

777 Old Saw Mill River Road
Tarrytown, NY 10591-6707
T: 914.847.7400
F: 914.847.7991
www.regeneron.com

Building #17
Campus Expansion Child
Day-care Center

777 Old Saw Mill River Road
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

Architect

Gensler

1700 Broadway, Suite 400
New York, NY 10019
(212) 492-1400 Phone
(212) 492-1472 Fax

Structural Engineer

Thornton Tomasetti
120 Broadway, 15th Floor
New York, NY 10021
(917) 661-7800 Phone
(917) 661-7801 Fax

MEP / IT / Security Engineer

Cosentini Associates
498 Seventh Avenue
New York, NY 10018
(212) 615-3600 Phone
(212) 615-3700 Fax

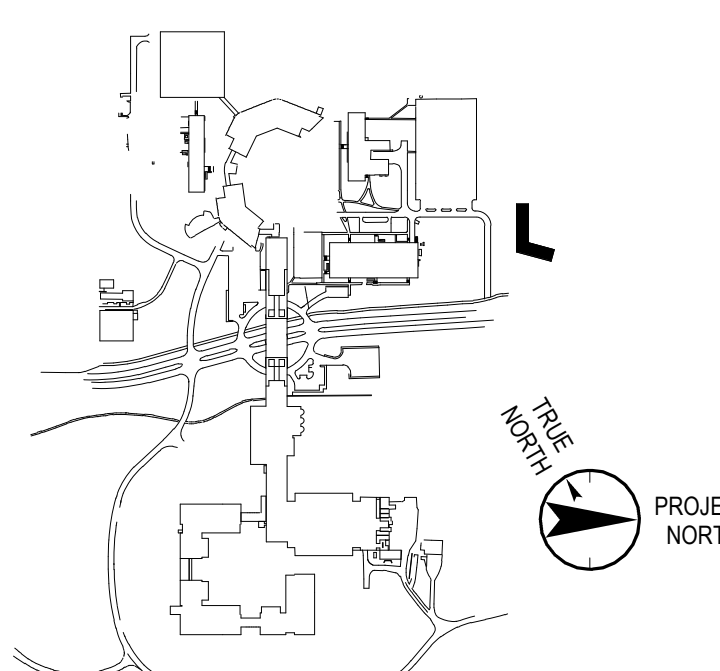
Civil Engineer

JMC
120 Bedford Road
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(914) 273-5225 Phone
(914) 273-2102 Fax

Landscape Architect

Langan
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
(212) 479-5400 Phone
(212) 479-5444 Fax

Key Plan



No. Date Description

0 05.20.2022 ISSUED FOR PERMIT

Plot Date: 10/25/21

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Professional Seal and Signature

Vendor Name: GENSLER
Vendor Project No.: 006.3608.000
Discipline: Drawn By: Author
**MECHANICAL 1ST FLOOR
DUCTWORK PLAN**

Scale: 1/8" = 1'-0" Floor:

M-100

AC UNIT RETURN AIR NOTES:
1. PROVIDE SPACE FOR MANUFACTURER PROVIDED FILTER KIT FOR MERV 14 FILTER.
2. PROVIDE THE FOLLOWING SIZES FOR RETURN PLENUM AND RETURN AIR DUCT THAT FACES ROOF. COORDINATE WITH EQUIPMENT MANUFACTURER.

0.5 TON: (899-AC-1-02F, 899-AC-1-03C)
20x8 PLENUM, 18x8 RETURN AIR DUCT

0.75 TON: (899-AC-1-01E, 899-AC-1-02G)
20x8 PLENUM, 18x8 RETURN AIR DUCT

1.0 TON: (899-AC-1-01G, 899-AC-1-02E, 899-AC-1-03E, 899-AC-1-04G, 899-AC-1-05E, 899-AC-1-05F)
24x8 PLENUM, 22x8 RETURN AIR DUCT

1.25 TON: (899-AC-1-01F)
36x10 PLENUM, 34x10 RETURN AIR DUCT

1.5 TON: (899-AC-1-01A, 899-AC-1-01B, 899-AC-1-02A, 899-AC-1-02B, 899-AC-1-04A)
38x12 PLENUM, 36x10 RETURN AIR DUCT

2.0 TON: (899-AC-1-01C, 899-AC-1-01D, 899-AC-1-02C, 899-AC-1-02D, 899-AC-1-03B, 899-AC-1-03D)
38x12 PLENUM, 36x10 RETURN AIR DUCT

2.5 TON: (899-AC-1-04B, 899-AC-1-04C, 899-AC-1-04E, 899-AC-1-05A, 899-AC-1-05C)
54x12 PLENUM, 52x12 RETURN AIR DUCT

4.0 TON: (899-AC-1-03A)
54x12 PLENUM, 52x12 RETURN AIR DUCT

SHEET NOTES:
1. DOAS SUPPLY AND RETURN DUCTWORK (INCLUDING BYPASS DUCT), TO BE PROVIDED WITH 1.5" INTERNAL ACOUSTICAL LINING FOR 25 FEET, IN ALL DIRECTIONS, FROM ROOF PENETRATION FOR NOISE ATTENUATION AND FOR A MINIMUM OF R-6 INSULATION. THE REMAINDER OF THE SUPPLY AND RETURN DUCTWORK FROM THE DOAS IS TO BE EXTERNALLY INSULATED.
2. TRANSFER DUCTS TO BE PROVIDED WITH 1" INTERNAL ACOUSTICAL LINING.
3. AC SUPPLY AND RETURN AIR DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATION AND CODE.
4. DRAWINGS SHOW CLEAR INSIDE DIMENSIONS.
5. ACOUSTICALLY WRAP AT ROOF PENETRATIONS, (EXCLUDING LAUNDRY).
6. ALL TRANSFER DUCTS AND RETURN AIR OPENINGS ARE TO BE PROVIDED WITH WIRE MESH SCREENS (WMS)

SHEET DIFFUSER NOTES:
1. CR-2 RETURN GRILLES TO HAVE 15" NECK FOR UP TO 750 CFM OF RETURN AT NC OF 20. THESE RETURN GRILLE ARE TO BE DISCRETELY TAGGED TO NOTE TO MAINTENANCE STAFF RETURN AIR FUNCTION.
2. CD-5 IN CORRIDOR TO HAVE 8" NECK AND BE PROVIDED WITH MODEL DB BAFFLES FOR 2-DIRECTIONAL AIR FLOW.
3. INACTIVE LINEARS TO SERVE AS RETURN AIR PATHWAYS.



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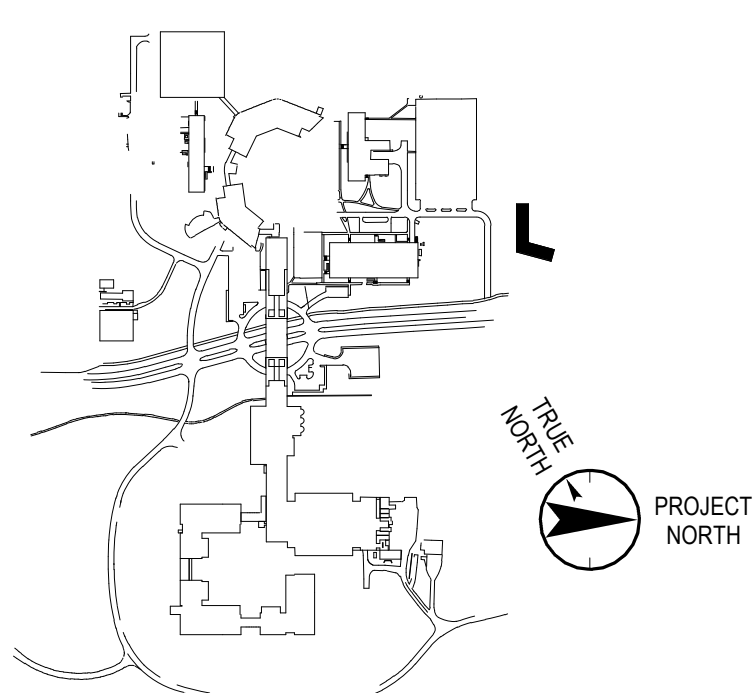
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Professional Seal and Signature

Vendor Name: GENSLER
Vendor Project No.: 006.3608.000
Discipline: Drawn By: Author

MECHANICAL ROOF
DUCTWORK PLAN

Scale: 1/8" = 1'-0" Floor:

M-101

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATION ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

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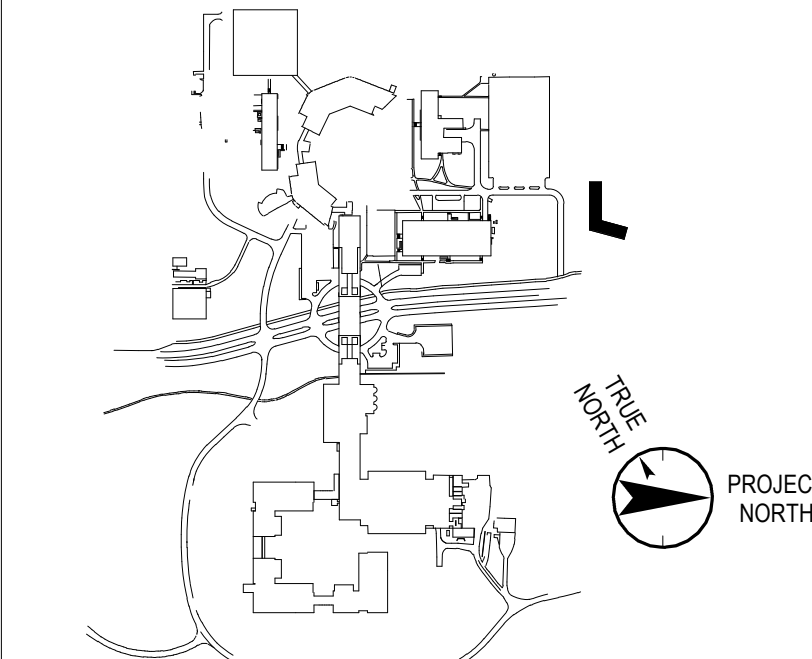
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Key Plan

[illegible]

Plot Date: 11/17/21

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**MECHANICAL ROOF PIPING
PLAN**

Scale: 1/8" = 1'-0" Floor:

M-151

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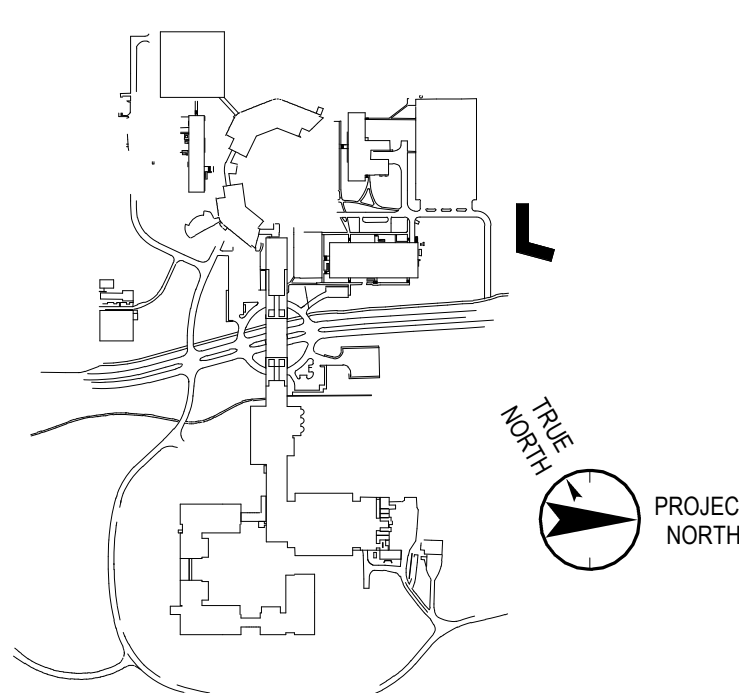
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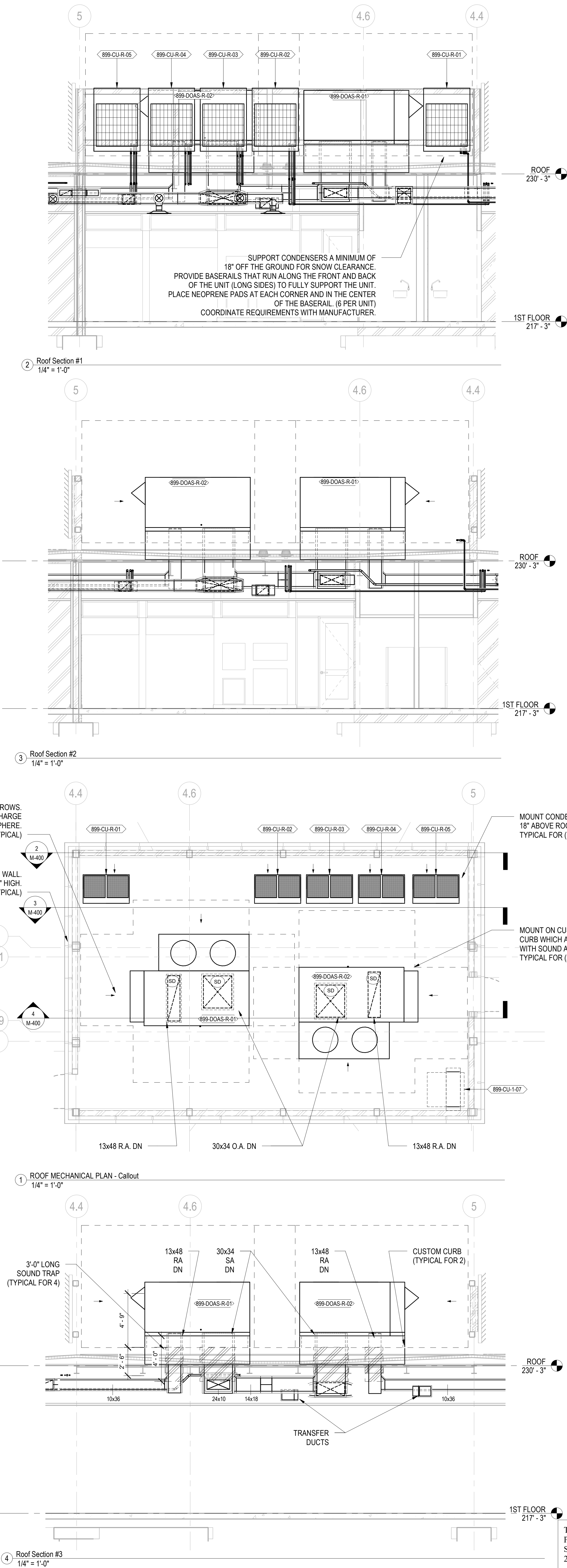
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Discipline: Drawn By: Author
**MECHANICAL ENLARGED
VIEWS SHEET 1**

Scale: 1/4" = 1'-0" Floor:

M-400



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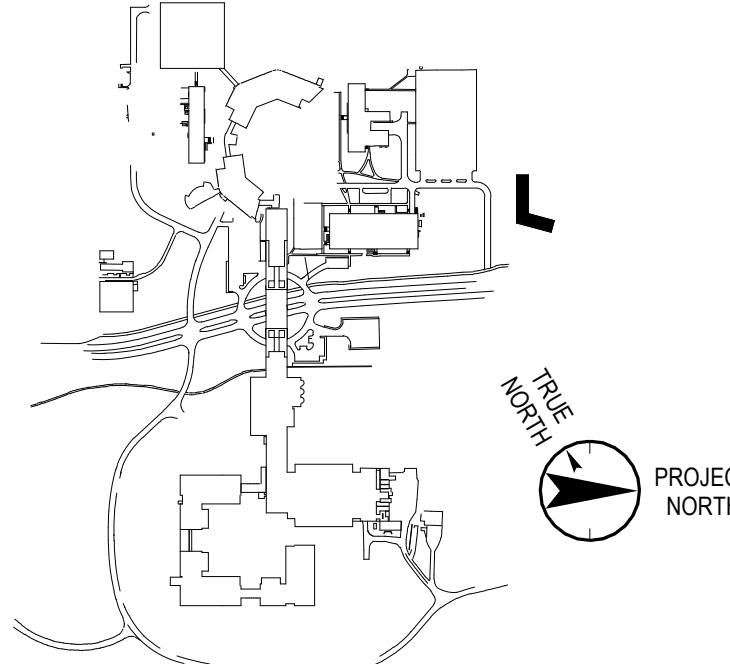
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Key Plan



