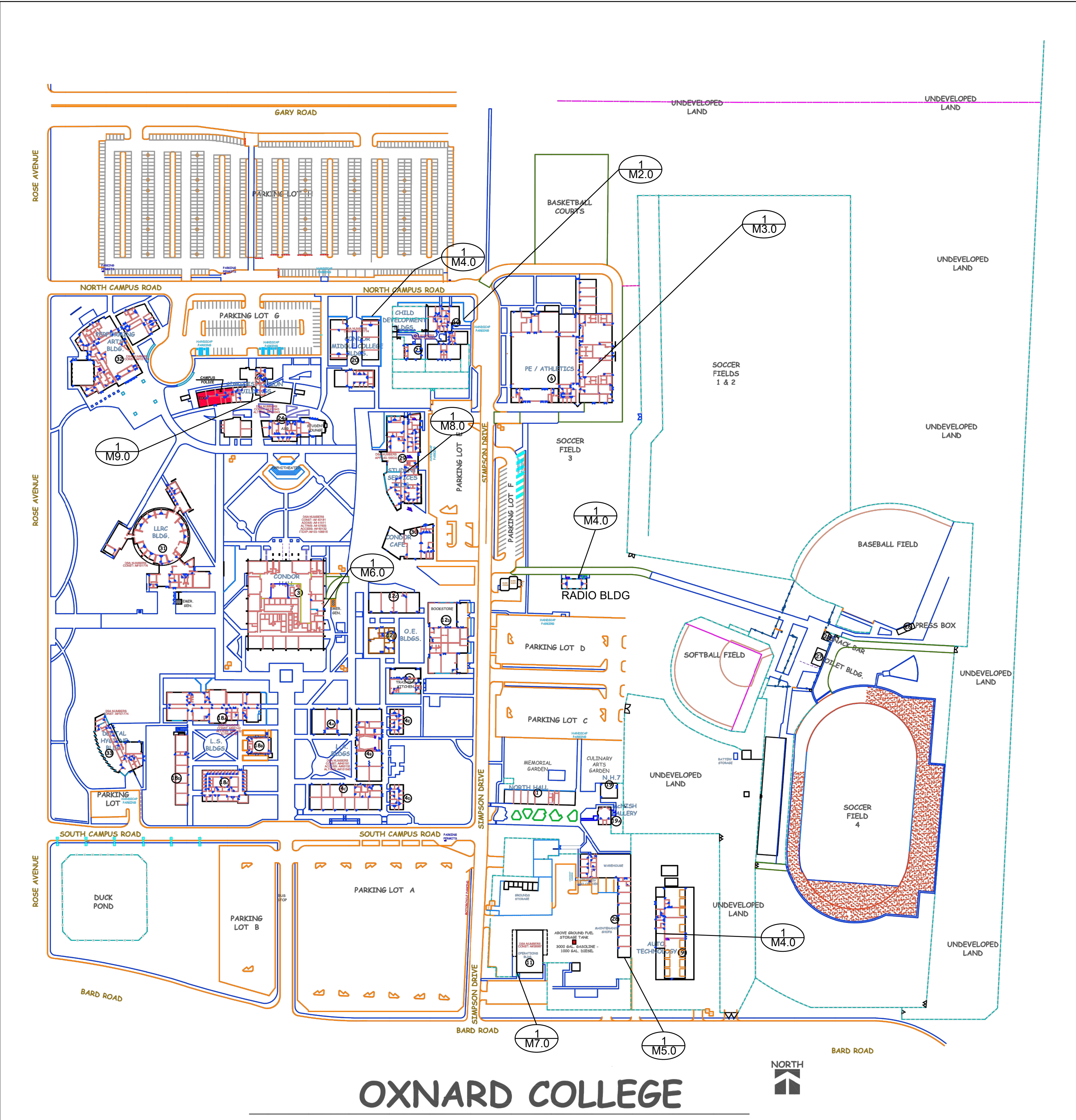


OXNARD COLLEGE HVAC EQUIPMENT RETROFIT



CAMPUS MAP
NO SCALE

SCOPE OF WORK

1. DEMO EXISTING SYSTEMS AND REPLACE WITH NEW HVAC EQUIPMENT.
2. AT M&O SHOP AREAS INSTALL NEW HVAC SYSTEM.
3. CLEAN EXISTING DUCT WHERE DUCT REMAINS AT VARIOUS LOCATIONS.

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- M-6.0 CONDOR HALL SERVER AREA HVAC REPLACEMENT
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- M-8.0 STUDENT SERVICES MACHINE & IT ROOMS HVAC REPLACEMENT
- M-9.0 ADMINISTRATION BUILDING IT ROOM HVAC REPLACEMENT

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VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
OXNARD COLLEGE
HVAC EQUIPMENT RETROFIT
4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

				REVISIONS	
NO	DATE	BY	DESCRIPTION		

DRAWN: HM CHECKED: PW
DATE: 8-03-2023 SCALE: AS NOTED
PROJECT NUMBER:

TITLE SHEET

DRAWING
NUMBER : T1.0

MECHANICAL NOTES

1. SCOPE OF WORK: WORK INCLUDES THE FOLLOWING: FURNISH AND INSTALL ALL EQUIPMENT AND CONTROLS SHOWN ON THE MECHANICAL AND ELECTRICAL DRAWINGS AND DESCRIBED IN THESE NOTES, AND THE CONTRACT DOCUMENTS. WORK INCLUDES BUT IS NOT LIMITED TO: DEMOLITION OF EXISTING MECHANICAL SYSTEMS; INSTALLATION OF NEW PACKAGE UNITS, VRF SYSTEMS, SPLIT SYSTEMS, & WALL MOUNTED UNITS, WITH NEW REFRIGERANT PIPING, ELECTRICAL, & CONTROLS; AND STARTUP AND COMMISSIONING OF NEW COMPLETE MECHANICAL AND CONTROL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS. INCLUDED ARE ALL DEVICES NEEDED TO MAKE COMPLETE AND FUNCTIONAL SPACE CONDITIONING SYSTEMS AND CONTROLS. CONTRACTOR SHALL FURNISH AND INSTALL, MAKE OPERABLE, AND TEST ALL SYSTEMS AND MECHANICAL EQUIPMENT SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS AND CONTRACT DOCUMENTS. IN CONNECTION THEREWITH, CONTRACTOR SHALL ALSO FURNISH AND INSTALL ALL NECESSARY DEVICES, HARDWARE, AND SYSTEMS REQUIRED TO MAKE SAID EQUIPMENT PROPERLY AND SAFELY OPERABLE, INCLUDING BUT NOT LIMITED TO, MOUNTING HARDWARE, INSULATION, FILTERS, DUCT SYSTEMS, ELECTRICAL AND CONTROL SYSTEMS.

2. EXAMINATION OF SITE AND CONTRACT DOCUMENTS. EACH BIDDER SHALL, AT ITS SOLE COST AND EXPENSE, INSPECT THE SITE OF THE PROPOSED WORK TO BECOME FULLY ACQUAINTED WITH CONDITIONS RELATING TO THE WORK AND TO FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS ATTENDING THE EXECUTION OF THE WORK UNDER THE CONTRACT DOCUMENTS AND COST THEREOF. BIDDERS SHALL THOROUGHLY REVIEW AND BE FAMILIAR WITH THE CONTRACT DOCUMENTS, INCLUDING WITHOUT LIMITATION, THE SPECIFICATIONS AND THE DRAWINGS, THE FAILURE OR OMISSION OF ANY BIDDER TO RECEIVE OR EXAMINE ANY OF THE CONTRACT DOCUMENTS, FORMS, INSTRUMENTS, ADDENDA, OR OTHER DOCUMENTS OR TO INSPECT THE SITE SHALL NOT RELIEVE SUCH BIDDER FROM ANY OBLIGATIONS WITH RESPECT TO THE BID PROPOSAL. THE CONTRACTOR OR THE WORK REQUIRED UNDER THE CONTRACT DOCUMENTS. THE OWNER ASSUMES NO RESPONSIBILITY OR LIABILITY TO ANY BIDDER FOR, NOR SHALL THE OWNER BE BOUND BY, ANY UNDERSTANDINGS, REPRESENTATIONS OR AGREEMENTS OF THE OWNER'S AGENTS, EMPLOYEES OR OFFICERS CONCERNING THE CONTRACT DOCUMENTS OR THE WORK MADE PRIOR TO EXECUTION OF THE CONTRACT.

3. INTERPRETATION OF DRAWINGS, SPECIFICATIONS OR CONTRACT DOCUMENTS. IF ANY BIDDER IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS; FINDS DISCREPANCIES, ERRORS OR OMISSIONS THEREIN; OR FINDS VARIANCES IN ANY OF THE CONTRACT DOCUMENTS WITH APPLICABLE RULES, REGULATIONS, ORDINANCES AND/OR LAWS, A WRITTEN REQUEST FOR AN INTERPRETATION OR CORRECTION THEREOF MAY BE SUBMITTED TO THE ENGINEER. IT IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE BIDDER TO SUBMIT SUCH REQUEST IN SUFFICIENT TIME FOR THE PREPARATION OF A RESPONSE THERETO AND DELIVERY OF SUCH RESPONSE TO ALL BIDDERS PRIOR TO THE SCHEDULED CLOSING FOR RECEIPT OF BID PROPOSALS. ANY REQUEST OF ANY BIDDER, PURSUANT TO THE FOREGOING SENTENCE THAT IS MADE LESS THAN SEVEN DAYS PRIOR TO THE SCHEDULED CLOSING DATE FOR THE RECEIPT OF BID PROPOSALS SHALL BE DEEMED UNTIMELY. ANY INTERPRETATION OR CORRECTION OF THE CONTRACT DOCUMENTS WILL BE MADE ONLY BY WRITTEN ADDENDUM DULY ISSUED BY THE OWNER OR THE ENGINEER. A COPY OF ANY SUCH ADDENDUM WILL BE MAILED OR OTHERWISE DELIVERED TO EACH BIDDER RECEIVING A SET OF THE CONTRACT DOCUMENTS. NO PERSON IS AUTHORIZED TO RENDER AN ORAL INTERPRETATION OR CORRECTION OF ANY PORTION OF THE CONTRACT DOCUMENTS TO ANY BIDDER, AND NO BIDDER IS AUTHORIZED TO RELY ON ANY SUCH ORAL INTERPRETATION OR CORRECTION. FAILURE TO REQUEST INTERPRETATION OR CLARIFICATION OF THE DRAWINGS, THE SPECIFICATIONS OR OTHER PORTIONS OF THE CONTRACT DOCUMENTS PURSUANT TO THE FOREGOING SHALL BE DEEMED TO BE A WAIVER OF ANY DISCREPANCY, DEFECT, OR CONFLICT THEREIN.

4. DIMENSIONS. ALL DIMENSIONS SHALL HAVE PREFERENCE OVER SCALE. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS BEFORE PROCEEDING WITH WORK. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS OR WORKING DRAWINGS. ALL SIZES OF EQUIPMENT AND MATERIALS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.

5. CODES AND STANDARDS. ALL WORK SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), 2022 CALIFORNIA BUILDING CODE, THE 2022 CALIFORNIA MECHANICAL CODE, THE 2022 CALIFORNIA PLUMBING CODE, THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, 2022 CALIFORNIA ELECTRIC CODE, THE STATE OF CALIFORNIA, EQUIPMENT MANUFACTURER'S RECOMMENDED PROCEDURES, AND STANDARD CONSTRUCTION PRACTICES. NOTE: ALL MECHANICAL EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH THE EQUIPMENT SCHEDULE, AND SHALL BE NEW AND FREE FROM DEFECTS. CONTRACTOR SHALL OBTAIN APPROVED INSPECTIONS FOR ALL WORK AS REQUIRED BY OWNER AND LOCAL JURISDICTION. CONTRACTOR SHALL MAINTAIN IN EFFECT ALL INSURANCE REQUIRED BY STATE LAWS, LOCAL JURISDICTION AND GENERAL CONTRACTOR/OWNER. WHERE CONFLICT OR VARIATION EXISTS AMONGST CODES, SPECIFICATIONS OR DRAWINGS, THE MOST STRINGENT SHALL GOVERN.

NOTE: WHERE TWO OR MORE CODES CONFLICT, THE MOST RESTRICTIVE SHALL APPLY. NOTHING IN THESE PLANS AND SPECIFICATIONS SHALL BE CONTRSUEED TO PERMIT WORK NOT CONFORMING TO APPLICABLE CODES.

6. CONSTRUCTION OBSERVATION: IN ADDITION TO THE REQUIREMENT FOR OBTAINING INSPECTIONS BY THE LOCAL JURISDICTION, CONTRACTOR SHALL NOTIFY ENGINEER AT APPROPRIATE TIMES DURING THE CONSTRUCTION PROCESS SO THAT ENGINEER CAN VISIT SITE TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF CONTRACTOR'S WORK AND TO DETERMINE IF THE WORK IS PROCEEDING IN GENERAL ACCORDANCE WITH THE CONTRACT DOCUMENTS.

7. SUBMITTALS REQUIRED: PRIOR TO ORDERING EQUIPMENT AND MATERIALS, CONTRACTOR SHALL FURNISH TO ENGINEER / OWNER SUBMITTALS AND SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS PROPOSED FOR USE IN THIS PROJECT. ORDERING OF EQUIPMENT AND MATERIALS SHALL ONLY PROCEED AFTER SATISFACTORY REVIEW OF ALL SUBMITTALS BY CONTRACTOR / ENGINEER / OWNER. COPIES OF ALL OWNER'S MANUALS, WARRANTIES AND OTHER WRITTEN INFORMATION REGARDING SYSTEMS SHALL BE PRESENTED TO OWNER PRIOR TO THE COMPLETION OF THE PROJECT.

8. UNIT LOCATIONS: EQUIPMENT AND SYSTEM LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL STRUCTURAL MEMBERS AND EXISTING CONDITIONS IN THE FIELD, AND LOCATE UNITS AND DUCTWORK TO AVOID INTERFERENCE. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. ALLOW CLEARANCE FOR DUCTWORK AND PIPING. ALL CLEARANCES REQUIRED BY UNIT MANUFACTURER SHALL BE MAINTAINED. ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH CODES AND THE RECOMMENDED INSTALLATION PROCEDURES PUBLISHED BY THE MANUFACTURER.

9. ALL EQUIPMENT SHALL BE SECURED TO RESIST SEISMIC INDUCED MOTION. ALL EXTERIOR FITTINGS AND FASTENERS SHALL BE GALVANIZED.

10. BALANCING: FOLLOWING INSTALLATION, CONTRACTOR SHALL START UP AND BALANCE ALL HVAC SYSTEMS TO CONFORM TO AIR VOLUMES INDICATED ON PLANS. COPIES OF BALANCING RECORDS SHALL BE FURNISHED TO BUILDING OWNER AND PROJECT ENGINEER.

11. ALL REFRIGERANT PIPING AND CONTROL WIRING PER MANUFACTURER'S REQUIREMENTS. PIPE SHALL BE US MANUFACTURED TYPE ACR WITH BRAZED FITTINGS. KEEP PIPING CLEAN AND FREE FROM DEBRIS AND CORROSION PRIOR TO INSTALLATION. ALL BRAZING SHALL BE PERFORMED WITH A NITROGEN (OR INERT GAS) SHIELD, PER ASHRAE STANDARDS BY QUALIFIED CRAFTSMEN. TEST PIPING PER MANUFACTURER'S REQUIREMENTS. PIPE INSULATION MUST BE INSTALLED STRICTLY IN ACCORDANCE WITH INSULATION MANUFACTURERS INSTALLATION INSTRUCTIONS. INSULATION THICKNESS SHALL BE PER THE 2022 BUILDING ENERGY EFFICIENCY STANDARDS. REQUIREMENTS FOR PIPE INSULATION AND TABLE 120.3-A. LIQUID LINE SHALL HAVE MINIMUM OF (R-11.5 OR 1.5" AT M&O SHOPS, R-7.7 OR 1" FOR SERVER AREAS) INSULATION AND VAPOR LINE SHALL HAVE A MINIMUM OF (R-11.5 OR 1-1/2) INSULATION. ALL EXTERIOR INSULATION SHALL BE COVERED WITH ALUMINUM WITH 3/16" CORRUGATED 0.016 JACKETING WITH FORMED ALUMINUM FITTINGS. INSTALL FLEXIBLE CONNECTIONS AT OUTDOOR UNITS.

12. WIRING: ALL WIRING SHALL BE PERFORMED IN ACCORDANCE WITH CEC REQTS. ALL WIRING SHALL BE IN CONDUIT. ALL INTERIOR LOW VOLTAGE AND CONTROL WIRING SHALL BE IN WIREMOLD AND IN FAN ROOMS SHALL BE IN CONDUIT. EXPOSED CONDUIT SHALL BE INSTALLED IN A SQUARE, PLUMB, AND LEVEL MANNER WITH THOUGHT GIVEN TO THE FINAL APPEARANCES. PROVIDE TO ENGINEER SHOP DRAWING FOR CONTROL TRANSFORMER CONFIGURATIONS DETAILING CIRCUITS TO BE USED, LOAD CALCULATIONS, WIRE SIZES, AND LOCATIONS. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CALIFORNIA ELECTRICAL CODE AND ELECTRICAL SPECIFICATIONS. ALL TRANSFORMERS SHALL BE PROTECTED BY PROPERLY SIZED CIRCUIT BREAKER OR FUSE(S). ALL TRANSFORMERS SHALL HAVE RESETTABLE BREAKER ON THE LOAD SIDE. ALL LOW VOLTAGE CONTROL & COMMUNICATIONS WIRING SHALL BE DONE ACCORDING TO MANUFACTURERS INSTALLATION MANUAL. PROVIDE SUBMITTALS ON WIRE AND ENCLOSURES.

13. COORDINATION DURING CONSTRUCTION: THE CONTRACTOR SHALL COORDINATE ANY NECESSARY CHANGES IN WORK SCHEDULING WITH THE OWNER TO MINIMIZE THE DISRUPTION. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY HIS WORK TO BUILDING(S) AND EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.

