STRUCTURAL DETAIL 1/54.02 FOR MOUNTING IN (E) 2-2X4 STUDS.
 B. SEE STRUCTURAL DETAIL 2/54.02 FOR MOUNTING IN (E) 4X4 STUDS.

HEAT PUMP MOUNTING DETAIL NTS 4



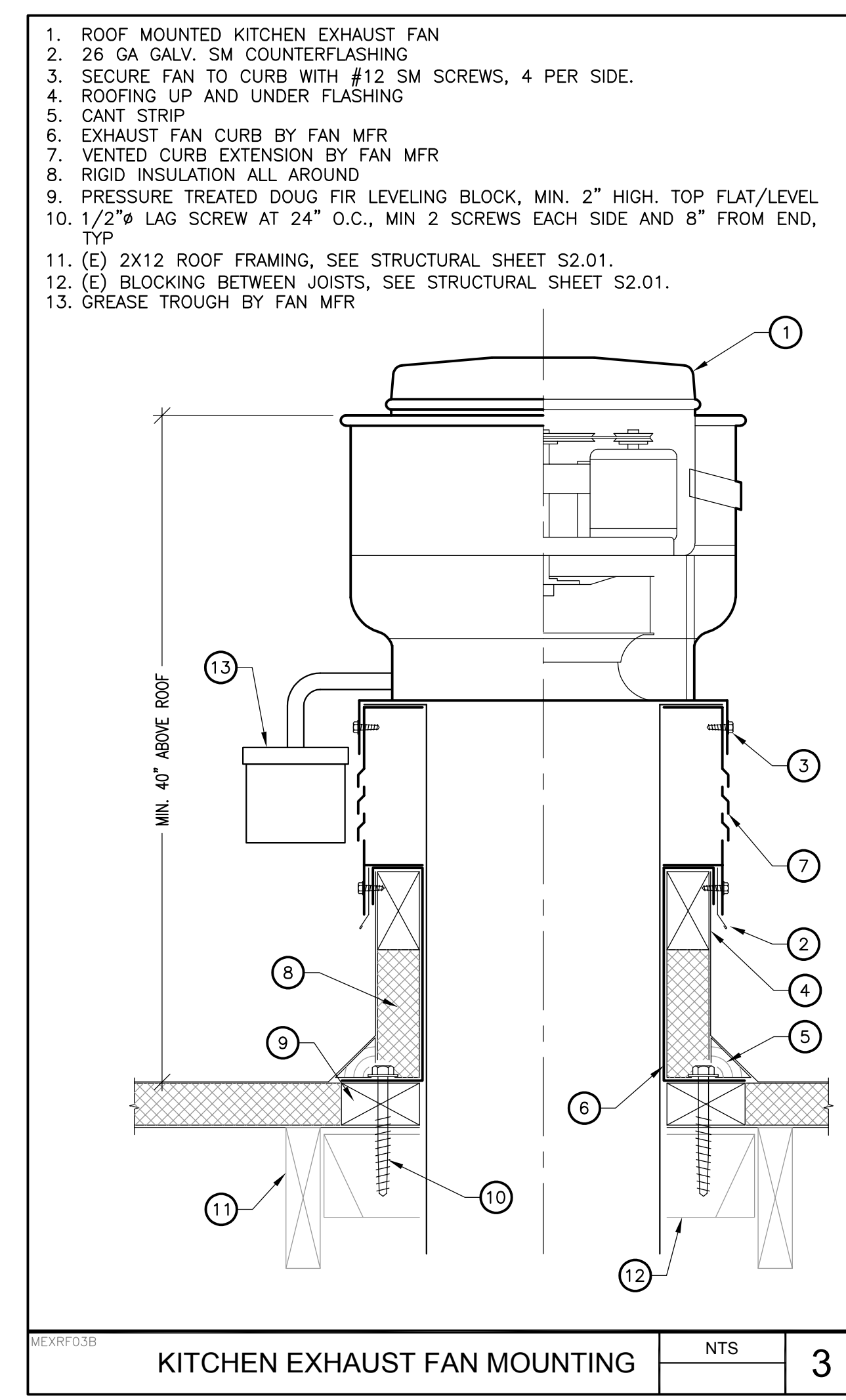
1. MAU UNIT BASE RAIL
2. MAU UNIT HOLD DOWN, 16 GA STEEL, 6" WIDE, TYP. 24" O.C. ON LONG SIDES AND 12" O.C. ON SHORT SIDES
3. 26 GA GALV. SM COUNTERFLASHING
4. SECURE HOLD DOWNS TO AC UNIT BASE RAIL WITH (4) #12 X 3/4" SM SCREWS, TYP. 24" MAX FROM EA CORNERS, MIN. OF 3 PER SIDE.
5. NAIL FLASHING TO WOOD NAILER
6. ROOFING UP AND UNDER FLASHING
7. CANT STRIP
8. MAU UNIT CURB BY UNIT MFR
9. RIGID INSULATION ALL AROUND
10. PRESSURE TREATED DOUG FIR LEVELING BLOCK, MIN. 2" HIGH, TOP FLAT/LEVEL
11. 2" THICK X 3 LB DENSITY FIBERGLASS INSULATION BOARD COVER ROOF INSIDE CURB
12. 1/2" LAG SCREWS AT 24" O.C., MIN 2 SCREWS EACH SIDE AND 8" FROM END, TYP.
13. ROOF FRAMING, SEE STRUCTURAL
14. 4X BLOCKING BETWEEN JOISTS, SEE STRUCTURAL
15. NEOPRENE GASKET ALL AROUND

