LIST OF DRAWINGS

COVER

- M1.1 FIRST FLOOR PART PLAN MECHANICAL
- E1.1 FIRST FLOOR POWER PLAN



NATHAN HALE ELEMENTARY SCHOOL



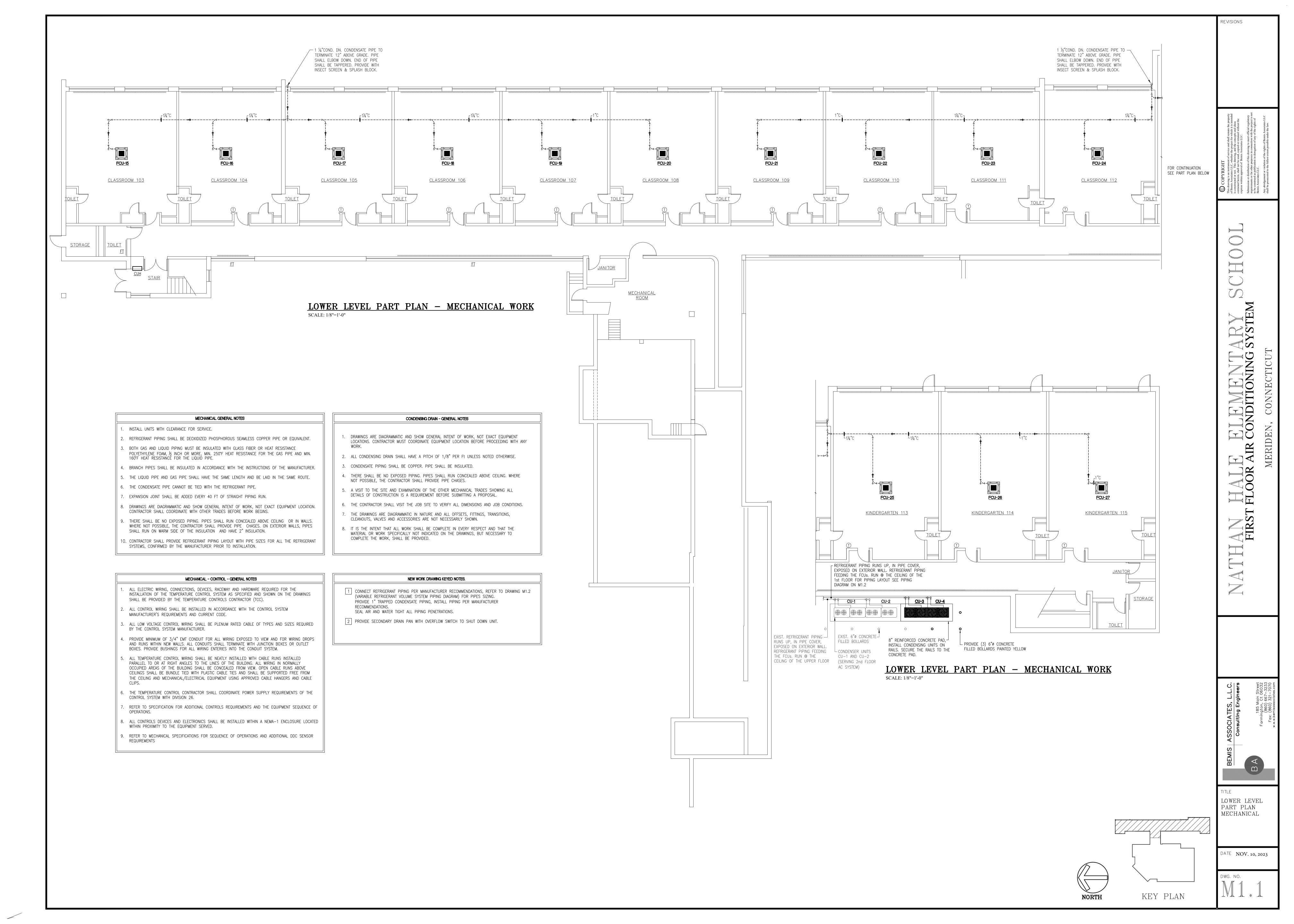
FIRST FLOOR NEW AIR CONDITIONING SYSTEM

277 ATKINS STREET EXT.
MERIDEN, CONNECTICUT 06450

M/E/P ENGINEER
BEMIS ASSOCIATES LLC

185 MAIN STREET
FARMINGTON, CONNECTICUT

NOVEMBER 10, 2023



SCHEDULES and PIPING DIAGRAMS

DATE NOV. 10, 2023

,	VARIABLI	E REFRIGER <i>A</i>	ANT VOLUME - A	IR-COOLED CONDENSING UN	NIT SCHEDULE (DAIKIN BA	SIS OF DESIGN)				
	TAG: ROOM	BASIS OF DESIGN (DAIKIN)	DESCRIPTION	COOLING CAPACITY HEATING CAPACITY	REFRIGERANT CHARGE CONNECTION RATIO	AMPS (MCA) PROTECTION (MOP) CURRENT(RLA)	DIMENSIONS	EFFICIENCY (NonDucted) Options and Accessories		NOTES
				BTU/h DESIGN BTU/h DESIGN (°F DB) (°F DB / WB)	Factory Add'I (%) Charge Refrigerant (lbs) (lbs)	VOLTAGE- PHASE mod #1 mod #2 total mod #1 mod #2 total mod #1 mod #2 total	(WxHxD) WEIGHT (lbs)	EER IEER COP47 COP17	•	

CU 1 (Existing) RXYQ_XATJA | Air cooled heat pump (2) | 156,953 | 95.0 | 237,656 | 47.0 / 43.0 | 45.6 | 39.2 | 102.7 | 208V - 230V 3ph | 36.3 | 72.6 | 45.0 | 45.0 | 45.0 | 90.0 | 26.2 | 23.8 | 50.0 | 48.9 