14. CORRECTION OF WORK: THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK THE OWNER FINDS DEFECTIVE OR FAILING TO CONFORM TO THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BEAR ALL COSTS REQUIRED BY THE CONTRACT DOCUMENTS; IF ANY OF THE WORK IS FOUND TO BE DEFECTIVE OR NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL CORRECT IT PROMPTLY AFTER RECEIPT OF A WRITTEN NOTICE FROM THE OWNER TO DO SO.

15. EXISTING CONDITIONS: THE CONTRACTOR SHALL PROMPTLY INFORM THE PROJECT MANAGER IN WRITING OF ANY EXISTING CONDITION THAT COMPROMISES SAFETY INCLUDED BUT NOT LIMITED TO: ELECTRICAL, DUCT, PIPE OR EQUIPMENT SUPPORT, OR STRUCTURAL. IF ANY DEVICE, ELECTRICAL OR MECHANICAL, DOES NOT FUNCTION PROPERLY, THE CONTRACTOR SHALL PROMPTLY INFORM THE PROJECT MANAGER IN WRITING OF THE NATURE OF THE FAILURE, ANY PROPOSED REMEDY, AND THE COST OF REPAIR OR REPLACEMENT. CONTRACTOR SHALL INSPECT ALL VISIBLE EQUIPMENT AND PROVIDE A WRITTEN REPORT ON ANY DEFICIENCY.

16. AS-BUILT DRAWINGS SHALL BE GIVEN TO THE OWNER PRIOR TO ACCEPTANCE OF THE PROJECT. AS-BUILTS SHALL BE PROVIDED AS A PDF TYP DOCUMENT.

17. FUNCTIONAL PERFORMANCE TESTING. CONTRACTOR SHALL CONFIRM THAT NEW SYSTEMS HAVE BEEN INSTALLED, PROPERLY STARTED, AND FUNCTIONING PROPERLY. PROVIDE REPORT WITH TEST RESULTS INCLUDING ECONOMIZER TESTING.

18. WATERPROOF PENETRATIONS AND EQUIPMENT PADS. ALL ROOF PATCH SHALL BE PERFORMED BY A QUALIFIED LICENSED ROOFING CONTRACTOR.

19. CLEANUP: EVERY DAY, AND AFTER ALL WORK HAS BEEN COMPLETED, CONTRACTOR SHALL CLEAN ENTIRE JOB-SITE OF ALL DEBRIS ASSOCIATED WITH MECHANICAL SYSTEMS. EXPOSED PARTS WHICH ARE TO BE PAINTED SHALL BE THOROUGHLY CLEANED READY FOR PAINTING.

20. PIPE AND DUCT PATHS ARE DIAGRAMMATIC. PRIOR TO BEGINNING PIPING REVIEW PROPOSED PATHS AND ALTERNATES TO DETERMINE THE MOST JUDICIOUS ROUTE.

21. ALL EXISTING TO REMAIN, SUPPLY & RETURN AIR DUCTS WITH EQUIPMENT BEING REPLACED SHALL BE CLEANED PER N.A.D.C.A. STANDARDS.

22. ALL WORK SHALL BE PERFORMED BY QUALIFIED SKILLED TRADES PEOPLE. WORKMANSHIP SHALL BE AT A HIGH LEVEL EQUAL OR ABOVE THE STANDARD OF CARE FOR THE TYPE WORK AT HAND. ALL WORK SHALL BE NEAT AND FREE OF DEFECTS.

PLUMBING NOTES

1. CONDENSATE PIPE SHALL BE U.S. MANUFACTURED HARD COPPER TYPE "L" WITH SOLDERED WROT COPPER FITTINGS. PROVIDE TEE WITH BRASS PLUG AT CHANGES OF DIRECTION. INSTALL CLEANOUTS PER CODE, SLOPE CONDENSATE MINIMUM 1/8"FT TO DRAIN.

2. INSULATION: INSULATE INTERIOR COPPER CONDENSATE PIPE W/ ARMAFLEX FLEX SHIELD INSULATION WITH FITTING COVERS W/ NO GAPS.

3. PIPING LOCATIONS: PIPING LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL LATERAL STUBS, OFFSETS, OBSTRUCTIONS, ETC. REQUIRED IN THE FIELD. THE ACTUAL LOCATIONS OF LINES, CLEANOUTS AND CONNECTIONS MAY VARY PROVIDED THAT COMPLETE SYSTEMS ARE SIZED AND INSTALLED IN COMPLIANCE WITH CODES. ANY SIGNIFICANT DEVIATIONS FROM THE PLANS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER PRIOR TO INSTALLATION.

4. PIPING SUPPORT: ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2022 CALIFORNIA PLUMBING CODE. HORIZONTAL CONDENSATE DRAINS SHALL BE HUNG WITH SUPERSTRUT C-727-F ADJUSTABLE FELT-LINED PIPE HANGERS, THREADED ROD, AND BEAM ATTACHMENT BRACKETS, LOCATED AT SIX FOOT MAXIMUM INTERVALS. VERTICAL CONDENSATE DRAINS SHALL BE SUPPORTED AT THEIR BASES AND AT EACH STORY OR AT TEN FOOT MAXIMUM INTERVALS. TO PREVENT SWAYING, PROVIDE LATERAL BRACING AT SIX FOOT INTERVALS ANCHORED TO OVERHEAD FRAMING.

TABLE 120.3-A PIPE INSULATION THICKNESS									
Fluid Operating Temperature Range (°F)	Insulation Conductivity		Nominal Pipe Diameter (in inches)						
	Conductivity (in Btu-in/h-ft²-°F)	Mean Rating Temperature (°F)		< 1	1 to <1.5	1.5 to < 4	4 to < 8	8 and larger	
Space heating and Service Water Heating Systems (Steam, Steam Condensate, Refrigerant, Space Heating, Service Hot Water)									
			Minimum Pipe Insulation Required (Thickness in inches or R-value)						
Above 350	0.32-0.34	250	Inches	4.5	5.0	5.0	5.0	5.0	
			R-value	R 37	R 41	R 37	R 27	R 23	
251-350	0.29-0.32	200	Inches	3.0	4.0	4.5	4.5	4.5	
			R-value	R 24	R 34	R 35	R 26	R 22	
201-250	0.27-0.30	150	Inches	2.5	2.5	2.5	2.0	2.0	
			R-value	R 21	R 20	R 17.5	R 17	R 14.5	
141-200	0.25-0.29	125	Inches	1.5	1.5	2.0	2.0	2.0	
			R-value	R 11.5	R 11	R 14	R 11	R 10	
105-140	0.22-0.28	100	Inches	1.0	1.5	1.5	1.5	1.5	
			R-value	R 7.7	R 12.5	R 11	R 9	R 8	
Nominal Pipe Diameter (in inches)									
				< 1	1 to <1.5	1.5 to < 4	4 to < 8	8 and larger	
Space cooling systems (chilled water, refrigerant and brine)									
			Minimum Pipe Insulation Required (Thickness in inches or R-value)						
40-60	0.21-0.27	75	Inches	Nonres 0.5	Res 0.75	Nonres 0.5	Res 0.75	1.0	1.0
			R-value	Nonres R 3	Res R 6	Nonres R 3	Res R 5	R 7	R 6
Below 40	0.20-0.26	50	Inches	1.0	1.5	1.5	1.5	1.5	1.5
			R-value	R 8.5	R 14	R 12	R 10	R 10	R 9

Footnote to Table 120.3-A:

1. These thicknesses are based on energy efficiency considerations only. Issues such as water vapor permeability or surface condensation sometimes require vapor barriers or additional insulation.

Footnote to TABLE 120.3-A:

1. These thickness are based on energy efficiency considerations only. Issues such as water vapor permeability or surface condensation sometimes require vapor retarders or additional insulation.

2022 BUILDING ENERGY EFFICIENCY STANDARDS, REQUIREMENTS FOR PIPE INSULATION

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ALTERING, PATCHING, AND REPAIRING OF EXISTING ADJACENT MATERIALS DISTURBED BY MECHANICAL EQUIPMENT REPLACEMENT, INCLUDING BUT NOT LIMITED TO INTERIOR PLASTER AND/OR GYP BOARD & TRIM, FLOOR & CEILING FINISHES. ALL DISTURBED AREAS SHALL BE FINISHED TO MATCH THE EXISTING CONDITION.

2. CUTTING, BORING SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED ON THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF THE ENGINEER.

3. ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY THE ENGINEER.

4. PATCHING MATERIALS, GENERAL: AS REQUIRED FOR ORIGINAL INSTALLATION AND TO MATCH SURROUNDING CONSTRUCTION. A.) CONTRACTOR SHALL PROVIDE SAME PRODUCTS OR TYPES OF CONSTRUCTION AS THAT IN EXISTING STRUCTURE, AS NEEDED TO PATCH, EXTEND OR MATCH EXISTING. B.) GENERALLY, THE CONTRACT DOCUMENTS WILL NOT DEFINE PRODUCTS OR STANDARDS OF WORKMANSHIP PRESENT IN EXISTING CONSTRUCTION. CONTRACTOR SHALL DETERMINE PRODUCTS BY INSPECTION AND NECESSARY TESTING AND DETERMINE QUALITY OF WORKMANSHIP BY USING EXISTING AS A SAMPLE FOR COMPARISON. C.) THE PRESENCE OF A PRODUCT, FINISH, OR TYPE OF CONSTRUCTION REQUIRES THAT PATCHING, EXTENDING OR MATCHING SHALL BE PERFORMED AS NECESSARY TO MAKE WORK COMPLETE AND CONSISTENT WITH IDENTICAL STANDARDS OF QUALITY.

5. PATCHING OF BUILDING FINISH MATERIALS: CONTRACTOR SHALL MATCH EXISTING PRODUCTS AND FINISHES. CONTRACTOR SHALL CONFIRM COLORS, PATTERNS, AND TEXTURES WITH ARCHITECT/OWNER. CONTRACTOR SHALL CUSTOM CUT NEW MATERIALS TO FIT AND TO MATCH JOINT PATTERNS WITH EXISTING MATERIALS. CONTRACTOR SHALL CUSTOM CUT NEW MATERIALS TO SIZE TO MATCH EXISTING CONSTRUCTIONS.

6. PATCHING OF ROOF: CONTRACTOR SHALL PATCH AND MATCH EXISTING ADJACENT SURFACE. WHERE PENETRATIONS HAVE OCCURRED TO FINISH SURFACE TO REMAIN, CONTRACTOR SHALL PATCH PENETRATIONS AND REPAIR TO WATERTIGHT CONDITION. ROOF PATCHING SHALL BE PERFORMED BY LICENSED ROOFING CONTRACTOR WITH EXPERIENCE WITH THE ROOF TYPE TO BE PATCHED. RESTORE EXPOSED FINISHES OF PATCH AREAS AND EXTEND RESTORATION INTO ADJOINING CONSTRUCTION IN A MANNER THAT ELIMINATES EVIDENCE OF PATCHING AND REFINISHING.

GREEN BUILDING NOTES

1. CONTRACTOR SHALL ESTABLISH A CONSTRUCTION WASTE MANAGEMENT PLAN FOR THE DIVERTED MATERIALS, OR MEET LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE, WHICHEVER IS MORE STRINGENT. WASTE MANAGEMENT PLAN SHALL:

- A.) IDENTIFY THE MATERIALS TO BE DIVERTED FROM DISPOSAL BY EFFICIENT USAGE, RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.
- B.) DETERMINE IF MATERIAL WILL BE SORTED ON-SITE OR MIXED
- C.) IDENTIFY DIVERSION FACILITIES WHERE MATERIALS COLLECTED WILL BE TAKEN.
- D.) SPECIFY THE AMOUNT OF MATERIALS DIVERTED WHICH SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BOTH.

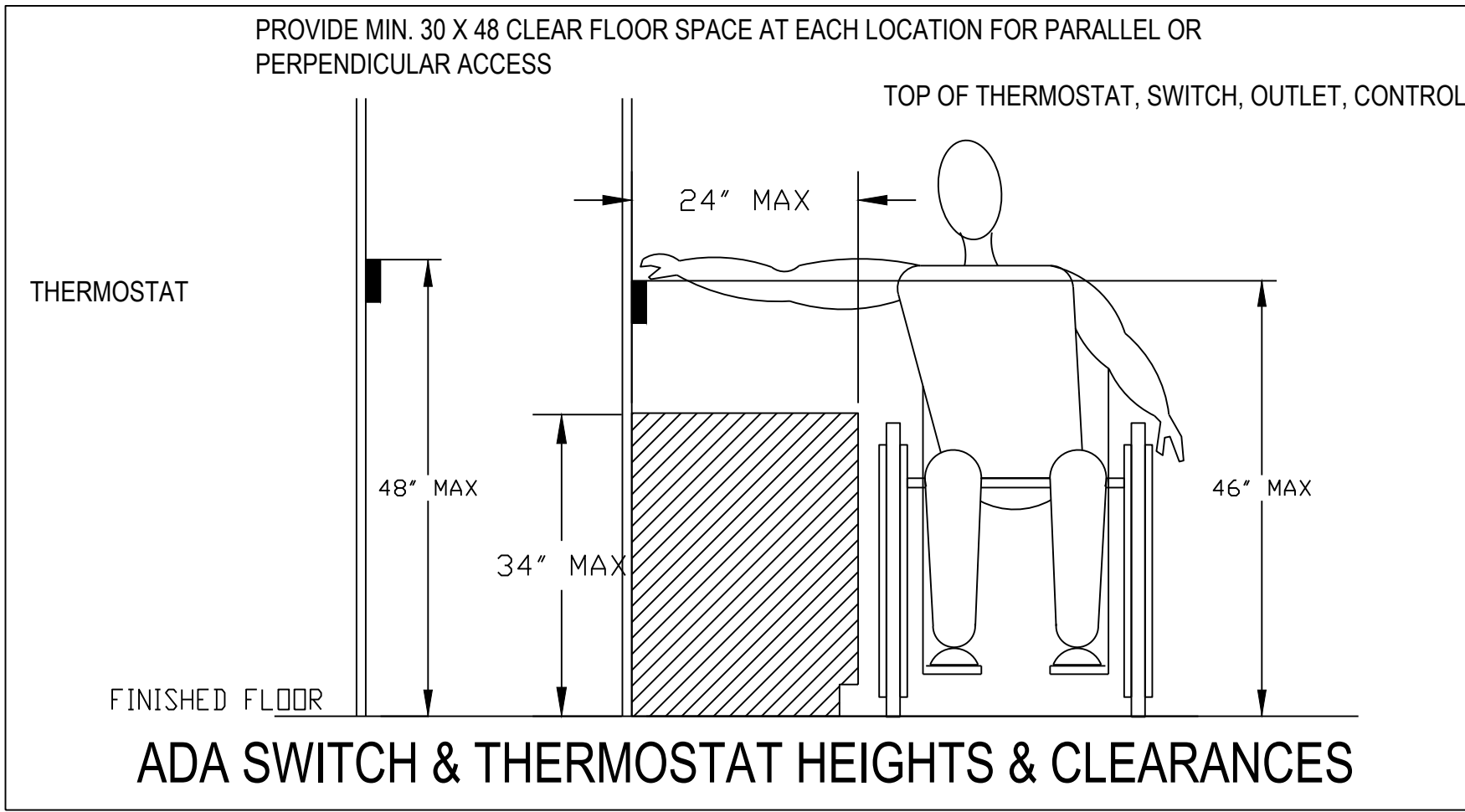
2. RECYCLE WASTE MATERIAL BEING REMOVED FROM SITE TO THE GREATEST EXTENT POSSIBLE. RECORD ALL AMOUNTS DISPOSED AND ALL AMOUNTS RECYCLED.

3. COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION: AT THE TIME OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM. PER THE 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, C.G.B.S.C., SECTION 5.504.3

4. RECLAIM AND RECYCLE ALL REFRIGERANT PER EPA REQUIREMENTS. THIS WORK SHALL BE PERFORMED BY TRAINED AND CERTIFIED PROFESSIONALS.

ELECTRICAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2022 CALIFORNIA ELECTRICAL CODE.
2. PROVIDE ALL NEEDED DEVICES, BOXES, ENCLOSURES, CONNECTIONS, CONDUIT AND RACEWAY, WIRE, AND SUPPORTS FOR A COMPLETE INSTALLATION.
3. ALL WIRE SHALL BE IN CONDUIT INCLUDING CONTROL WIRING.
4. WORK SHALL BE PERFORMED BY QUALIFIED TRADES PEOPLE. WORKMANSHIP SHALL EQUAL OR BETTER TO THE STANDARD OF CARE FOR THE WORK ANT HAND.
5. WIREMOLD AND APPROPRIATE FITTINGS AND BOXES MAY BE USED TO ADJUST HEIGHT OF THERMOSTAT.
6. ALL NEW THERMOSTATS SHALL BE INSTALLED AT ACCESSIBLE HEIGHTS.