MAKE-UP AIR UNIT MOUNTING NTS 2



1. ROOF MOUNTED EXHAUST FAN
2. PATE MODEL PC-A (INCREASING) OR PATE MODEL PC-R (REDUCING) ADAPTER CURB, COORDINATE REQUIRED
3. SECURE FAN TO CURB WITH #12 SM SCREWS, 4 PER SIDE
4. SECURE ADAPTER CURB TO (E) CURB WITH #12 SM SCREWS, 4 PER SIDE
5. EXISTING ROOF CURB

EXHAUST FAN ADAPTER CURB NTS 5



1. ROOF MOUNTED KITCHEN EXHAUST FAN
2. 26 GA GALV. SM COUNTERFLASHING
3. SECURE FAN TO CURB WITH #12 SM SCREWS, 4 PER SIDE.
4. ROOFING UP AND UNDER FLASHING
5. CANT STRIP
6. EXHAUST FAN CURB BY FAN MFR
7. VENTED CURB EXTENSION BY FAN MFR
8. RIGID INSULATION ALL AROUND
9. PRESSURE TREATED DOUG FIR LEVELING BLOCK, MIN. 2" HIGH, TOP FLAT/LEVEL
10. 1/2" LAG SCREW AT 24" O.C., MIN 2 SCREWS EACH SIDE AND 8" FROM END, TYP.
11. (E) 2X12 ROOF FRAMING, SEE STRUCTURAL SHEET S2.01.
12. (E) BLOCKING BETWEEN JOISTS, SEE STRUCTURAL SHEET S2.01.
13. GREASE TROUGH BY FAN MFR

KITCHEN EXHAUST FAN MOUNTING NTS 3

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FACILITY:
MATSUYAMA ELEMENTARY SCHOOL
 7680 WINDBRIDGE DR.
 SACRAMENTO, CA 95831

PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
MECHANICAL DETAILS

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

SHEET:

EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS...

PIPING AND DUCTWORK DISTRIBUTION SYSTEM BRACING NOTES

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3...

PLUMBING LEGEND

Table with 3 columns: SYMBOL, ITEM, ABBR. listing various plumbing fixtures and pipe types.

PLUMBING SPECIFICATIONS

- A. THIS CONTRACTOR SHALL COMPLY WITH ALL CODES AND REGULATIONS IN EFFECT AT THE JOB SITE, INCLUDING, BUT NOT LIMITED TO: A.1. 2022 CALIFORNIA BUILDING CODE...

PLUMBING SHEET INDEX

Table with 2 columns: SHEET NO., SHEET TITLE. Lists sheets P0.01 through P8.01.

AGENCY APPROVAL:



HMC Architects

3186-070-000

2101 CAPITOL AVENUE, SUITE 100, SACRAMENTO, CA 95816

ISSUE table with columns: DESCRIPTION, DATE. Shows ADDENDUM #1 dated 03/01/2024.