x 66.7 x 30.2 / 48.9 x 66.7 x 30.2 | 526.9 / 524.7 | 10.7 | 20.5 | 3.83 | 2.6 | BHFP22P100U (1), VRV-SHL-FR (2), VRV-SHL-FR (2), VRV-SH-RL (1) | Reference Only CU 2 (Existing) RXYQ_XATJA | Air cooled heat pump (2) | 205,796 | 95.0 | 290,848 | 47.0 / 43.0 | 41.0 | 30.0 | 95.5 | 208V - 230V 3ph | 55.1 | 36.3 | 91.4 | 60.0 | 45.0 | 105.0 | 33.4 | 26.2 | 59.6 | 48.9 x 66.7 x 30.2 / 48.9 x 66.7 x 30.2 | 694.5 / 526.9 | 10.8 | 20.3 | 3.33 | 2.43 | BHFP22P100U (1), VRV-SHL-FR (2), 903.9 11.0 21.8 3.34 2.05 VRV6-SH-RL (1), VRV6-SHXL-FR (1), VRV6-SHXL-T (1) 68.9 x 65.4 x 30.1 903.9 11.0 21.8 3.34 2.05 VRV6-SH-RL (1), VRV6-SHXL-FR (1), VRV6-SHXL-T (1) 68.9 x 65.4 x 30.1

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 snow hoods on the top and all four 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 BACnet based software for displaying up to 8 DIII-Net systems with 128 indoor units per system.PC by others.

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 -22 degrees FWB in heating mode. Manufacturer must provide 10 years parts warranty on all Condensing Units and Mode Changeover Devices. Warranty conditions must be clarified during submittal phase.