SYMBOL LEGEND	
SEE MECH. SCHEDULE FOR DESCRIPTIONS	
	RETURN AIR REGISTER
	CEILING DIFFUSER
	EXHAUST FAN
	VOLUME DAMPER
	THERMOSTAT
	EQUIPMENT TAG SEE MECH. SCHEDULE
	DETAIL TAG
	P.O.C. POINT OF CONNECTION
ABBREVIATIONS	
ABBREV.	ABBREVIATIONS
ABV.	ABOVE
APPROX.	APPROXIMATELY
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BLDG	BUILDING
BLV	BELOW
BTM	BOTTOM
BTR	BETTER
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CL	CENTERLINE
CLG	CEILING
CONC	CONCRETE
COND	CONDENSATE
CONT	CONTINUED
DF	DOUGLAS FIR
DIA	DIAMETER
DN	DOWN
DSA	DIVISION OF THE STATE ARCHITECT
DWG	DRAWING
(E)	EXISTING
EA	EACH
EL ELEV	ELEVATION
ELEC	ELECTRIC
EQ	EQUIPMENT
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
EXH	EXHAUST
FIN	FINISHED
FLR	FLOOR
FRM	FROM
G	GAS
GDW	GYPSUM DRYWALL
GPM	GALLONS PER MINUTE
GSM	GALVANIZED STEEL METAL
HDG	HOT DIPPED GALVANIZED
HP	HORSE POWER
MIN.	MINIMUM
MEZZ.	MEZZANINE
MAX.	MAXIMUM
MTL	METAL
(N)	NEW
(NC)	NORMALLY CLOSED
OC	ON CENTER
OSA	OUTSIDE AIR
POC	POINT OF CONNECTION
POD	POINT OF DISCONNECTION
PT	PRESSURE TREATED
RAG	RETURN AIR GRILLE
RAR	RETURN AIR REGISTER
SA	SUPPLY AIR
SD	SHEET
SHT	SHEET METAL SCREW
SMS	SIDEWALL REGISTER
SR	SHUT-OFF VALVE
SOV	SPECIFICATIONS
SPEC	STEEL
STL	UNDERGROUND
UGND	VOLUME DAMPER (LOCKING)
VD	VENT TO ROOF
VTR	VARIABLE AIR VOLUME BOX
VAV	VARIABLE FREQUENCY DRIVE
VFD	WATER COLUMN
WC	TYPICAL
(TYP)	

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
OXNARD COLLEGE
HVAC EQUIPMENT RETROFIT
4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

					DESCRIPTION	REVISIONS
					BY	
					DATE	
					NO	

DRAWN: HM	CHECKED: PW
DATE: 8-03-2023	SCALE: AS NOTED
PROJECT NUMBER:	

MECHANICAL NOTES

DRAWING NUMBER : M1.0

MECHANICAL SCEDULE

ADMINISTRATION BUILDING SERVER ROOM

SS 1	SPLIT SYSTEM. SAMSUNG MODEL AC018BNNDCH/AA/ACO18BXADCH/AA COOLING 17,400 BTUH. COATED CONDENSER COIL. MINI SPLIT CONDENSATE PUMP 208/1/60 MCA 20.1 MOCP 25 WIRED THERMOSTAT OUTDOOR UNIT WEIGHT 118 LBS. INDOOR UNIT 26 LBS. OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT.
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STUDENT SERVICES BUILDING ELEVATOR ROOM 1ST FLOOR AND SERVER ROOM SECOND FLOOR

SS 1	SPLIT SYSTEM. SAMSUNG MODEL AR12TSFABWKNCV/AR12TSFACWKXCV COOLING 12,000 BTUH. COATED CONDENSER COIL. MINI SPLIT CONDENSATE PUMP 208/1/60 MCA 12.5 MOCP 20 W/ WIRED THERMOSTAT OUTDOOR UNIT WEIGHT 71 LBS. INDOOR UNIT 23 LBS. OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT.
SS 2	SPLIT SYSTEM. SAMSUNG MODEL AR12TSFABWKNCV/AR12TSFACWKXCV COOLING 12,000 BTUH. COATED CONDENSER COIL. MINI SPLIT CONDENSATE PUMP 208/1/60 MCA 12.5 MOCP 20 W/ WIRED THERMOSTAT OUTDOOR UNIT WEIGHT 71 LBS. INDOOR UNIT 23 LBS. OUTDOOR UNIT PROVIDES POWER TO INDOOR UNIT.

CHILD DEVELOPMENT CENTER

AC 1	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL PHE6B36 EER 12.0. 2.5 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL ECONOMIZER, CURB ADAPTER. ELECTRICAL DATA 208/3/60 MCA 23.5 AMPS, MOCP 35 AMPS. REPLACE (E) THREE PHASE BREAKER W/ TWO POLE BREAKER UNIT WEIGHT - 407 LBS. SET OUTSIDE AIR TO 200 CFM.
AC 2	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE04 EER 12.0. 3 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL ECONOMIZER WITH FAULT DETECTION, CURB ADAPTER ELECTRICAL DATA 208/3/60 MCA 21.6 AMPS, MOCP 30 AMPS UNIT WEIGHT - 535 LBS SET OUTSIDE AIR TO 200 CFM.
AC 3	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE04 EER 12.0. 3 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL ECONOMIZER WITH FAULT DETECTION, CURB ADAPTER ELECTRICAL DATA 208/3/60 MCA 21.6 AMPS, MOCP 30 AMPS UNIT WEIGHT - 535 LBS SET OUTSIDE AIR TO 200 CFM.
AC 4	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE04 EER 12.0. 3 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL ECONOMIZER WITH FAULT DETECTION, CURB ADAPTER ELECTRICAL DATA 208/3/60 MCA 21.6 AMPS, MOCP 30 AMPS UNIT WEIGHT - 535 LBS SET OUTSIDE AIR TO 200 CFM.
AC 5	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE04 EER 12.0. 3 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL ECONOMIZER WITH FAULT DETECTION, CURB ADAPTER ELECTRICAL DATA 208/3/60 MCA 21.6 AMPS, MOCP 30 AMPS UNIT WEIGHT - 535 LBS SET OUTSIDE AIR TO 200 CFM.
AC 6	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE04 EER 12.0. 3 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL ECONOMIZER WITH FAULT DETECTION, CURB ADAPTER ELECTRICAL DATA 208/3/60 MCA 21.6 AMPS, MOCP 30 AMPS UNIT WEIGHT - 535 LBS SET OUTSIDE AIR TO 200 CFM.

CONDOR HALL SERVER ROOM

OU 1	OUTDOOR UNIT. SAMSUNG MODEL AM072FXVAJH2AA COOLING 72,000 BTUH. COATED CONDENSER COIL 460/3/60 MCA 16.4 MOCP 20 OUTDOOR UNIT WEIGHT 416 LBS.
OU 2	OUTDOOR UNIT. SAMSUNG MODEL AM072FXVAJH2AA COOLING 72,000 BTUH. COATED CONDENSER COIL 460/3/60 MCA 16.4 MOCP 20 OUTDOOR UNIT WEIGHT 416 LBS.
IU 1	INDOOR UNIT. SAMSUNG MODEL AM036JNCDCH/AA COOLING 36,000 BTUH. WIRED SAMSUNG THERMOSTAT 208/1/60 MCA 0.9 MOCP 15. LITTLE GIANT CONDENSATE PUMP VCMA 20 PRO INDOOR UNIT 74 LBS.
IU 2	INDOOR UNIT. SAMSUNG MODEL AM036JNCDCH/AA COOLING 36,000 BTUH. WIRED SAMSUNG THERMOSTAT 208/1/60 MCA 0.9 MOCP 15. LITTLE GIANT CONDENSATE PUMP VCMA 20 PRO INDOOR UNIT 74 LBS.
IU 3	INDOOR UNIT. SAMSUNG MODEL AM036JNCDCH/AA COOLING 36,000 BTUH. WIRED SAMSUNG THERMOSTAT 208/1/60 MCA 0.9 MOCP 15. LITTLE GIANT CONDENSATE PUMP VCMA 20 PRO INDOOR UNIT 74 LBS.
IU 4	INDOOR UNIT. SAMSUNG MODEL AM048JNCDCH/AA COOLING 48,000 BTUH. WIRED SAMSUNG THERMOSTAT 208/1/60 MCA 1.4 MOCP 15. LITTLE GIANT CONDENSATE PUMP VCMA 20 PRO INDOOR UNIT 94 LBS.

CUSTODIAL WAREHOUSE

FC 1	FAN COIL. SAMSUNG MODEL AM036TNZDCH/AA 3 TON NOMINAL WITH 2" FILTER GRILLE WITH MERV 13 FILTERS 208/1/60 MCA 2.08 MOCP 15. WEIGHT 138 LBS
FC 2	FAN COIL. SAMSUNG MODEL AM036TNZDCH/AA 3 TON NOMINAL WITH 2" FILTER GRILLE WITH MERV 13 FILTERS 208/1/60 MCA 2.08 MOCP 15. WEIGHT 138 LBS
OU 1	OUTDOOR UNIT. SAMSUNG MODEL AM072FXVAJH2AA COOLING 72,000 BTUH. COATED CONDENSER COIL 460/3/60 MCA 16.4 MOCP 20 OUTDOOR UNIT WEIGHT 416 LBS.
CP 1	CONDENSATE PUMP LITTLE GIANT CONDENSATE PUMP VCMA 20 PRO POWER FROM FC-1 WIRE TO SHUT BOTH FAN COILS DOWN UPON PUMP FAILURE

MIDDLE COLLEGE/JCC AND RADIO STATION

HP 1	HEAT PUMP WALL MOUNT. 3.5 TON NOMINAL COOLING MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 2	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 3	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 4	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 5	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 6	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 7	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 8	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 9	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 10	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 11	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 12	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3

AUTO TECH

HP 13	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 14	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3

RADIO BUILDING

HP 15	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3
HP 16	HEAT PUMP WALL MOUNT. MARVAIR MAA2042HA090D++ZA1EAC32+AD PELICAN THERMOSTAT MODEL TC3

M&O SHOPS

OU 1	OUTDOOR UNIT SAMSUNG MODEL AM096BXVGJH. COOLING 86,003 BTUH, HEATING 91,600 BTUH @ 30°F. EER 13.7. WITH COATED COILS. ELECTRICAL DATA - 460/3/60 MCA 18.0 MOCP 20 WEIGHT - OUTDOOR UNIT 571 LBS
IU 1 A,B	SPLIT SYSTEM. INDOOR UNIT SAMSUNG MODEL AM028TNVDCH. COOLING 18,543 BTUH, HEATING 23,000 BTUH @ 30°F. 600 CFM. SAMSUNG THERMOSTAT ADAPTER MIM-A60UN. PELICAN TC-3 THERMOSTAT ELECTRICAL DATA- 208/1/60 MCA 0.54, MOP 15. WEIGHT - INDOOR UNIT 28.7 LBS
IU 2	SPLIT SYSTEM. INDOOR UNIT SAMSUNG MODEL AM032MNQDCH. COOLING 22,034 BTUH, HEATING 33,600 BTUH @ 30°F. 600 CFM. SAMSUNG THERMOSTAT ADAPTER MIM-A60UN. PELICAN TC-3 THERMOSTAT ELECTRICAL DATA- 208/1/60 MCA 0.7, MOP 15. WEIGHT - INDOOR UNIT 41 LBS
OU 2	OUTDOOR UNIT SAMSUNG MODEL AM0120BXVGJH. COOLING 116,843 BTUH, HEATING 125,200 BTUH @ 30°F. EER 12.9. WITH COATED COILS. ELECTRICAL DATA - 460/3/60 MCA 19.4 MOCP 25 WEIGHT - OUTDOOR UNIT 571 LBS
IU 3 A,B	SPLIT SYSTEM. INDOOR UNIT SAMSUNG MODEL AM028TNVDCH. COOLING 18,543 BTUH. HEATING 23,000 BTUH @ 30°F. 600 CFM. SAMSUNG THERMOSTAT ADAPTER MIM-A60UN. PELICAN TC-3 THERMOSTAT ELECTRICAL DATA- 208/1/60 MCA 0.54, MOP 15. WEIGHT - INDOOR UNIT 28.7 LBS
IU 4 A,B	SPLIT SYSTEM. INDOOR UNIT SAMSUNG MODEL AM032MNQDCH. COOLING 22,034 BTUH, HEATING 33,600 BTUH @ 30°F. 600 CFM. SAMSUNG THERMOSTAT ADAPTER MIM-A60UN. PELICAN TC-3 THERMOSTAT ELECTRICAL DATA- 208/1/60 MCA 0.7, MOP 15. WEIGHT - INDOOR UNIT 41 LBS
OU 3	OUTDOOR UNIT SAMSUNG MODEL AC018BXSCCC. COOLING 18,000 BTUH. EER2 8.1. WITH COATED COILS. ELECTRICAL DATA - 208/1/60 MCA 13.5 MOCP 15 OUTDOOR UNIT SHALL SUPPLY POWER TO INDOOR WEIGHT - OUTDOOR UNIT 90 LBS
IU 5	SPLIT SYSTEM. INDOOR UNIT SAMSUNG MODEL AC018BNADCH. 500 CFM. WITH HARDWIRED SAMSUNG THERMOSTAT WEIGHT - INDOOR UNIT 26 LBS

INSTALL PELICAN ROUTER IN IT ROOM SERVED BY IU-5
COORDINATE WITH IT DEPARTMENT FOR IP ADDRESS
SET SYSTEM UP FOR WEB ACCESS AND PROVIDE
2 HOURS TRAINING TO OWNER

GYM

HP 1	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE09A4B3AA1A111A2 EER 12.0. 8.5 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL. ECONOMIZER WITH FAULT DETECTION. 3400 CFM. SET OUTSIDE AIR TO 340 CFM ELECTRICAL DATA 460/3/60 MCA 21 AMPS, MOCP 25 AMPS UNIT WEIGHT - 1071 LBS WITH DUCT SMOKE DETECTOR SYSTEM SENSOR
HP 2	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE09A4B3AA1A111A2 EER 12.0. 8.5 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL. ECONOMIZER WITH FAULT DETECTION. 3400 CFM. SET OUTSIDE AIR TO 340 CFM ELECTRICAL DATA 460/3/60 MCA 21 AMPS, MOCP 25 AMPS UNIT WEIGHT - 1071 LBS WITH DUCT SMOKE DETECTOR SYSTEM SENSOR
HP 3	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XYE09A4B3AA1A111A2 EER 12.0. 8.5 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL. ECONOMIZER WITH FAULT DETECTION. 3400 CFM. SET OUTSIDE AIR TO 340 CFM ELECTRICAL DATA 460/3/60 MCA 21 AMPS, MOCP 25 AMPS UNIT WEIGHT - 1071 LBS WITH DUCT SMOKE DETECTOR SYSTEM SENSOR
HP 4	PACKAGE ROOFTOP UNIT. HEAT PUMP YORK MODEL XXE12A4B3AA1A111A3 EER 12.0. 10 TON NOMINAL COOLING, MERV 13 FILTERS, COATED CONDENSER COIL. ECONOMIZER WITH FAULT DETECTION. 4000 CFM. SET OUTSIDE AIR TO 400 CFM ELECTRICAL DATA 460/3/60 MCA 24 AMPS, MOCP 30 AMPS UNIT WEIGHT - 1071 LBS WITH DUCT SMOKE DETECTOR SYSTEM SENSOR

COMMON FEATURES ON WALL MOUNTED UNITS HP-1 THRU HP14.
208/1/60
9KW SUPPLEMENTAL HEAT
2 STAGE COMPRESSOR
42,000 BTUH NOMINAL COOLING
HEAT PUMP
ECONOMIZER WITH FACTORY CO2 SENSOR
LOW AMBIENT W/ CCH & EFS
UV LIGHT
TOP SUPPLY BOTTOM RETURN
MERV 13 FILTER
CONDENSER COIL COATING
GRAY
LOCKABLE ACCESS PLATE W/ TAMPER PROOF
STAINLESS STEEL FASTENERS AND DRAIN PAN
INSTALL ROUTER IN IT CLOSET SERVED BY HP-1
COORDINATE WITH IT DEPARTMENT FOR IP ADDRESS
SET SYSTEM UP FOR WEB ACCESS AND PROVIDE
2 HOURS TRAINING TO OWNER

CONTROL SCHEDULE

T 1	THERMOSTAT. PELICAN MODEL TC3. PROGRAMMABLE. FOR INDOOR UNIT CONTROL. INSTALL ALL WIRING IN CONDUIT. INTERNET CONNECTIVITY. PROVIDE REPEATERS AS NEEDED FOR COMMUNICATION WITH GATEWAY. WITH CO2 SENSOR.
SAT 1	PELICAN TEMP. & ALARM SENSOR, MODEL TA1. (INSTALL AT SUPPLY PLENUMS)
R 1	REPEATER. PELICAN WR400. INSTALL AS NEEDED FOR CAMPUS WIDE NETWORK. BUDGET 6 REPEATERS W/ FIBERGLASS ENCLOSURE. ELECT. 110 V.
GW 1	GATEWAY. PELICAN GW 400. WIRELESS GATEWAY WITH CABLE AND 110V ADAPTER. LOCATE IN IT ROOM
PE 1	PELICAN PEARL ECONOMIZER CONTROLLER WITH FAULT DETECTION

COMMON FEATURES ON WALL MOUNTED UNITS HP-15 & HP16.
9KW SUPPLEMENTAL HEAT
2 STAGE COMPRESSOR
42,000 BTUH NOMINAL COOLING
HEAT PUMP
ECONOMIZER WITH FACTORY CO2 SENSOR
LOW AMBIENT W/ CCH & EFS
UV LIGHT
TOP SUPPLY BOTTOM RETURN
MERV 13 FILTER
CONDENSER COIL COATING
LOCKABLE ACCESS PLATE W/ TAMPER PROOF
STAINLESS STEEL FASTENERS AND DRAIN PAN
INSTALL PELICAN ROUTER IN IT RACK
COORDINATE WITH IT DEPARTMENT FOR IP ADDRESS
SET SYSTEM UP FOR WEB ACCESS AND PROVIDE
2 HOURS TRAINING TO OWNER

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
OXNARD COLLEGE
HVAC EQUIPMENT RETROFIT
4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