FACILITY: MATSUYAMA ELEMENTARY SCHOOL 7680 WINDBRIDGE DR. SACRAMENTO, CA 95831

PROJECT: MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME: PLUMBING LEGEND AND NOTES

DSA SUBMITTAL

DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

SHEET:

AutoDesk Docs/118607000 - SCUSD Matsuyama ES Modernization/318607000-A-MATSUYAMA-MOD.rvt
 12/15/2023 2:28:53 PM

KITCHEN EQUIPMENT SCHEDULE							
EQUIP. NO.	DESCRIPTION	S or W	IND. WASTE	V	CW	HW	GAS (MBH)
5	OVEN-STEAMER, COMBINATION	---	2"	---	3/4"	---	---
7	PREP SINK, 2-COMP	---	1-1/2"	---	1/2"	1/2"	---
8	HAND SINK	1-1/2"	---	1-1/2"	1/2"	1/2"	---
10	WAREWASHER	---	1-1/2"	---	3/4"	3/4"	---
11	DISH TABLE SINK	---	1-1/2"	---	1/2"	1/2"	---
12	SINK, 3-COMP	---	1-1/2"	---	3/4"	3/4"	---

NOTES:
 1. COORDINATE CLOSELY WITH KITCHEN EQUIPMENT COMPANY FOR EQUIPMENT LOCATIONS, CONNECTION SIZES AND REQUIREMENTS.
 2. SEE KITCHEN EQUIPMENT PLAN FOR EQUIPMENT SCHEDULE AND REQUIREMENTS.
 3. PROVIDE INDIVIDUAL SHUT-OFF VALVES AT ALL CW, HW & GAS CONNECTIONS.
 4. PROVIDE AND INSTALL STRAINERS ON INDIVIDUAL GAS SUPPLY LINES.
 5. PROVIDE QUICK DISCONNECT WITH CABLE RESTRAINT FOR ALL GAS EQUIPMENT CONNECTIONS PER KITCHEN EQUIPMENT PLAN.
 6. PROVIDE CHROME PLATED PIPES AND FITTINGS FOR ALL EXPOSED CONNECTIONS PER KITCHEN EQUIPMENT PLAN.
 7. COORDINATE WITH KITCHEN EQUIPMENT PLUMBING PLAN FOR PLUMBING ROUGH-IN DIMENSIONS.

PLUMBING EQUIPMENT SCHEDULE						
MARK	FIXTURE	S or W	V	CW	HW	DESCRIPTION
WH-1	GAS WATER HEATER	---	---	SEE PLAN	SEE PLAN	A.O. SMITH MODEL BTH-199(A), STORAGE TANK TYPE, 100 GALLON CAPACITY, 110 VAC POWER VENT ELECTRICAL CONNECTION, 261 GPH RECOVERY AT 90°F RISE, 190,000 BTUH INPUT, 95% THERMAL EFFICIENCY, MEETS OR EXCEEDS U.S. DOE, ASHRAE 90.1 AND SOA/QMD RULE 1146.2 REQUIREMENTS. PROVIDE OPTIONAL POWER-DIRECT VENT AND CONCENTRIC VENT KIT TERMINATION, 3" PVC INTAKE AND EXHAUST PIPING, 120VAC/60HZ ELECTRICAL SERVICE, 2.2 F.L. AMPS BLOWER, 4.0 AMPS IGNITER, UL LISTED, OPERATING WEIGHT= 960 LBS. SET AT 120°F. PROVIDE ACID-NEUTRALIZER KIT.
ET-1	EXPANSION TANK	---	---	1/2"	---	BELL & GOSSETT MODEL PT-5, STEEL SHELL, BUTYL DIAPHRAGM TYPE EXPANSION TANK, PRE-CHARGED TO 40 PSI WITH 2.0 GALLON TANK CAPACITY, 0.9 GALLON ACCEPTANCE CAPACITY.

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	S or W	V	CW	HW	DESCRIPTION
TP-1	TRAP PRIMER	---	---	1/2"	---	PRECISION PLUMBING PRODUCTS, INC. #PO-500 PRIME-RITE TRAP PRIMER, PROVIDE 12 X 12 ACCESS DOOR FOR CONCEALED UNIT, COORDINATE ACCESS DOOR LOCATION WITH ARCHITECTURAL INTERIOR ELEVATIONS AND FINISHES.
TMV-1	THERMOSTATIC MIXING VALVE	---	---	3/4"	3/4"	LEONARD MODEL 270-LF, POINT OF USE LEAD-FREE THERMOSTATIC MIXING VALVE, MINIMUM 0.25 GPM FLOW, 12 GPM FLOW AT 50 PSI PRESSURE LOSS, ASSE 1017 AND 1070 LISTED, CA AB-1953 COMPLIANT, SET OUTLET TEMPERATURE TO 110°F, PROVIDE 12"x12" WALL ACCESS PANEL PER SPECIFICATIONS, FINISH BY ARCHITECT.
DW-1	DRY WELL	1-1/2"	---	---	---	NDS FLO-WELL DRY WELL, 24"Ø X 28.75" HIGH, 48 GALLON TOTAL CAPACITY, INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