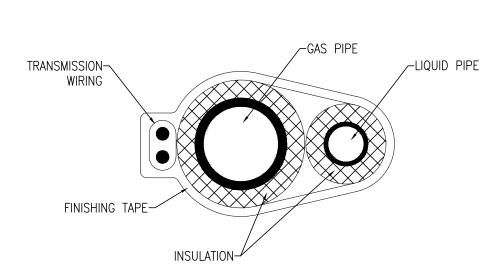
	VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE (DAIKIN BASIS OF DESIGN)	
ı	······································	

		BASIS OF DESIGN (DAIKIN)	ТҮРЕ	CONNECTED TO:		SUPPLY FAN	cc	COOLING CAPAC			ITY HEATIN		ELECTRICAL			DIMENSIONS WEIGHT		· 	
TAG RO	DOM			CONDENSING UNIT	ZONE CHANGEOVER DEVICE	AIR FLOW RATE cfm	TOTAL BTU/h	SENSIBLE BTU/h	ENTERING AIR			ENTERING AIR	POWER SUPPLY	Min Circuit Amps	Max Overcurrent Protection	WxHxD	Net	Options and Accessories	NOTES
									°F DB	°F WB	BTU/h	°Fdb	Voltage - Phase	MCA	МОР	inch	lbs		
FCU 19 Classro	oom 107 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 3	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 20 Classro	oom 108 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 3	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 18 Classro	oom 106 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 3	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 17 Classro	oom 105 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 3	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 16 Classro	oom 104 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 3	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 15 Classro	oom 103 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 3	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 25 Kinderg	garten 113 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 26 Kinderg	garten 114 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 27 Kinderg	arten 115 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 24 Classro	oom 112 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 23 Classro	oom 111 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 22 Classro	oom 110 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1	57.3	BRC1E73 (1), BYCQ125B-W1 (1)	
FCU 21 Classro	oom 109 F	FXFQ_TVJU	Round Flow Sensing Cassette	CU 4	No	1,165	30,946	23,918	75.0	63.0	39,989	70.0	208-230V 1ph	1.5	15.0	33.1 x 11.3 x 33.1		BRC1E73 (1), BYCQ125B-W1 (1)	
													·						

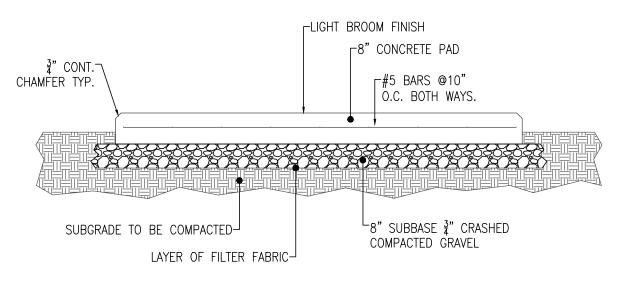
360 degree airflow distribution and three room sensors enables optimized occupant comfort and efficiency

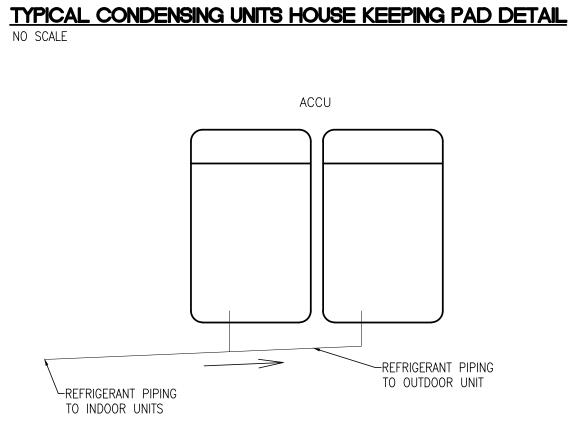
Built-in condensate pump Individually controlled supply air louvers for comfortable air supply Unit to optimizable with up to 18 possible airflow patterns

