HANOVER ELEMENTARY SCHOOL

AREA 1 (SOUTH WING) NEW AIR CONDITIONING SYSTEM

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MERIDEN, CONNECTICUT 06451

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BEMIS ASSOCIATES LLC
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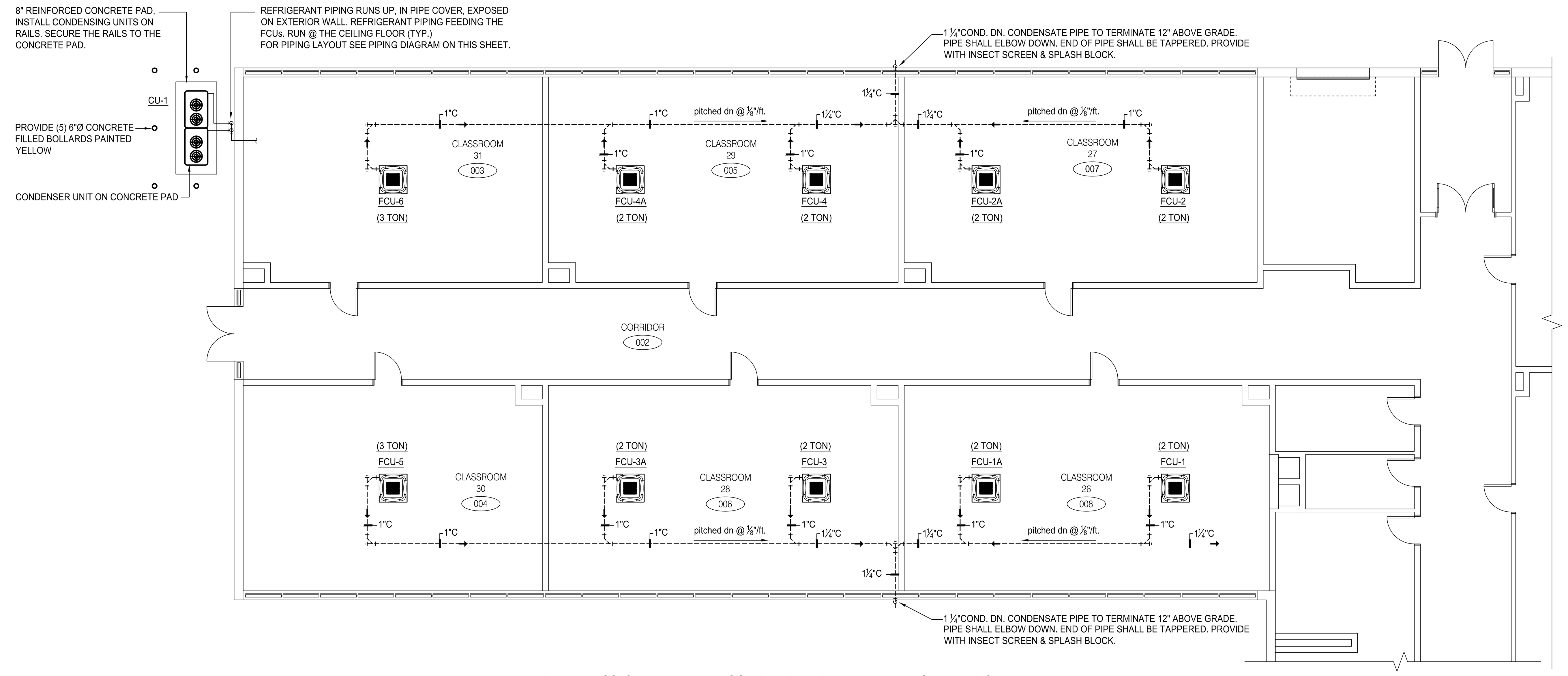
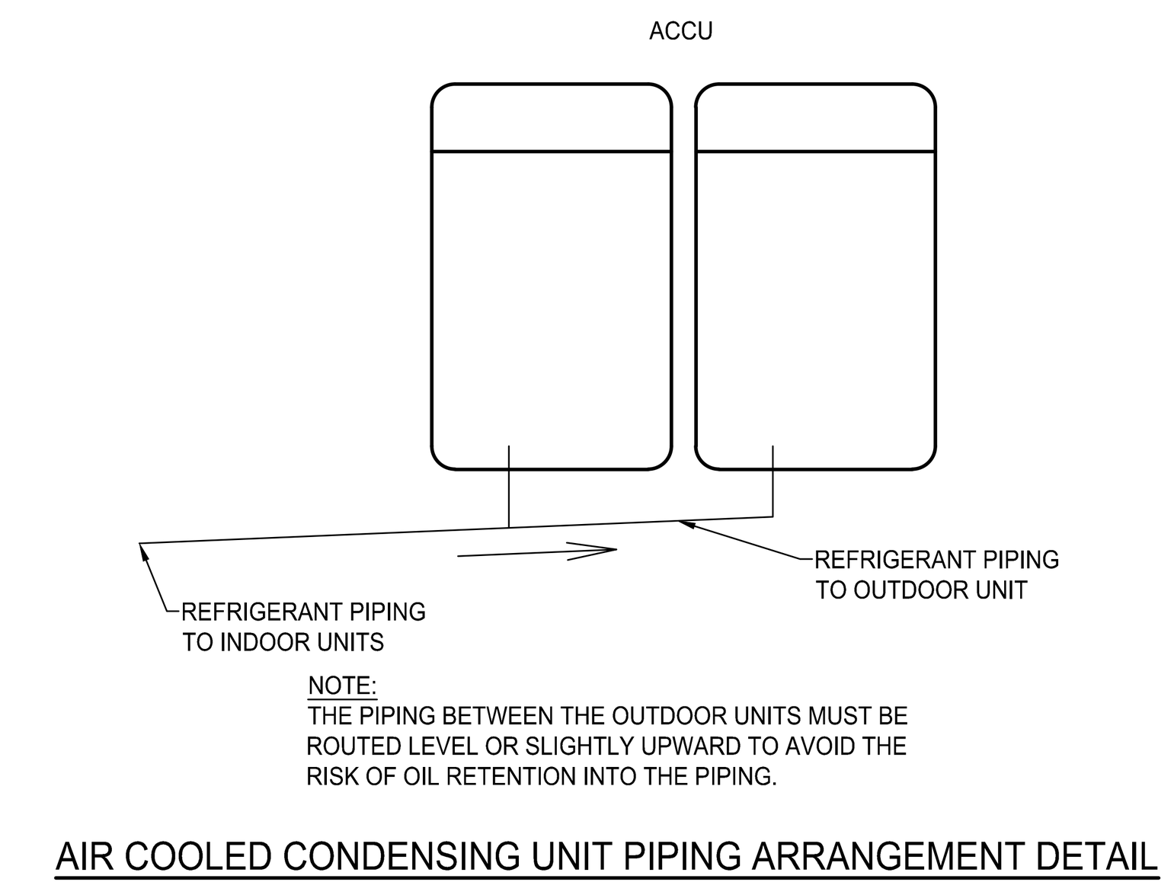
LIST OF DRAWINGS