PIPE HANGER SCHEDULE			
PER 2022 CPC TABLE 313.3			
MATERIALS	TYPES OF JOINTS	HORIZONTAL	VERTICAL
CAST-IRON HUBLESS	CAST-IRON HUBLESS	EVERY OTHER JOINT, UNLESS OVER 4 FEET THEN SUPPORT EACH JOINT; NOTES 1,2,3,4	BASE AND EACH FLOOR, NOT TO EXCEED 15 FEET
COPPER TUBE AND PIPE	SOLDERED OR BRAZED	1-1/2 INCHES AND SMALLER, 6 FEET; 2 INCHES AND LARGER, 10 FEET	EACH FLOOR, NOT TO EXCEED 10 FEET; NOTE 5
STEEL PIPE FOR GAS	THREADED OR WELDED	1/2 INCH, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1-1/4 INCHES AND LARGER, 10 FEET; NOTE 7	1/2 INCH, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1-1/4 INCHES AND LARGER, EVERY FLOOR; NOTE 7
SCHEDULE 40 PVC AND ABS DW	SOLVENT CEMENTED	ALL SIZES, 4 FEET; ALLOW FOR EXPANSION EVERY 30 FEET; NOTES 3,6	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES; PROVIDE FOR EXPANSION EVERY 30 FEET; NOTE 6
CPVC	SOLVENT CEMENTED	1 INCH AND SMALLER, 3 FEET; 1-1/4 INCHES AND LARGER, 4 FEET	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES; NOTE 6
PEX	COLD EXPANSION, INSERT AND COMPRESSION	1 INCH AND SMALLER, 32 INCHES; 1-1/4 INCHES AND LARGER, 4 FEET	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES
POLYPROPYLENE (PP)	FUSION WELD	1 INCH AND SMALLER, 32 INCHES; 1-1/4 INCHES AND LARGER, 4 FEET	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES

NOTES:
 1. SUPPORT ADJACENT TO JOINT, NOT TO EXCEED 18".
 2. BRACE NOT TO EXCEED 40 FOOT INTERVALS TO PREVENT HORIZONTAL MOVEMENT.
 3. SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION.
 4. HANGERS SHALL NOT BE PLACED ON THE COUPLING.
 5. VERTICAL WATER LINES SHALL BE PERMITTED TO BE SUPPORTED IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRINCIPLES WITH REGARD TO EXPANSION AND CONTRACTION, WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION.
 6. SEE THE APPROPRIATE IAPMO INSTALLATION STANDARD FOR EXPANSION AND OTHER SPECIAL REQUIREMENTS.
 7. NATURAL GAS PIPING TO BE SUPPORTED PER 2022 CPC TABLE 1210.3.5.1.

HANGER ROD SIZING	
PER 2022 CPC TABLE 313.6	
PIPE AND TUBE SIZE (IN)	ROD SIZE (IN)
1/2 - 4	3/8
5 - 8	1/2
10 - 12	5/8

WHA SIZING	
FIXTURE TYPE	FIXTURE UNITS (PER FIXTURE)
WATER CLOSET	8
URINAL	4
LAVATORY	2

PDI SIZE	FIXTURE UNITS (PER ARRESTOR)
A	1-11
B	12-32
C	33-60
D	61-113
E	114-154
F	155-330

NOTES:
 1. PROVIDE WATER HAMMER ARRESTORS AS REQUIRED IN SPECIFICATIONS.
 2. WATER HAMMER ARRESTOR SIZING SHALL BE THE MORE STRINGENT OF THE TABLE ABOVE AND CURRENT PDI (PLUMBING & DRAINAGE INSTITUTE) REQUIREMENTS.
 3. LOCATE WATER HAMMER ARRESTORS AS CLOSE TO BRANCH PIPING AS POSSIBLE.