No. Date Description

0 05.20.2022 ISSUED FOR PERMIT

Plot Date: 03/08/22

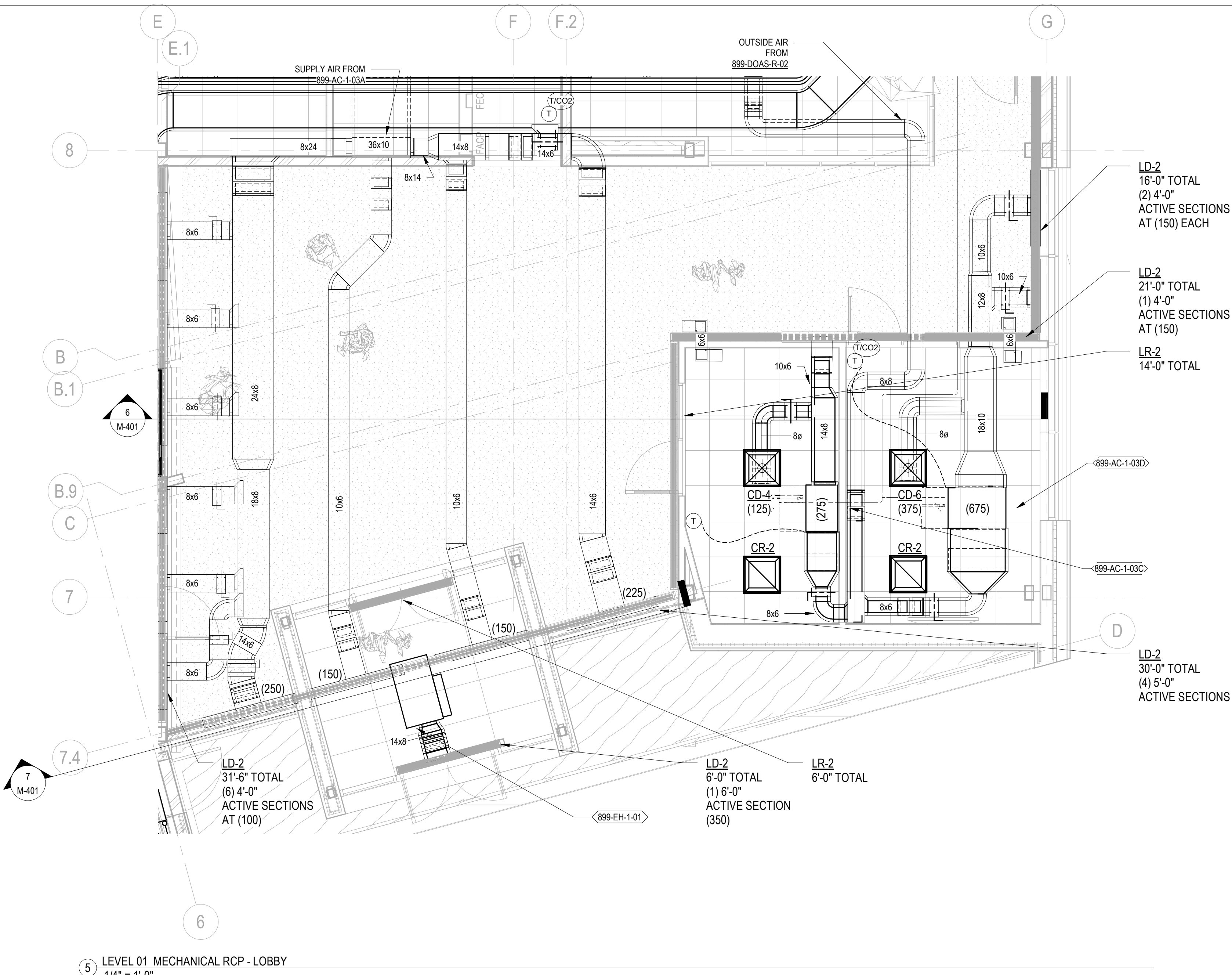
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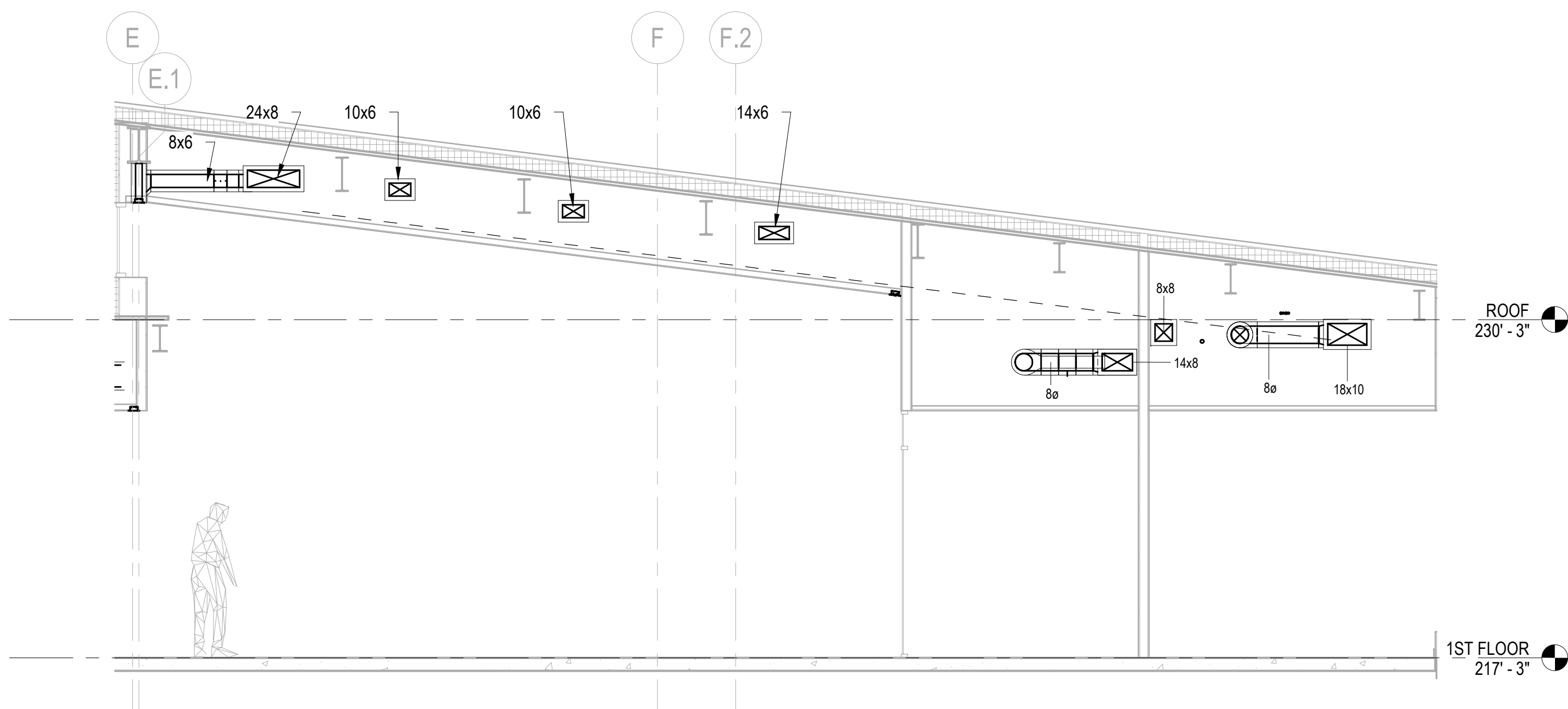
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Discipline: Drawn By: Author
MECHANICAL ENLARGED
VIEWS SHEET 1

Scale: 1/4" = 1'-0" Floor:

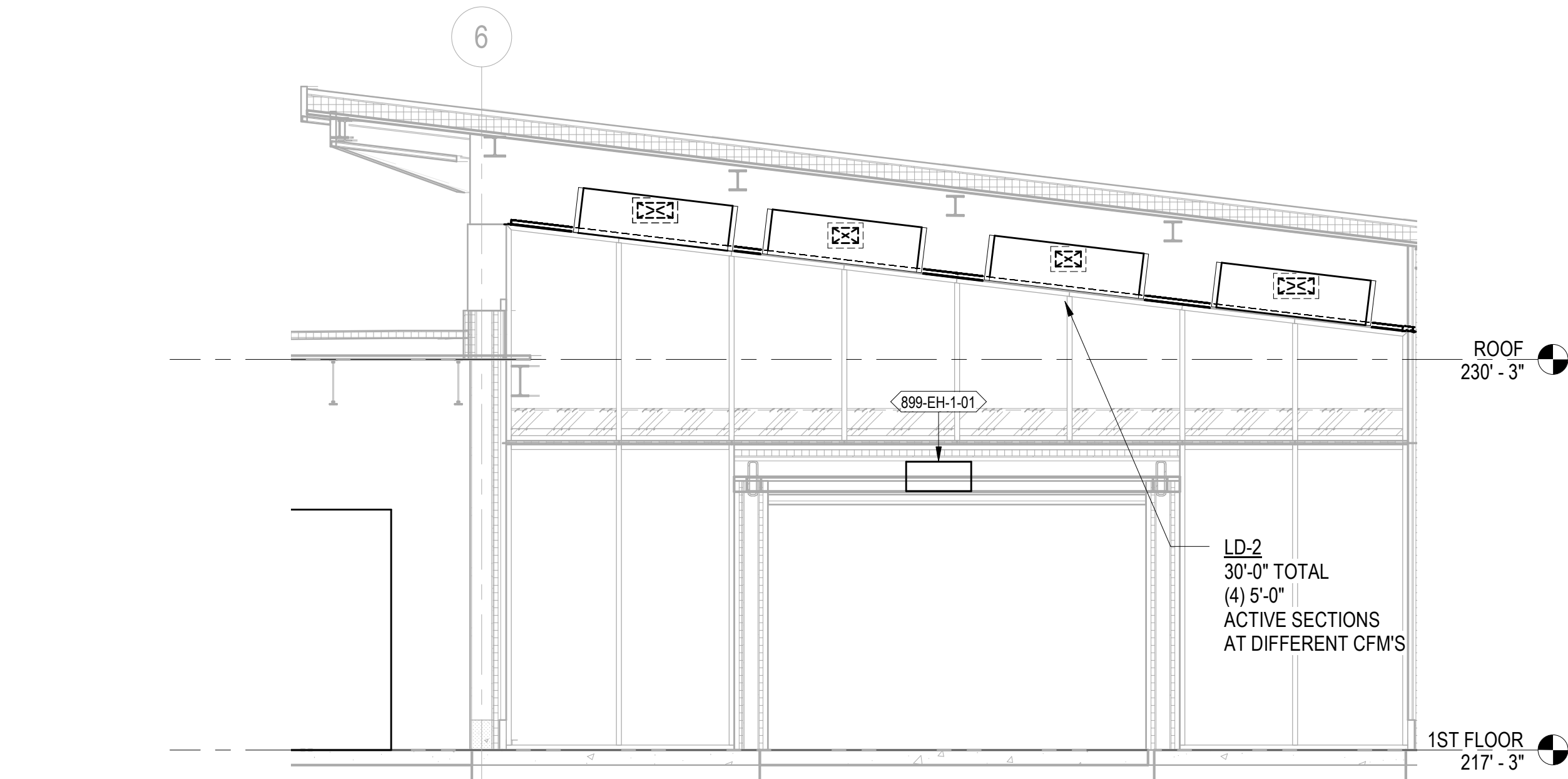
M-401



5 LEVEL 01 MECHANICAL RCP - LOBBY
1/4" = 1'-0"

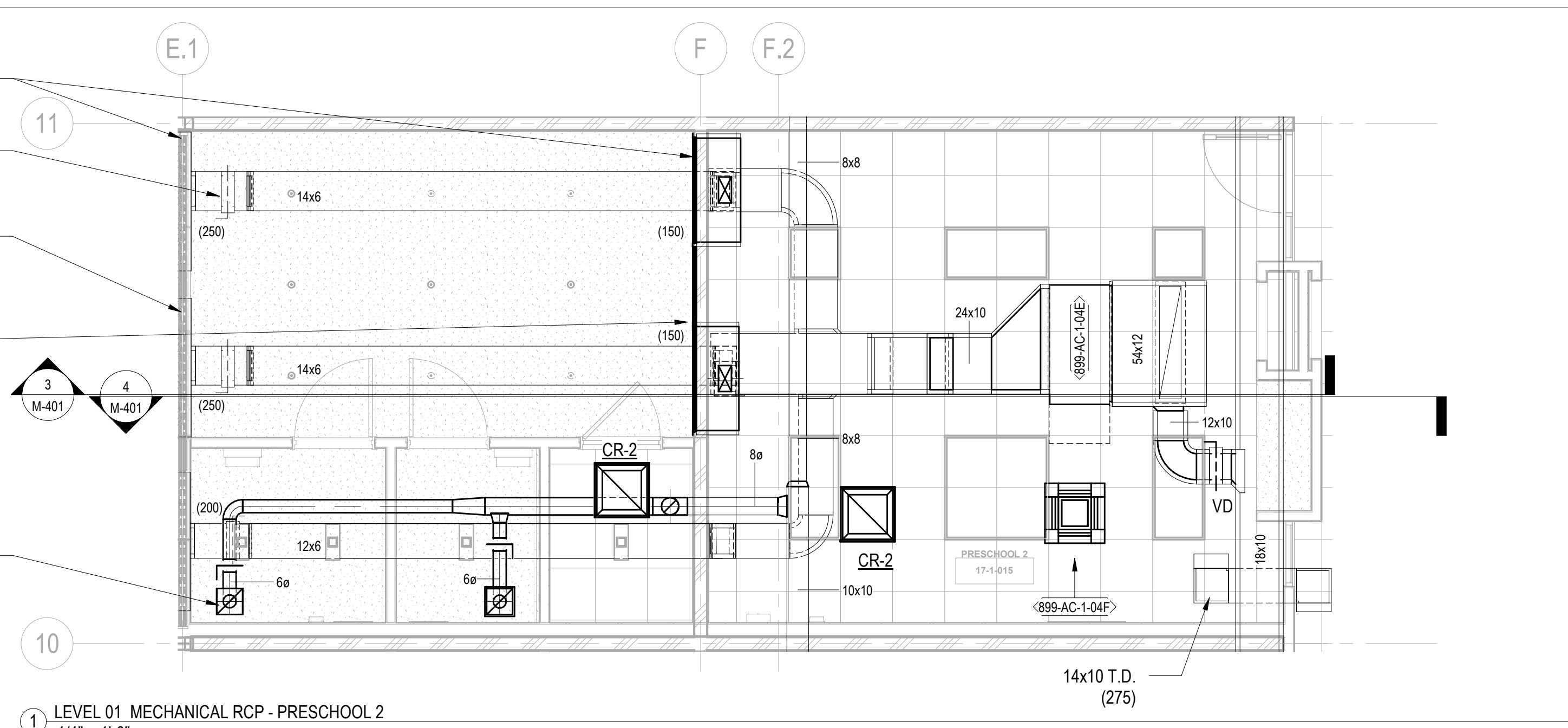


6 LOBBY - SECTION #1
1/4" = 1'-0"



7 LOBBY - SECTION #2
1/4" = 1'-0"

CONTINUOUS LINEAR WITH
INACTIVE SECTIONS USED
FOR RETURN AIR,
(TYPICAL)
VOLUME DAMPER
(TYPICAL FOR ALL OUTLETS)
LD-2
19'-0" TOTAL
(3) 5'-0"
ACTIVE SECTIONS
LD-2
11'-6" TOTAL
(2) 4'-0"
ACTIVE SECTIONS

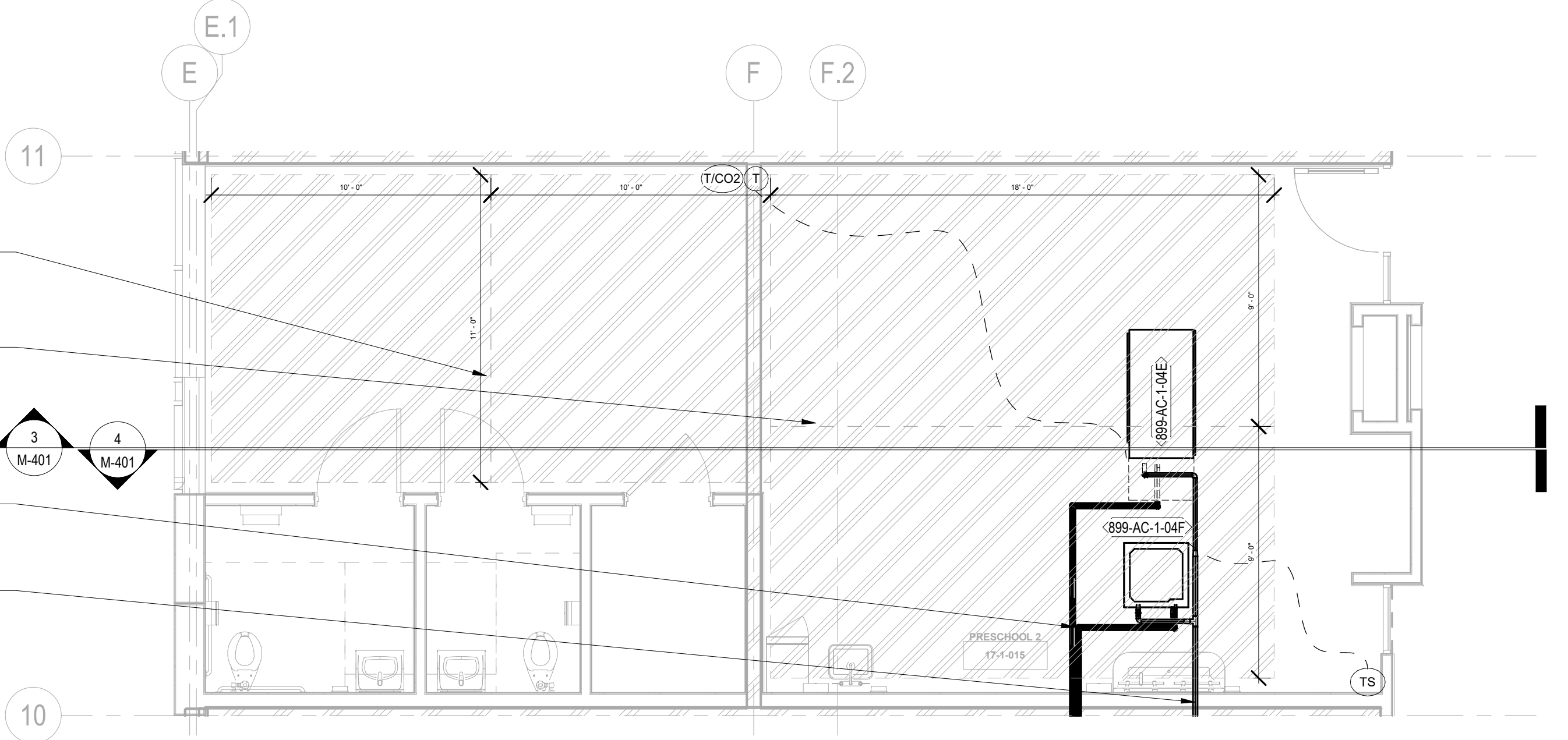


1 LEVEL 01 MECHANICAL RCP - PRESCHOOL 2
1/4" = 1'-0"

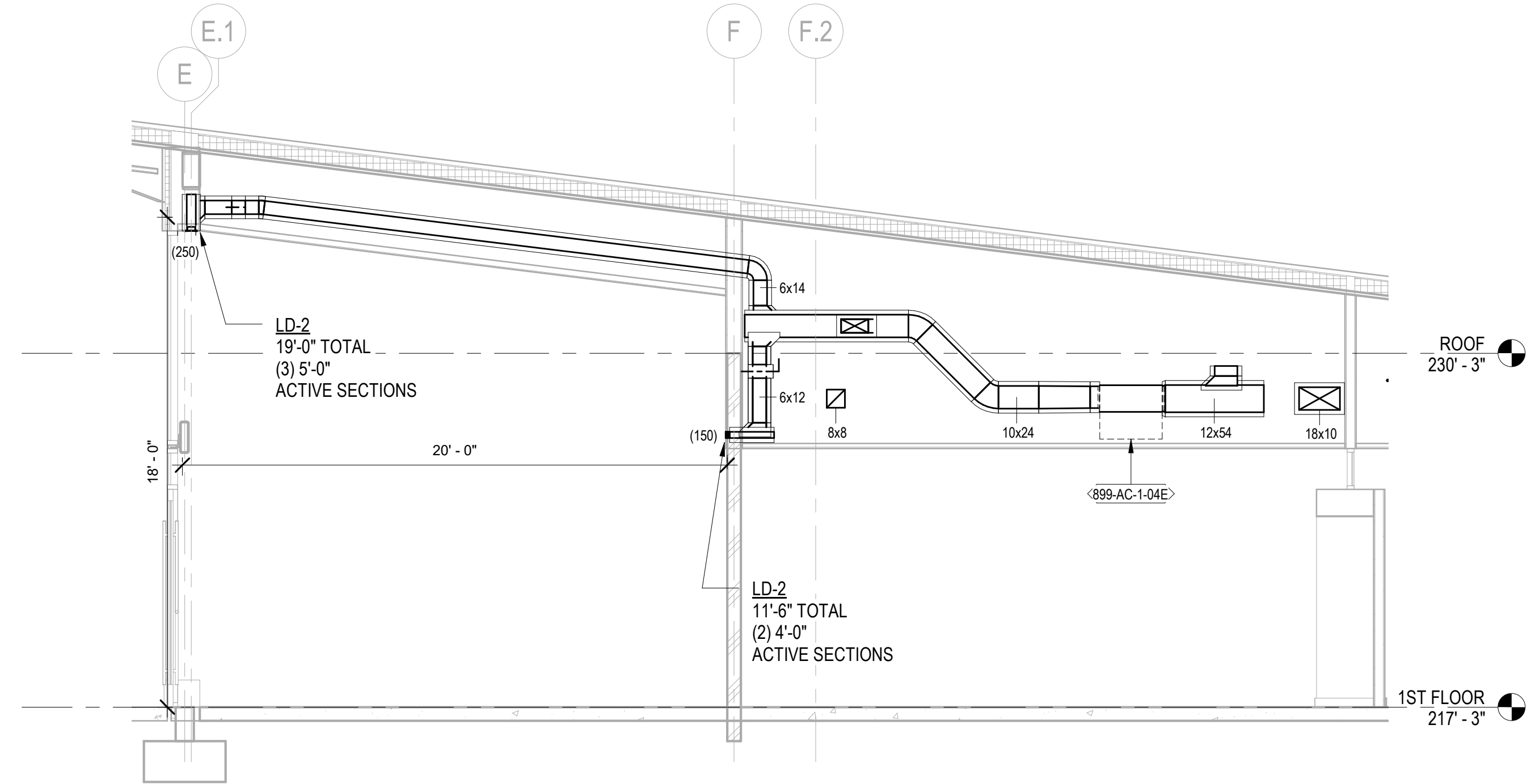
ELECTRIC MAT
220 SF / 2.6 KW
ADD-ALT
FOR ADDITIONAL
ELECTRIC MAT
324 SF / 3.5 KW