03/24/2023



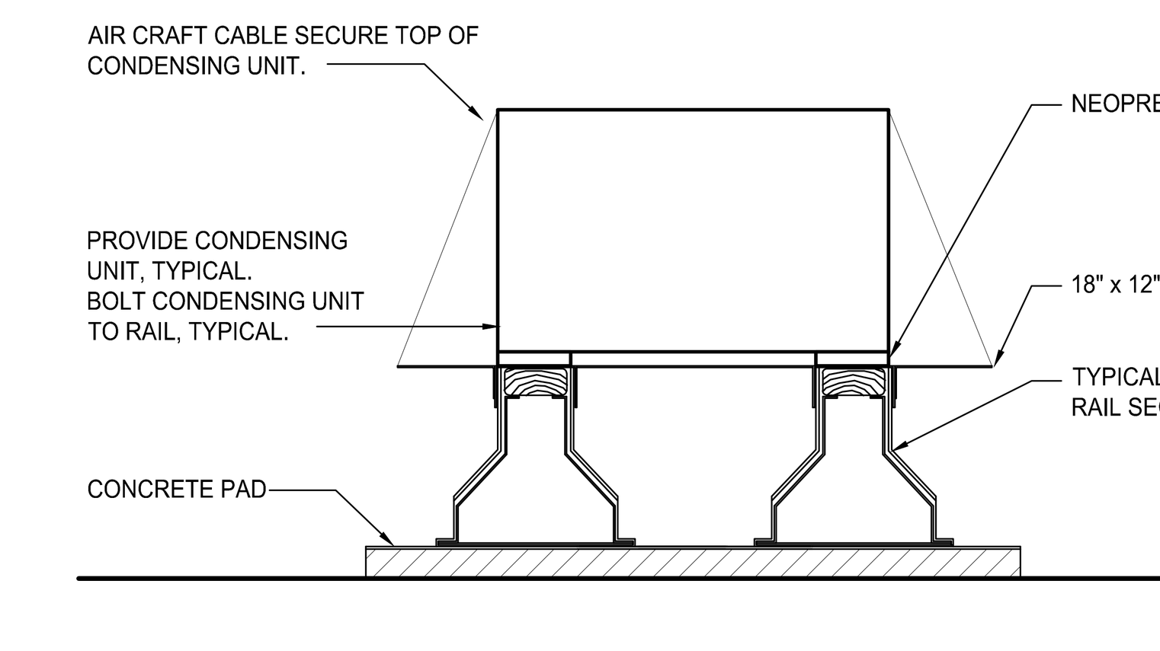
AREA 1 (SOUTH WING) PART PLAN - MECHANICAL

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



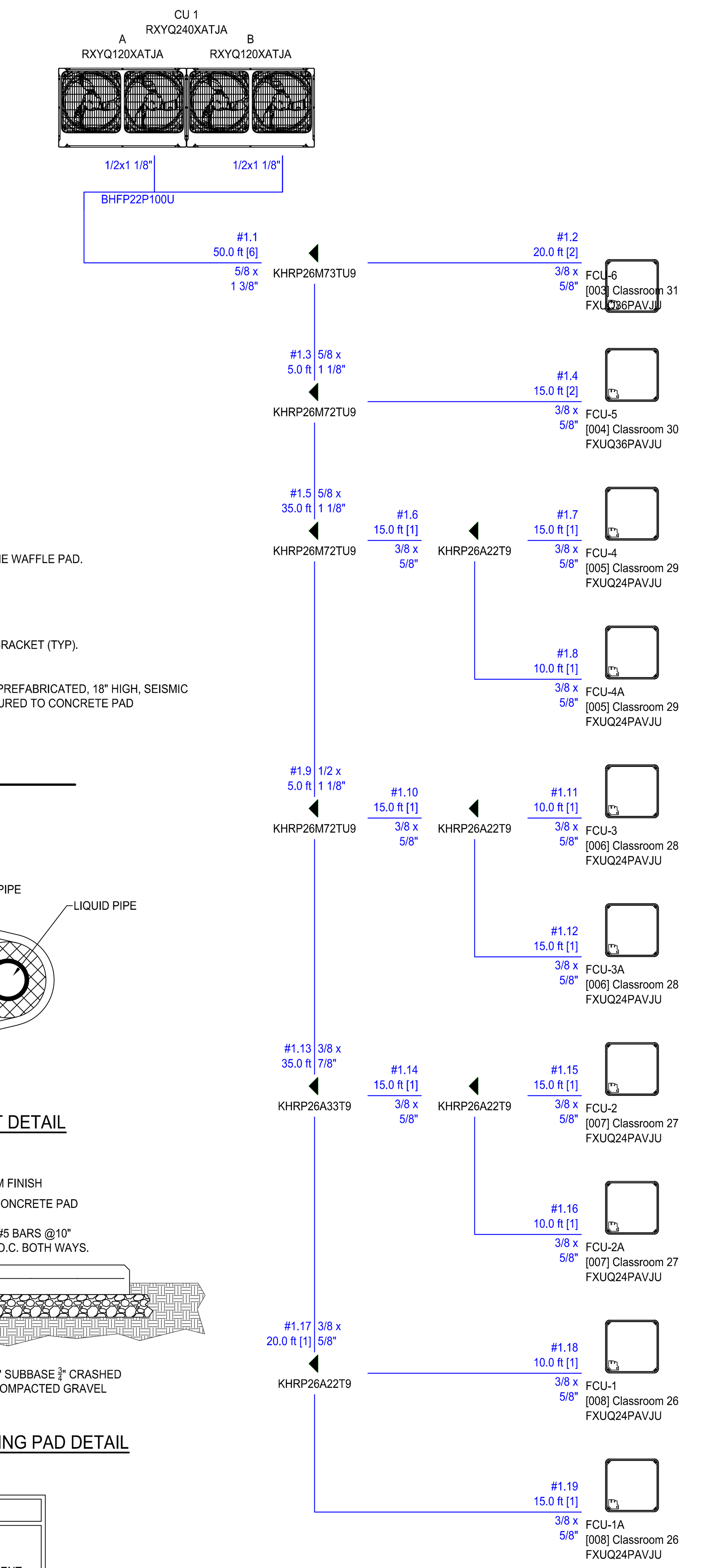
AIR COOLED CONDENSING UNIT PIPING ARRANGEMENT DETAIL

NOT TO SCALE



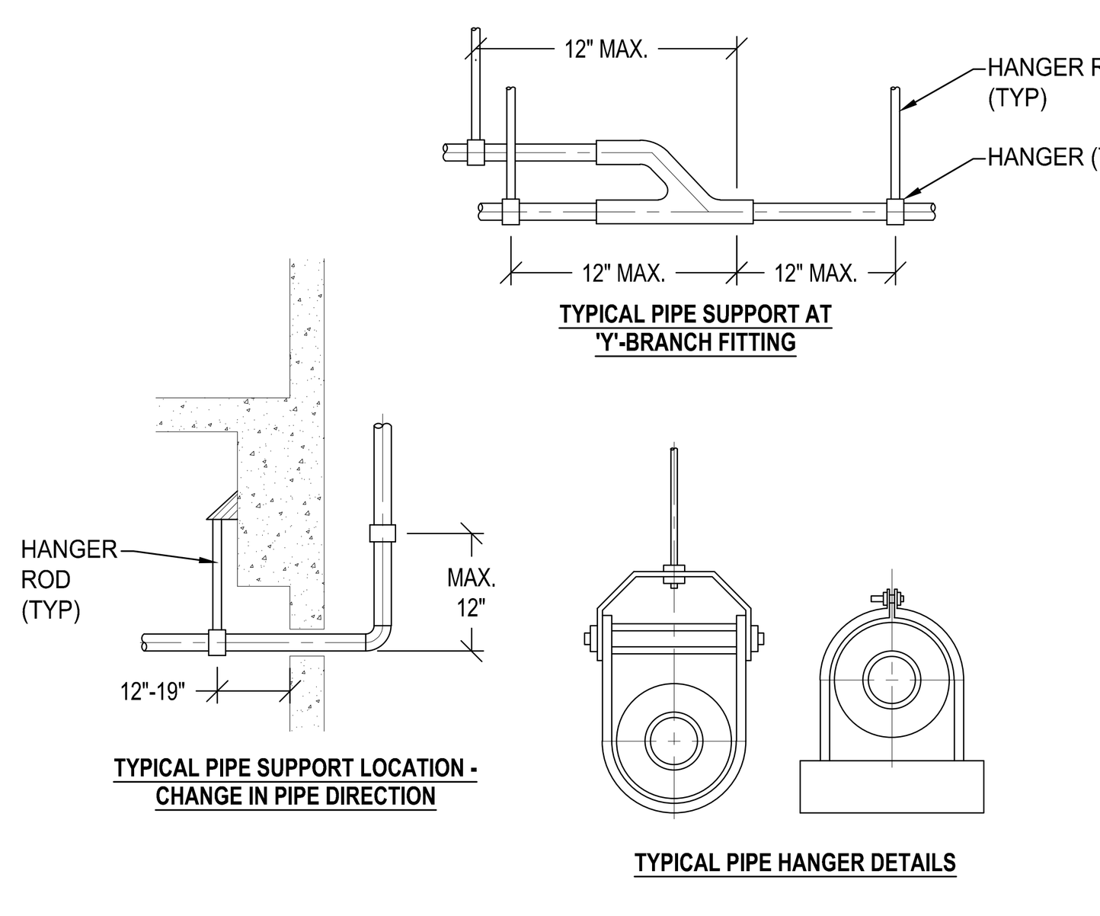
TYPICAL CONDENSING UNIT INSTALLATION DETAIL