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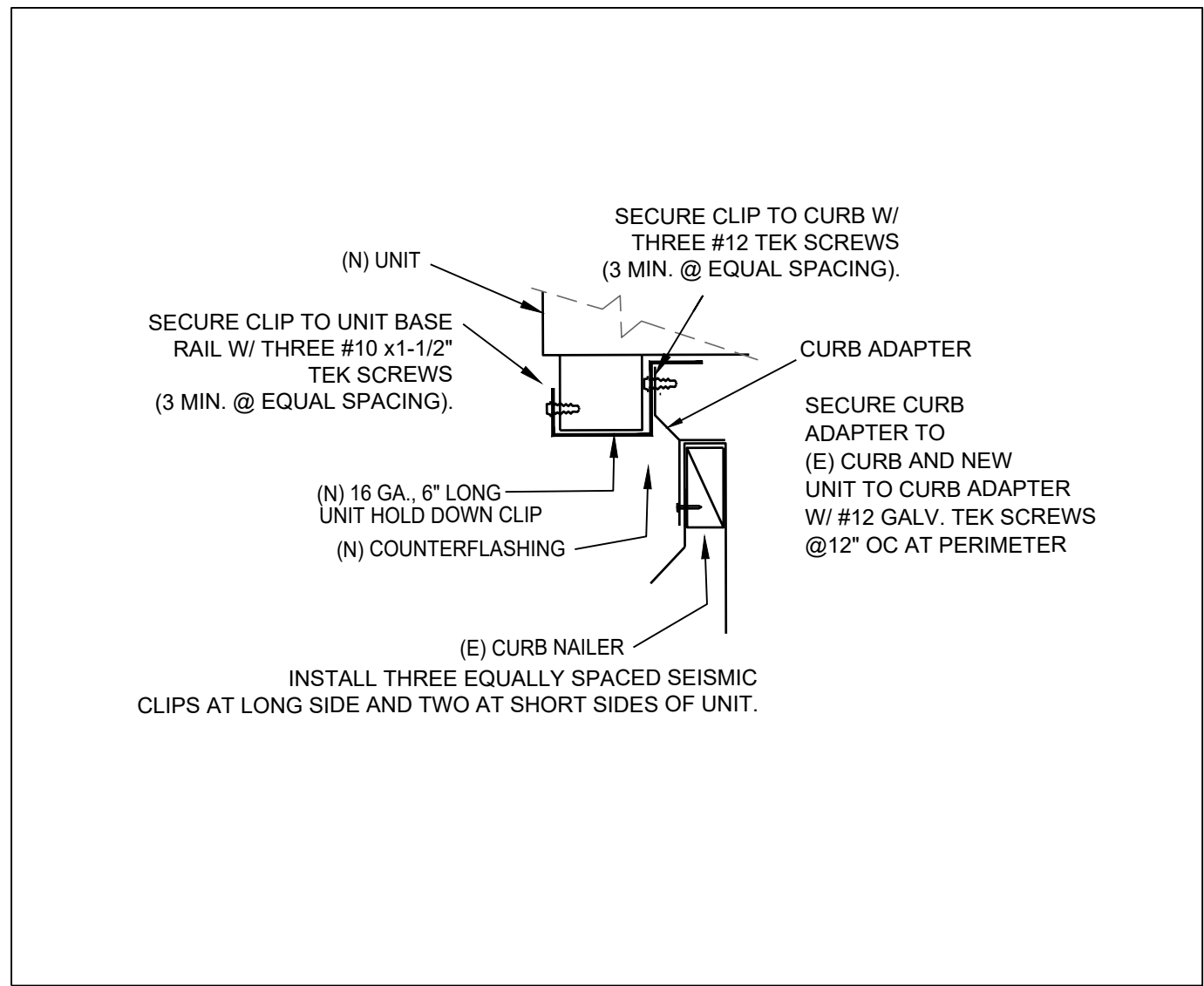


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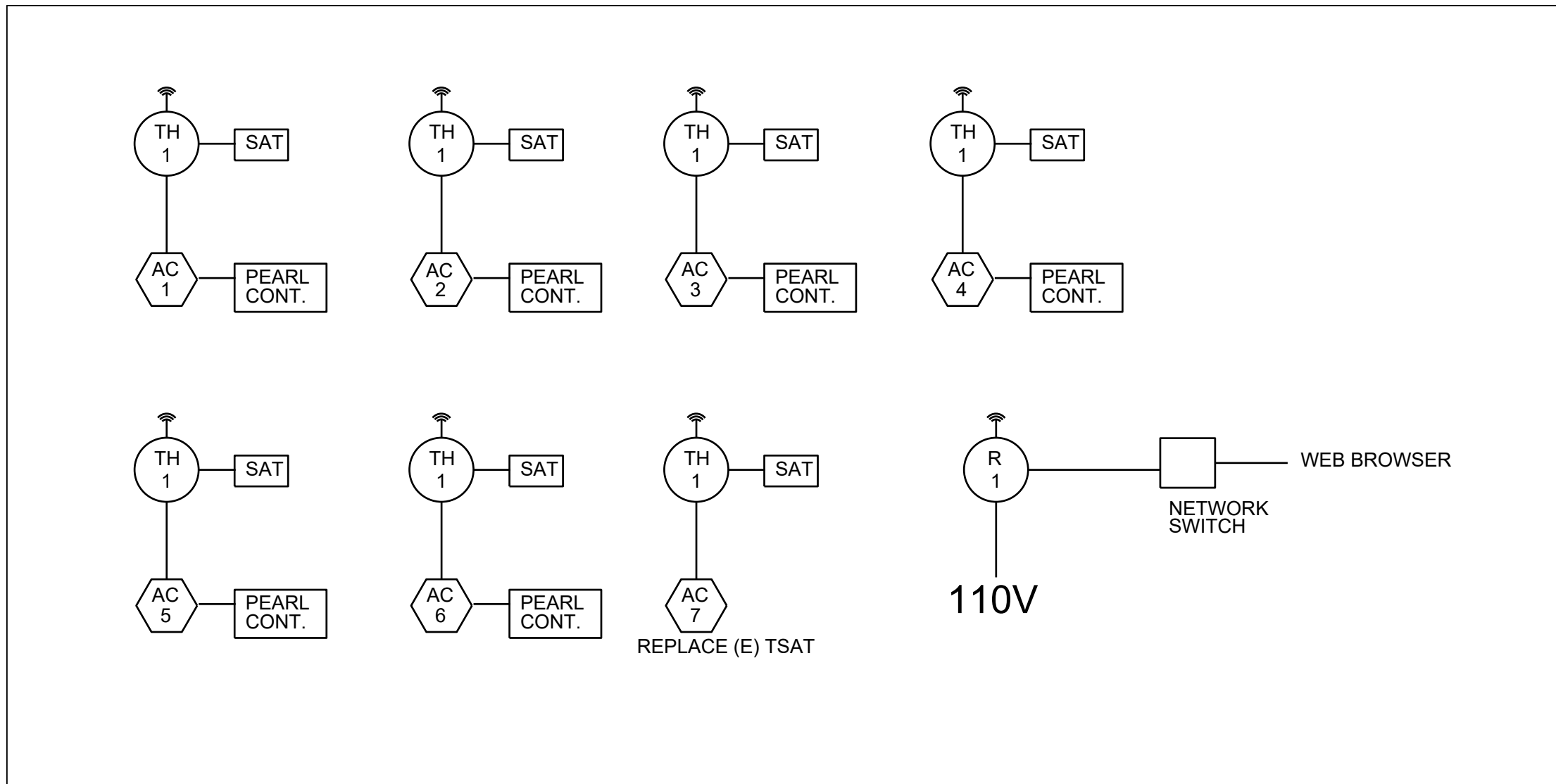
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DATE: 8-03-2023 SCALE: AS NOTED	
PROJECT NUMBER:	

EQUIPMENT
SCHEDULES

DRAWING
NUMBER : M1.1

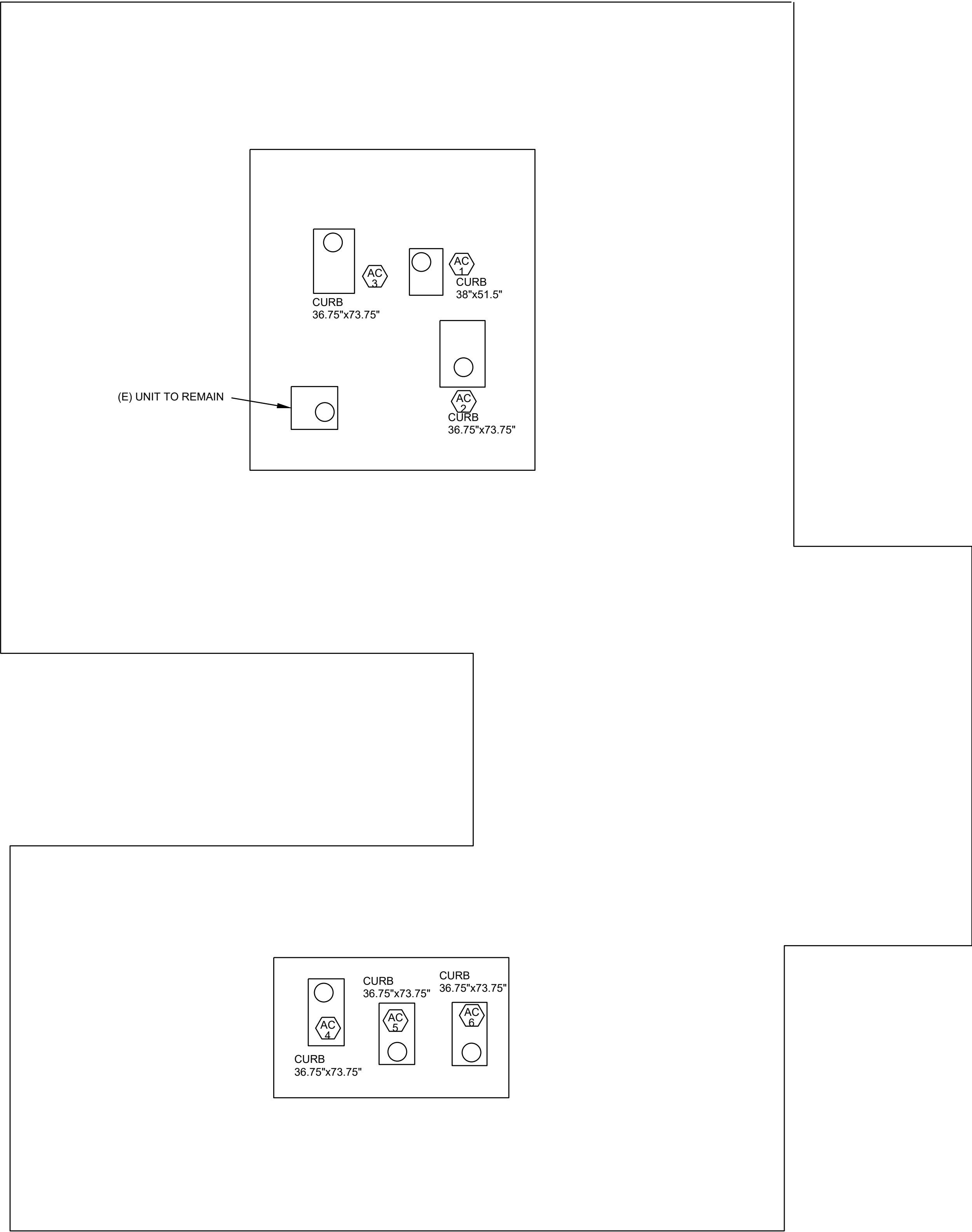


2
M2.0 CURB ADAPTER
NO SCALE



3
M2.0 CONTROLS TOPOLOGY
NO SCALE

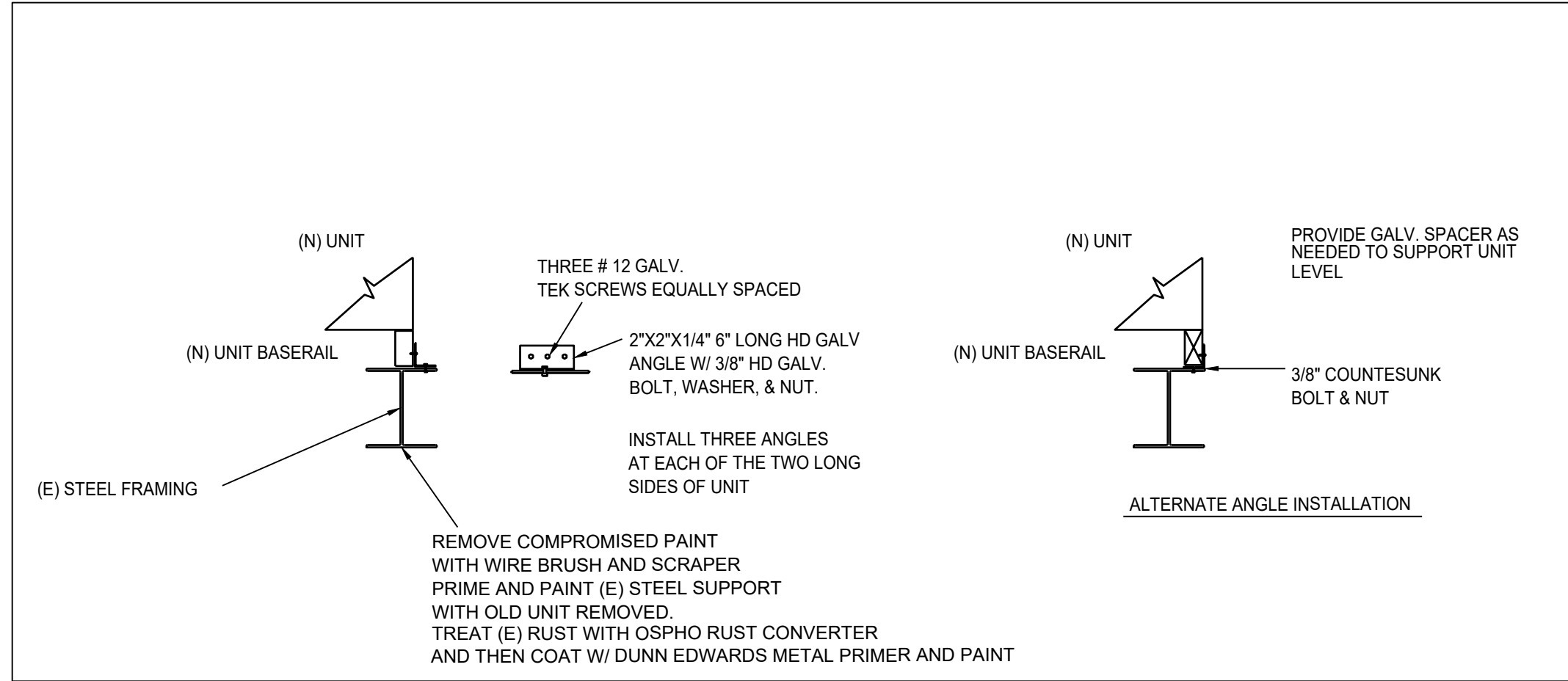
- NOTES
1. AT AC-1 REPLACE EXISTING BREAKER WITH SINGLE PHASE TWO POLE 30 AMP. INSTALL NEW #10 90 DEG. C WIRE AND CONNECT TO (N) DISCONNECT. RELABEL PANEL.
 2. SCHEDULE
 3. PROVIDE CURB ADAPTERS FOR ALL UNITS
 4. INSTALL NEW SQUARE D DISCONNECT WITH BUSSMAN FUSES, NEMA 3R
 5. PROVIDE NEW WEATHERTIGHT CONDUIT TO DISCONNECT AND TO UNIT WITH 10 GA. 90 DEG C WIRE.
 6. PROVIDE NEW WEATHERTIGHT CONDUIT TO DISCONNECT AND TO UNIT WITH 10 GA. 90 DEG C WIRE.
 7. PROVIDE NEW CONDENSATE PIPING WITH P-TRAP ASSEMBLY. SLOPE DRAIN @ 1/8\"/>