Standard Limited Warranty: 10-year warranty on compressor and all parts



REFRIGERANT PIPING ARRANGEMENT DETAIL

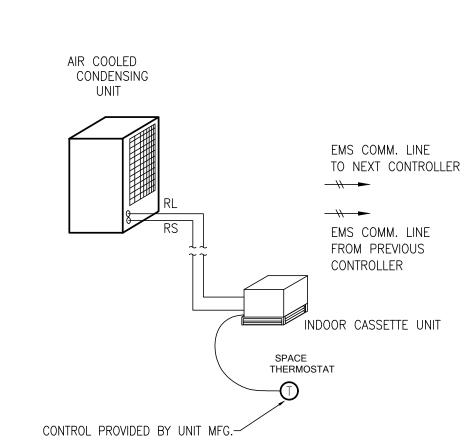




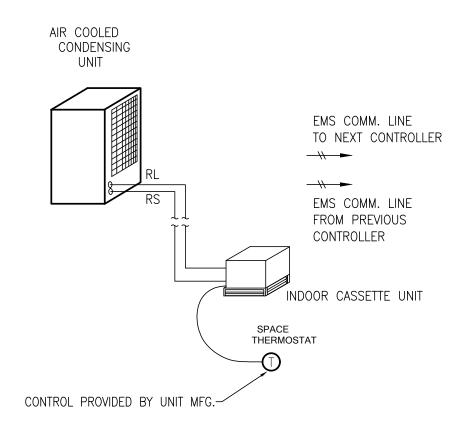
NOTE:
THE PIPING BETWEEN THE OUTDOOR UNITS MUST BE

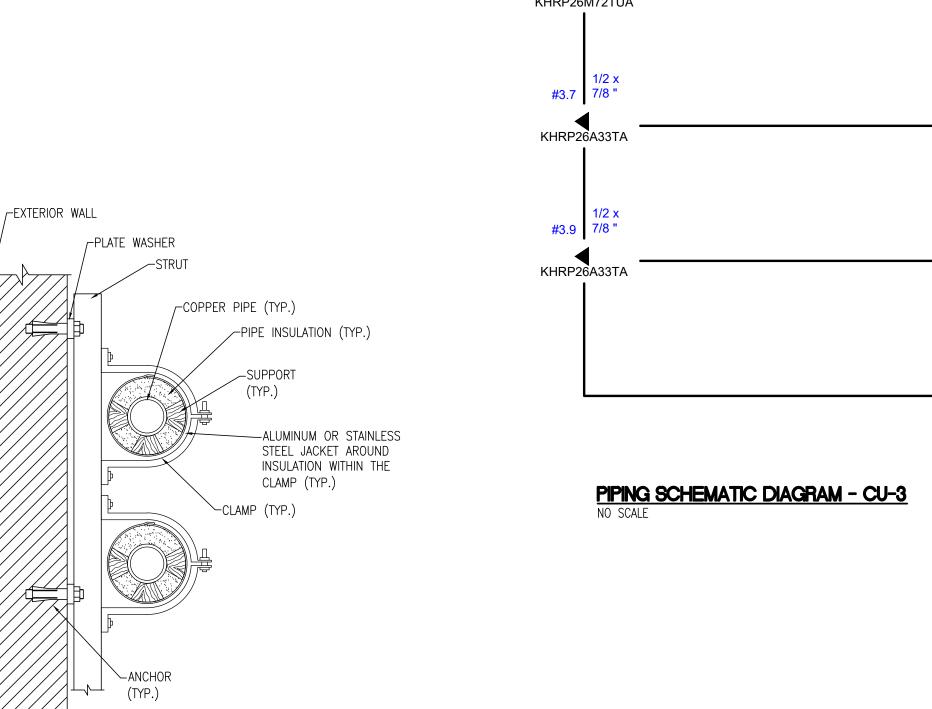
ROUTED LEVEL OR SLIGHTLY UPWARD TO AVOID THE