NOT TO SCALE



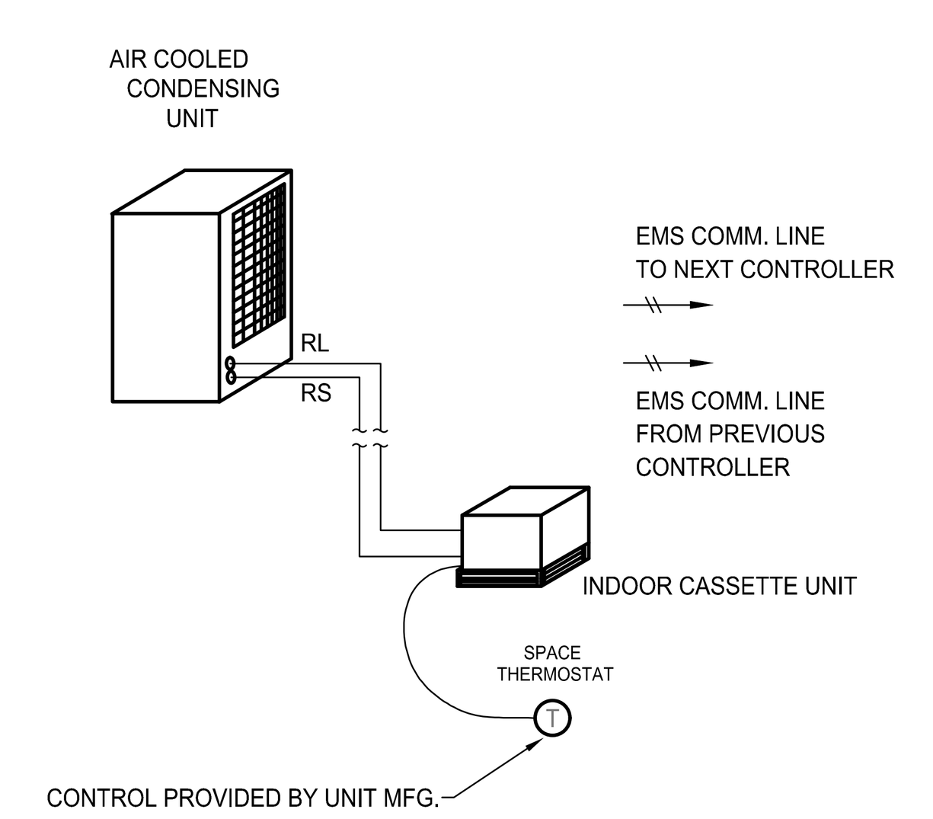
PIPING SCHEMATIC DIAGRAM - CU-1

NO SCALE



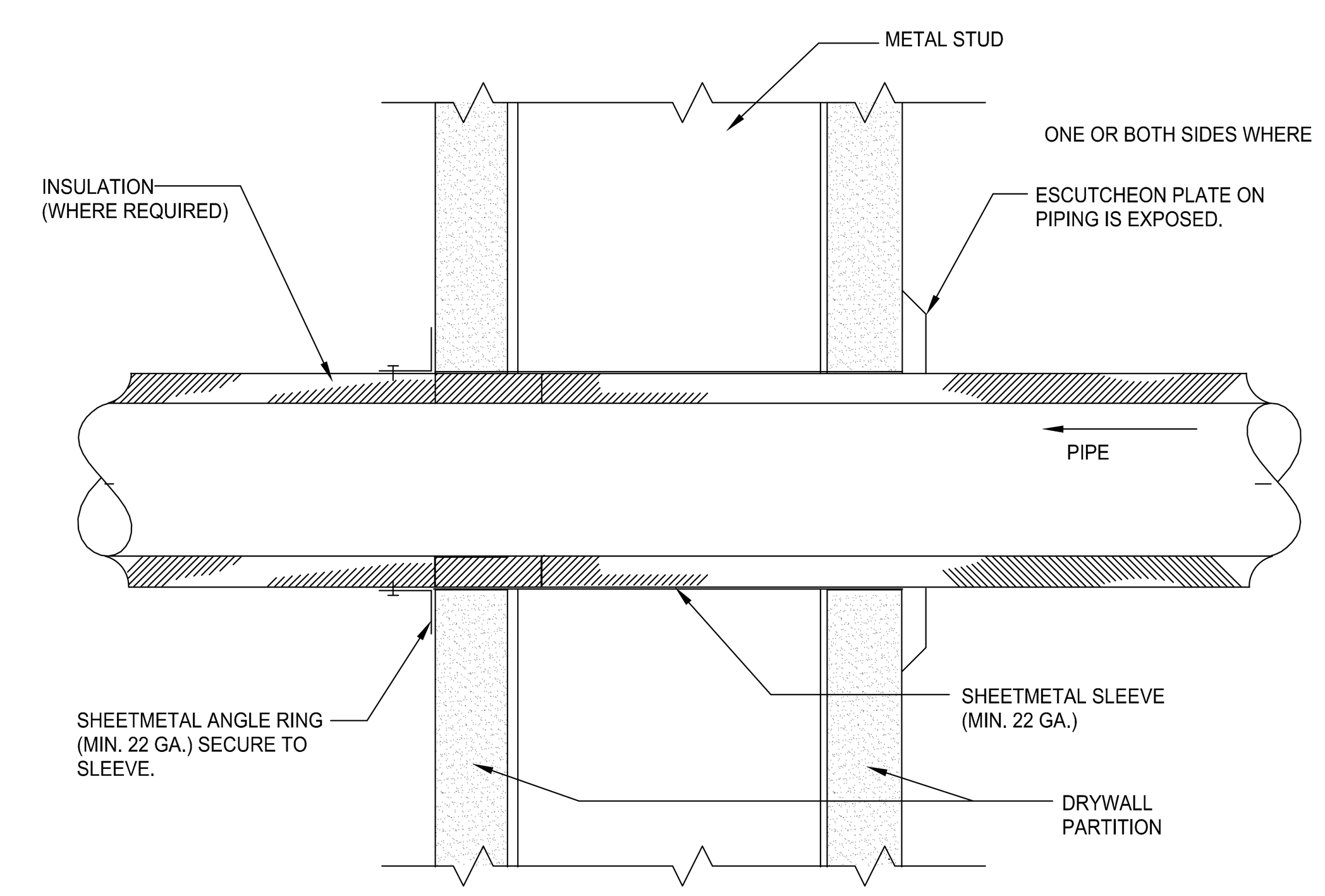
TYPICAL PIPING SUPPORTING DETAIL

NOT TO SCALE



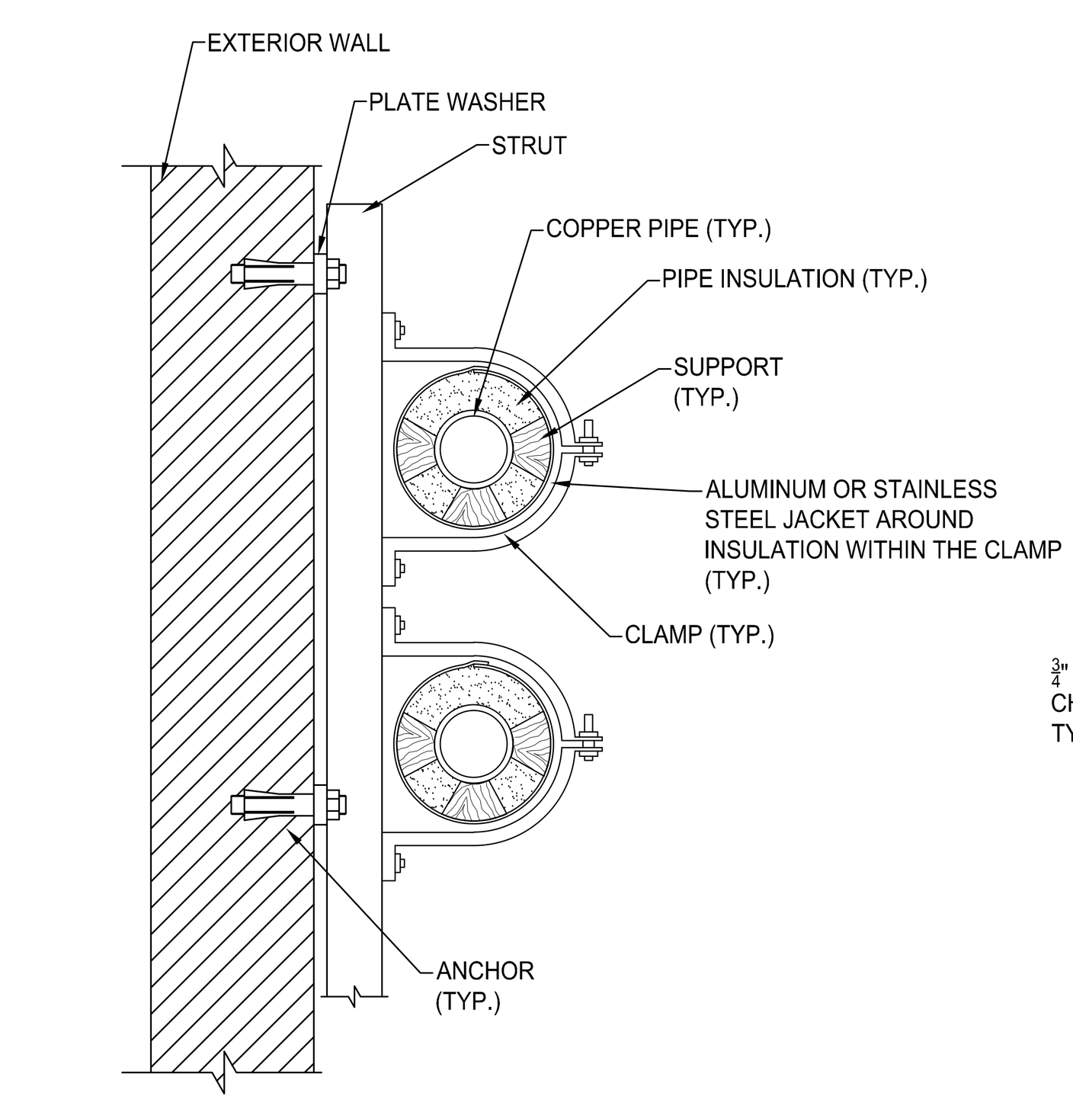
CASSETTE UNTI CONTROL DIAGRAM

NOT TO SCALE



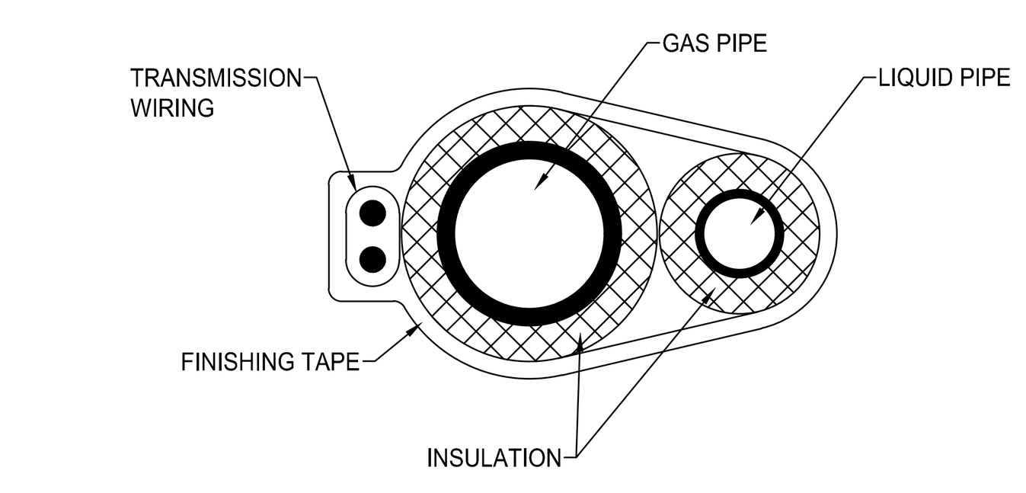
PIPE SLEEVE THROUGH WALL DETAIL

NOT TO SCALE



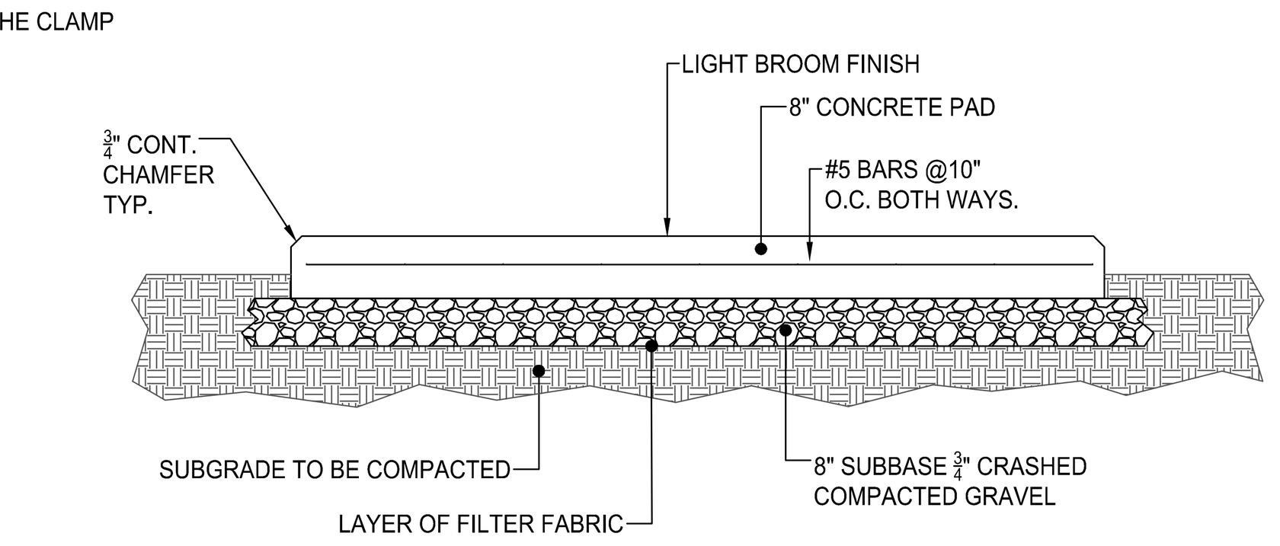
TYPICAL PIPING SUPPORT DETAIL

NO SCALE



REFRIGERANT PIPING ARRANGEMENT DETAIL

NOT TO SCALE



TYPICAL CONDENSING UNITS HOUSE KEEPING PAD DETAIL

NO SCALE

VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE

TAG: ROOM	BASIS OF DESIGN (DAIKIN)	COOLING CAPACITY		HEATING CAPACITY		REFRIGERANT CHARGE		CONNECTION RATIO (%)	ELECTRICAL										DIMENSIONS		EFFICIENCY (NonDucted/Ducted or Specific Combo)				NOTES
									VOLTAGE-PHASE	MIN CIRCUIT AMPS (MCA)			MAX OVERCURRENT PROTECTION (MOP)			RUNNING CURRENT(RLA)									
		BTU/h	AMBIENT DESIGN (°F DB)	BTU/h	AMBIENT DESIGN (°F DB / WB)	Factory Charge (lbs)	Add'l Refrigerant (lbs)			mod #1	mod #2	total	mod #1	mod #2	total	mod #1	mod #2	total	(WxHxD) (inch)	WEIGHT (lbs)	EER	IEER	COP47	COP17	
CU 1	RXYQ_XATJA	228,669	88.0	293,982	47.0 / 43.0	45.9	27.2	110.0	208V - 230V 3ph	36.3	36.3	72.6	45.0	45.0	90.0	26.2	26.2	52.4	48.9 x 66.7 x 30.2 / 48.9 x 66.7 x 30.2	526.9 / 526.9	11.3 / 11.2	20.8 / 20.9	3.63 / 3.33	2.43 / 2.34	ALL

Schedule Notes:

Manufacturer must be certified, listed, and labeled per AHRI 1230.

System rating data based on design ambient conditions for cooling and for heating.

Submitted performance data must be fully de-rated for all components and accessories, including but not limited to, line length, vertical separation, connection ratio, design conditions, condenser coil coating.

Condensing units must have fully modulating INVERTER compressors.

Condensing units must have have auto changeover functions

Condensing units must have a top mounted snow hood and hail gaurds on all sides.

Demand limiting relay contact must be provided.

EEV actuators must be removable from valve body without disturbing the refrigerant system.

FCU thermostats must provide +/- 1 degree dead-band set-point and control capability.

System shall be provided with i-Touch Manager controller with WEB based software for displaying up to 8 DIII-Net systems with 128 indoor units per system.PC by others.

System shall be provided with i-Touch Manager BACnet integration software.

Manufacturers submittal must include refrigerant piping diagram with pipe diameters, lengths, and refrigerant volume.