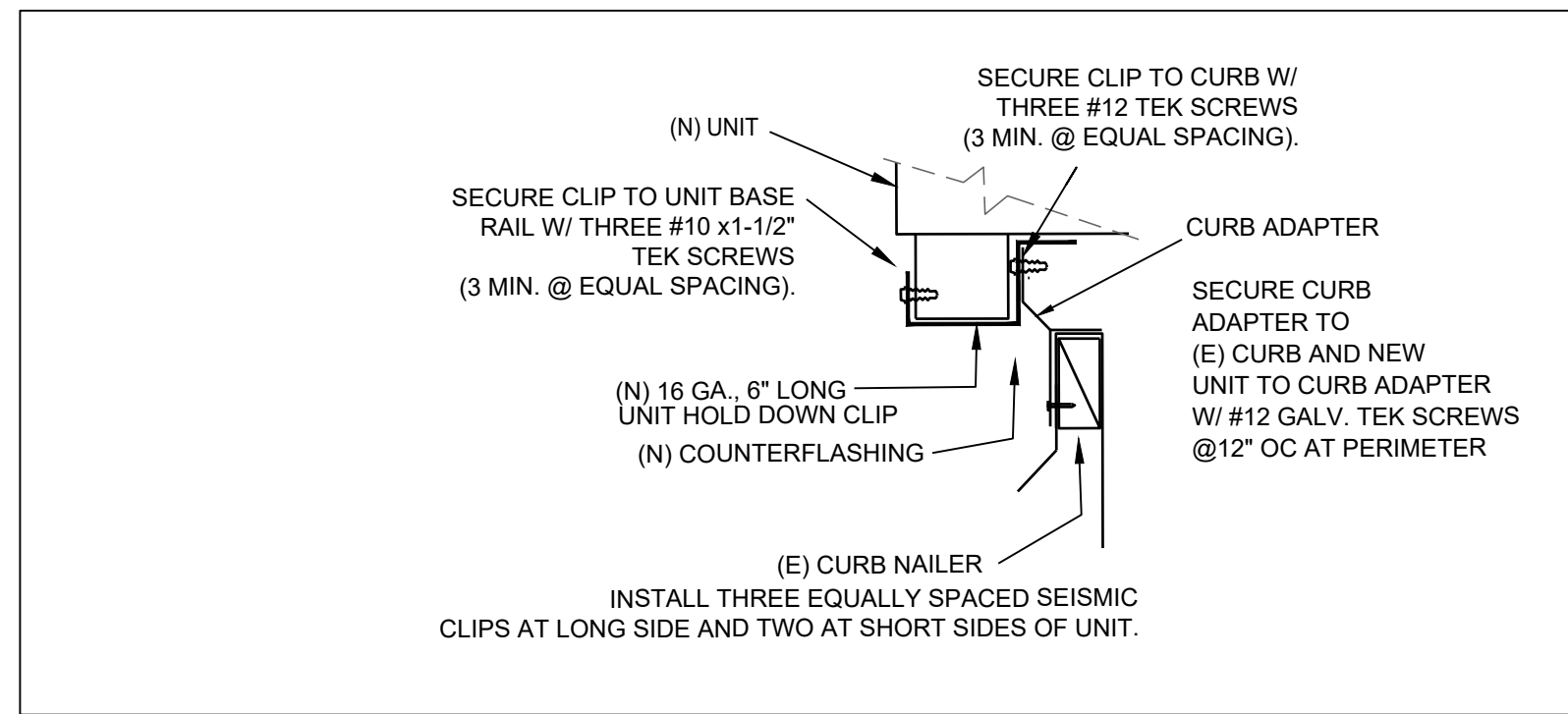
1
M2.0 HVAC REPLACEMENT
1\"/>

REVISIONS				DESCRIPTION
NO	DATE	BY		

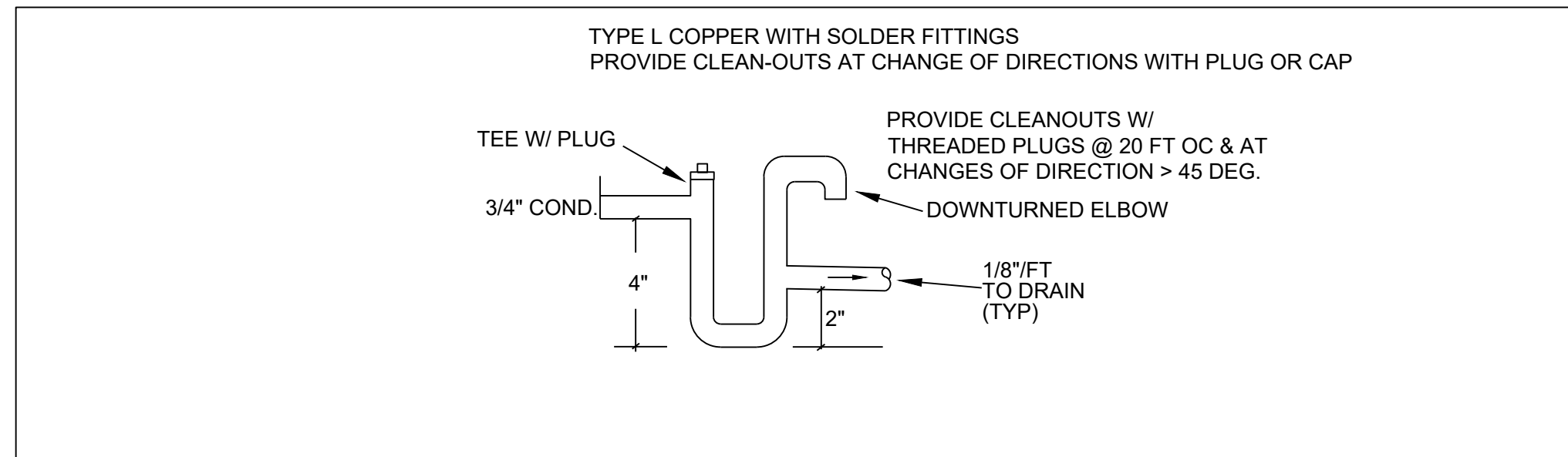
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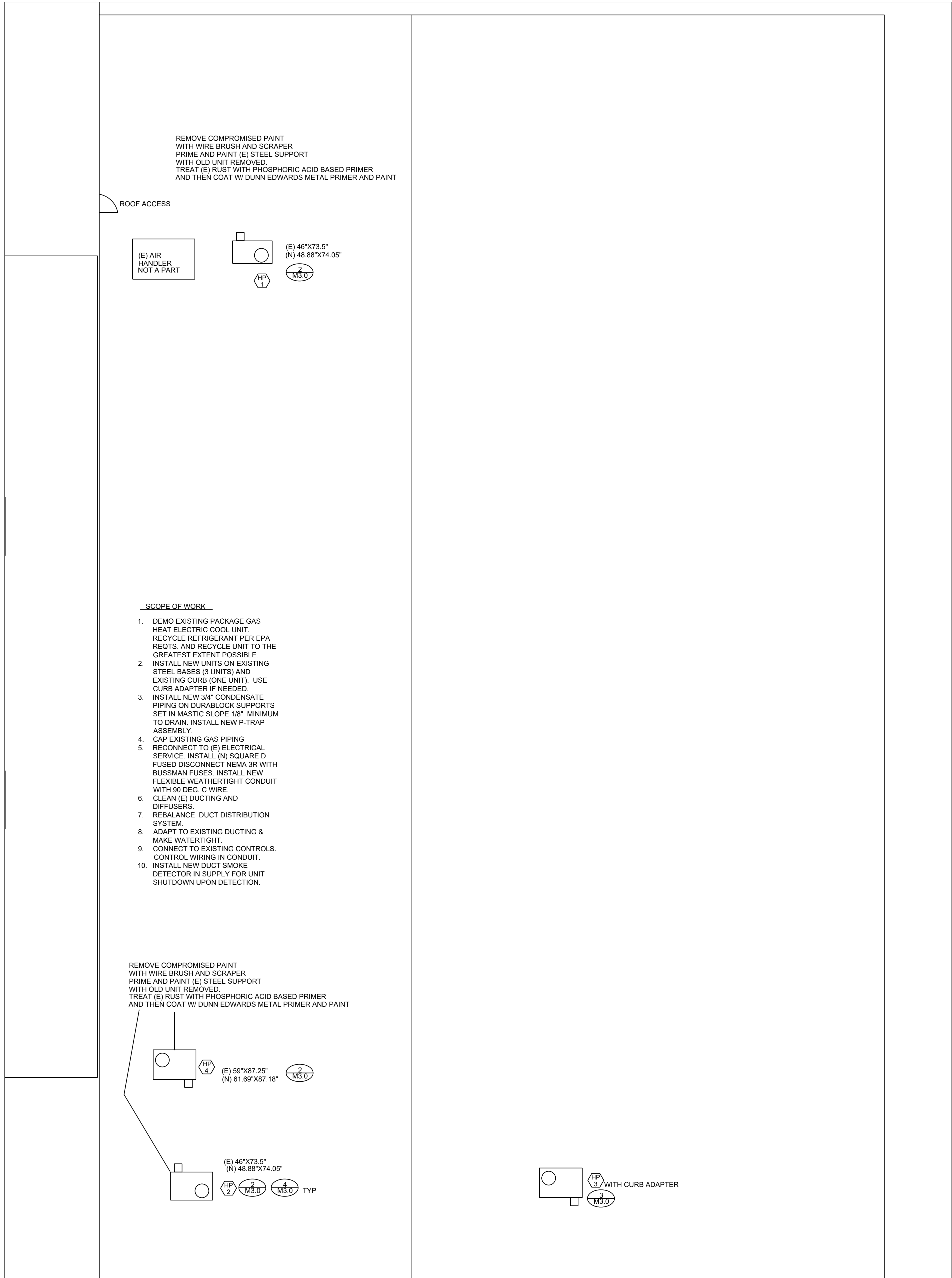
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M3.0 UNIT ANCHORAGE
NO SCALE



3
M3.0 UNIT ANCHORAGE
NO SCALE



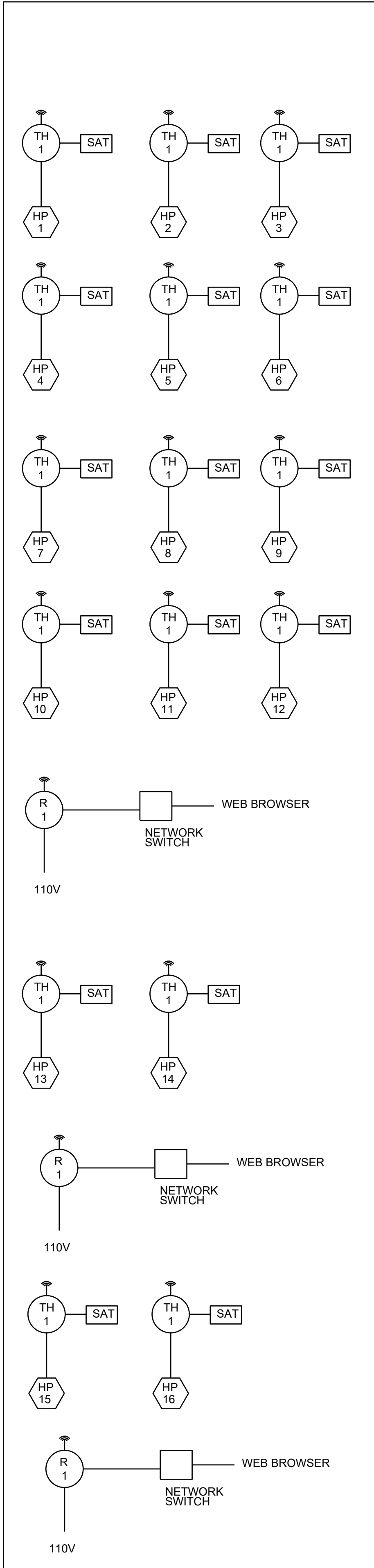
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M3.0 CONDENSATE PIPING DETAIL
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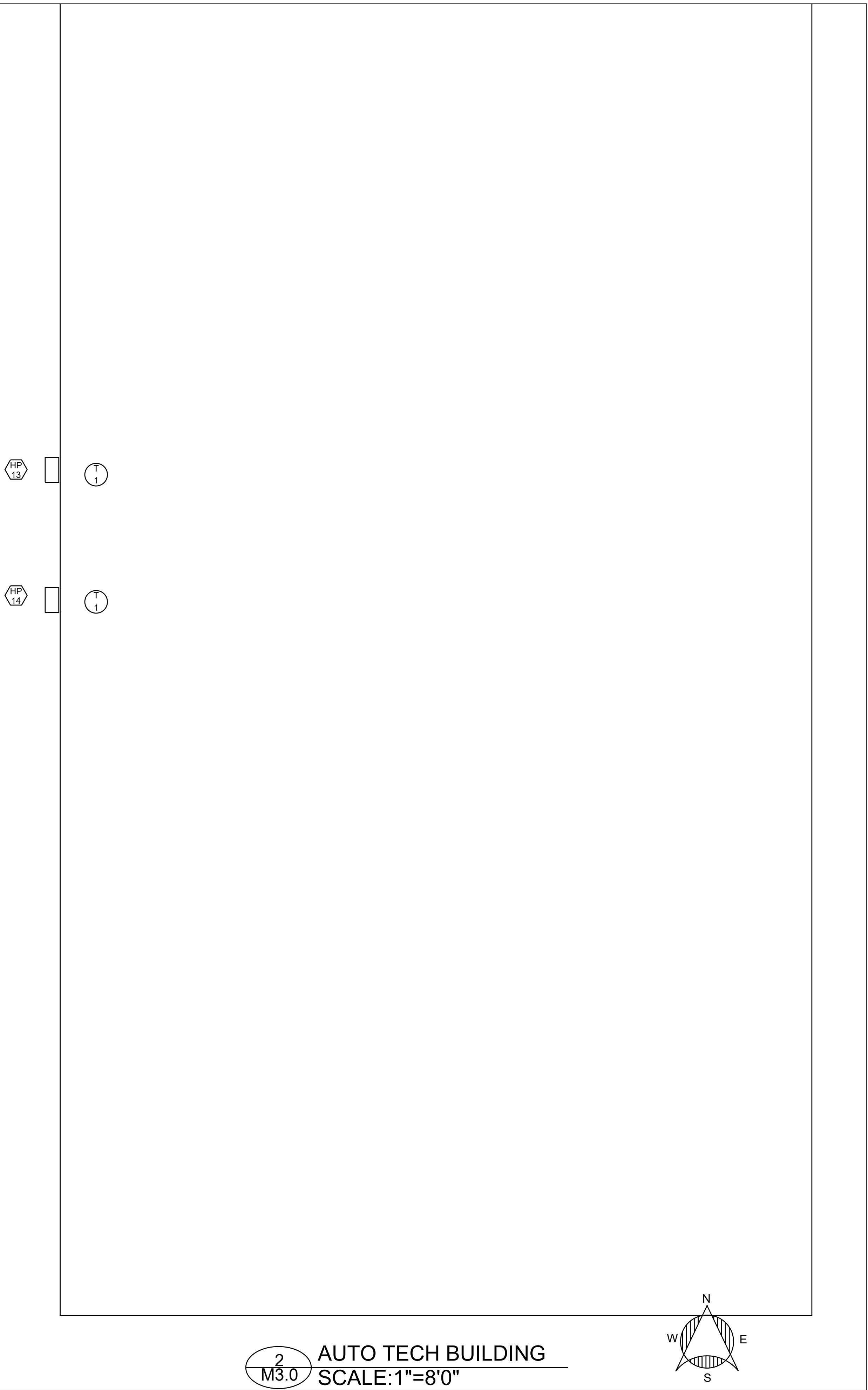
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M3.0 GYM EASTERN ROOF MECHANICAL PLAN
SCALE: 1"=8'0"

REVISIONS					DESCRIPTION
NO	DATE	BY			

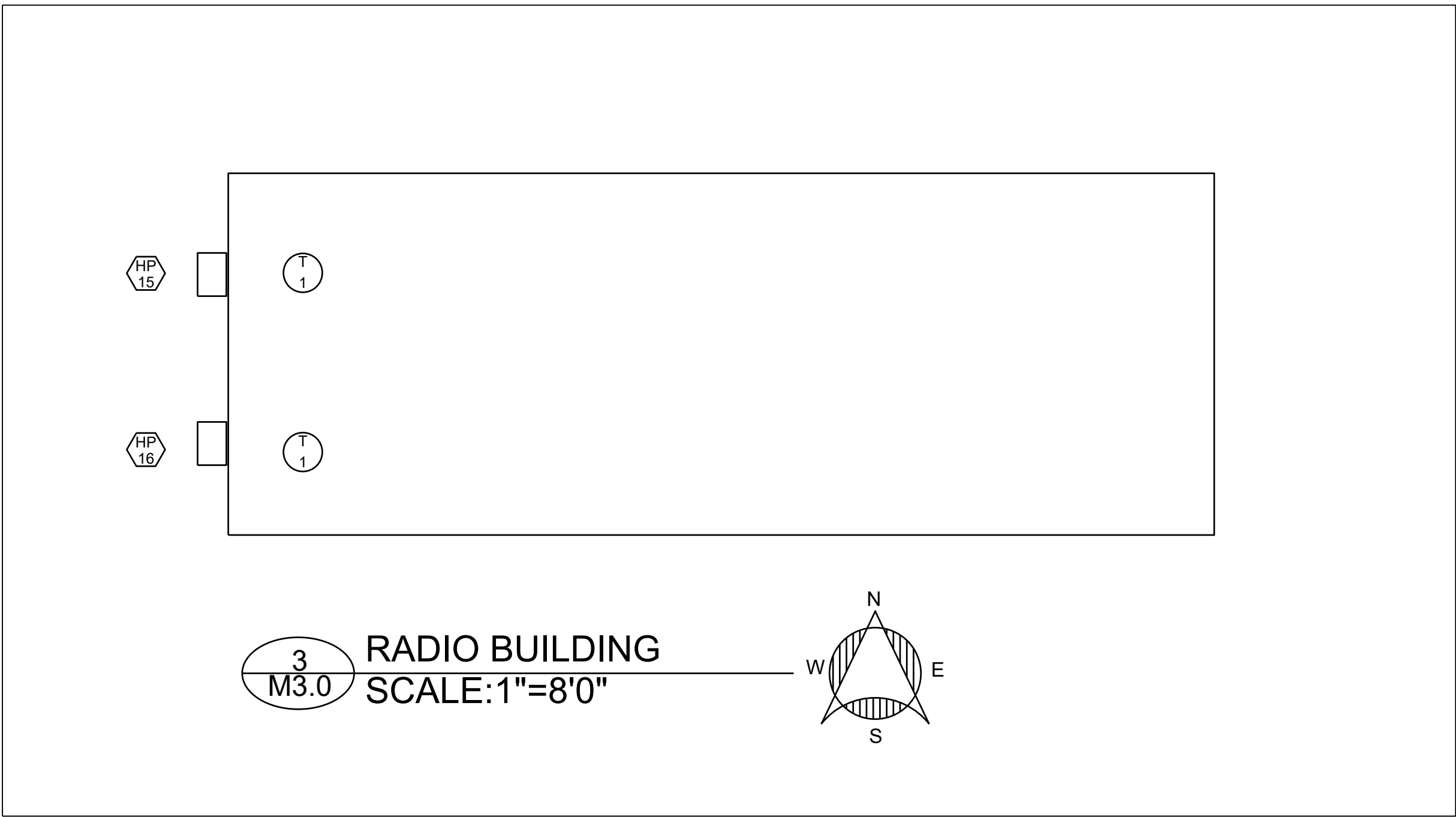
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DATE: 8-03-2023	SCALE: AS NOTED
PROJECT NUMBER:	