REFRIGERANT
LINES FROM
899-B5B-1-04

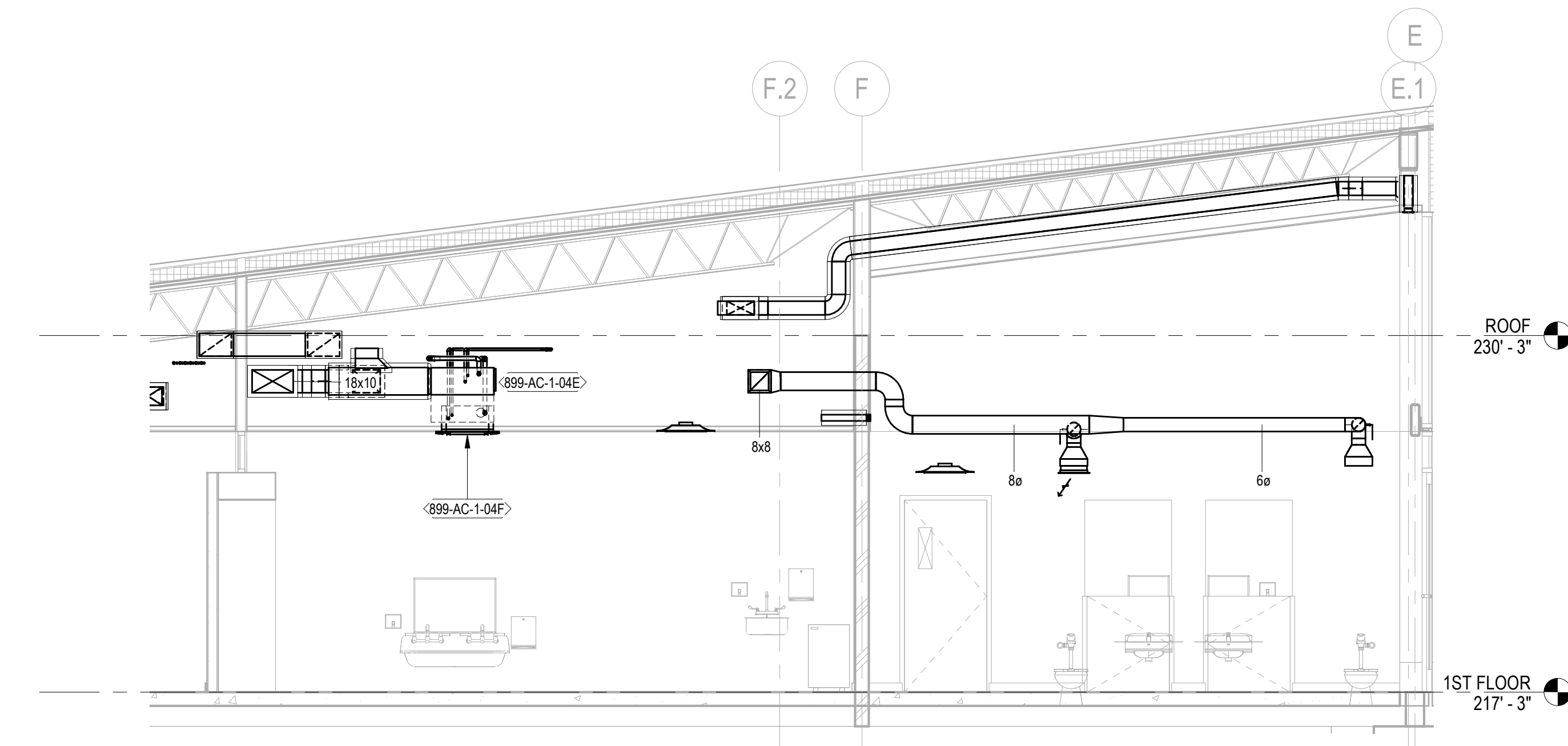
CONDENSATE
LINE TO DRAIN



2 LEVEL 01 MECHANICAL PLAN - Callout 1
1/4" = 1'-0"



3 PRESCHOOL 2 - SECTION #1
1/4" = 1'-0"



4 PRESCHOOL 2 - SECTION #2
1/4" = 1'-0"

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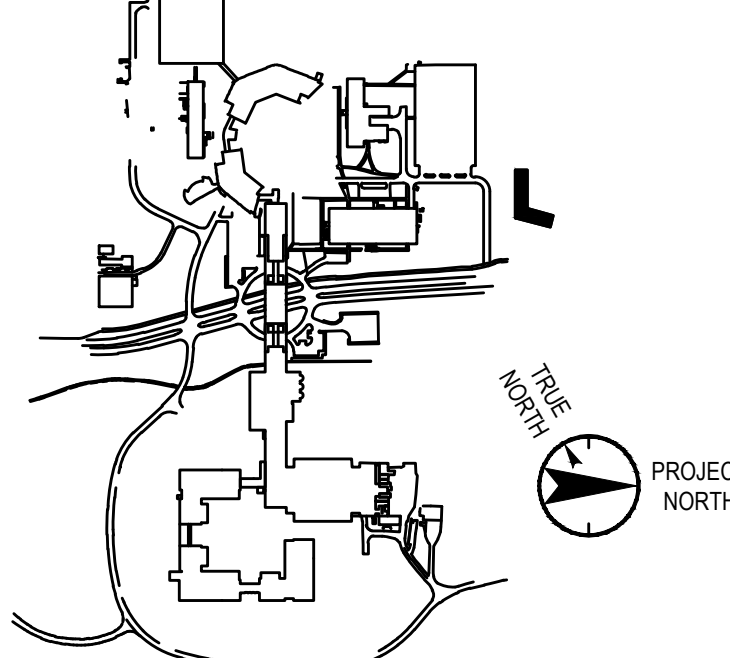
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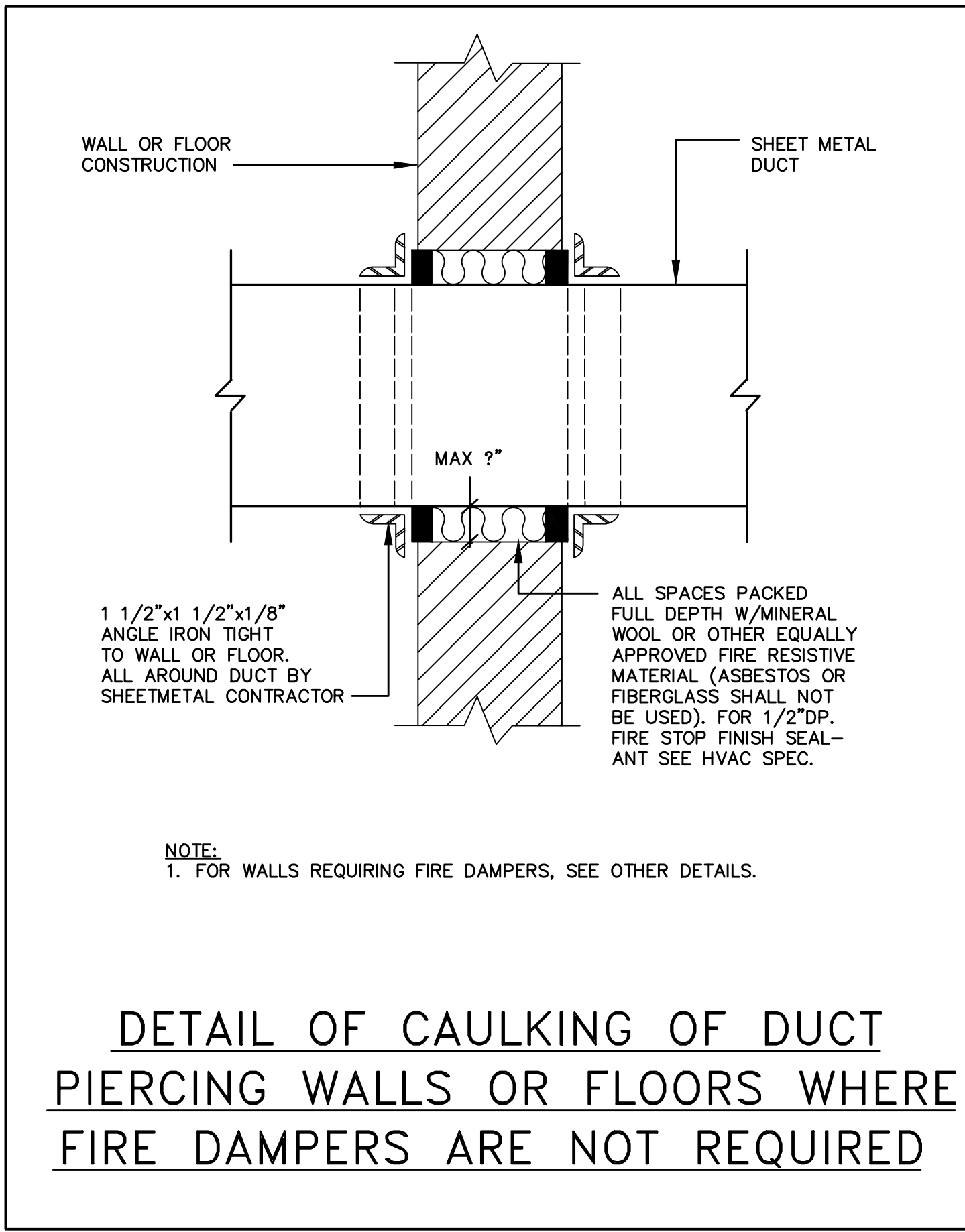