Substitute manufacturer shall be responsible for additional piping and refrigerant.

Substitute manufacturer that use electric panel or base pan heaters shall not be acceptable.

Contractor to verify piping dimensions.

Installing contractor must have successfully completed manufacturers certified installation class within past 36 months.

Contractor to furnish and install insulation on refrigerant piping.

Manufacturers Representative must have local stock of parts and factory certified technician on staff.

Manufacturers Representative shall provide proof of ongoing installation training at their local facility for at least the past 5 years.

Manufacturers Representative shall provide proof of continuous sales and support of their products for at least 15 years.

Mechanical contractor shall be responsible for all direct costs and operating costs increases for 20 years associated with any deviations resulting from changes in design.

3-phase Air cooled condensing units must have published performance data with 200% indoor connected capacity.

Condensing units must be furnished with protective coil coating to withstand ASTM B117 salt spray test for a minimum of 1000 hours.
Performance of system must be de-rated for coil coating.

Manufacturer must certify and submit system performance at extreme conditions of 122 degrees FDB ambient in cooling mode and -4 degrees FWB in heating mode.

Manufacturer must provide 10 years parts warranty on all FCU's & Condensing Units. Warranty conditions must be clarified during submittal phase.

VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE

TAG	ROOM	BASIS OF DESIGN (DAIKIN)	SUPPLY FAN	COOLING CAPACITY				HEATING CAPACITY		ELECTRICAL			DIMENSIONS	WEIGHT	NOTES
			AIR FLOW RATE cfm	TOTAL BTU/h	SENSIBLE BTU/h	ENTERING AIR		TOTAL BTU/h	ENTERING AIR °Fdb	POWER SUPPLY	Min Circuit Amps	Max Overcurrent Protection	WxHxD	Net	
						°F DB	°F WB			Voltage - Phase	MCA	MOP	inch	lbs	
FCU-6	[003] Classroom 31	FXUQ_PAVJU	1,095	34,707	22,712	77.0	66.0	41,458	68.0	208-230V 1ph	1.4	16.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-5	[004] Classroom 30	FXUQ_PAVJU	1,095	34,707	22,712	77.0	66.0	41,458	68.0	208-230V 1ph	1.4	16.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-4	[005] Classroom 29	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-4A	[005] Classroom 29	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-3	[006] Classroom 28	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-3A	[006] Classroom 28	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-2	[007] Classroom 27	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-2A	[007] Classroom 27	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-1	[008] Classroom 26	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL
FCU-1A	[008] Classroom 26	FXUQ_PAVJU	795	23,160	15,668	77.0	66.0	27,980	68.0	208-230V 1ph	0.6	15.0	37.4 x 7.8 x 37.4	57.3	ALL

CONDENSING DRAIN - GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK, NOT EXACT EQUIPMENT LOCATIONS. CONTRACTOR MUST COORDINATE EQUIPMENT LOCATION BEFORE PROCEEDING WITH ANY WORK.
2. ALL CONDENSING DRAIN SHALL HAVE A PITCH OF 1/8" PER Ft UNLESS NOTED OTHERWISE.
3. CONDENSATE PIPING SHALL BE COPPER. PIPE SHALL BE INSULATED.
4. THERE SHALL BE NO EXPOSED PIPING. PIPES SHALL RUN CONCEALED ABOVE CEILING. WHERE NOT POSSIBLE, THE CONTRACTOR SHALL PROVIDE PIPE CHASES.
5. A VISIT TO THE SITE AND EXAMINATION OF THE OTHER MECHANICAL TRADES SHOWING ALL DETAILS OF CONSTRUCTION IS A REQUIREMENT BEFORE SUBMITTING A PROPOSAL.
6. THE CONTRACTOR SHALL VISIT THE JOB SITE TO VERIFY ALL DIMENSIONS AND JOB CONDITIONS.
7. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ALL OFFSETS, FITTINGS, TRANSITIONS, CLEANOUTS, VALVES AND ACCESSORIES ARE NOT NECESSARILY SHOWN.
8. IT IS THE INTENT THAT ALL WORK SHALL BE COMPLETE IN EVERY RESPECT AND THAT THE MATERIAL OR WORK SPECIFICALLY NOT INDICATED ON THE DRAWINGS, BUT NECESSARY TO COMPLETE THE WORK, SHALL BE PROVIDED.

MECHANICAL GENERAL NOTES

1. INSTALL UNITS WITH CLEARANCE FOR SERVICE.
2. REFRIGERANT PIPING SHALL BE DEOXIDIZED PHOSPHOROUS SEAMLESS COPPER PIPE OR EQUIVALENT.
3. BOTH GAS AND LIQUID PIPING MUST BE INSULATED WITH GLASS FIBER OR HEAT RESISTANCE POLYETHYLENE FOAM, ½ INCH OR MORE, MIN. 250°F HEAT RESISTANCE FOR THE GAS PIPE AND MIN. 160°F HEAT RESISTANCE FOR THE LIQUID PIPE.
4. BRANCH PIPES SHALL BE INSULATED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE MANUFACTURER.
5. THE LIQUID PIPE AND GAS PIPE SHALL HAVE THE SAME LENGTH AND BE LAID IN THE SAME ROUTE.
6. THE CONDENSATE PIPE CANNOT BE TIED WITH THE REFRIGERANT PIPE.
7. EXPANSION JOINT SHALL BE ADDED EVERY 40 FT OF STRAIGHT PIPING RUN.
8. DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK, NOT EXACT EQUIPMENT LOCATION. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES BEFORE WORK BEGINS.
9. THERE SHALL BE NO EXPOSED PIPING. PIPES SHALL RUN CONCEALED ABOVE CEILING OR IN WALLS. WHERE NOT POSSIBLE, THE CONTRACTOR SHALL PROVIDE PIPE CHASES. ON EXTERIOR WALLS, PIPES SHALL RUN ON WARM SIDE OF THE INSULATION AND HAVE 2" INSULATION.
10. CONTRACTOR SHALL PROVIDE REFRIGERANT PIPING LAYOUT WITH PIPE SIZES FOR ALL THE REFRIGERANT SYSTEMS, CONFIRMED BY THE MANUFACTURER PRIOR TO INSTALLATION.