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PROJECT:
MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
PLUMBING SCHEDULES

DSA SUBMITTAL

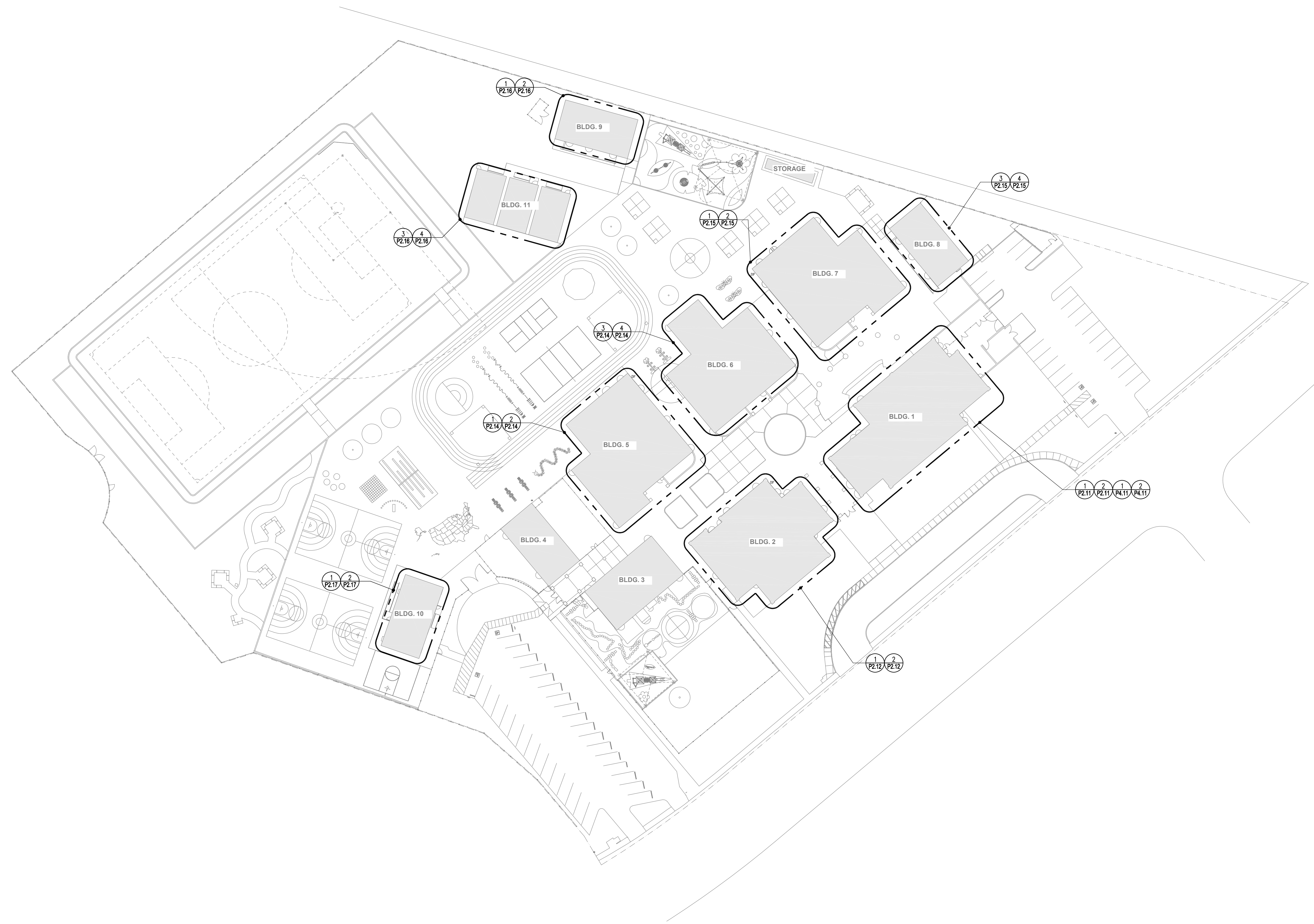
DATE: 01/04/2024
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SHEET:

P0.02

ALL LINE WORK SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. SEE THE ORIGINAL DRAWING FOR THE FINAL DESIGN.