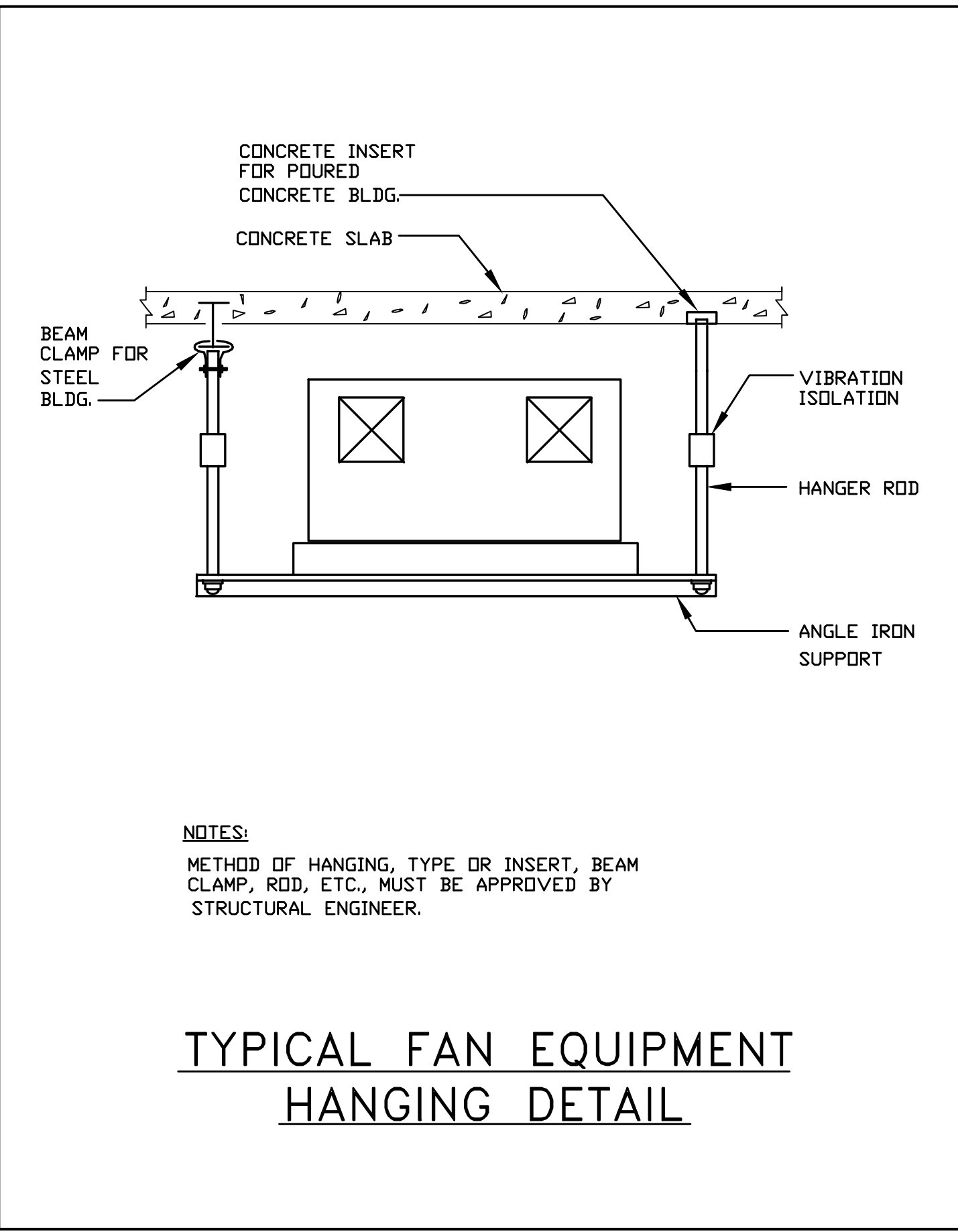
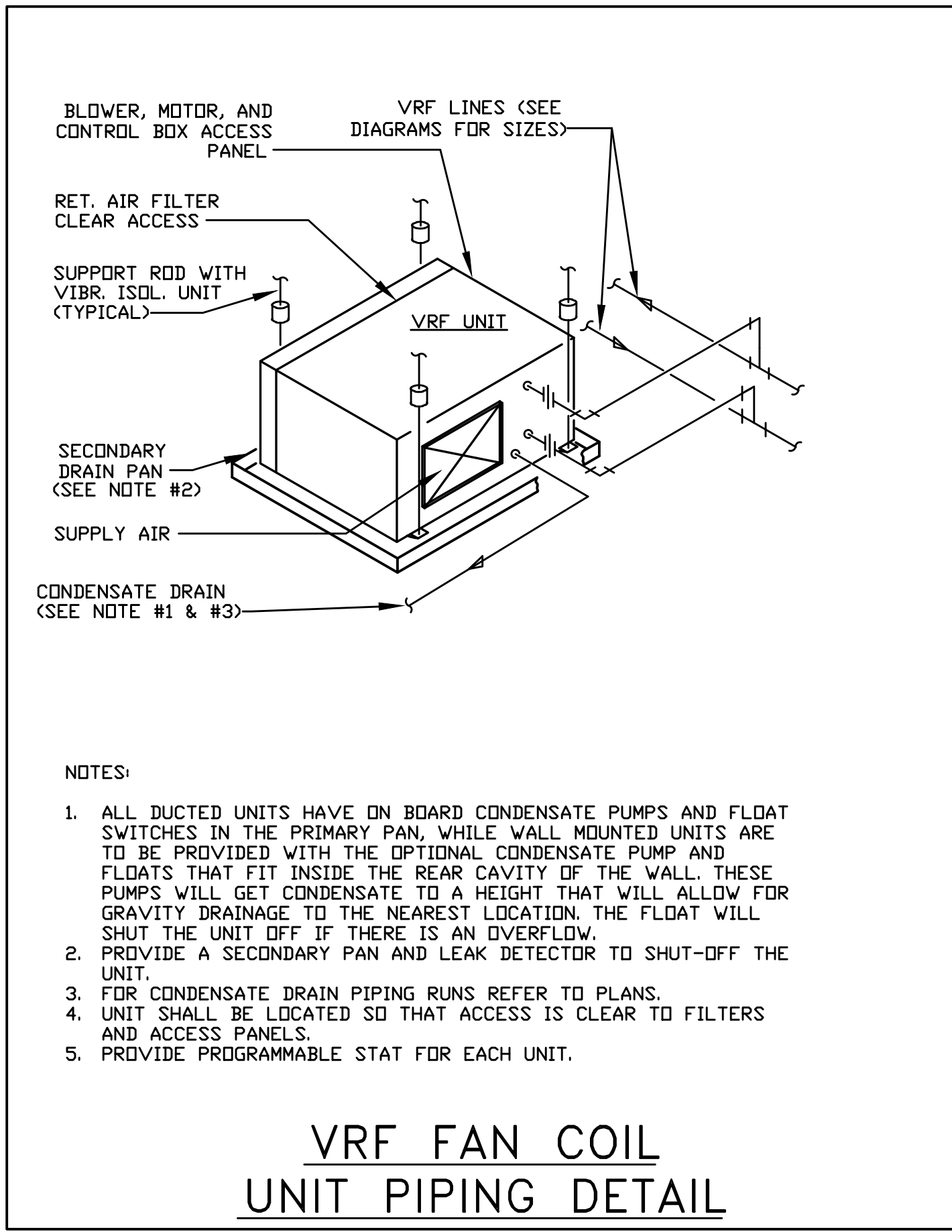
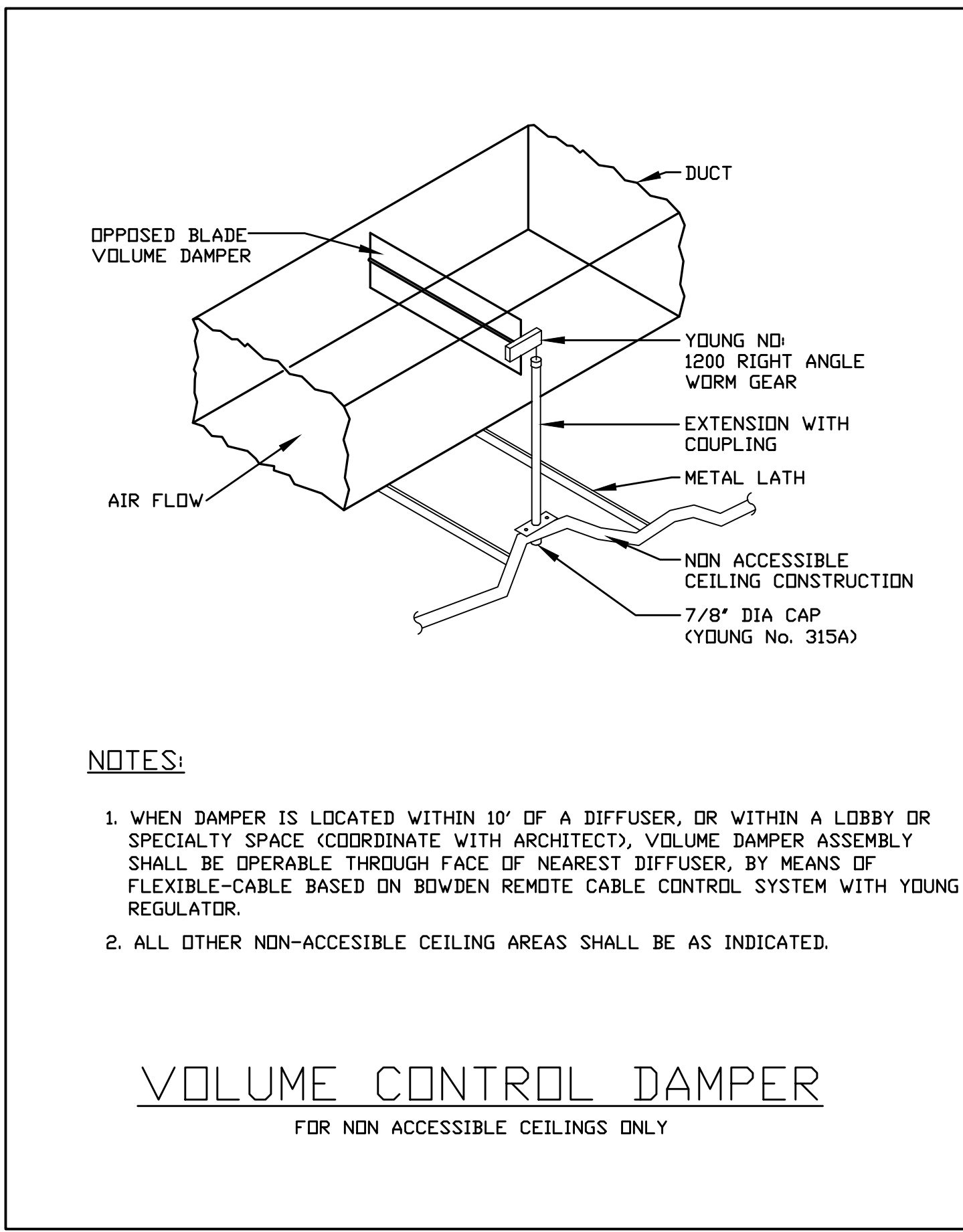
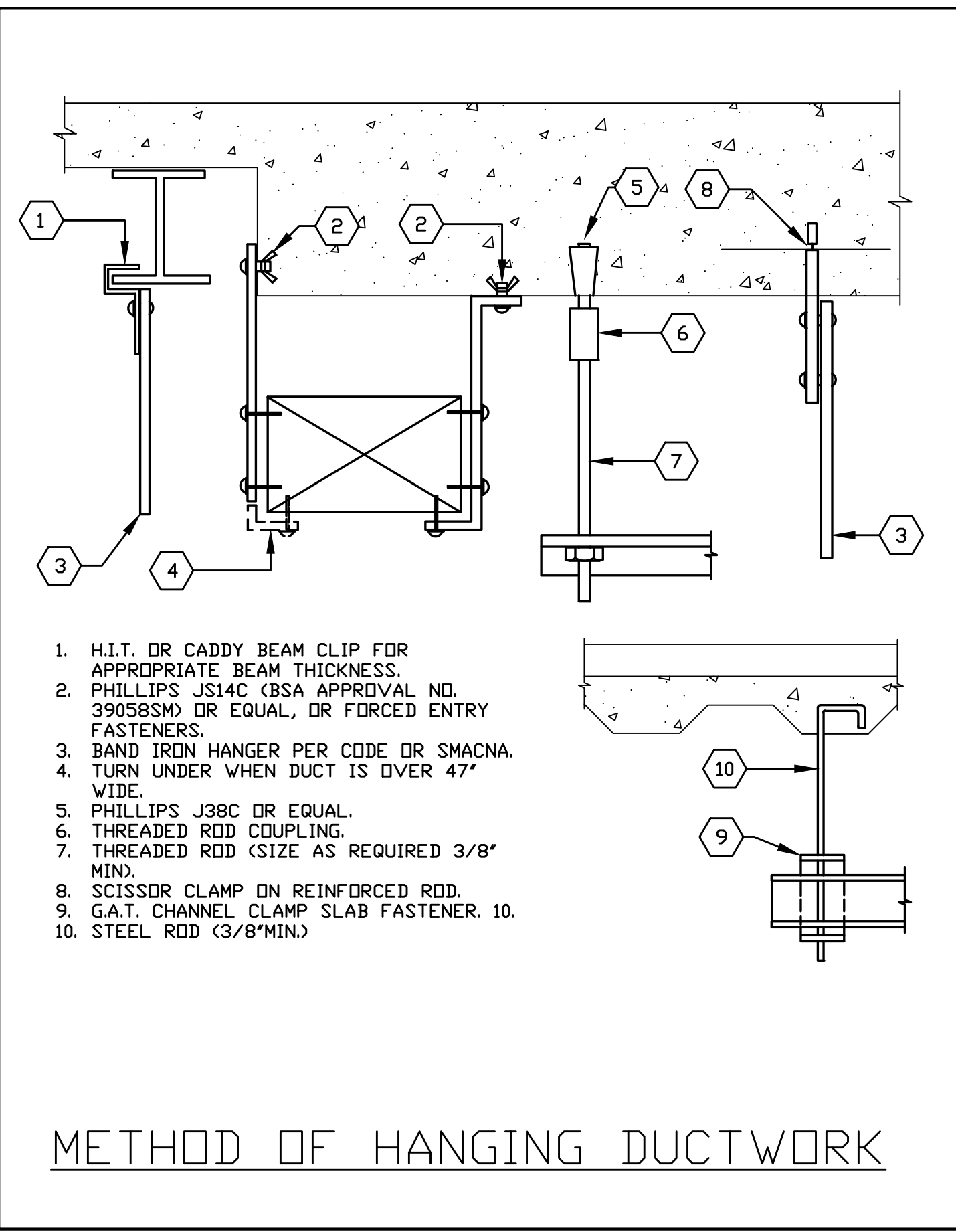
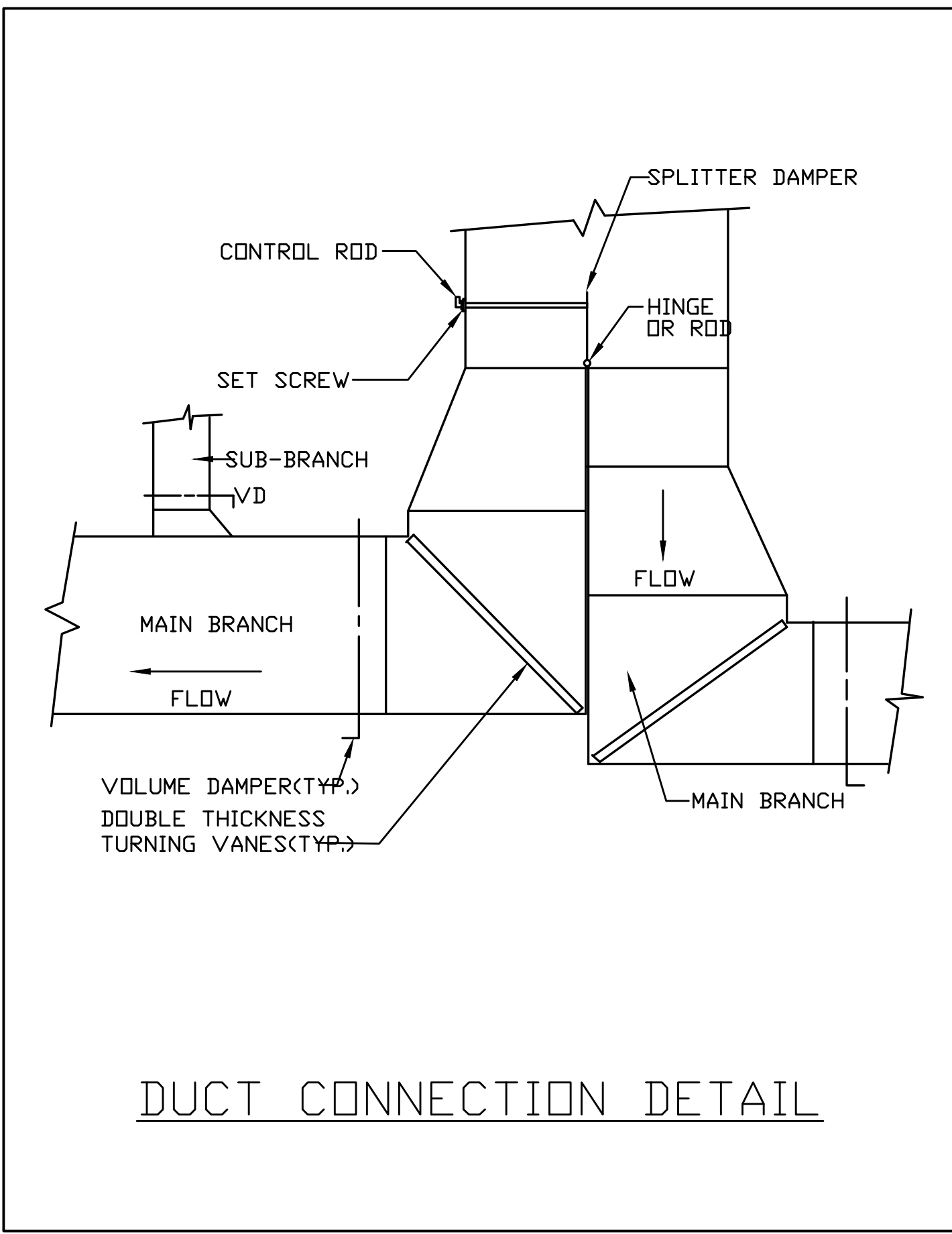
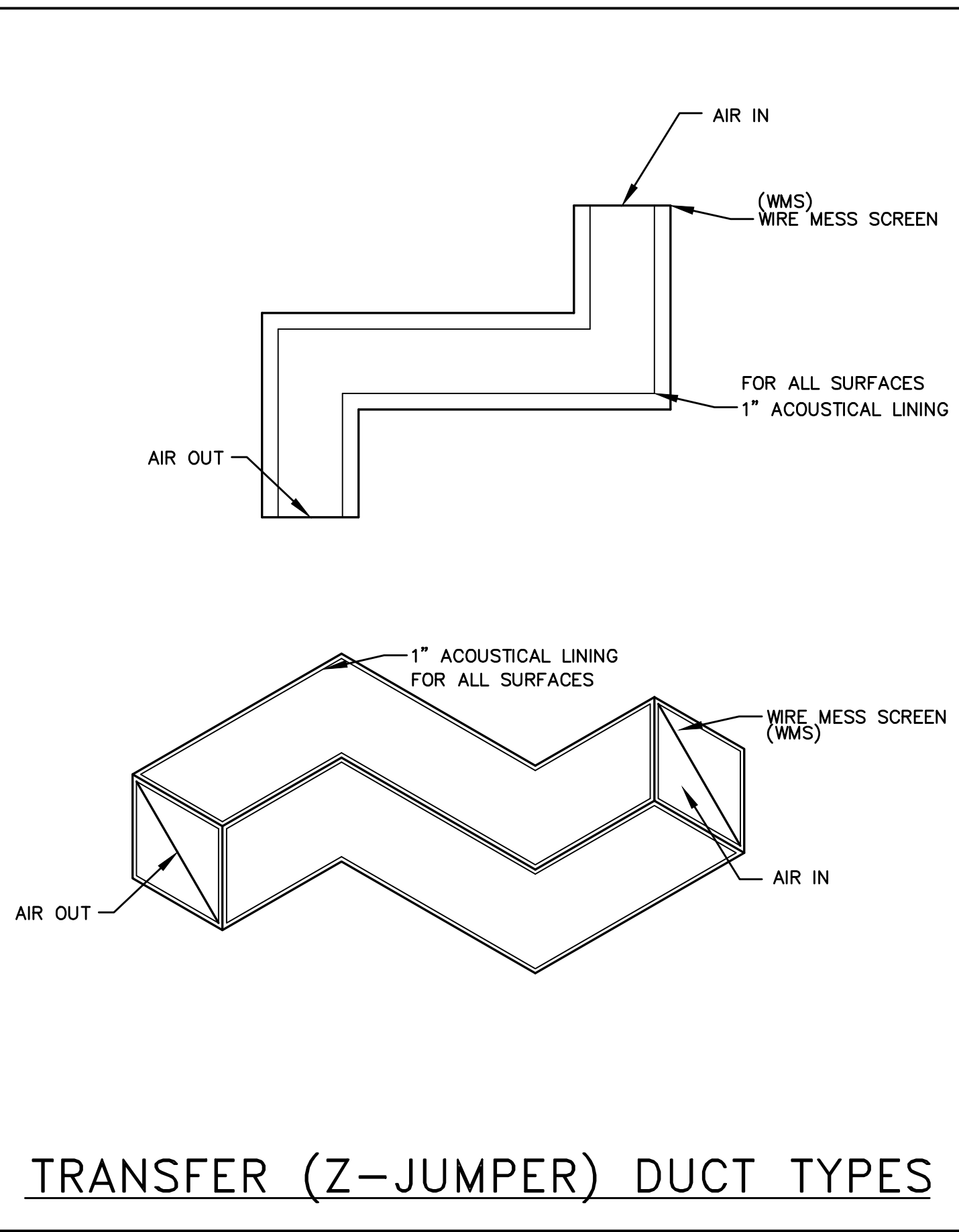
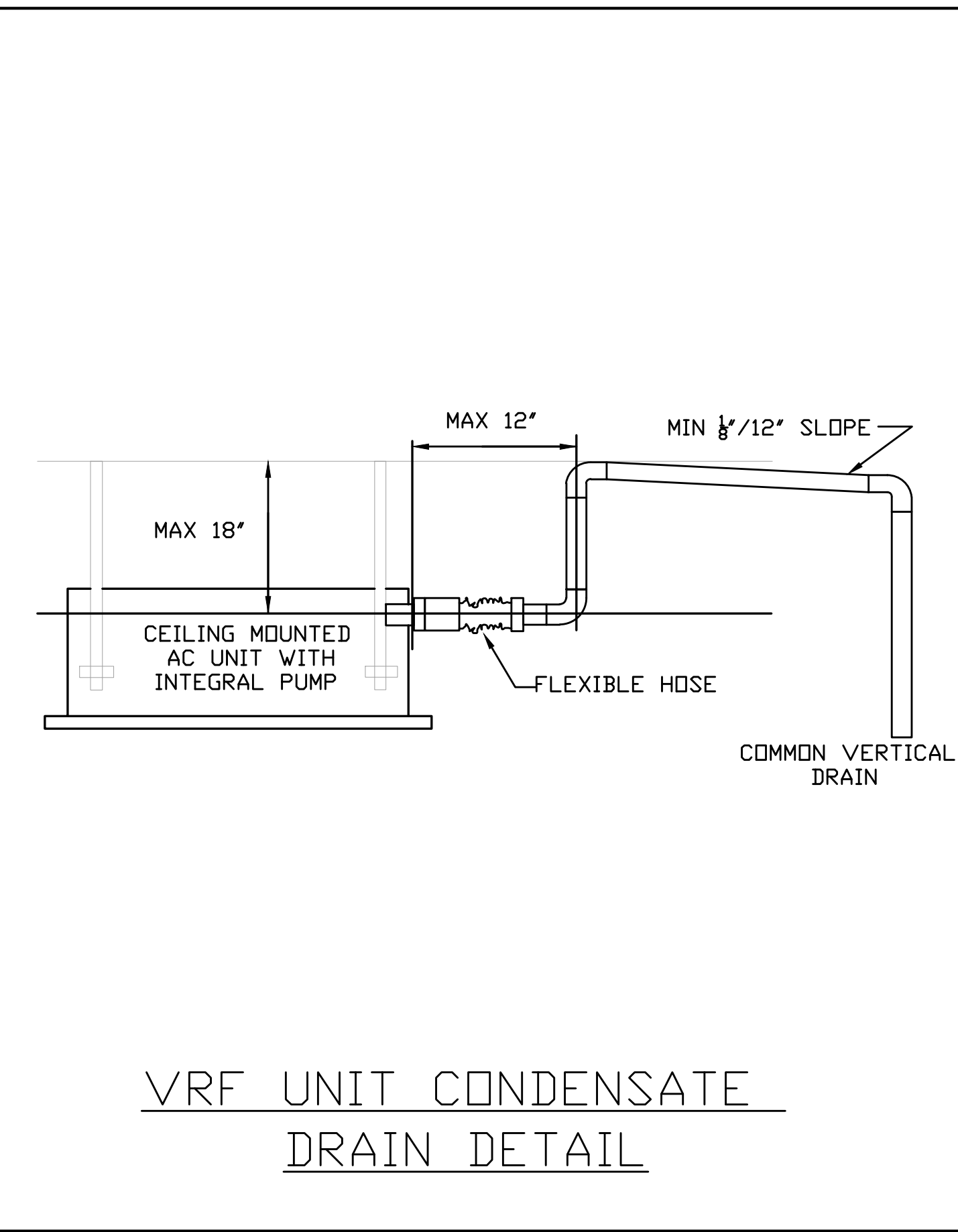
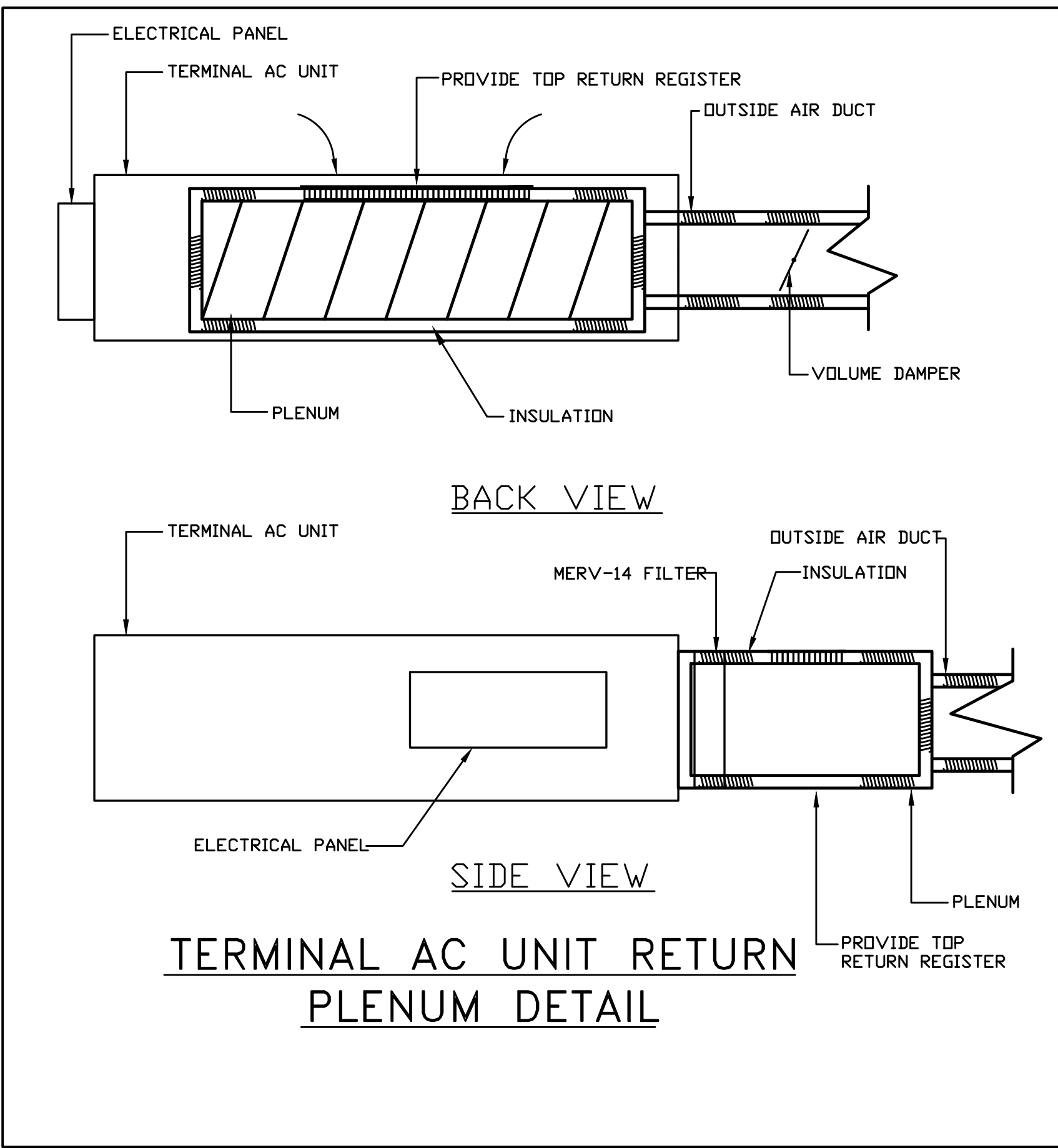
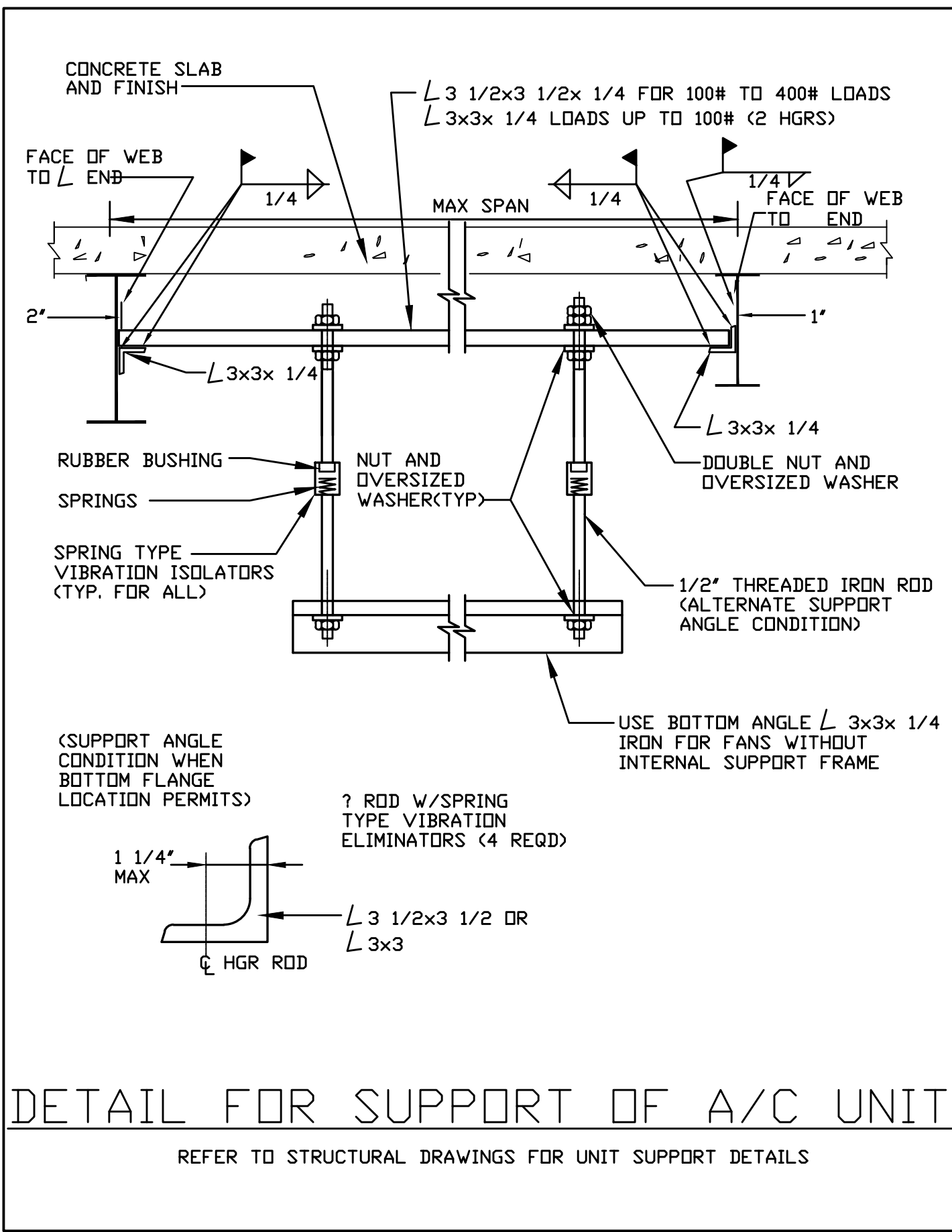
Discipline: Drawn By:

MECHANICAL
DETAILS
SHEET 1

Scale: NTS

Floor:

M-500



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A map of the project area showing the intersection of Highway 101 and Highway 15. The map includes a north arrow pointing towards the top right, labeled 'PROJECT NORTH'. A scale bar indicates a distance of 100 feet. The map shows the layout of the proposed development, including parking lots, building footprints, and surrounding infrastructure.

[illegible]

Professional Seal and Signature

Vendor Name: _____
Vendor Project No.: _____

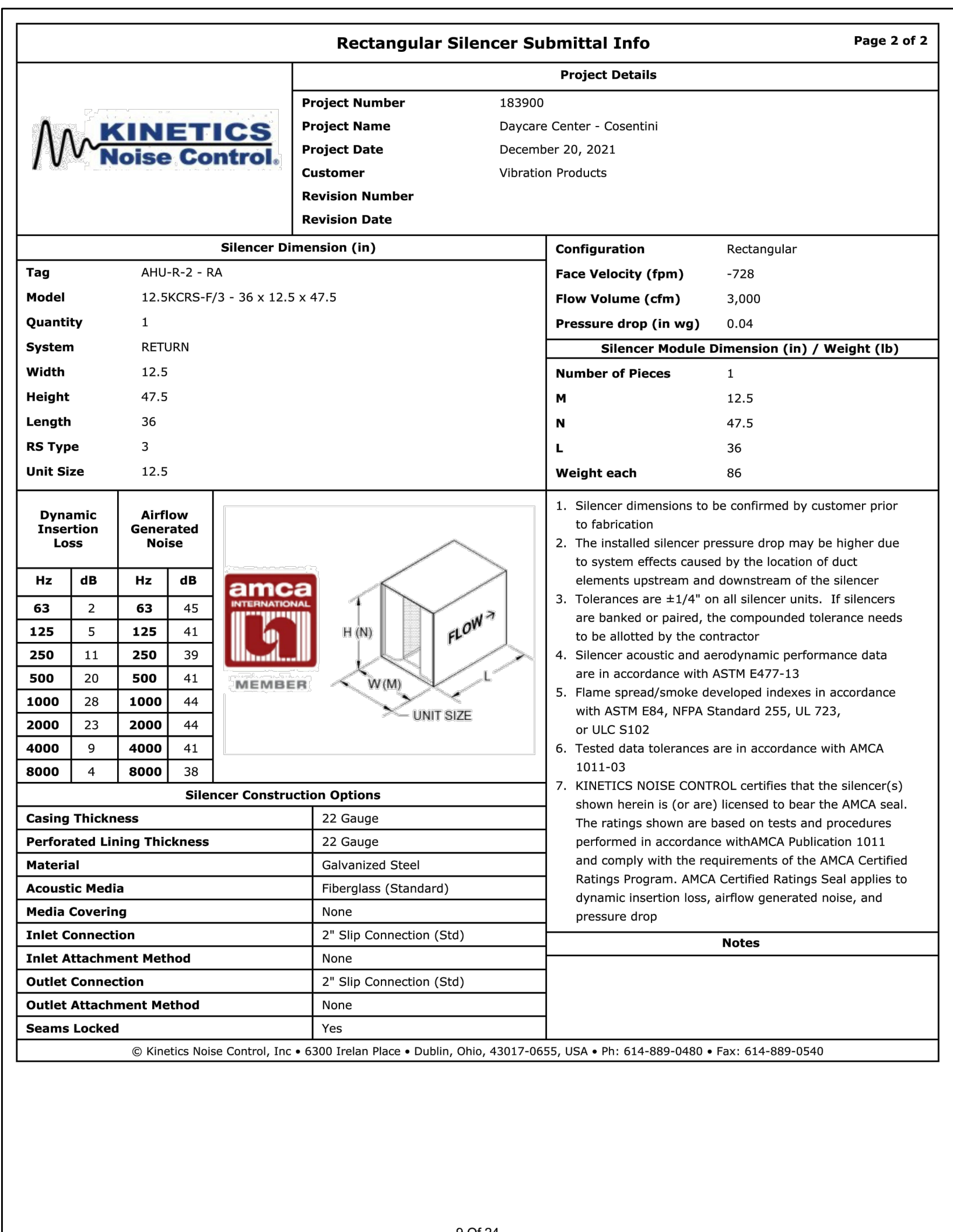
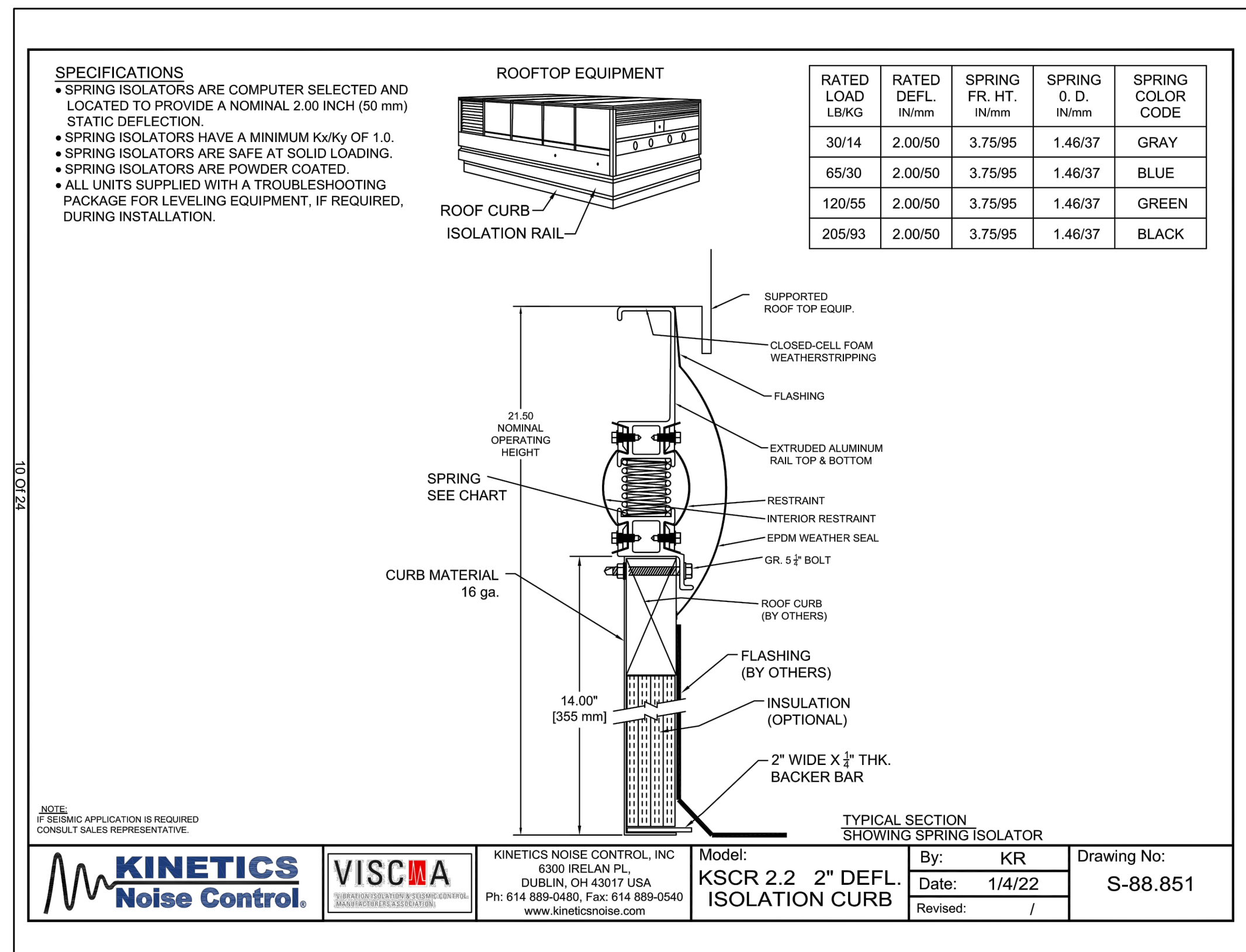
MECHANICAL

DETAILS
SHEETS

SHEET 2

Scale: NTS Floor:

M-501



This plan is approved only for work indicated on the application specification sheet. All other matters shown are not to be relied upon, or to be considered as either being approved or in accordance with applicable codes.

M-501

RF PIPING ROOF PENETRATION
NOT SCALE

CONTACT RPH AT 1-800-994-0945
ALL VAULT ICE (AWI) MODELS COMPLY
WITH ICC 2015 SECTION C402.1 - BUILDING
ENVELOPE ROOF INSULATION INTEGRITY
AND AIR LEAKAGE AND FEMA/ICC-500
GENERAL CONTRACTOR IS RESPONSIBLE TO
PROVIDE VAULT AND APPROPRIATE TRADES
TO PROVIDE EXIT SEALS.

VRF PIPING ROOF PENETRATION

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

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Thornton Tomasetti
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(917) 661-7800 Phone
(917) 661-7801 Fax

Cosentini Associates
498 Seventh Avenue
New York, NY 10018
(212) 615-3600 Phone
(212) 615-3700 Fax

Landscape Architect

Langan
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
(212) 479-5400 Phone
(212) 479-5444 Fax

A map of the project area showing the location of the proposed development relative to the existing road network and the project north arrow. The map includes a north arrow pointing towards the top right, labeled 'TRUE NORTH' and 'PROJECT NORTH'. The project area is outlined in black, showing the proposed development and surrounding infrastructure.

ALL DRAWINGS AND WRITTEN MATERIALS REPRESENTED ON THIS SHEET CONSTITUTE THE COPYRIGHTED WORK AND ARE THE SOLE PROPERTY OF REGENERON PHARMACEUTICALS. THIS SHEET MAY NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART, NOR MAY ANY OF THE DRAWINGS OR WRITTEN MATERIALS APPEARING THEREIN, BE INCORPORATED INTO ANOTHER WORK FOR ANY REASON WITHOUT THE WRITTEN CONSENT OF REGENERON PHARMACEUTICALS. THIS SHEET MUST BE RETURNED UPON THE REQUEST OF REGENERON PHARMACEUTICALS. IF REGENERON MAKES OR AUTHORIZES REUSE OF ANY SUCH DOCUMENTS OR INFORMATION PRODUCED BY DESIGN PROFESSIONALS OUTSIDE OF THE PROJECT WITHOUT THE WRITTEN CONSENT OF REGENERON PHARMACEUTICALS, REGENERON ASSUMES FULL RESPONSIBILITY FOR ANY AND ALL RISKS INVOLVED IN SUCH REUSE.

Vendor Name: _____
Vendor Project No.: _____
Discipline: _____ Drawn By: _____

M-600

		DEDICATED OUTSIDE AIR SYSTEM (DOAS) SCHEDULE (CONTINUED)																				"DAIKIN" AS STD.									
UNIT TAG	AIR-COOL HEAT PUMP HEATING DATA				AUXILIARY HEAT KW (0 DEG F - 60 DEG F)	SUPPLY FAN								EXHAUST FAN								PRE FILTERS	FINAL FILTERS	PRE FILTERS	ELECTRICAL INFO				WEIGHT (LBS)	MODEL NO.	NOTES
	TMBH	EAT (DEG F)	LAT (DEG F)	COP @ 47 DEG_F		TYPE	CFM	E.S.P. (IN. W.C.)	T.S.P. (IN. W.C.)	RPM	BHP	HP	FLA/ MOTOR	TYPE	CFM	E.S.P. (IN. W.C.)	T.S.P. (IN. W.C.)	RPM	BHP	HP	FLA/ MOTOR	SUPPLY ONLY	SUPPLY ONLY	RETURN ONLY	FLA	MCA	MOP	V/PH/Hz			
899-DOAS-R-01	164.2	45.0	97.2	3.64	72	SWSI AF, ECM DIRECT DRIVE	2,900/3,700	2.5	3.9	1,550	3.3	8	6.1	SWSI AF, ECM DIRECT DRIVE	2,100/2,900	2.5	3.8	2,050	1.67	4	4	2" MERV 8	4" MERV 14	2" MERV 8	119	122	125	460/3/60	2,800	DPS015A	1 TO 10
899-DOAS-R-02	165.5	45.00	94.2	3.64	72	SWSI AF, ECM DIRECT DRIVE	3,100/3,900	2.5	4	1,600	3.5	8	6.1	SWSI AF, ECM DIRECT DRIVE	2,100/2,900	2.5	3.8	2,100	1.7	4	4	2" MERV 8	4" MERV 14	2" MERV 8	119	122	125	460/3/60	2,800	DPS015A	1 TO 10

AIR OUTLET & INLET SCHEDULE										MANUFACTURER "TITUS"			
TAG	SERVICE	SPEC. TYPE	FACE		SIZE IN INCHES NOM. NECK/ DUCT SIZE	BLADE SPACING	MAX CFM	TOTAL PRESSURE (IN. W.C.)	VELOCITY PRESSURE (IN. W.C.)	THROW	MAX NC	MODEL NUMBER	NOTES
CD-1	SUPPLY AIR	SQUARE CEILING DIFFUSER	12x12		4" Ø	-	75	0.134	0.040	2-3-6	21	OMNI	
CD-2	SUPPLY AIR	SQUARE CEILING DIFFUSER	12x12		6" Ø	-	157	0.194	0.040	4-6-12	21	OMNI	
CD-3	SUPPLY AIR	SQUARE CEILING DIFFUSER	12x12		8" Ø	-	244	0.213	0.031	5-8-16	17	OMNI	
CD-4	SUPPLY AIR	SQUARE CEILING DIFFUSER	24x24		6" Ø	-	160	0.064	0.040	2-4-7	13	OMNI	
CD-5	SUPPLY AIR	SQUARE CEILING DIFFUSER	24x24		8" Ø	-	280	0.072	0.040	4-6-12	17	OMNI	
CD-6	SUPPLY AIR	SQUARE CEILING DIFFUSER	24x24		10" Ø	-	450	0.107	0.040	5-8-14	20	OMNI	
CR-1	EXHAUST/RETURN AIR	CEILING REGISTER (SQUARE PANEL)	12x12		-	-	350					OMNI	
CR-2	EXHAUST/RETURN AIR	CEILING REGISTER (SQUARE PANEL)	24x24		-	-	800					OMNI	
SG-1	SUPPLY AIR	SUPPLY GRILLE	8x8		6x6	3/4"	150	0.131	0.040	10-12-18	24	301RL	
SG-2	SUPPLY AIR	SUPPLY GRILLE	10x10		8x8	3/4"	300	0.131	0.040	14-17-25	27	301RL	
SG-3	SUPPLY AIR	SUPPLY GRILLE	12x12		10x10	3/4"	450	0.131	0.040	18-22-31	29	301RL	
EG-1	EXHAUST AIR	EXHAUST GRILLE	8x8		6x6	3/4"	150	-	0.040	-	25	350RL	
EG-2	EXHAUST AIR	EXHAUST GRILLE	14x12		12x10	3/4"	300	0.051	0.016	-	11	350RL	
EG-3	EXHAUST AIR	EXHAUST GRILLE	20x14		18x12	3/4"	675	0.051	0.016	-	13	350RL	

COMMON NOTES:

A. DATA OBTAINED FROM TESTS CONDUCTED IN ACCORDANCE WITH ANSI/ASHRAE STANDARD 70-1991.

B. THROW VALUES ARE GIVEN FOR TERMINAL VELOCITIES OF 150, 100 AND 50 FPM AND FOR ISOTHERMAL CONDITIONS.

C. NC VALUES BASED ON OCTAVE BAND 2 TO 7 SOUND POWER LEVELS MINUS A ROOM ABSORPTION OF 10 DB.

D. EACH NC VALUE REPRESENTS THE NOISE CRITERIA CURVE WHICH WILL NOT BE EXCEEDED BY THE SOUND PRESSURE IN ANY OF THE OCTAVE BANDS, 2 THROUGH 7, WITH A ROOM ABSORPTION OF 10 DB. RE 10⁻¹² WATTS.