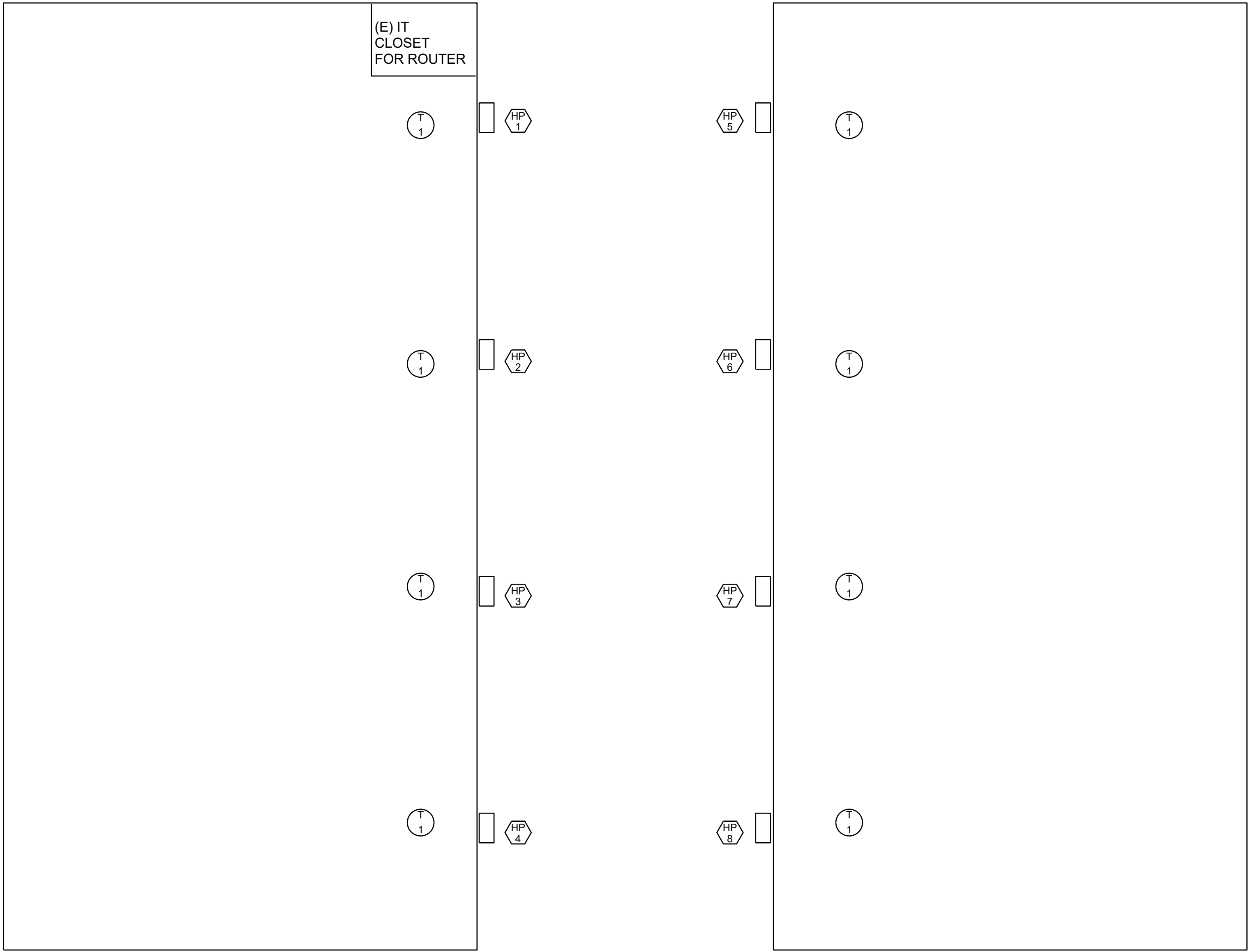
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M3.0 CONTROLS



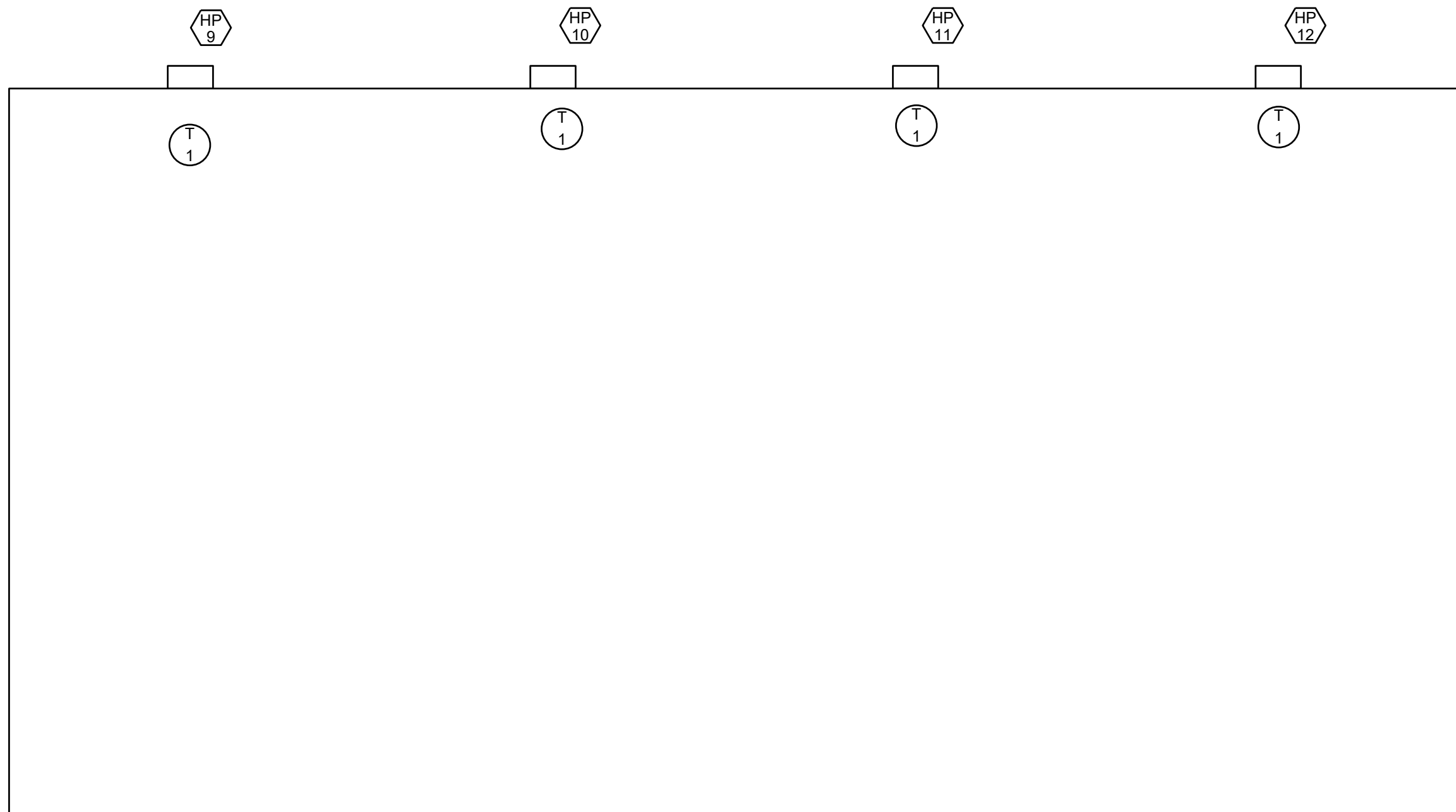
2
M3.0 AUTO TECH BUILDING
SCALE:1"=8'0"



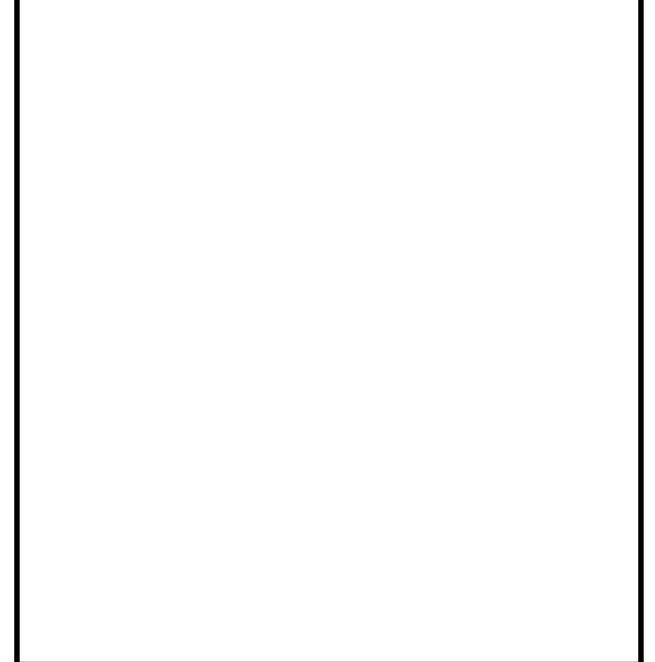
3
M3.0 RADIO BUILDING
SCALE:1"=8'0"



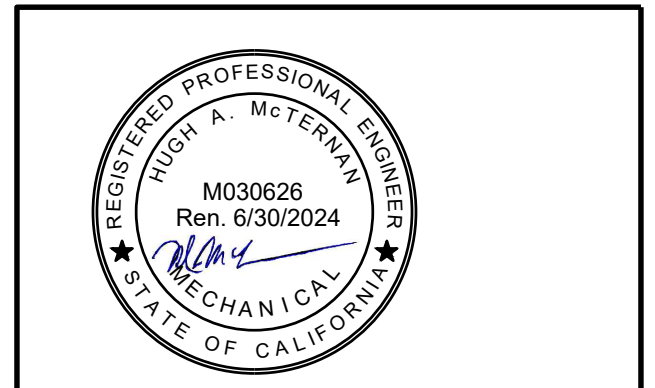
1
M3.0 MIDDLE HIGH SCHOOL
SCALE:1"=8'0"



- SCOPE OF WORK
1. DEMO (E) WALL UNITS AND RECYCLE REFRIGERANT PER EPA GUIDELINES
 2. DISPOSE OF OLD MARVAIR AND BARD UNITS. RECYCLE TO THE GREATEST EXTENT POSSIBLE.
 3. INSTALL NEW UNITS WITH ALL NEEDED HARDWARE. RECONNECT TO EXISTING ELECTRICAL WITH NEW WEATHER-TIGHT CONDUIT AND WIRE. RE-USE EXISTING DISCONNECTS.
 4. RE-CONNECT TO (E) DUCTING. CLEAN DUCTING AND DIFFUSERS PER SPECIFICATIONS
 5. BALANCE ECONOMIZER TO MINIMUM POSITION OF 230 CFM.
 6. CALIBRATE AND VERIFY FUNCTION OF CO2 SENSOR CONTROL.
 7. INSTALL NEW PELICAN THERMOSTATS AND REPEATERS. BUDGET FOR THREE REPEATERS WITH POWER.
 8. INSTALL THREE ROUTERS AT IT CONNECTIONS WITH PATCH CABLE AND POWER.
 9. SET-UP PELICAN SYSTEM FOR WEB ACCESS. COORDINATE WITH CAMPUS I.T. DEPT.



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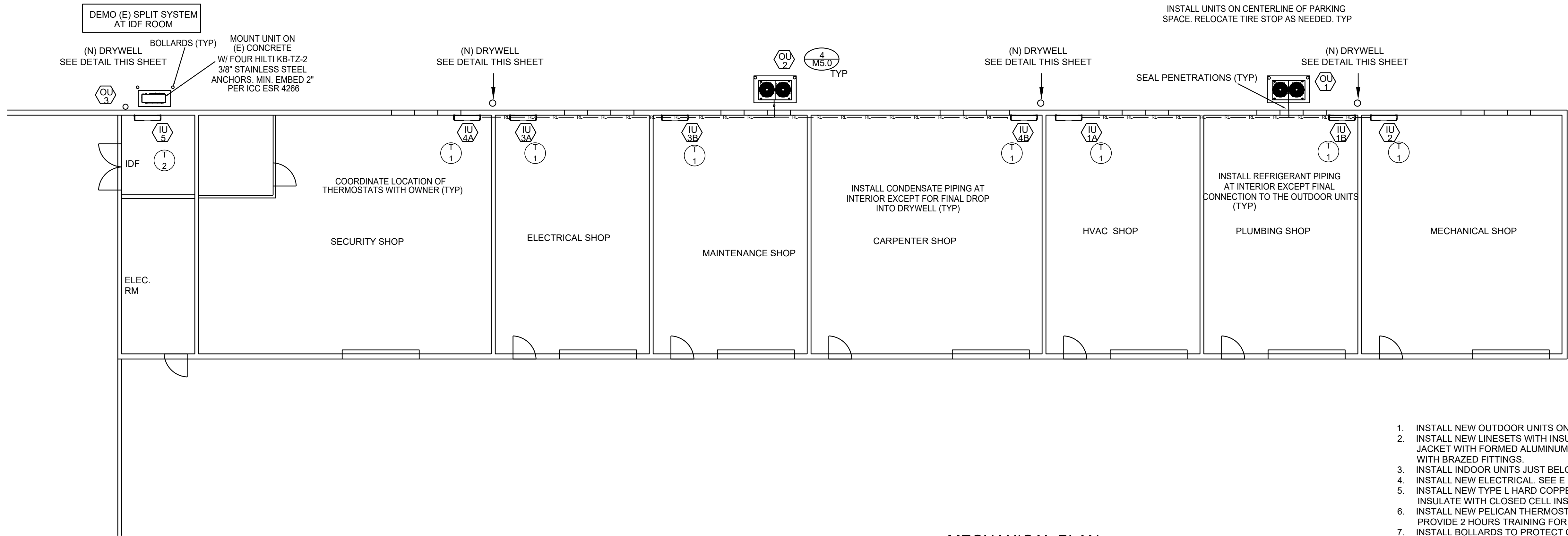
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
OXNARD COLLEGE
HVAC EQUIPMENT RETROFIT
4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

REVISIONS				DESCRIPTION
NO	DATE	BY		

DRAWN: HM CHECKED: PW
DATE: 8-03-2023 SCALE: AS NOTED
PROJECT NUMBER:

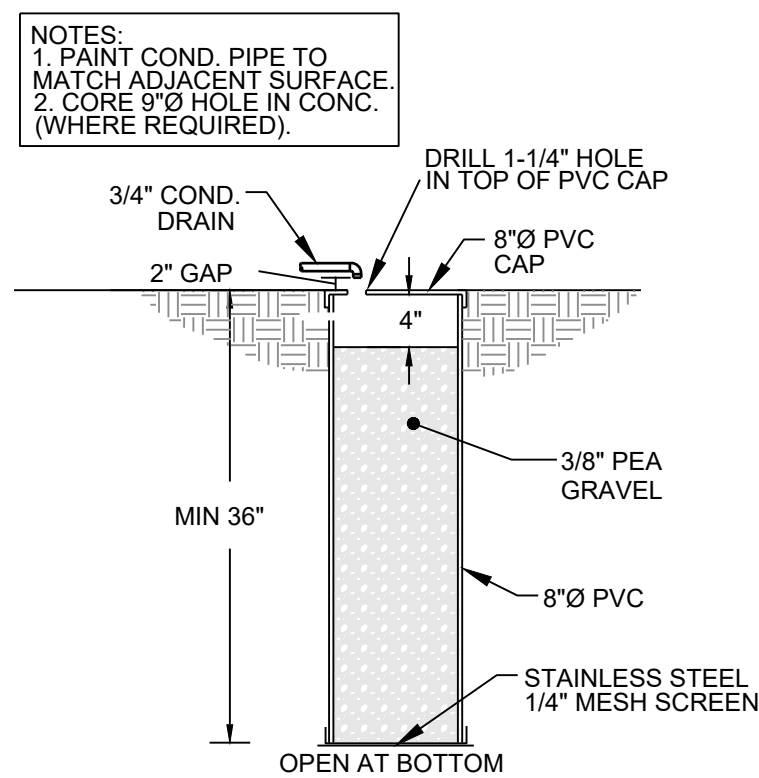
WALL MOUNTED
HVAC PLAN

DRAWING NUMBER : M4.0

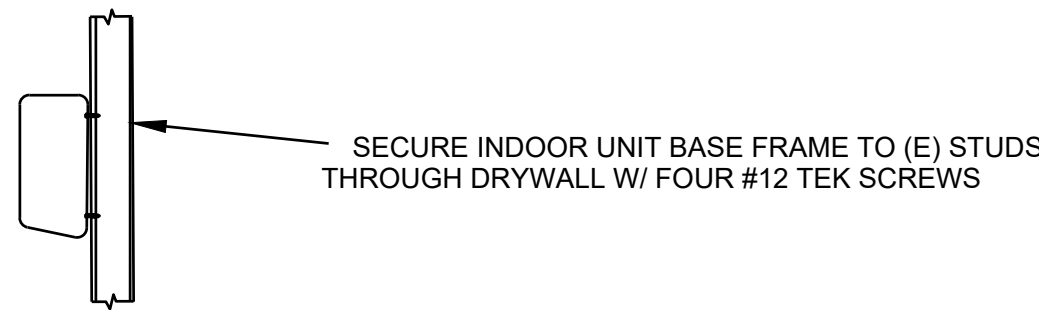


1 MECHANICAL PLAN
SCALE: 1/8"=1'-0"

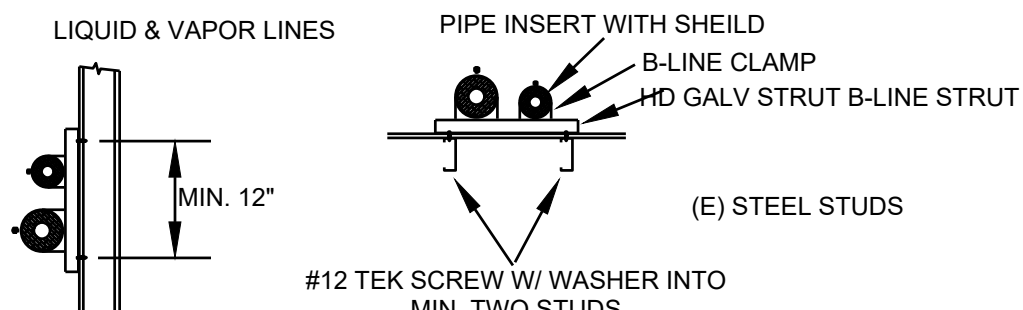
- SCOPE OF WORK
1. INSTALL NEW OUTDOOR UNITS ON (N) CONCRETE PADS
 2. INSTALL NEW LINESETS WITH INSULATION. EXTERIOR LINESETS SHALL BE INSULATED AND JACKETED WITH ALUMINUM JACKET WITH FORMED ALUMINUM FITTINGS. SECURE TO STRUCTURE. REFRIGERANT PIPING SHALL BE HARD ACR COPPER WITH BRAZED FITTINGS.
 3. INSTALL INDOOR UNITS JUST BELOW WINDOW LINE
 4. INSTALL NEW ELECTRICAL SEE E PLANS
 5. INSTALL NEW TYPE L HARD COPPER CONDENSATE PIPING WITH SOLDERED COPPER FITTINGS TO NEW DRYWELL. INSULATE WITH CLOSED CELL INSULATION AT INTERIOR AND PAINT TO MATCH ADJACENT SURFACE AT EXTERIOR.
 6. INSTALL NEW PELICAN THERMOSTATS WITH WIRING AND ROUTER AT COMM ROOM. CONNECT TO CAMPUS NETWORK. PROVIDE 2 HOURS TRAINING FOR USE OF SYSTEMS.
 7. INSTALL BOLLARDS TO PROTECT OUTDOOR UNITS.
 8. DEMO EXISTING SPLIT SYSTEM AT IDF ROOM