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PLUMBING SITE PLAN

1
1" = 40'-0"

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DESCRIPTION	DATE
1 ADDENDUM #1	03/01/2024

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SHEET NAME:
PLUMBING SITE PLAN

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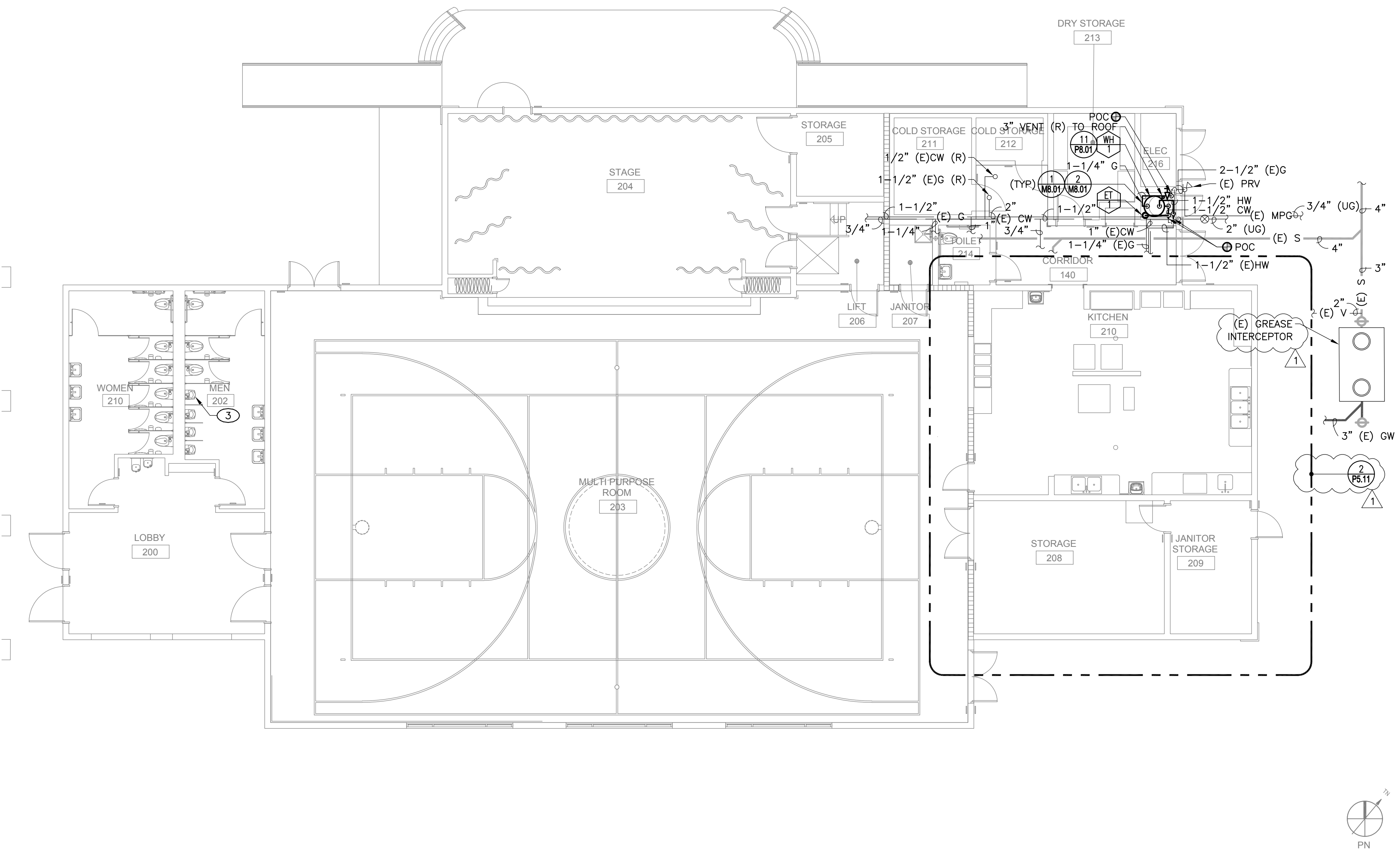
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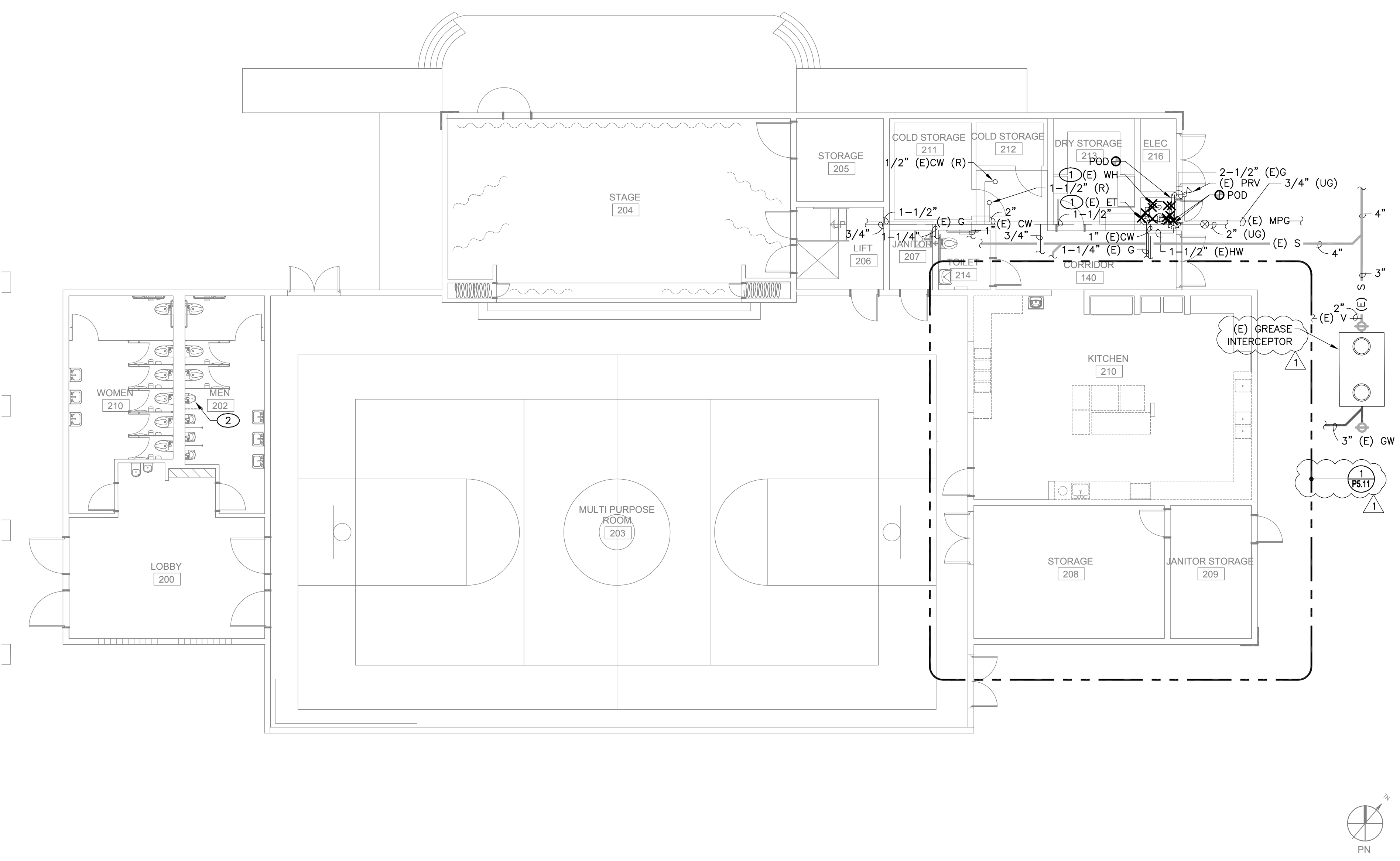
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PLUMBING IMPROVEMENT FLOOR PLAN - BLDG 1
1/8" = 1'-0"



PLUMBING DEMOLITION FLOOR PLAN - BLDG 1
1/8" = 1'-0"

KEY NOTES

- 1 REMOVE EXISTING WATER HEATER, EXPANSION TANK AND RELATED PIPING SHOWN HATCHED BACK TO POD.
- 2 REMOVE EXISTING PLUMBING FIXTURE, SEE NEW PLAN FOR NEW LOCATION.
- 3 EXISTING PLUMBING FIXTURE NEW LOCATION, MODIFY PIPING AS NEEDED, REFER TO ARCHITECT FOR MOUNTING HEIGHTS.

GENERAL NOTES

1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO PERFORMING WORK. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.
2. PATCH, REPAIR, AND FINISH AS NECESSARY FOR ANY DAMAGES DURING DEMOLITION AND INSTALL.

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MATSUYAMA ELEMENTARY SCHOOL MODERNIZATION

SHEET NAME:
PLUMBING DEMOLITION AND IMPROVEMENT FLOOR PLANS - BLDG 1

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DATE: 01/04/2024 CLIENT PROJ NO: 3186-070-000

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P2.11