E. DATA UNDER TOTAL PRESSURE FOR RETURN GRILLES IS NEGATIVE STATIC PRESSURE.

F. COORDINATE BORDER TYPE WITH ARCHITECTURAL REFLECTED CEILING PLANS. OFFICE BATHROOMS TO HAVE BORDER TYPE 3.

G. PROVIDE CABLE OPERATED DAMPER THRU DIFFUSER IN UN-ACCESSIBLE CEILING (SEE DETAILS).

H. PROVIDE LIGHT SHIELD FOR RETURN GRILLES

NOTES:

1) THROW AND PRESSURE DROP INFO PROVIDED FOR 45 DEG DEFLECTION ANGLE.

2) BORDER TYPE 1, INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS. GRILLE TO BE HEAVY DUTY CONSTRUCTION. DAMPER ACCESS IS THROUGH THE GRILLE. FINISH BY ARCHITECT.

3) PROVIDE WITH REMOTE CABLE OPERATED DAMPER FOR AIR OUTLETS NEAR UN-ACCESSIBLE CEILINGS.

4) THROW AND PRESSURE DROP INFO PROVIDED FOR 22 DEG DEFLECTION ANGLE.

VARIABLE REFRIGERANT VOLUME AIR CONDITIONING UNIT SCHEDULE - CRITICAL SPACES																												MANUFACTURER "DAIKIN" OR APPROVED EQUAL					
INDOOR UNIT TAG	OUTDOOR CONDENSING UNIT TAG	SERVICE	TYPE	OUTDOOR UNIT										INDOOR UNIT										REFRIGERANT		PIPING				VIBRATION ISOLATION		REMARKS	
				OPERATING RANGE		ELECTRICAL		QUANTITY	MAX AIR FLOW RATE (CFM)	SOUND PRESSURE (DBA)	WEIGHT (LBS)	EER	SEER	Region IV HSFP RATING (HEATING)	MODEL NO.	TOTAL COOLING CAPACITY (BTU/Hr)	SENSIBLE COOLING CAPACITY (BTU/Hr)	HEATING CAPACITY (BTU/Hr)	ELECTRICAL		FAN AIR FLOW (CFM) HL	SOUND PRESSURE (DBA) HL	WEIGHT (LBS)	MODEL NO.	TYPE	CHARGE (LBS)	LIQUID LINE (IN., OD)	VAPOR LINE (IN., OD)	MAX PIPE LENGTH (FT.)	MAX ELEVATION (FT.)	TYPE		DEFLECTION (IN.)
				COOLING DB	HEATING DB	V / PH / HZ	MOP												MCA	V / PH / HZ													
899-AC-1-06	899-CU-R-06	ELECTRICAL ROOM	SINGLE ZONE EXTENDED PIPE	95	5	208 / 1 / 60	20	18.25	1	2,800	59	150	9.1	15.9	9.2	RX36NMVJU	34,400	22,800	15,740	208 / 1 / 60	64 WATTS	37 FLA	915 / 575	54/40	40	FTX36NVJU	410A	3.96	1/4	5/8	98	65	SEE SPECS
899-AC-1-07	899-CU-R-07	IT CLOSET	SINGLE ZONE EXTENDED PIPE	95	0	208 / 1 / 60	20	16.5	1	2,900	58	175	10.2	17.8	8.4	FAQ24TAVJU	24,000	18,000	27,000	208 / 1 / 60	15	0.6	635 / 470	43 / 37	35	RZQ24TAVJUA	410A	6.44	3/8	5/8	25	-	SEE SPECS
NOTES: PROVIDE UNITS WITH THE FOLLOWING: a) PROVIDE TEMPERATURE SENSORS AND BACNET INTERFACES TO BE MONITORED BY BMS b) PROVIDE CONDENSATE RUMP TO BE POWERED THROUGH THE UNIT. PROVIDE SHELFF ON WALL FOR PUMP c) VIBRATION ISOLATORS d) DISCONNECT SWITCHES																																	

<p>TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS</p>	<p>This plan is approved only for work indicated on the application specification sheet. All other matters shown are not to be relied upon, or to be considered as either being approved or in accordance with applicable codes.</p>	<p>Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.</p>
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Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

VARIABLE REFRIGERANT VOLUME CONDENSING UNIT SCHEDULE																				MANUFACTURER "DAIKIN" OR APPROVED EQUAL									
UNIT TAG	CONNECTED WITH	LOCATION	AMBIENT AIR TEMP. (°F) DB	NOMINAL TONNAGE	DESCRIPTION	COOLING CAP. (MBH)	AMBIENT AIR TEMP. (°F) DB	HEATING CAP. (MBH)	CONNECTION RATIO (%)	ELECTRICAL DATA				EER	IEER	COP (47 F)	COP (17 F)	SCHE	REFRIGERANT CHARGE		OPERATING WEIGHT (LBS)	MODEL #	VIBRATION ISOLATION		SYSTEM COMPLIANCE CHECK WINYS MC 1102.1				REMARKS
										V/ø/Hz	MCA	MOP	RLA						FACTORY CHARGE (LBS)	ADDITIONAL CHARGE (LBS)			TYPE	DEFLECTION (IN.)	REFRIG. TYPE	REFRIG. CLASS	ALLOW. REFR. (LBS/1000) (CU.FT.)	MINIMUM ALLOWABLE VOLUME OF SPACE (CU.FT.)	
899-CUR-01	899-AC-1-01A TO 899-AC-1-01G	ROOF	95	10	AIR COOLED HEAT RECOVERY	100.5	0	81.1	100%	460/3/60	21.1	25	12.8	13.2	25.5	3.81	2.54	26	25.8	19.7	750	REYQ120XAYDA	SEE SPECS	R410A	A1	26/2 = 13	3,500		
899-CUR-02	899-AC-1-02A TO 899-AC-1-02G	ROOF	95	10	AIR COOLED HEAT RECOVERY	100.1	0	81.1	93%	460/3/60	21.1	25	12.8	13.2	25.5	3.81	2.54	26	25.8	19.7	750	REYQ120XAYDA	SEE SPECS	R410A	A1	26/2 = 13	3,500		
899-CUR-03	899-AC-1-03A TO 899-AC-1-03E	ROOF	95	10	AIR COOLED HEAT RECOVERY	100.1	0	81.1	95%	460/3/60	21.1	25	12.8	13.2	25.5	3.81	2.54	26	25.8	19.7	750	REYQ120XAYDA	SEE SPECS	R410A	A1	26/2 = 13	3,500		
899-CUR-04	899-AC-1-04A TO 899-AC-1-04G	ROOF	95	10	AIR COOLED HEAT RECOVERY	109.7	0	81.1	110%	460/3/60	21.1	25	12.8	13.2	25.5	3.81	2.54	26	25.8	19.7	750	REYQ120XAYDA	SEE SPECS	R410A	A1	26/2 = 13	3,500		
899-CUR-05	899-AC-1-05A TO 899-AC-1-5F	ROOF	95	8	AIR COOLED HEAT RECOVERY	80.1	0	76.3	100%	460/3/60	21.1	25	10.5	14.6	27.8	4.23	2.63	26.4	25.8	19.7	750	REYQ96XAYDA	SEE SPECS	R410A	A1	26/2 = 13	3,500		
NOTES: 1. PROVIDE VIBRATION ISOLATORS. 2. PROVIDE DISCONNECT SWITCHES. 3. PROVIDE LOW AMBIENT BAFFLE KIT - ZLABG04A. 4. MANUFACTURER MUST BE CERTIFIED, LISTED, AND LABELED PER AHR1 1230. 5. SYSTEM RATING DATA BASED ON DESIGN AMBIENT CONDITIONS FOR COOLING AND FOR HEATING. 6. 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. 7. CONDENSING UNITS MUST HAVE FULLY MODULATING INVERTER COMPRESSORS. 8. CONDENSING UNITS MUST HAVE AUTO CHANGEOVER FUNCTIONS. 9. DEMAND LIMITING RELAY CONTACT MUST BE PROVIDED. 10. EEV ACTUATORS MUST BE REMOVABLE FROM VALVE BODY WITHOUT DISTURBING THE REFRIGERANT SYSTEM. 11. AC THERMOSTATS MUST PROVIDE +/- 1 DEGREE DEAD-BAND SET-POINT AND CONTROL CAPABILITY. 12. SYSTEM SHALL BE PROVIDED WITH A TOUCH MANAGER CONTROLLER WITH WEB BASED SOFTWARE FOR DISPLAYING UP TO 8 DII-NET SYSTEMS WITH 128 INDOOR UNITS PER SYSTEM PC BY OTHERS. 13. MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUME. 14. SUBSTITUTE MANUFACTURER SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT. 15. CONTRACTOR TO VERIFY PIPING DIMENSIONS. 16. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURERS CERTIFIED INSTALLATION CLASS WITHIN PAST 36 MONTHS. 17. CONTRACTOR TO FURNISH AND INSTALL INSULATION ON REFRIGERANT PIPING. 18. MANUFACTURERS REPRESENTATIVE MUST HAVE LOCAL STOCK OF PARTS AND FACTORY CERTIFIED TECHNICIAN ON STAFF. 19. MANUFACTURERS REPRESENTATIVE SHALL PROVIDE PROOF OF ONGOING INSTALLATION TRAINING AT THEIR LOCAL FACILITY FOR AT LEAST THE PAST 5 YEARS. 20. MANUFACTURERS REPRESENTATIVE SHALL PROVIDE PROOF OF CONTINUOUS SALES AND SUPPORT OF THEIR PRODUCTS FOR AT LEAST 10 YEARS. 21. 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. 22. MANUFACTURER MUST PROVIDE 10 YEARS PARTS WARRANTY ON ALL ACS, CONDENSING UNITS, AND MOCE CHANGEOVER DEVICES. WARRANTY CONDITIONS MUST BE CLARIFIED DURING SUBMITTAL PHASE. 23. 3 PHASE AIR COOLED CONDENSING UNITS MUST HAVE PUBLISHED PERFORMANCE DATA WITH 200% INDOOR CONNECTED CAPACITY. 24. 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. 25. MANUFACTURER MUST CERTIFY AND SUBMIT SYSTEM PERFORMANCE AT EXTREME CONDITIONS OF 122 DEGREES FDB AMBIENT IN COOLING MODE AND -13 DEGREES FDB IN HEATING MODE. INSTALLING CONTRACTOR MUST HAVE SUCCESSFULLY COMPLETED MANUFACTURERS CERTIFIED INSTALLATION CLASS WITHIN PAST 36 MONTHS.																													

VARIABLE REFRIGERANT VOLUME AIR CONDITIONING UNIT SCHEDULE																											MANUFACTURER "DAIKIN" OR APPROVED EQUAL	
UNIT TAG	CONNECTED WITH		LOCATION	SERVICE	TYPE	NOMINAL TONS	NOMINAL CAPACITY		CORRECTED CAPACITY			ENTERING (RETURN) AIR TEMPERATURE			OUTSIDE AIR (CFM)	FAN AIRFLOW (CFM DESIGN/ (CFM HH+HL)	MAX STATIC PRESS. (IN.W.G.)	POWER					OPERATING WEIGHT (LBS)	DIMENSION (WxDxH)	MODEL	VIBRATION ISOLATION		REMARKS
	ACC	BSB					TOTAL COOLING (MBH)	HEATING (MBH)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	HEATING (MBH)	COOLING DB	COOLING WB	HEATING DB				VOLTS	PHASE	HZ	MCA	MOP				TYPE	DEFLECTION (IN.)	
899-AC-1-01A			1ST FLOOR (SOUTH)	INFANT (ROOM #4)	HORIZONTAL	1.5	18.0	20.0	15.5	13.2	20	75	63	70	275	600 635/580/530	0.8	208	1	60	1.6	15	79.4	39.4 x 11.8 x 27.6	FXMQ18PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-01B			1ST FLOOR (SOUTH)	INFANT (ROOM #3)	HORIZONTAL	1.5	18.0	20.0	15.5	13.2	20	75	63	70	275	600 635/580/530	0.8	208	1	60	1.6	15	79.4	39.4 x 11.8 x 27.6	FXMQ18PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-01C			1ST FLOOR (SOUTH)	TODDLER (ROOM #3)	HORIZONTAL	2	24.0	27.0	20.6	16.0	27.0	75	63	70	275	675 690/620/565	0.8	208	1	60	1.8	15	79.4	39.4 x 11.8 x 27.6	FXMQ24PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-01D	899-CU-R-01	899-BSB-1-01	1ST FLOOR (SOUTH)	TODDLER (ROOM #4)	HORIZONTAL	2	24.0	27.0	20.6	16.0	27.0	75	63	70	275	675 690/620/565	0.8	208	1	60	1.8	15	79.4	39.4 x 11.8 x 27.6	FXMQ24PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-01E			1ST FLOOR (SOUTH)	LAUNDRY	HORIZONTAL	0.75	9.5	10.5	8.5	6.1	10.6	75	63	70	50	315 315/265/230	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ09TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-01F			1ST FLOOR (SOUTH)	WARMING KITCHEN	HORIZONTAL	1.25	15.0	17.0	12.9	10.2	16.5	75	63	70	110	550 560/530/500	0.8	208	1	60	1.5	15	79.4	39.4 x 11.8 x 27.6	FXMQ15PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-01G			1ST FLOOR (SOUTH)	INTERIOR CORRIDOR (NORTH)	HORIZONTAL	1	12.0	13.5	10.5	8.4	13.6	75	63	70	175	335 335/280/250	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ12TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02A			1ST FLOOR (SOUTH)	INFANT (ROOM #2)	HORIZONTAL	1.5	18.0	20.0	15.5	13.2	20	75	63	70	275	600 635/580/530	0.8	208	1	60	1.6	15	79.4	39.4 x 11.8 x 27.6	FXMQ18PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02B			1ST FLOOR (SOUTH)	INFANT (ROOM #1)	HORIZONTAL	1.5	18.0	20.0	15.5	13.2	20	75	63	70	275	600 635/580/530	0.8	208	1	60	1.6	15	79.4	39.4 x 11.8 x 27.6	FXMQ18PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02C			1ST FLOOR (SOUTH)	TODDLER (ROOM #2)	HORIZONTAL	2	24.0	27.0	20.6	16.0	27.0	75	63	70	275	675 690/620/565	0.8	208	1	60	1.8	15	79.4	39.4 x 11.8 x 27.6	FXMQ24PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02D	899-CU-R-02	899-BSB-1-02	1ST FLOOR (SOUTH)	TODDLER (ROOM #1)	HORIZONTAL	2	24.0	27.0	20.6	16.0	27.0	75	63	70	275	675 690/620/565	0.8	208	1	60	1.8	15	79.4	39.4 x 11.8 x 27.6	FXMQ24PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02E			1ST FLOOR (SOUTH)	INTERIOR CORRIDOR (SOUTH)	HORIZONTAL	1	12.0	13.5	10.5	8.4	13.6	75	63	70	175	335 335/280/250	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ12TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02F			1ST FLOOR (SOUTH)	HEALTH OFFICE/ STROLLER STORAGE	HORIZONTAL	0.5	5.8	6.5	5.2	4.3	6.5	75	63	70	35	275 280/265/230	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ05TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-02G			1ST FLOOR (SOUTH)	WELLNESS/ CORRIDOR	HORIZONTAL	0.75	9.5	10.5	8.5	6.1	10.6	75	63	70	30	315 315/265/230	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ09TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-03A			1ST FLOOR (CENTER)	LOBBY/RECEPTION	HORIZONTAL	4	48	54	41.3	30.5	54	75	63	70	300	1,375 1,375/1,165/990	0.8	208	1	60	3.4	15	101.4	55.1 x 11.8 x 27.6	FXMQ48PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-03B			1ST FLOOR (CENTER)	MOVEMENT MATTERS ZONE	HORIZONTAL	2	24.0	27.0	20.6	16.0	27.0	75	63	70	300	675 690/620/565	0.8	208	1	60	1.8	15	79.4	39.4 x 11.8 x 27.6	FXMQ24PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-03C	899-CU-R-03	899-BSB-1-03	1ST FLOOR (CENTER)	DIRECTOR OFFICE/ LOBBY	HORIZONTAL	0.5	5.8	6.5	5.2	4.3	6.5	75	63	70	45	275 280/265/230	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ05TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-03D			1ST FLOOR (CENTER)	CONFERENCE ROOM/ LOBBY	HORIZONTAL	2	24.0	27.0	20.6	16.0	27.0	75	63	70	75	675 690/620/565	0.8	208	1	60	1.8	15	79.4	39.4 x 11.8 x 27.6	FXMQ24PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-03E			1ST FLOOR (CENTER)	PERIMETER CORRIDOR (WEST)	HORIZONTAL	1	12.0	13.5	10.5	8.4	13.6	75	63	70	75	335 335/280/250	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ12TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-04A			1ST FLOOR (SOUTH)	STEAM LAB	HORIZONTAL	1.5	18.0	20.0	15.5	13.2	20	75	63	70	325	600 635/580/530	0.8	208	1	60	1.6	15	79.4	39.4 x 11.8 x 27.6	FXMQ18PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-04B			1ST FLOOR (SOUTH)	STAFF LOUNGE/ COPY AREA / STORAGE	HORIZONTAL	2.5	30.0	34.0	25.8	20.1	34	75	63	70	215	1,075 1,095/950/810	0.8	208	1	60	2.8	15	101.4	55.1 x 11.8 x 27.6	FXMQ30PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-04C			1ST FLOOR (SOUTH)	PRESCHOOL #1	HORIZONTAL	2.5	30.0	34.0	25.8	20.1	34	75	63	70	375	1,075 1,095/950/810	0.8	208	1	60	2.8	15	101.4	55.1 x 11.8 x 27.6	FXMQ30PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-04D	899-CU-R-04	899-BSB-1-04	1ST FLOOR (SOUTH)	PRESCHOOL #1	CASSETTE	0.5		5	4.3	6.5	75	63	70	0	300			208	1	60	0.3	15	35	22.6 x 10.2 x 22.6	FXZQ05TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1), BYFQ60C3W1W (1)	
899-AC-1-04E			1ST FLOOR (SOUTH)	PRESCHOOL #2	HORIZONTAL	2.5	30.0	34.0	25	20.1	34	75	63	70	375	1,075 1,095/950/810	0.8	208	1	60	2.8	15	101.4	55.1 x 11.8 x 27.6	FXMQ30PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-04F			1ST FLOOR (SOUTH)	PRESCHOOL #2	CASSETTE	0.5		5	4.3	6.5	75	63	70	0	300			208	1	60	0.3	15	35	22.6 x 10.2 x 22.6	FXZQ05TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1), BYFQ60C3W1W (1)	
899-AC-1-04G			1ST FLOOR (SOUTH)	PERIMETER CORRIDOR (WEST)	HORIZONTAL	1	12.0	13.5	10.5	8.4	13.6	75	63	70	70	335 335/280/250	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ12TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-05A			1ST FLOOR (SOUTH)	K-PREP #1	HORIZONTAL	2.5	30.0	34.0	25.8	20.1	34	75	63	70	375	1,075 1,095/950/810	0.8	208	1	60	2.8	15	101.4	55.1 x 11.8 x 27.6	FXMQ30PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-05B			1ST FLOOR (SOUTH)	K-PREP #1	CASSETTE	0.5		5	4.3	6.5	75	63	70	0	300			208	1	60	0.3	15	35	22.6 x 10.2 x 22.6	FXZQ05TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1), BYFQ60C3W1W (1)	
899-AC-1-05C			1ST FLOOR (SOUTH)	K-PREP #2	HORIZONTAL	2.5	30.0	34.0	25.8	20.1	34	75	63	70	375	1,075 1,095/950/810	0.8	208	1	60	2.8	15	101.4	55.1 x 11.8 x 27.6	FXMQ30PBVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-05D	899-CU-R-05	899-BSB-1-05	1ST FLOOR (SOUTH)	K-PREP #1	CASSETTE	0.5		5	4.3	6.5	75	63	70	0	300			208	1	60	0.3	15	35	22.6 x 10.2 x 22.6	FXZQ05TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1), BYFQ60C3W1W (1)	
899-AC-1-05E			1ST FLOOR (SOUTH)	PERIMETER CORRIDOR (WEST)	HORIZONTAL	1	12.0	13.5	10.5	8.4	13.6	75	63	70	70	335 335/280/250	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ12TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
899-AC-1-05F			1ST FLOOR (SOUTH)	PLUMBING/STORAGE	HORIZONTAL	1	12.0	13.5	10.5	8.4	13.6	75	63	70	125	335 335/280/250	0.6	208	1	60	0.8	15	55.0	21.7 x 9.6 x 31.5	FXSQ12TAVJU	PER SPECIFICATIONS	SEE NOTES BELOW, OPTIONS: BRC1E73 (1)	
NOTES:	PROVIDE UNITS WITH THE FOLLOWING: a) PROVIDE MANUFACTURER THERMOSTATS AS INDICATED IN PLAN, TO BE MONITORED AND PROGRAMMED BY THE BMS, WITH CAPABILITY FOR OCCUPANT TO ADJUST TEMPERATURE BY +/- 2 DEG_F. b) VIBRATION ISOLATORS. c) DISCONNECT SWITCHES, INTEGRAL CONDENSATE PUMPS d) OPTIONS AND ACCESSORIES, THERMOSTAT PER CONTROL DIAGRAM ; e) PROVIDE FILTER KIT AND PROVIDE WITH 4" MERV 14 FILTERS																											