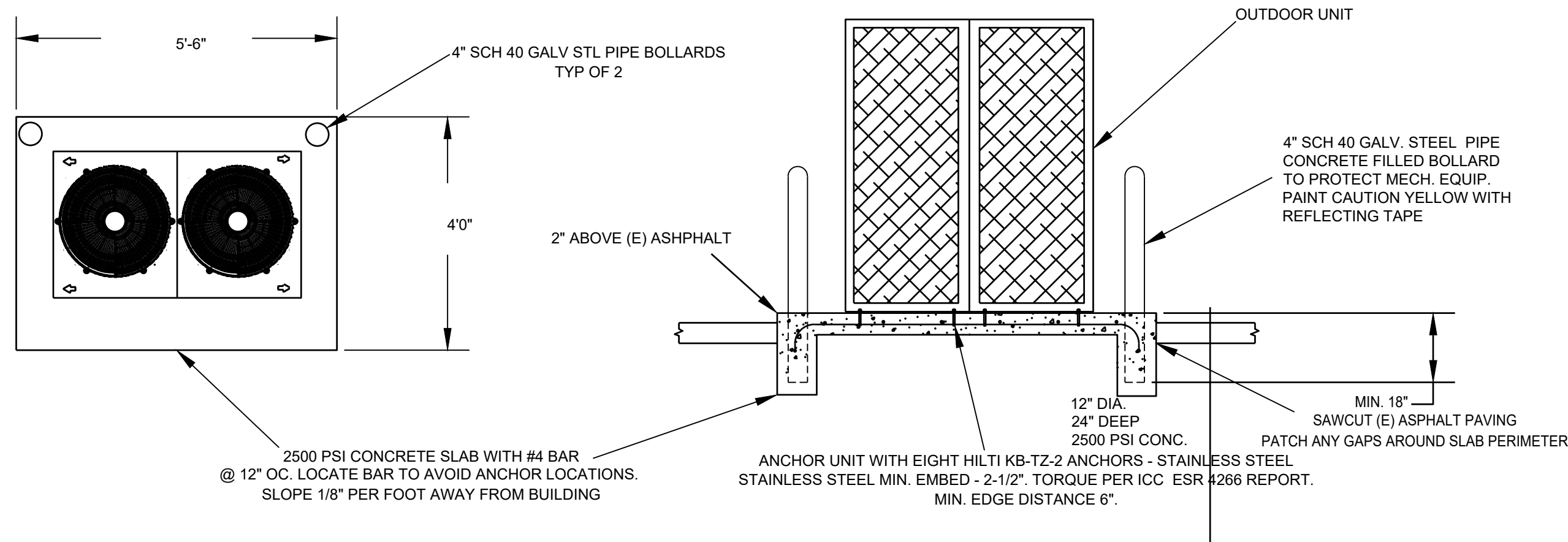
2 DRYWELL DETAIL
NO SCALE



3 INDOOR UNIT DETAIL
NO SCALE



5 PIPE SUPPORT (TYP)
NO SCALE



4 OUTDOOR UNIT DETAIL
NO SCALE

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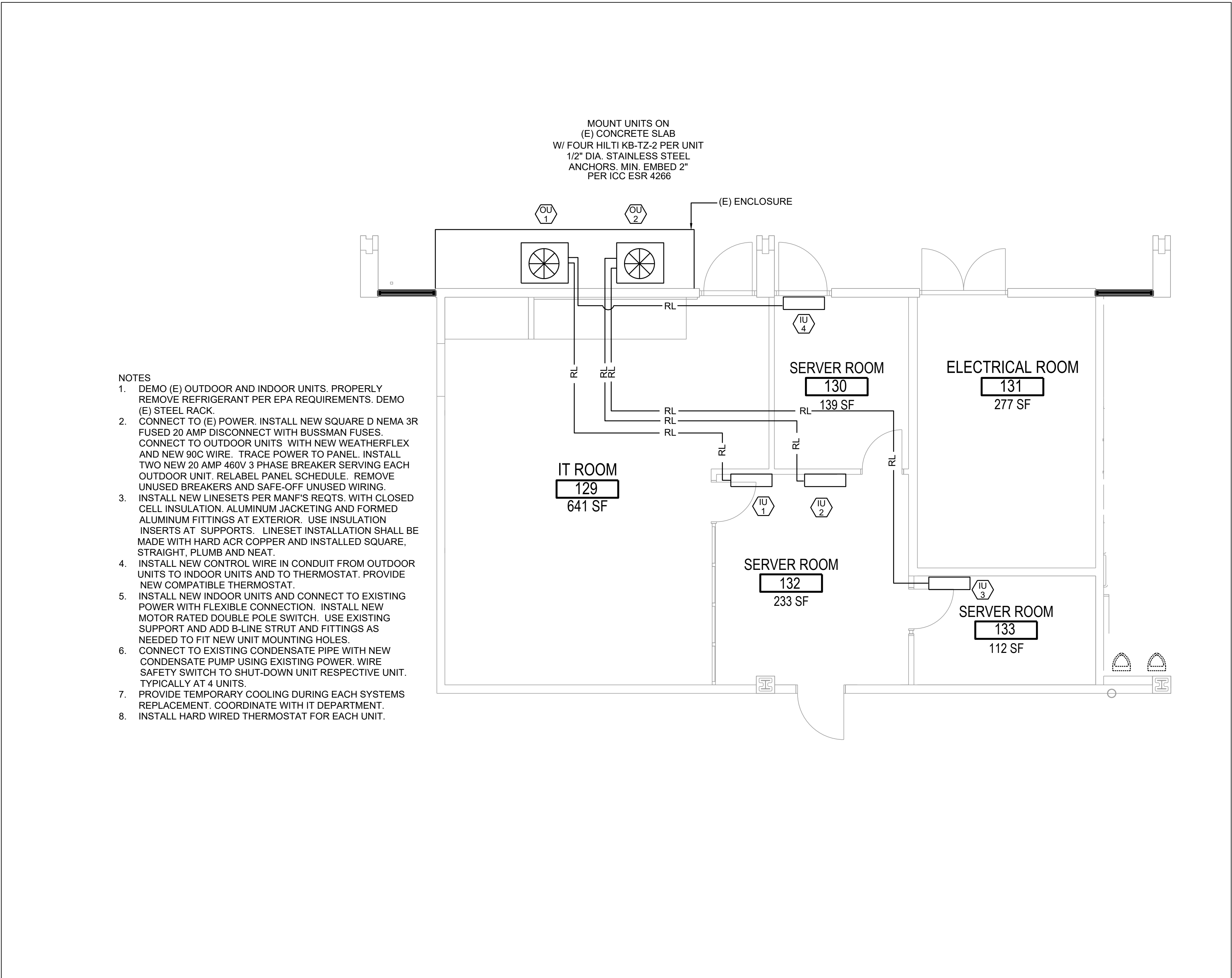
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
OXNARD COLLEGE
HVAC EQUIPMENT RETROFIT
4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

					DESCRIPTION
NO	DATE	BY			

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PROJECT NUMBER:	

MAINTENANCE
& OPERATION
HVAC PLAN

DRAWING
NUMBER : M5.0



1
M6.0 HVAC REPLACEMENT
1'=4'0"

AE Group
Mechanical Engineers
838 East Front Street
Ventura, California 93001-2925
(805) 653-1722
hugh@aegroupme.com



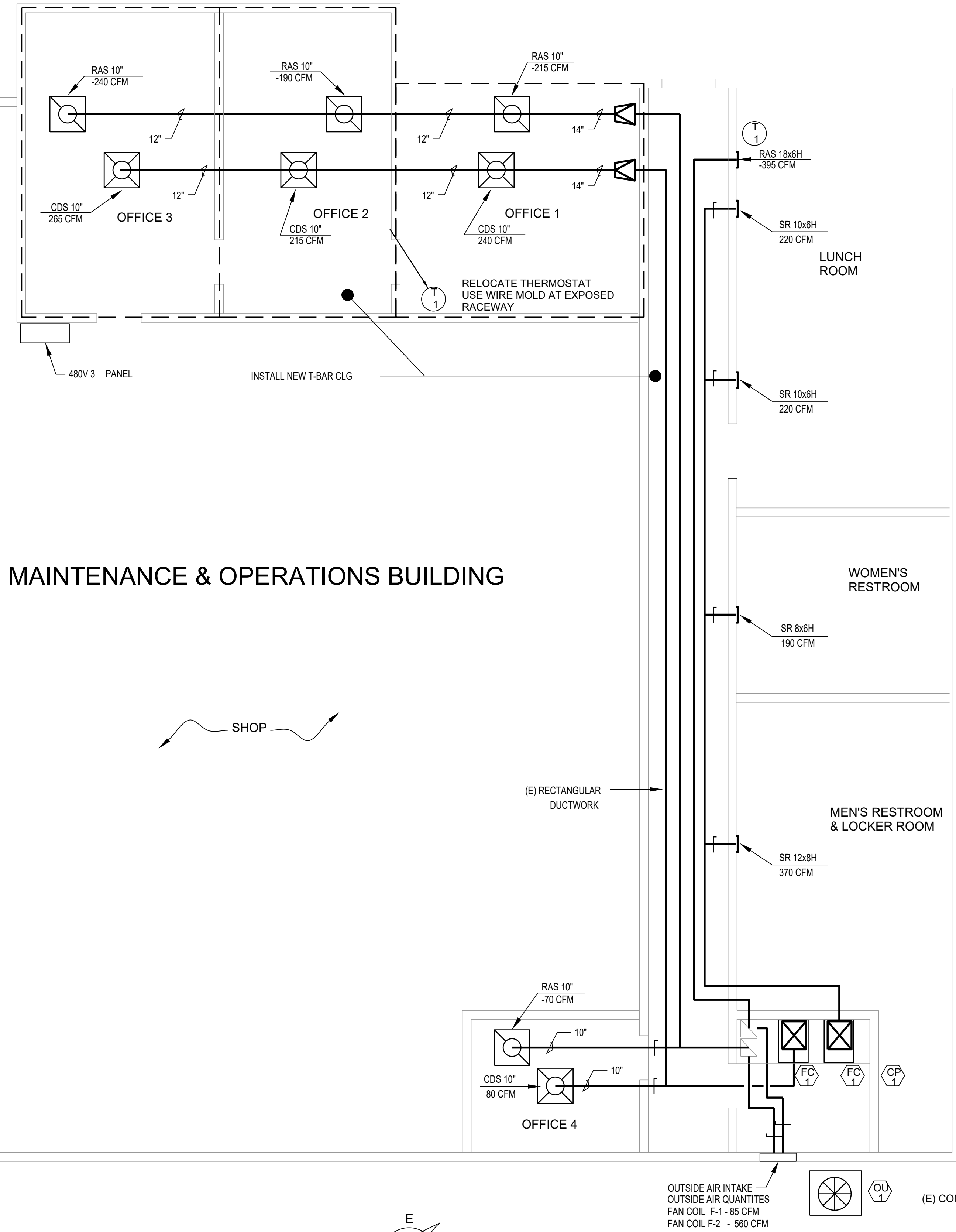
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
OXNARD COLLEGE
HVAC EQUIPMENT RETROFIT
4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

REVISIONS				
NO	DATE	BY	DESCRIPTION	

DRAWN: HM	CHECKED: PW
DATE: 8-03-2023	SCALE: AS NOTED
PROJECT NUMBER:	

CONDOR HALL
SERVER AREA
HVAC REPLACEMENT

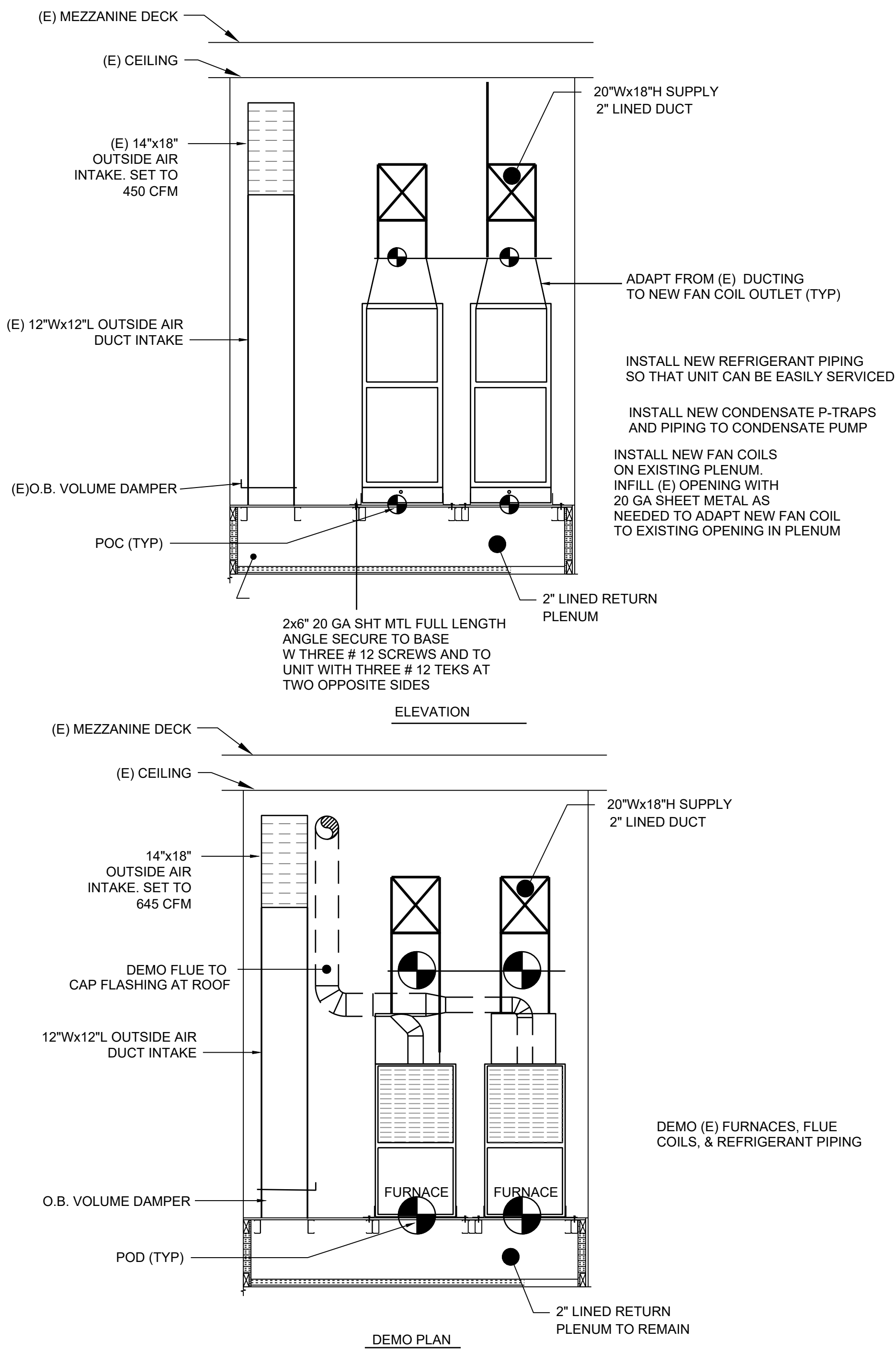
DRAWING
NUMBER : M6.0



MECHANICAL PLAN

- SCOPE OF WORK
1. DEMO TWO (E) CONDENSING UNITS & TWO FURNACES
 2. INSTALL TWO (N) FAN COILS WITH 2" FILTER BOX WITH MERV 13 FILTERS ON EXISTING PLENUM. SECURE FAN COILS AND FILTER BOXES TO PLENUM
 3. INSTALL NEW OUTDOOR HEAT PUMP WITH NEW REFRIGERANT PIPING TO (N) FAN COILS. INSULATE ALL PIPE AND AT EXTERIOR COVER WITH ALUMINUM JACKETING WITH FORMED ALUMINUM ELBOWS.
 4. INSTALL (N) 20 AMP THREE POLE BREAKER WITH NEW #10 90 DEG C WIRE IN CONDUIT TO NEW CONDENSING UNIT. INSTALL NEW FUSED 20 AMP DISCONNECT NEMA 3R AND NEW WEATHERFLEX CONDUIT TO OUTDOOR UNIT.
 5. ANCHOR OUTDOOR UNIT WITH FOUR HILTI KB-T22 STAINLESS STEEL ANCHORS MIN. EMBED 2-1/2" PER ICC ESR 4266
 6. INSTALL NEW 15 AMPS 2 POLE BREAKER TO SERVE BOTH FAN COILS WITH TWO 2 POLE SWITCHES IN 4S BOX WITH FLEX CONDUIT TO NEW FAN COILS.
 7. AIR BALANCE SYSTEM TO QUANTITIES SHOWN ON PLANS
 8. CLEAN (E) DUCTING & DIFFUSERS
 9. INSTALL NEW CONDENSATE PUMP TO SERVE BOTH FAN COILS. WIRE FOR FAN COILS SHUTDOWN. CONNECT TO (E) CONDENSATE
 10. INSTALL NEW PELICAN TC-3 THERMOSTAT WITH PELICAN ROUTER AT NETWORK SWITCH. CONNECT TO CAMPUS NETWORK.