MECHANICAL - CONTROL - GENERAL NOTES

1. ALL ELECTRIC WIRING, CONNECTIONS, DEVICES, RACEWAY AND HARDWARE REQUIRED FOR THE INSTALLATION OF THE TEMPERATURE CONTROL SYSTEM AS SPECIFIED AND SHOWN ON THE DRAWINGS SHALL BE PROVIDED BY THE TEMPERATURE CONTROLS CONTRACTOR (TCC).
2. ALL CONTROL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE CONTROL SYSTEM MANUFACTURER'S REQUIREMENTS AND CURRENT CODE.
3. ALL LOW VOLTAGE CONTROL WIRING SHALL BE PLENUM RATED CABLE OF TYPES AND SIZES REQUIRED BY THE CONTROL SYSTEM MANUFACTURER.
4. PROVIDE MINIMUM OF 3/4" EMT CONDUIT FOR ALL WIRING EXPOSED TO VIEW AND FOR WIRING DROPS AND RUNS WITHIN NEW WALLS. ALL CONDUITS SHALL TERMINATE WITH JUNCTION BOXES OR OUTLET BOXES. PROVIDE BUSHINGS FOR ALL WIRING ENTERIES INTO THE CONDUIT SYSTEM.
5. ALL TEMPERATURE CONTROL WIRING SHALL BE NEATLY INSTALLED WITH CABLE RUNS INSTALLED PARALLEL TO OR AT RIGHT ANGLES TO THE LINES OF THE BUILDING. ALL WIRING IN NORMALLY OCCUPIED AREAS OF THE BUILDING SHALL BE CONCEALED FROM VIEW. OPEN CABLE RUNS ABOVE CEILINGS SHALL BE BUNDLE TIED WITH PLASTIC CABLE TIES AND SHALL BE SUPPORTED FREE FROM THE CEILING AND MECHANICAL/ELECTRICAL EQUIPMENT USING APPROVED CABLE HANGERS AND CABLE CLIPS.
6. THE TEMPERATURE CONTROL CONTRACTOR SHALL COORDINATE POWER SUPPLY REQUIREMENTS OF THE CONTROL SYSTEM WITH DIVISION 26.
7. REFER TO SPECIFICATION FOR ADDITIONAL CONTROLS REQUIREMENTS AND THE EQUIPMENT SEQUENCE OF OPERATIONS.
8. ALL CONTROLS DEVICES AND ELECTRONICS SHALL BE INSTALLED WITHIN A NEMA-1 ENCLOSURE LOCATED WITHIN PROXIMITY TO THE EQUIPMENT SERVED.
9. REFER TO MECHANICAL SPECIFICATIONS FOR SEQUENCE OF OPERATIONS AND ADDITIONAL DDC SENSOR REQUIREMENTS

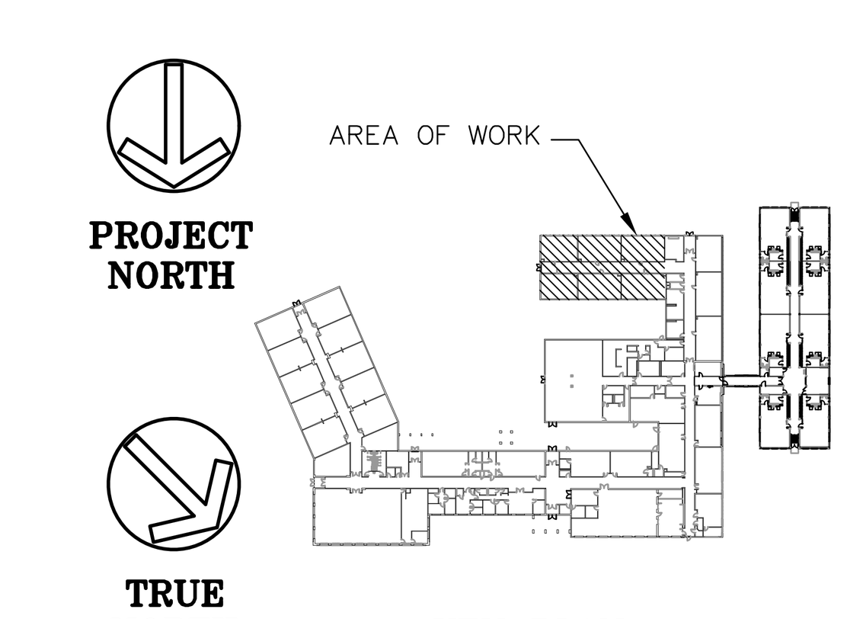
NOTES :
1. UNIT MANUFACTURER SHALL PROVIDE WIRED CONTROLLER INDOOR UNIT.
2. PROVIDE REFRIGERATION LINE SETS FOR AIR CONDITIONING UNIT WITH CONNECTIONS TO CONDENSING UNIT.
3. POWER WIRING AND RACEWAY BY DIVISION 26.
4. DISCONNECTS AND STARTING RELAYS FURNISHED BY DIVISION 23.
5. REFER TO DIVISION 23 SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
6. UNITS USING CFC BASED REFRIGERANTS WILL NOT BE ACCEPTABLE.
7. CASSETTE UNITS SHALL HAVE MULTIFUNCTION CASEMENT/MERV 10 FILTER
8. OUTDOOR UNITS SHALL HAVE WIND BAFFLE
9. SYSTEM SHALL BE BACNET READY. COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR

MECHANICAL - GENERAL NOTES :

1. INSTALL UNITS WITH CLEARANCE FOR SERVICE.
2. DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL INTENT OF WORK, NOT EXACT EQUIPMENT LOCATION. ALL CONTRACTORS MUST COORDINATE EQUIPMENT LOCATIONS WITH OTHER TRADES BEFORE WORK BEGINS.
3. THE LOCATION OF ALL AC CASSETTE UNITS SHALL BE COORDINATED WITH THE EXISTING CEILING
4. CONTRACTOR SHALL PROVIDE REFRIGERANT PIPING. INSULATE ALL REFRIGERANT PIPES.
5. CONDENSATE PIPING SHALL BE COPPER. PIPE SHALL BE INSULATED.
6. PROVIDE PIPE COVER TO NEW PIPES TO AC UNITS. CONTRACTOR TO FIELD VERIFY PIPE COVER DIMENSIONS.
7. PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH WALLS/PARTITION. THIS CONTRACTOR SHALL OPEN WALLS AS NECESSARY. SEAL PENETRATIONS

NEW WORK DRAWING KEYED NOTES.

1. CONNECT REFRIGERANT PIPING PER MANUFACTURER RECOMMENDATIONS, REFER TO DRAWING M1.2 (VARIABLE REFRIGERANT VOLUME SYSTEM PIPING DIAGRAM) FOR PIPES SIZING.
   PROVIDE 1" TRAPPED CONDENSATE PIPING, INSTALL PIPING PER MANUFACTURER RECOMMENDATIONS.
   SEAL AIR AND WATER TIGHT ALL PIPING PENETRATIONS.
2. PROVIDE SECONDARY DRAIN PAN WITH OVERFLOW SWITCH TO SHUT DOWN UNIT.