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Building #17
Campus Expansion Child
Day-care Center

777 Old Saw Mill River Road
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

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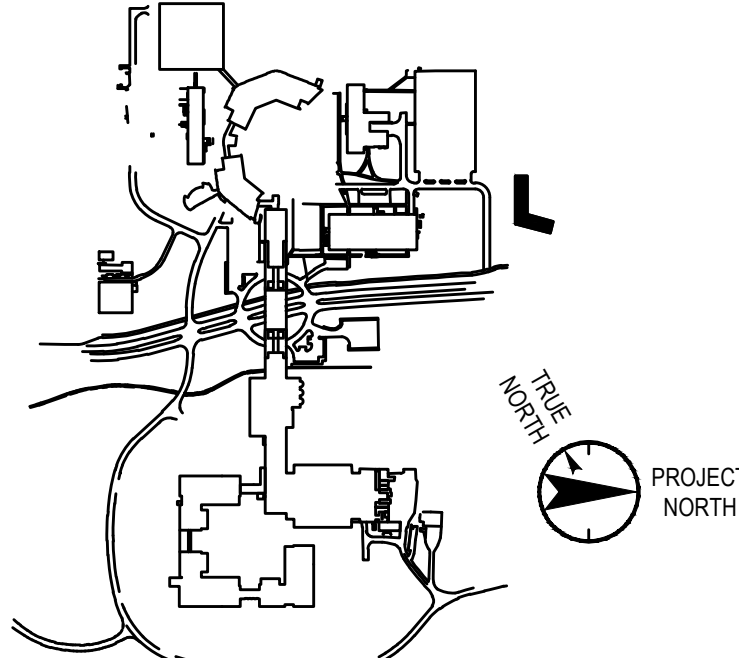
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Landscape Architect

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Key Plan



No. Date Description

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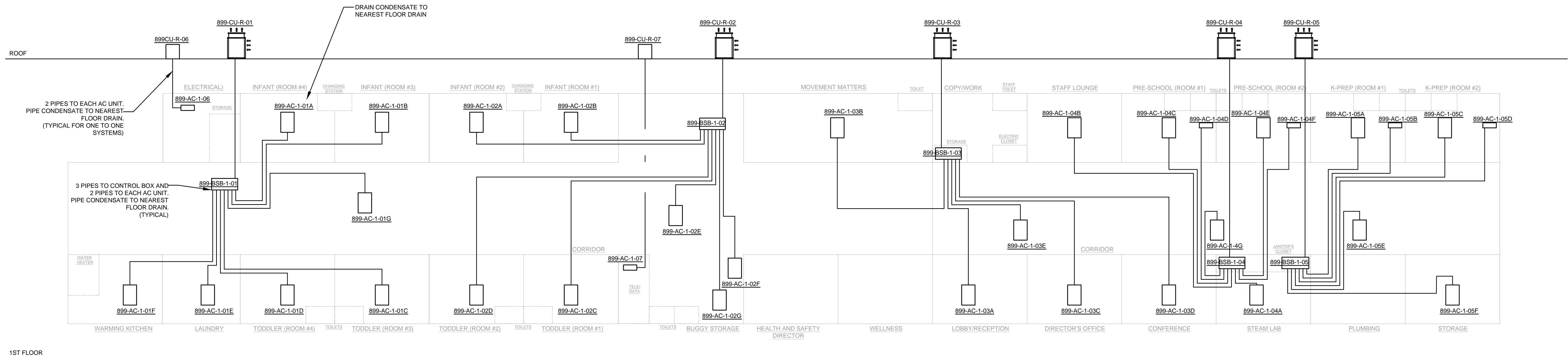
Vendor Name:
Vendor Project No.:
Discipline: Drawn By:

MECHANICAL
RISER
DIAGRAM

Scale: NTS Floor:

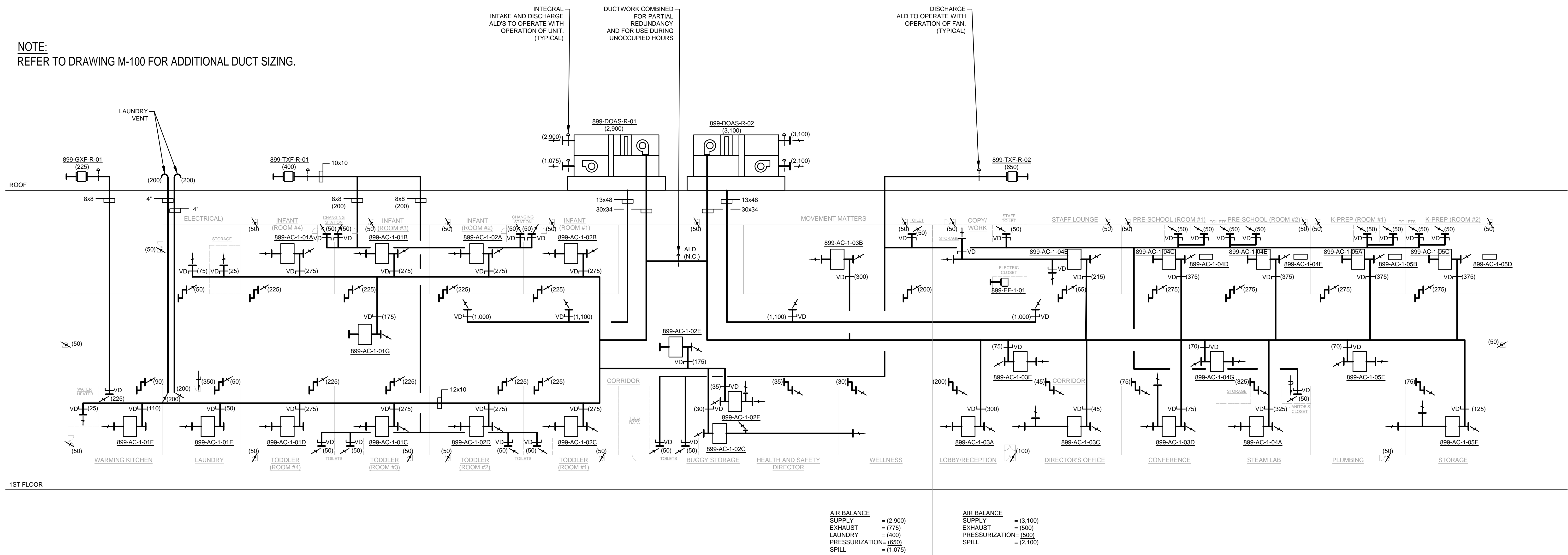
M-700

NOTE:
REFER TO DRAWING M-701 TO M-703 FOR ADDITIONAL VRF PIPING AND WIRING DETAILS



REFRIGERANT RISER DIAGRAM

NOTE:
REFER TO DRAWING M-100 FOR ADDITIONAL DUCT SIZING.



AIR BALANCE
SUPPLY = (2,900)
EXHAUST = (775)
LAUNDRY = (400)
PRESSURIZATION = (650)
SPILL = (1,075)

AIR BALANCE
SUPPLY = (3,100)
EXHAUST = (500)
PRESSURIZATION = (500)
SPILL = (2,100)

AIR RISER DIAGRAM

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

This plan is approved only for work indicated on the application specification sheet. All other matters shown are not to be relied upon, or to be considered as either being approved or in accordance with applicable codes.

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

899-CU-R-01
REV'Q120XAYDA

1/2 x
1 1/8 x
3 1/4

899-SSB-1-01
BSRSC24TVJ

A 1/4 x
1/2 899-AC-1-01A
FXM218PBVJU

B 1/4 x
1/2 899-AC-1-01B
FXM218PBVJU

C 3/8 x
5/8 899-AC-1-01C
FXM224PBVJU


D 3/8 x
5/8 899-AC-1-01D
FXM224PBVJU

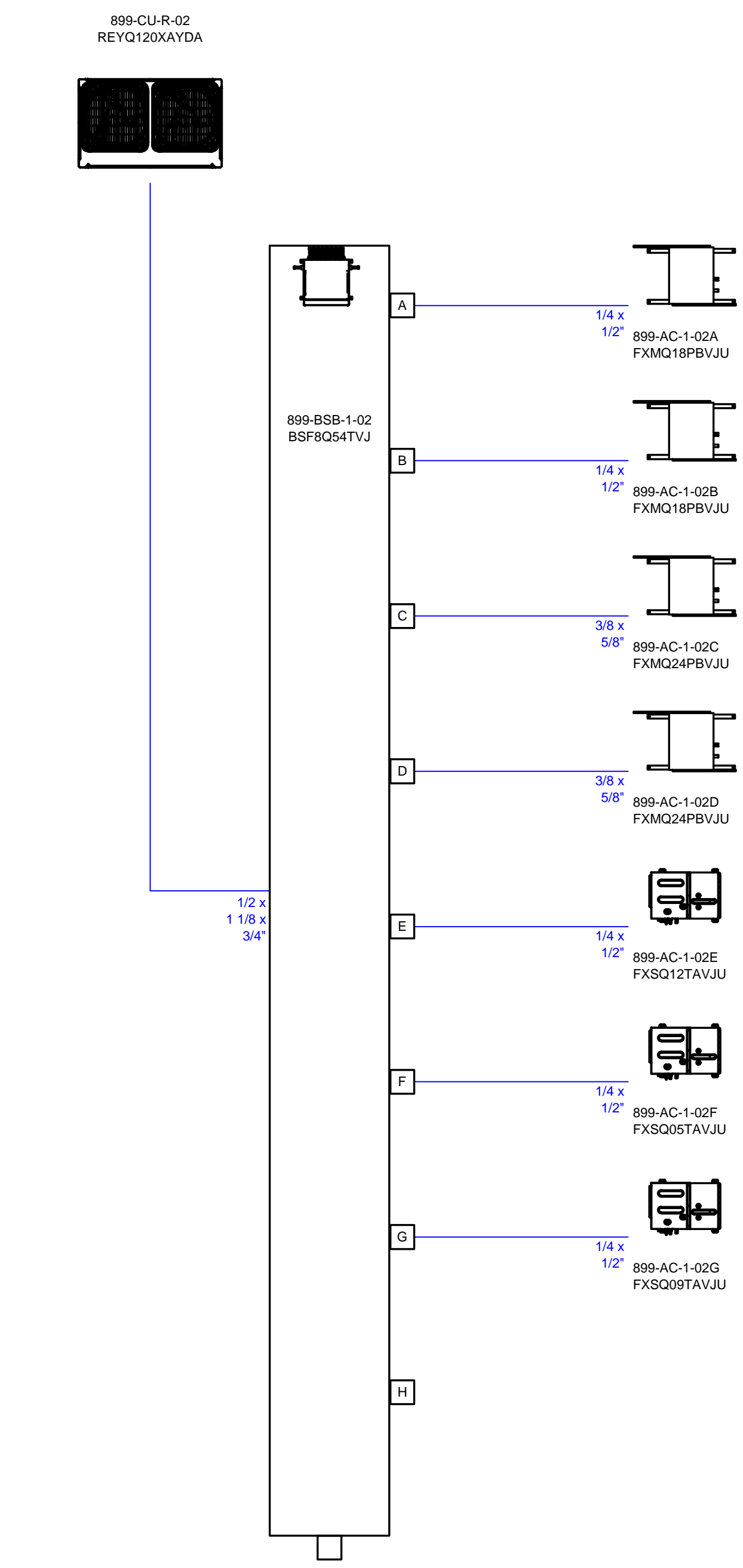
E 1/4 x
1/2 899-AC-1-01E
FXSQ28TAVJU

F 1/4 x
1/2 899-AC-1-01F
FXM215PBVJU

G 1/4 x
1/2 899-AC-1-01G
FXSQ12TAVJU

H

	Client	
		USA
	Project	Daycare center
	Title	Piping schematics CU-R-2 Air cooled heat recovery VRV-IV-X-A REYQ120XAYDA
	Date	04/26/2022
	Drawing No	



The diagram illustrates a 100 Gbps optical switch architecture using two 80 Gbps optical switches. The top switch is labeled "899-CU-R-01 REYQ120XAYDA" and the bottom switch is labeled "899-B5B-1-01 85FR054TUJ". Both switches have a 10x10 grid of ports. The top switch's "In F1,F2" ports are connected to the "OUT F1,F2" ports of the bottom switch. The bottom switch's "In F1,F2" ports are connected to the "OUT F1,F2" ports of the top switch. The output ports of the top switch are labeled "L1, L2, L3 2:1, 1A 3ph" and the output ports of the bottom switch are labeled "L1, L2 0.8A 1ph".

899-CU-B-02
REYQ120XAYDA

L1, L2, L3 21-1A 3ph

899-B5B-1-02
85PBG64TVJ

L1, L2 0.6A 1ph

IN F1,F2

OUT F1,F2

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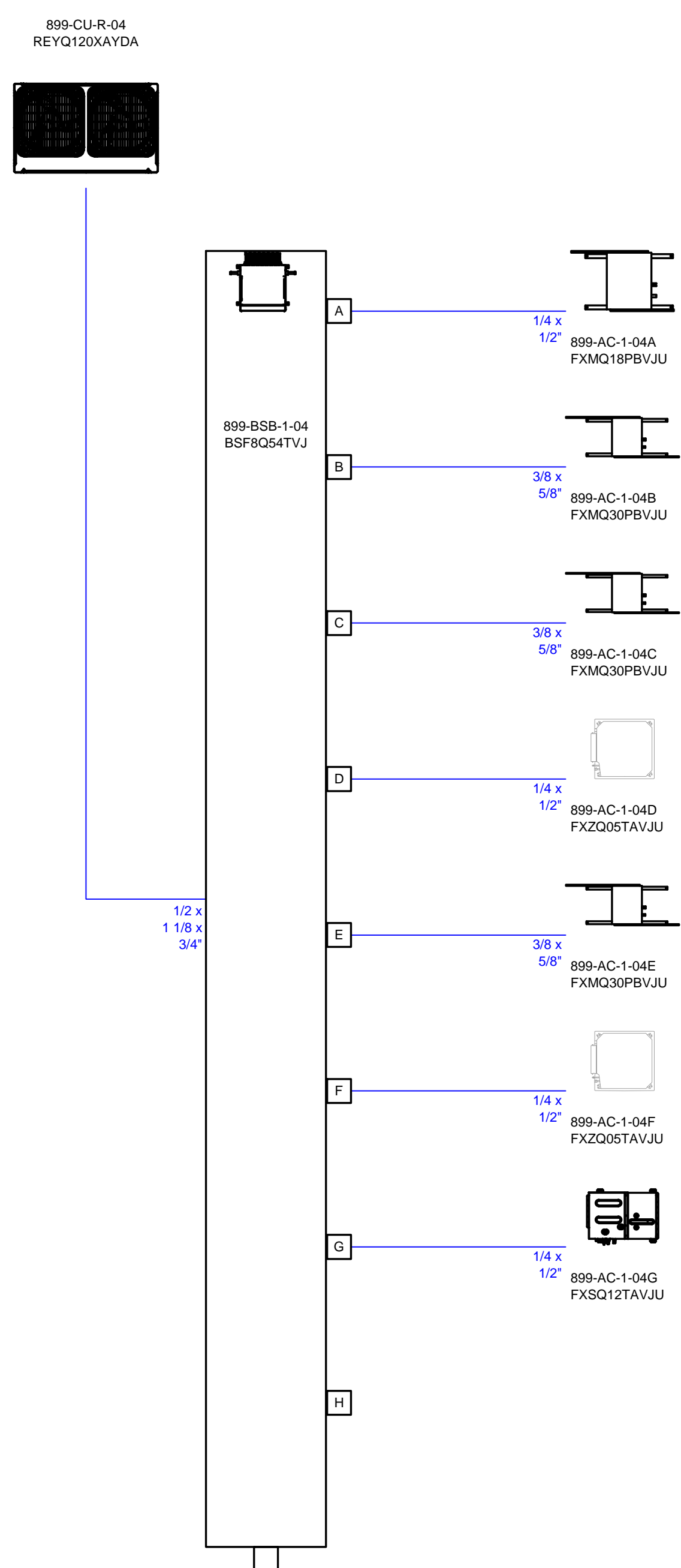
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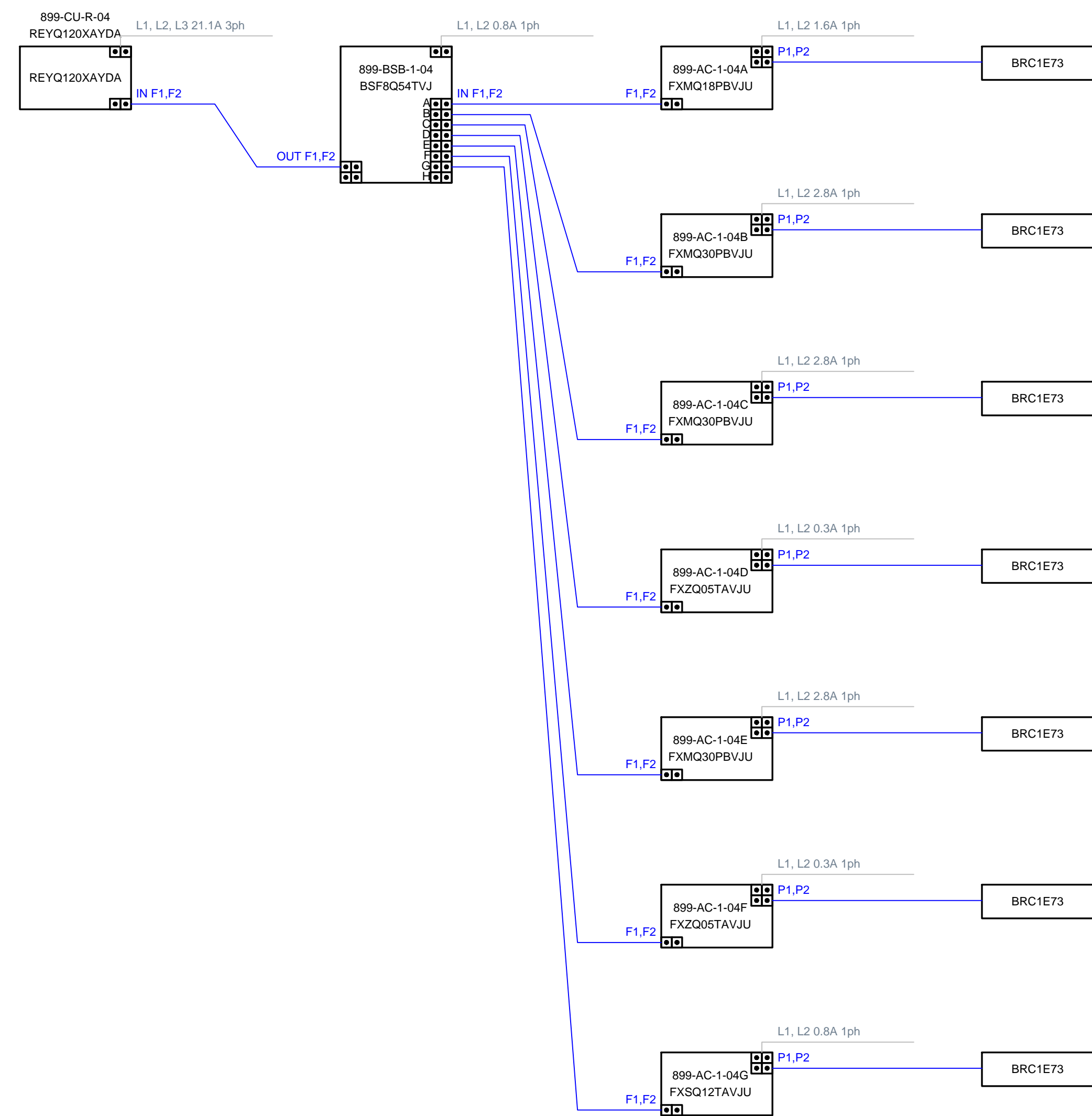
M-701