ALL DUCTING AND AIR DISTRIBUTION ELEMENTS ARE EXISTING TO REMAIN



1
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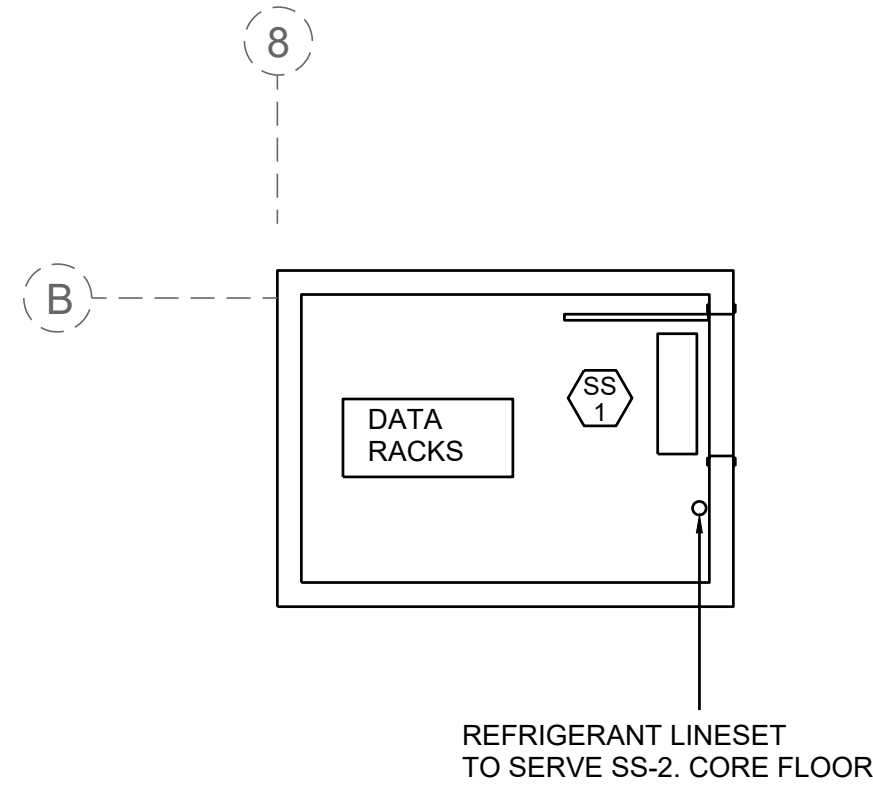
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4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

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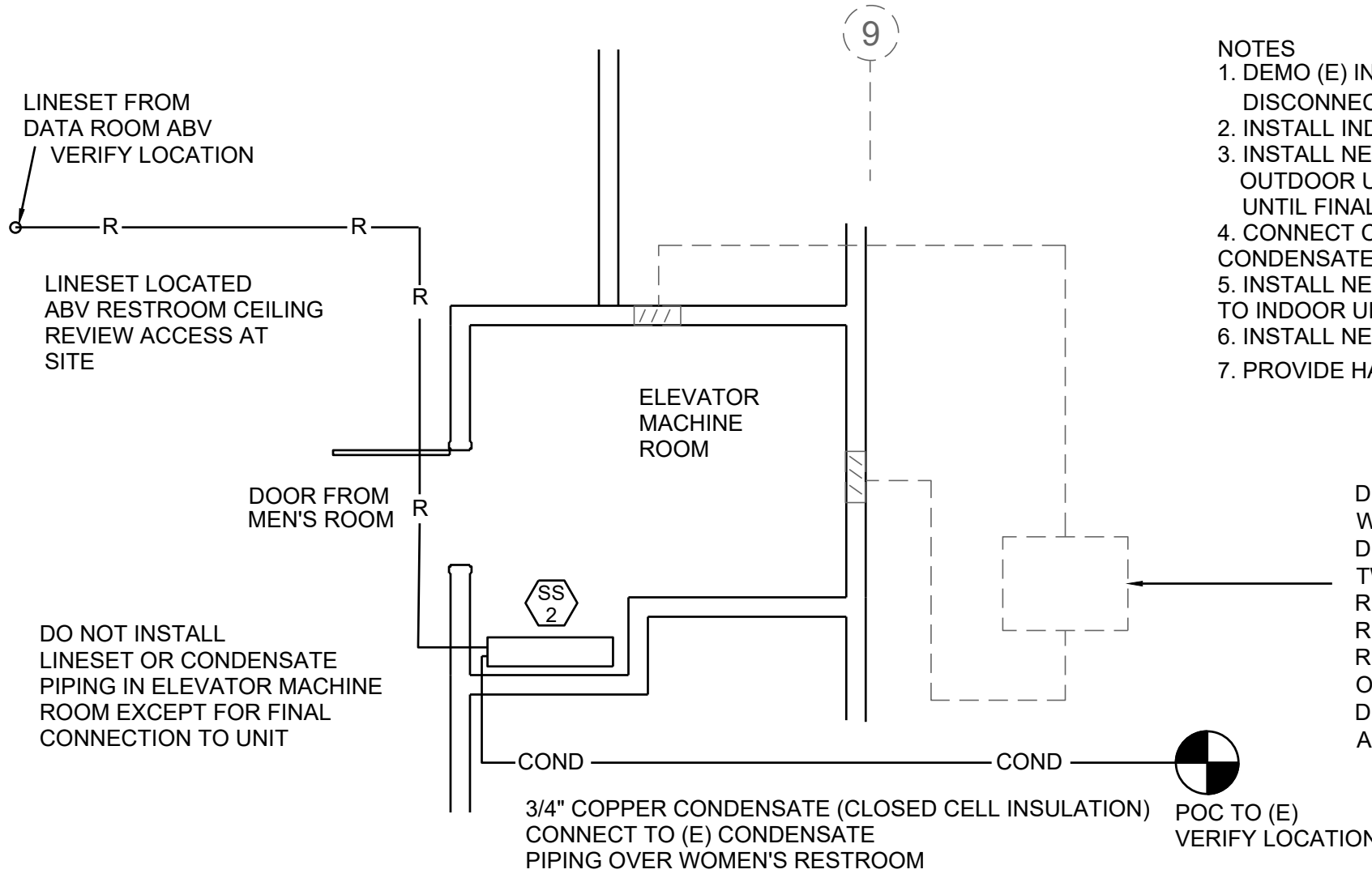
CUSTODIAL
WAREHOUSE
HVAC REPLACEMENT

DRAWING
NUMBER : M7.0



- NOTES
1. DEMO (E) INDOOR UNIT AND REFRIGERANT PIPING. DISCONNECT FROM EXISTING ELECTRICAL AND SAFE-OFF CONNECTION.
 2. INSTALL INDOOR UNIT ABOVE DOOR. SECURE TO STEEL STUDS WITH TEK SCREWS. VERIFY LOCATION
 3. INSTALL NEW REFRIGERANT LINESET FROM OUTDOOR UNIT TO INDOOR UNIT ABOVE CEILINGS UNTIL FINAL CONNECTION TO UNIT.
 4. CONNECT CONDENSATE PUMP OUTLET TO EXISTING CONDENSATE PIPING.
 5. INSTALL NEW POWER WIRING FROM OUTDOOR UNIT TO INDOOR UNIT IN CONDUIT.
 6. INSTALL NEW SHIELDED CONTROL WIRING FROM OUTDOOR UNIT TO INDOOR UNIT IN CONDUIT
 7. PROVIDE HARDWIRED THERMOSTAT.

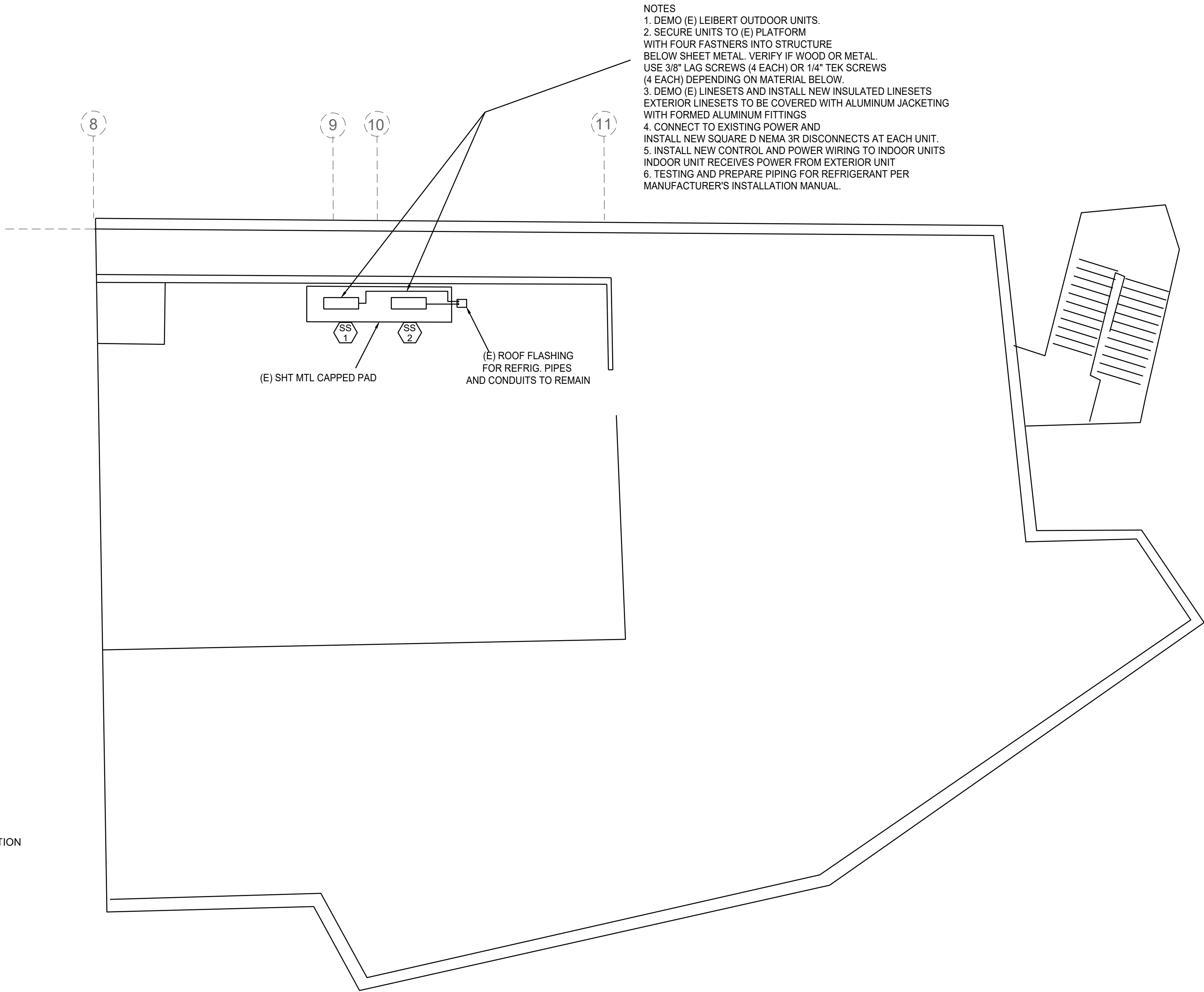
2
M8.0
MECHANICAL ROOF PLAN
1'=4'0"



- NOTES
1. DEMO (E) INDOOR UNIT AND REFRIGERANT PIPING. DISCONNECT FROM EXISTING ELECTRICAL AND SAFE-OFF CONNECTION.
 2. INSTALL INDOOR UNIT ABOVE DOOR. SECURE TO STEEL STUDS WITH TEK SCREWS. VERIFY LOCATION
 3. INSTALL NEW REFRIGERANT LINESET FROM OUTDOOR UNIT TO INDOOR UNIT ABOVE CEILINGS UNTIL FINAL CONNECTION TO UNIT.
 4. CONNECT CONDENSATE PUMP OUTLET TO EXISTING CONDENSATE PIPING.
 5. INSTALL NEW POWER WIRING FROM OUTDOOR UNIT TO INDOOR UNIT IN CONDUIT.
 6. INSTALL NEW SHIELDED CONTROL WIRING FROM OUTDOOR UNIT TO INDOOR UNIT IN CONDUIT
 7. PROVIDE HARDWIRED THERMOSTAT.

DEMO (E) LEIBERT FAN COIL OVER WOMEN'S RESTROOM DEMO (E) DUCTING REMOVE (E) GRILLES AND TWO FIRE SMOKE DAMPERS. REVIEW LIMITED ACCESS AT SITE. REPROGRAM FIRE ALARM FOR REMOVAL OF DEVICES PATCH OPENINGS WITH TYPE X GYMSUM DRYWALL. LEVEL 3 FINISH PRIME AND PAINT TO MATCH

3
M8.0
MECHANICAL ROOF PLAN
1'=4'0"



- NOTES
1. DEMO (E) LEIBERT OUTDOOR UNITS.
 2. SECURE UNITS TO (E) PLATFORM WITH FOUR FASTNERS INTO STRUCTURE BELOW SHEET METAL. VERIFY IF WOOD OR METAL. USE 3/8" LAG SCREWS (4 EACH) OR 1/4" TEK SCREWS (4 EACH) DEPENDING ON MATERIAL BELOW.
 3. DEMO (E) LINESETS AND INSTALL NEW INSULATED LINESETS EXTERIOR LINESETS TO BE COVERED WITH ALUMINUM JACKETING WITH FORMED ALUMINUM FITTINGS
 4. CONNECT TO EXISTING POWER AND INSTALL NEW SQUARE D NEMA 3R DISCONNECTS AT EACH UNIT.
 5. INSTALL NEW CONTROL AND POWER WIRING TO INDOOR UNITS. INDOOR UNIT RECEIVES POWER FROM EXTERIOR UNIT
 6. TESTING AND PREPARE PIPING FOR REFRIGERANT PER MANUFACTURER'S INSTALLATION MANUAL.

1
M8.0
MECHANICAL ROOF PLAN
1'=8'0"



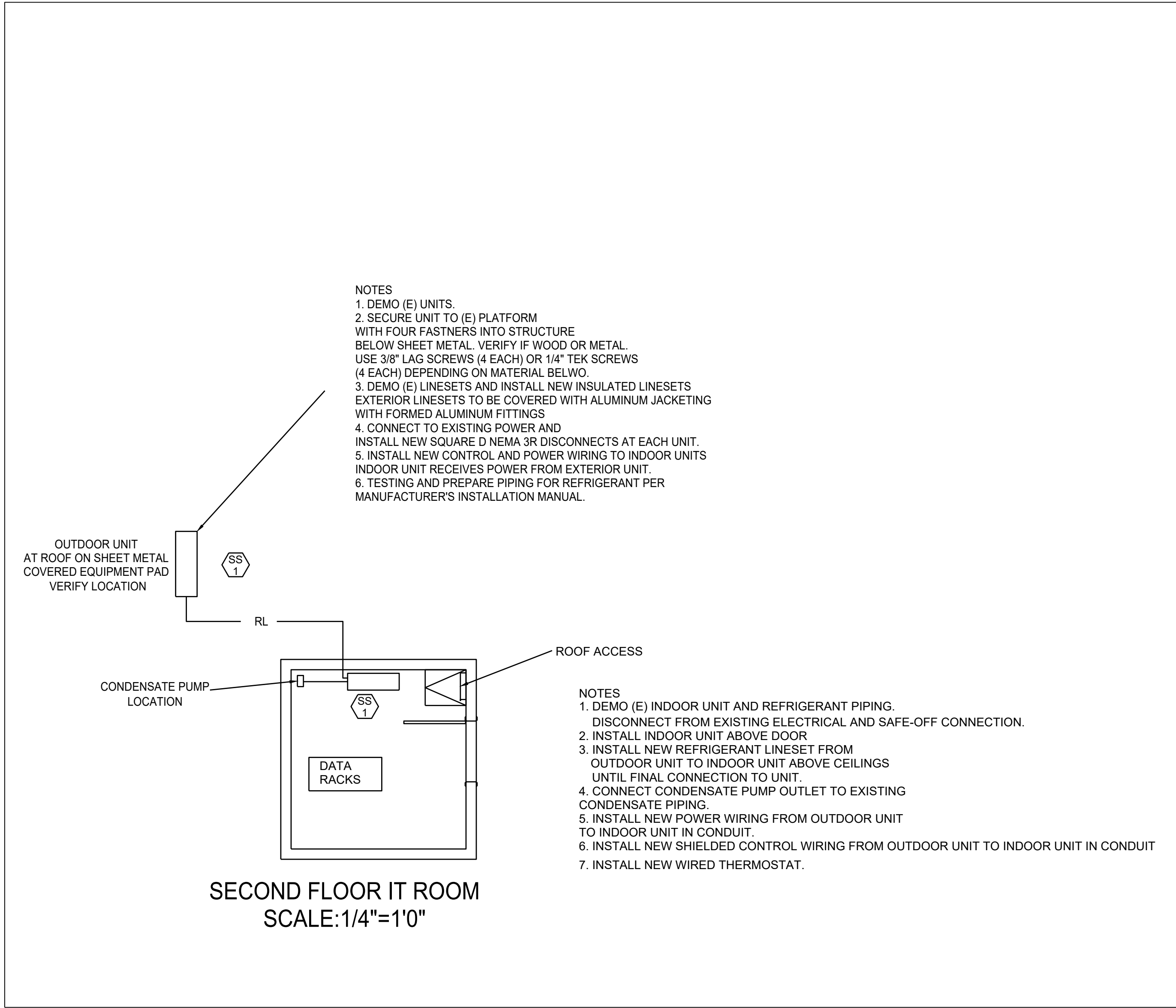
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4000 SOUTH ROSE AVENUE - OXNARD, CALIFORNIA

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STUDENT SERVICES
MACHINE & IT ROOM
HVAC REPLACEMENT

DRAWING
NUMBER : M8.0



1
M9.0

MECHANICAL PLAN
1"=4'0"

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OXNARD COLLEGE
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ADMINISTRATION
BUILDING IT ROOM
HVAC REPLACEMENT

DRAWING
NUMBER : M9.0