REVISIONS

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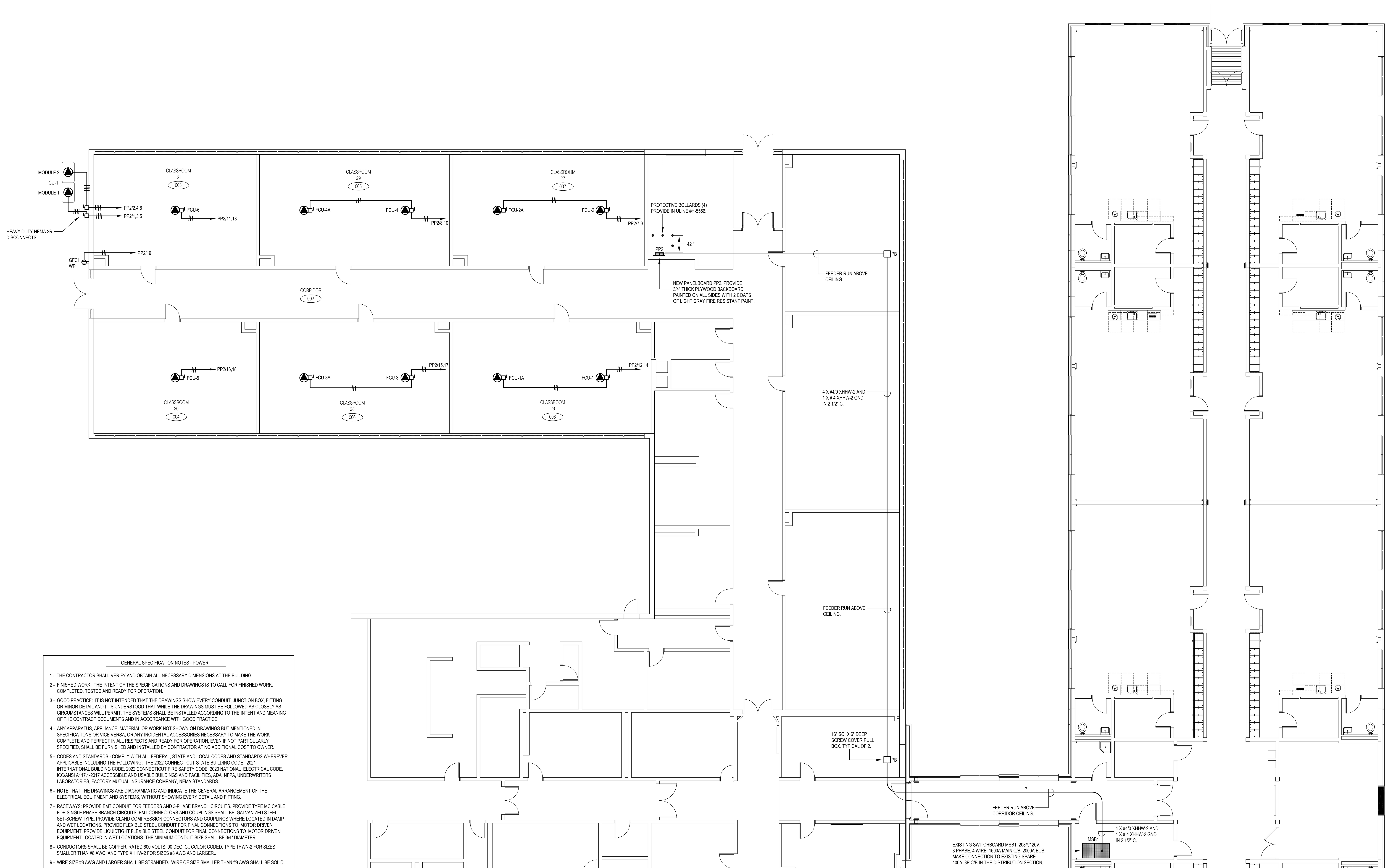
TITLE
AREA 1 (SOUTH WING) PART PLAN MECHANICAL

DATE 03/24/2023

DWG. NO. M1.1



GENERAL SPECIFICATION NOTES - POWER

1 - THE CONTRACTOR SHALL VERIFY AND OBTAIN ALL NECESSARY DIMENSIONS AT THE BUILDING.

2 - FINISHED WORK: THE INTENT OF THE SPECIFICATIONS AND DRAWINGS IS TO CALL FOR FINISHED WORK, COMPLETED, TESTED AND READY FOR OPERATION.

3 - GOOD PRACTICE: IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY CONDUIT, JUNCTION BOX, FITTING OR MINOR DETAIL AND IT IS UNDERSTOOD THAT WHILE THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE SYSTEMS SHALL BE INSTALLED ACCORDING TO THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH GOOD PRACTICE.

4 - ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON DRAWINGS BUT MENTIONED IN SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER.

5 - CODES AND STANDARDS - COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND STANDARDS WHEREVER APPLICABLE INCLUDING THE FOLLOWING: THE 2022 CONNECTICUT STATE BUILDING CODE , 2021 INTERNATIONAL BUILDING CODE, 2022 CONNECTICUT FIRE SAFETY CODE, 2020 NATIONAL ELECTRICAL CODE, ICC/ANSI A117.1-2017 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, ADA, NFPA, UNDERWRITERS LABORATORIES, FACTORY MUTUAL INSURANCE COMPANY, NEMA STANDARDS.

6 - NOTE THAT THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL EQUIPMENT AND SYSTEMS, WITHOUT SHOWING EVERY DETAIL AND FITTING.

7 - RACEWAYS: PROVIDE EMT CONDUIT FOR FEEDERS AND 3-PHASE BRANCH CIRCUITS. PROVIDE TYPE MC CABLE FOR SINGLE PHASE BRANCH CIRCUITS. EMT CONNECTORS AND COUPLINGS SHALL BE GALVANIZED STEEL SET-SCREW TYPE. PROVIDE GLAND COMPRESSION CONNECTORS AND COUPLINGS WHERE LOCATED IN DAMP AND WET LOCATIONS. PROVIDE FLEXIBLE STEEL CONDUIT FOR FINAL CONNECTIONS TO MOTOR DRIVEN EQUIPMENT. PROVIDE LIQUIDTIGHT FLEXIBLE STEEL CONDUIT FOR FINAL CONNECTIONS TO MOTOR DRIVEN EQUIPMENT LOCATED IN WET LOCATIONS. THE MINIMUM CONDUIT SIZE SHALL BE 3/4" DIAMETER.

8 - CONDUCTORS SHALL BE COPPER, RATED 600 VOLTS, 90 DEG. C., COLOR CODED, TYPE THWN-2 FOR SIZES SMALLER THAN #8 AWG, AND TYPE XHHW-2 FOR SIZES #8 AWG AND LARGER..

9 - WIRE SIZE #8 AWG AND LARGER SHALL BE STRANDED. WIRE OF SIZE SMALLER THAN #8 AWG SHALL BE SOLID.

10 - MINIMUM SIZE CONDUCTORS FOR POWER AND LIGHTING SHALL BE #12 AWG. PROVIDE MINIMUM #10 AWG SIZE FOR RUNS EXCEEDING 75' IN CONDUCTOR LENGTH, AND #8 AWG SIZE FOR RUNS EXCEEDING 150' IN CONDUCTOR LENGTH. PROVIDE LARGER SIZE CONDUCTORS AS SCHEDULED OR AS NOTED ON THE DRAWINGS.

11 - THE NUMBER OF WIRES IN A CONDUIT RUN IS INDICATED ON THE DRAWINGS BY CROSS LINES ON THE CONDUIT RUNS. PROVIDE CODE-SIZED CONDUIT FOR THE NUMBER AND SIZE OF WIRES UNLESS A LARGER SIZE IS SHOWN ON THE DRAWINGS. MINIMUM CONDUIT SIZE SHALL BE 3/4".