RISK OF OIL RETENTION INTO THE PIPING. AIR COOLED CONDENSING UNIT PIPING ARRANGEMENT DETAIL

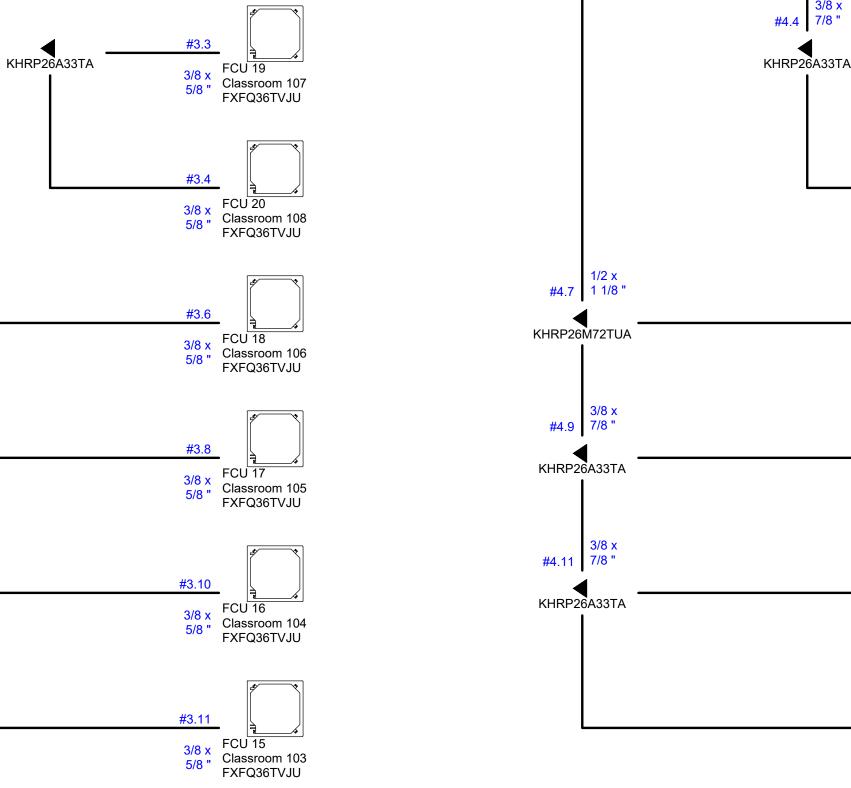


CASSETTE UNTI CONTROL DIAGRAM





KHRP26M73TUA



— NEOPRENE WAFFLE PAD.

/-- 18" x 12" BRACKET (TYP).

TYPICAL PREFABRICATED, 18" HIGH,

SEISMIC RAIL SECURED TO CONCRETE

1. UNIT MANUFACTURER SHALL PROVIDE WIRED CONTROLLER INDOOR UNIT.

7. CASSETTE UNITS SHALL HAVE MULTIFUNCTION CASEMENT/MERV 10 FILTER

9. SYSTEM SHALL BE BACNET READY. COORDINATE WITH TEMPERATURE CONTROL CONTRACTOR

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.

3. POWER WIRING AND RACEWAY BY DIVISION 26.

8. OUTDOOR UNITS SHALL HAVE WIND BAFFLE

MECHANICAL - GENERAL NOTES :

RXYQ240AATJA

1. INSTALL UNITS WITH CLEARANCE FOR SERVICE.

WALLS AS NECESSARY. SEAL PENETRATIONS

2. PROVIDE REFRIGERATION LINE SETS FOR AIR CONDITIONING UNIT WITH CONNECTIONS TO CONDENSING UNIT.

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.

7. PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH WALLS/PARTITION. THIS CONTRACTOR SHALL OPEN

KHRP26A33TA

Kindergarten 113

Kindergarten 114

3/8 x Kindergarten 115

FXFQ36TVJU

Classroom 112 FXFQ36TVJU

Classroom 111 FXFQ36TVJU

Classroom 110 FXFQ36TVJU

Classroom 109

FXFQ36TVJU

FXFQ36TVJU

3. THE LOCATION OF ALL AC CASSETTE UNITS SHALL BE COORDINATED WITH THE EXISTING CEILING

6. PROVIDE PIPE COVER TO NEW PIPES TO AC UNITS. CONTRACTOR TO FIELD VERIFY PIPE COVER

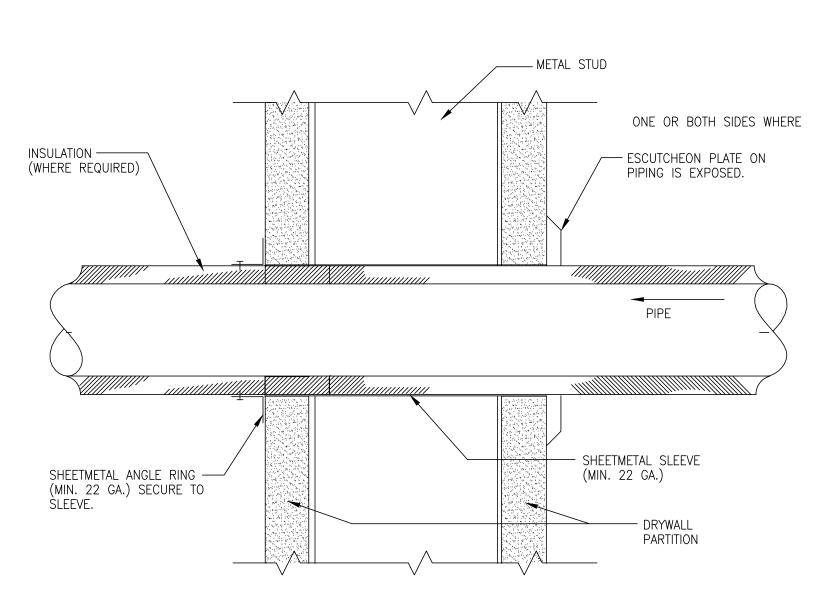
4. CONTRACTOR SHALL PROVIDE REFRIGERANT PIPING. INSULATE ALL REFRIGERANT PIPES.

5. CONDENSATE PIPING SHALL BE COPPER. PIPE SHALL BE INSULATED.

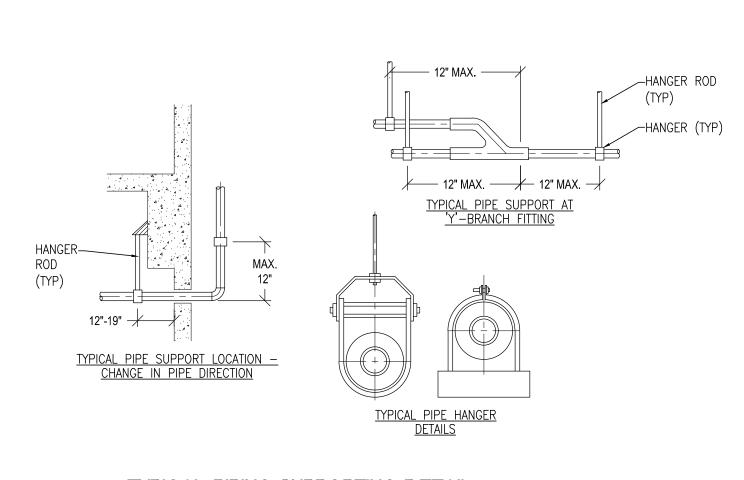
KHRP26M73TUA

1 3/8 "

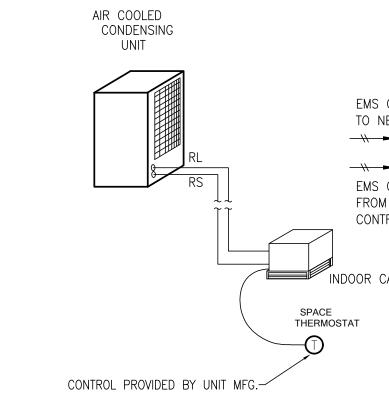
PIPING SCHEMATIC DIAGRAM - CU-4



PIPE SLEEVE THROUGH WALL DETAIL



TYPICAL PIPING SUPPORTING DETAIL



TYPICAL PIPING SUPPORT DETAIL



AIR CRAFT CABLE SECURE TOP OF CONDENSING

PROVIDE CONDENSING

CONCRETE PAD ---

BOLT CONDENSING UNIT TO RAIL, TYPICAL.

UNIT, TYPICAL.