[illegible]

	Client	USA
	Project	Daycare center
	Title	Piping schematics CU-R-4 Air cooled heat recovery VRV-IV-X-A REYQ120XAYDA
	Date	04/26/2022
	Drawing No	

[illegible]

	Client	USA
	Project	Daycare center
	Title	Wiring schematics CU-R-4 Air cooled heat recovery VRV-IV-X-A REYQ120XAYDA
	Date	04/26/2022
	Drawing No	



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A map of the project area showing the location of the proposed development relative to the existing road network and the project area. The map includes a north arrow pointing towards the top right, labeled 'TRUE NORTH' and 'PROJECT NORTH'. The map shows a central area with a road network and a proposed development area. The map is oriented with the project area at the top and the road network at the bottom.

No.	Date	Description
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Vendor Name:
Vendor Project No.:
Discipline: Drawn By:

MECHANICAL
VRF DIAGRAM
SHEET 2

Scale: NTS Floor:

M-702

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Project No. B17-DAYCARE

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Civil Engineer

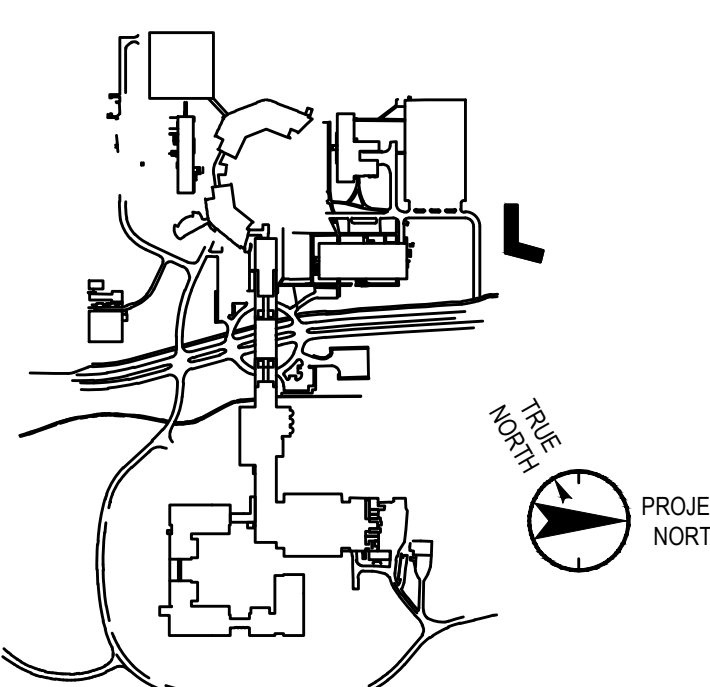
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Key Plan



No.	Date	Description
0	05.20.2022	ISSUED FOR PERMIT

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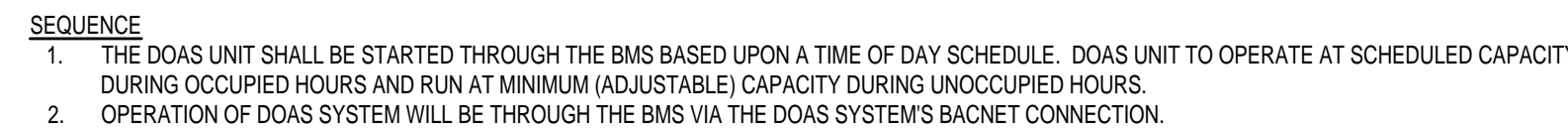
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Vendor Project No.: _____
Discipline: _____ Drawn By: _____

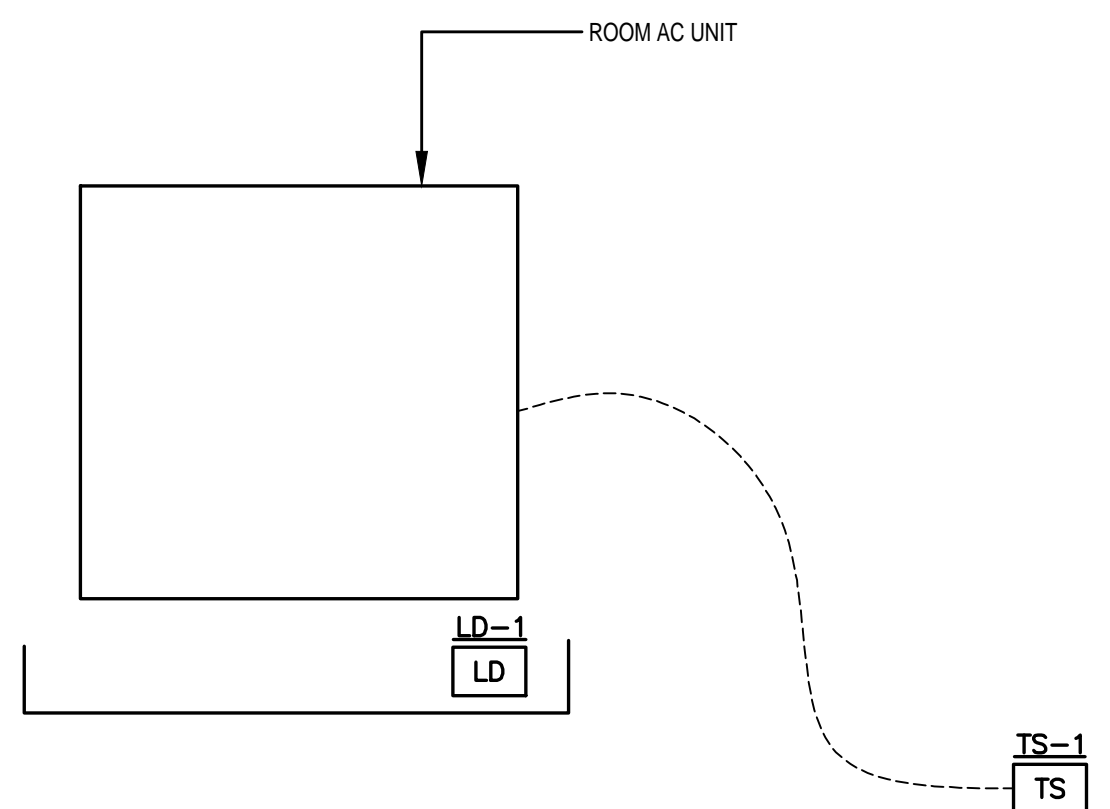
MECHANICAL
CONTROL DIAGRAM
SHEET 2

Scale: NTS Floor:

M-705



(899-AC-1-01A TO 899-AC-1-01G; 899-AC-1-02A TO 899-AC-1-02G; 899-AC-1-03A TO 899-AC-1-03E; 899-AC-1-04D TO 899-AC-1-04G; 899-AC-1-05A TO 899-AC-1-05F



POINTS (VIA NETWORK INTERFACE)

1. STATUS (ON/OFF)
2. ROOM TEMPERATURE
3. OPERATION MODE (COOL/HEAT/ FAN/DRY)
4. FILTER SIGN AND RESET
5. REMOTE CONTROLLER PERMIT/PROHIBIT
6. FAN SPEED SETTING
7. ALARM
8. MALFUNCTION CODE
9. SECONDARY LEAK DETECTION

IN SECONDARY PAN FOR ALARM.

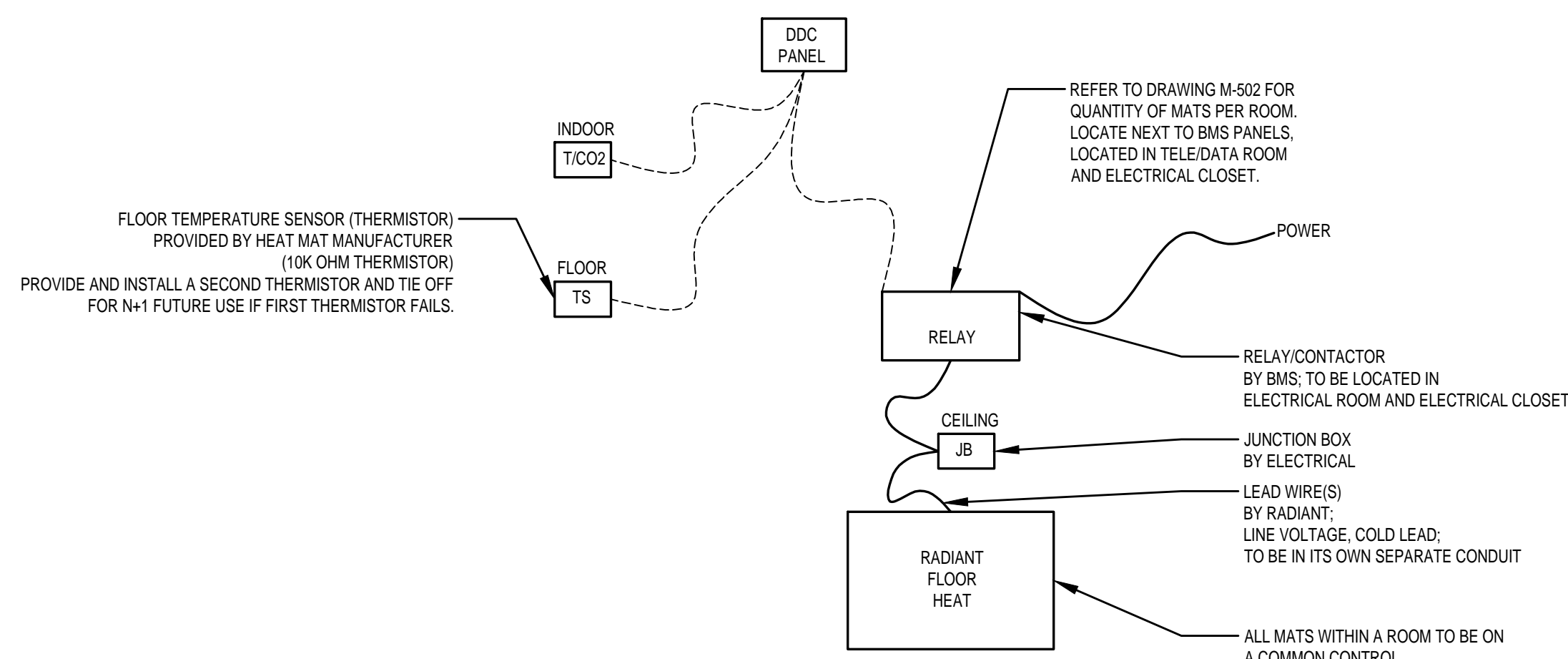
(4) CASSETTE STYLE UNITS WILL NOT HAVE A SECONDARY PAN

899-AC-1-04D, 899-AC-1-04F, 899-AC-1-05B, 899-AC-1-05D)

(899-CU-R-01, 899-CU-R-02,
899-CU-R-03, 899-CU-R-04,
899-CU-R-05, 899-CU-R-06,
899-CU-R-07)

POINTS POINTS (VIA NETWORK INTERFACE)	
1	STATUS (ON/OFF)

(INFANT 1 TO INFANT 4; TODDLER 1 TO TODDLER 4; STAFF LOUNGE; PRESCHOOL 1 TO PRESCHOOL 2; K-PREP 1 TO K-PREP 2; MOVEMENT MATTERS)



POINTS

1. STATUS
2. SPACE TEMPERATURE
3. SPACE CO2 LEVEL
4. ENABLE/DISABLE

OVERALL SEQUENCE

THE DOAS VENTILATION SYSTEM, VRF SPACE HEATING AND COOLING SYSTEM, AND RADIANT FLOOR HEAT ARE DECOUPLED SYSTEMS THAT WILL BE PROGRAMMED BY THE BMS TO WORK TOGETHER. THE DOAS VENTILATION SYSTEM WILL PROVIDE ROOM NEUTRAL VENTILATION AIR, 70°F (ADJ.) AND DEHUMIDIFIED, BASED UPON A TIME SCHEDULE. THE VRF SYSTEM WILL PROVIDE CONTINUOUS ROOM AIR CIRCULATION AND MAINTAIN SPACE TEMPERATURE BASED ON AN OCCUPANCY SCHEDULE. THE ELECTRIC RADIANT MAT WILL MAINTAIN FLOOR TEMPERATURE AND ACT AS THE 1ST STAGE OF HEAT FOR THE SPACE. THE BMS WILL PREVENT SIMULTANEOUS HEATING AND COOLING.

- DOAS PROVIDES VENTILATION AIR PER TIME SCHEDULE WITH SET LEAVING AIR TEMPERATURE AND HUMIDITY
- 1) THE DOAS UNIT SHALL BE CONTROLLED BY A DDC CONTROLLER FURNISHED, INSTALLED, AND WIRED BY THE DOAS UNIT MANUFACTURER.
 - 2) THE BMS SHALL OPERATE ON A TIME OF DAY SCHEDULE TO PROVIDE CONTINUOUS VENTILATION TO THE SPACE DURING OCCUPANCY. VENTILATION TO OPERATE AT DESIGNED CAPACITY DURING OCCUPIED HOURS AND AT A REDUCED CAPACITY DURING UNOCCUPIED HOURS.
 - 3) THE BMS CONTRACTOR SHALL PROVIDE A DDC POINT TO INDEX THE DOAS SYSTEM INTO A PURGE MODE. THIS WOULD TYPICALLY BE USED AS A PRE OR POST OCCUPANCY EVENT. THE OPERATOR SHALL HAVE THE ABILITY TO SCHEDULE THIS EVENT THROUGH THE BMS SCHEDULING PROGRAM OR BE ABLE TO INITIATE THE EVENT MANUALLY THROUGH THE BMS USER INTERFACE.
 - 4) WHEN THE PURGE MODE IS INITIATED, THE DOAS UNIT SHALL START AND OPERATE FOR A PRESET PERIOD OF TIME. THE UNIT SHALL OPERATE AS DESCRIBED IN THE SEQUENCE OF OPERATIONS FOR THE UNIT.
 - 5) IF DURING OCCUPY MODE, A CO2 SENSOR IN A ROOM IS ALARMED AT THE BMS, THE BMS WILL BE PROGRAMMED TO INCREASE VENTILATION TO MAXIMUM CAPACITY UNTIL THE SYSTEM CAN BE RE-BALANCED TO PREVENT FURTHER CO2 ALARMS.
 - 6) DURING UNOCCUPIED HOURS, ONLY ONE (1) OF THE TWO (2) DOAS UNITS WILL OPERATE (IN A LEAD/LAG SCHEDULE) AND THE ALD WHICH COMBINES THE DUCTED SYSTEMS WILL OPEN TO ALLOW ONE(1) UNIT TO PARTIALLY VENTILATE BOTH WINGS OF THE BUILDING.
 - 7) DDC POINTS:
 - A) POINTS LISTED ABOVE.
- B. VRF**
- 1) THE VRF UNITS SHALL BE FURNISHED WITH LOCAL CONTROLS FOR STAND-ALONE OPERATION TO MAINTAIN SPACE TEMPERATURE, BASED ON AN OCCUPANCY SCHEDULE.
- C. ELECTRIC RADIANT MAT**
- 1) THE BMS CONTRACTOR SHALL FURNISH AND INSTALL BACNET DDC CONTROLS FOR AUTOMATIC CONTROL OF THE ELECTRIC RADIANT FLOOR HEAT.
 - 2) RADIANT FLOOR HEAT IS ENABLE/DISABLED VIA BMS BASED ON OUTSIDE AIR TEMPERATURE (BELOW 50 DEG. F, ADJUSTABLE). WHEN ENABLED, THE RADIANT FLOOR HEAT SENSOR SHALL MAINTAIN FLOOR TEMPERATURE (85 DEG. F, ADJUSTABLE) AT SETPOINT VIA MANUFACTURER FURNISHED FLOOR TEMPERATURE SENSOR(S). FLOOR HEAT TEMPERATURE SETPOINT WILL BE SCHEDULED OCCUPANCY.
 - 3) THE RADIANT FLOOR HEAT SHALL ALWAYS BE THE FIRST STAGE OF HEAT WITH THE VRF BEING THE SECOND STAGE OF HEAT. THE BMS SHALL PREVENT THE VRF FROM BEING INDEXED TO THE COOLING MODE WHILE THE RADIANT FLOOR HEAT IS ENABLED.
 - 4) THE VRF HEAT SHALL BE USED TO MAINTAIN THE SPACE TEMPERATURE DURING THE UNOCCUPIED PERIODS.
 - 5) DDC POINTS:
 - a. ZONE SPACE TEMPERATURE W/ HIGH/LOW ALARM
 - b. ZONE SPACE CO2 W/ HIGH ALARM
 - c. ZONE RADIANT FLOOR HEAT ENABLE/DISABLE
- TO THE BEST OF MY KNOWLEDGE, BELIEF AND**

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

This plan is approved only for work indicated on the application specification sheet. All other matters shown are not to be relied upon, or to be considered as either being approved or in accordance with applicable codes.

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.