12 - RACEWAYS SHALL BE CONCEALED WHEREVER POSSIBLE IN ALL FINISHED AREAS.

13 - RACEWAYS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES TO WALL LINES.

14 - RACEWAYS SHALL BE SUPPORTED FROM THE STRUCTURE BY STRAP HANGERS, ROD HANGERS, OR RACK MOUNTED, OR OTHER APPROVED ELECTRICAL MOUNTING.

15 - PROVIDE FIRE STOPPING AT ALL FIRE AND/OR SMOKE RATED WALL OR CEILING PENETRATIONS IN ORDER TO MAINTAIN ITS ORIGINAL INTEGRITY.

16 - OUTLET BOXES SHALL BE CODE GAUGE GALVANIZED STEEL AND SHALL BE OF SHAPES AND SIZES TO SUIT THEIR RESPECTIVE LOCATIONS AND INSTALLATIONS, AND SHALL BE PROVIDED WITH COVERS TO SUIT THEIR FUNCTION AND INSTALLATION. MINIMUM BOX SIZE SHALL BE 4" SQ. X 2 1/8" DEEP (2-GANG). PROVIDE CAST BOXES FOR OUTDOOR WORK.

SCHEDULE OF BRANCH CIRCUIT CONDUCTOR SIZES

C/B SIZE	* CIRCUIT SIZE
20A-1P	** 2 X #12 AWG AND 1 X #12 AWG GND. IN 3/4" C.
20A-2P	2 X #12 AWG AND 1 X #12 AWG GND. IN 3/4" C.
20A-3P	3 X #12 AWG AND 1 X #12 AWG GND. IN 3/4" C.
25A-1P	2 X #10 AWG AND 1 X #10 AWG GND. IN 3/4" C.
25A-2P	2 X #10 AWG AND 1 X #10 AWG GND. IN 3/4" C.
25A-3P	3 X #10 AWG AND 1 X #10 AWG GND. IN 3/4" C.
30A-1P	2 X #10 AWG AND 1 X #10 AWG GND. IN 3/4" C.
30A-2P	2 X #10 AWG AND 1 X #10 AWG GND. IN 3/4" C.
30A-3P	3 X #10 AWG AND 1 X #10 AWG GND. IN 3/4" C.
35A-1P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
35A-2P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
35A-3P	3 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
40A-1P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
40A-2P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
40A-3P	3 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
45A-1P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
45A-2P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
45A-3P	3 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
50A-1P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
50A-2P	2 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.
50A-3P	3 X #8 AWG AND 1 X #10 AWG GND. IN 3/4" C.

* PROVIDE CIRCUIT SIZE AND NUMBER OF CONDUCTORS SCHEDULED UNLESS NOTED OR SHOWN DIFFERENTLY ON THE DRAWINGS. CROSS REFERENCE CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS WITH RESPECTIVE PANEL SCHEDULES TO OBTAIN C/B SIZE.

** PROVIDE #10 AWG SIZE CONDUCTORS FOR BRANCH CIRCUIT RUNS EXCEEDING 75' IN CONDUCTOR LENGTH AND #8 AWG SIZE CONDUCTORS FOR BRANCH CIRCUIT RUNS EXCEEDING 150' IN CONDUCTOR LENGTH.

PANEL #PP2 - EATON TYPE PRL1X, SURFACE, 208Y/120V, 3 PHASE, 4 WIRE, 100 AMP MAIN LUGS, 22K A.I.C. MIN.

CKT	TRIP	POLE	REMARKS	CKT	TRIP	POLE	REMARKS
1	45	3	CU-1 MODULE 1	2	45	3	CU-1 MODULE 2
3	-	-	-	4	-	-	-
5	-	-	-	6	-	-	-
7	20	2	FCU-2 AND FCU-2A	8	20	1	FCU-4 AND FCU-4A
9	-	-	-	10	-	-	-
11	20	2	FCU-6	12	20	2	FCU-1 AND FCU-1A
13	-	-	-	14	-	-	-
15	20	2	FCU-3 AND FCU-3A	16	20	2	FCU-5
17	-	-	-	18	-	-	-
19	20	1	RECEPTACLE	20	20	1	SPARE
21	20	1	SPARE	22	20	1	SPARE
23	20	1	SPARE	24	20	1	SPARE
25	20	1	SPARE	26	20	1	SPARE
27	20	1	SPARE	28	20	1	SPARE
29	20	1	SPARE	30	20	1	SPARE

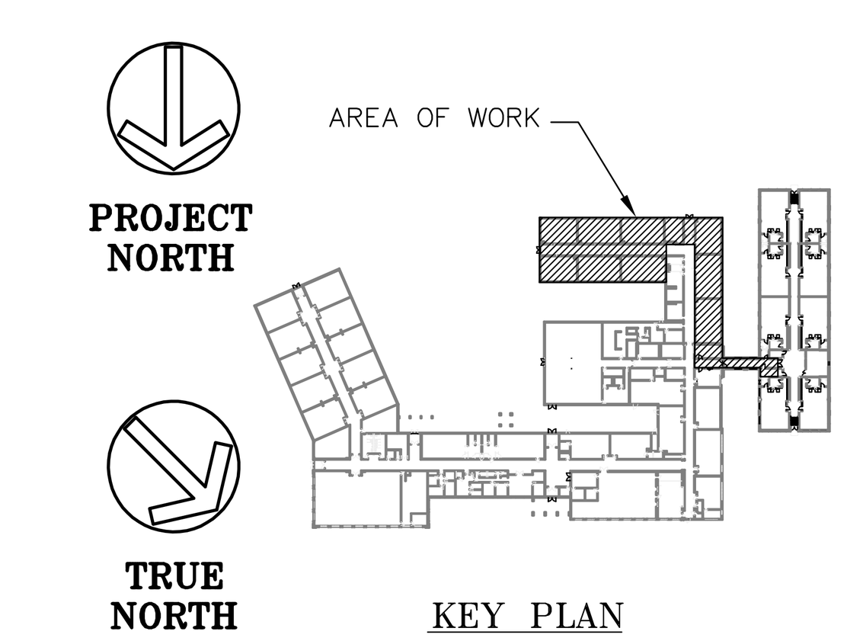
NOTES:
1) PROVIDE WITH BLACK FACE, WHITE CORE ENGRAVED NAMEPLATE
2) PROVIDE WITH TYPE WRITTEN CIRCUIT DIRECTORY REPRESENTING CIRCUITS AS ACTUALLY CONNECTED TO PANEL.

ELECTRICAL DRAWING LEGEND

SYMBOL	DESCRIPTION
	DUPLEX GFCI RECEPTACLE. PROVIDE IN HUBBELL #GFR5362SG WITH WEATHER PROOF COVER HUBBELL #WP8E.
	HEAVY DUTY RATED DISCONNECT SWITCH.
	EQUIPMENT POWER CONNECTION, EQUIPMENT TYPE AS INDICATED.
	BRANCH CIRCUIT WIRING. CROSS LINES INDICATE NUMBER OF CONDUCTORS.
	BRANCH CIRCUIT WIRING HOMERUN IN EMT CONDUIT. CROSS LINES INDICATE NUMBER OF CONDUCTORS.
	PANELBOARD.

DRAWING ABBREVIATIONS

A	AMPS
C	CONDUIT
C/B	CIRCUIT BREAKER
CU	CONDENSING UNIT
FCU	FAN COIL UNIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
NTS	NOT TO SCALE
P	POLE
WP	WEATHER PROOF



KEY PLAN

REVISIONS

HANOVER ELEMENTARY SCHOOL
AREA 1 (SOUTH WING) NEW AIR CONDITIONING SYSTEM
MERIDEN, CONNECTICUT

BEMIS ASSOCIATES, L.L.C.
Consulting Engineers
185 Main Street
Farmington, Ct 06032
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TITLE
SOUTH WING POWER PLAN

DATE 03/24/2023

DWG. NO.
E1.1