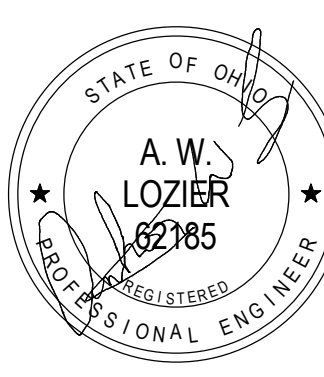


GENERAL NOTES:

- A. ALL WORK SHALL BE INSTALLED PER THE 2017 OHIO BUILDING CODE, 2017 OHIO MECHANICAL CODE AND ALL LOCAL APPLICABLE CODES.
- B. DO NOT SCALE THE DRAWINGS. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING, AND COMPONENT. DO NOT USE THE PLANS FOR THE EXACT LOCATION OF EQUIPMENT, FIXTURES, OR DUCTWORK. ARCHITECTURAL ITEMS SUCH AS WALLS AND OVERALL DIMENSIONS OF BUILDING COMPONENTS ARE TO BE OBTAINED FROM ARCHITECTURAL DRAWINGS WHEN AVAILABLE.
- C. ALL WORK IS TO BE ACCOMPLISHED WITHIN STRICT COMPLIANCE WITH THE PROJECT SCHEDULE AND THE PROJECT PHASING REQUIREMENTS.
- D. **RENO ONLY:** PRIOR TO BID, THE MECHANICAL CONTRACTOR SHALL PERFORM A DETAILED WALL THROUGH FIELD INSPECTION REVIEWING EXISTING CONDITIONS, STRUCTURE, DEVICE/EQUIPMENT LOCATIONS, AND SHALL MAKE ALL NECESSARY ALLOWANCES FOR ALL REQUIRED DEMOLITION AND NEW WORK PER CONSTRUCTION DOCUMENTATION.
- E. WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS AND EQUIPMENT SCHEDULES, THE MORE STRINGENT SHALL APPLY.
- F. REFER TO DRAWINGS M200, M300 AND M400 FOR HVAC LEGEND, DETAILS, DIAGRAMS, AND SCHEDULES.
- G. CONTRACTOR SHALL CAREFULLY COORDINATE DUCTWORK PATHWAY AND LOCATIONS WITH OTHER TRADES **AND EXISTING CONDITIONS**. ALL DUCTWORK SHALL BE INSTALLED AS TIGHT TO THE STRUCTURE AS POSSIBLE. CONNECTIONS TO THE SUPPLY AIR DEVICES MAY BE MADE WITH FLEXIBLE DUCTWORK. REFER TO THE DETAIL ON DRAWING M200 FOR FLEXIBLE DUCT CONNECTIONS. ALL CONDITIONS SHALL BE FIELD VERIFIED BEFORE ORDERING EQUIPMENT OR FABRICATED MATERIAL.
- H. CONTRACTOR SHALL PROVIDE ALL ROOF OR WALL NON-COMBUSTIBLE FRAMING AS REQUIRED TO INSTALL EQUIPMENT AND DUCTWORK. COORDINATE NEW WORK WITH OTHER TRADES PRIOR TO BEGINNING CONSTRUCTION. NO WORK IS TO BE INSTALLED OR FABRICATED UNTIL AFTER THE PROJECT COORDINATION HAS BEEN APPROVED BY THE OWNER'S REPRESENTATIVE.
- I. INSTALL A MANUAL BALANCE DAMPER IN ALL BRANCH DUCTS, INCLUDING ALL SUPPLY AND EXHAUST GRILLES.
- J. ALL SQUARE THROATED ELBOWS SHALL HAVE AIRFOIL TURNING VANES AND SHALL ONLY BE USED WHEN RADIUS ELBOWS WILL NOT FIT.
- K. ALL ROUND BRANCH DUCT CONNECTIONS SHALL BE MADE WITH BELLMOUTH FITTINGS OR ANGLED TEES. STRAIGHT SPIN-IN TAP COLLARS SHALL NOT BE ACCEPTABLE.
- L. ALL DAMPERS AND CONTROL COMPONENTS THAT ARE LOCATED ABOVE CEILING SHALL BE INSTALLED WHERE COMPLETELY ACCESSIBLE. CONTRACTOR SHALL PROVIDE ACCESS PANELS AS REQUIRED.
- M. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHALL BE FABRICATED FROM GALVANIZED STEEL METAL, INSTALLED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS FOR GAUGE. REINFORCEMENT AND SUPPORT: 2" W.G. PRESSURE CLASS FOR ALL DUCTWORK. ALL JOINTS AND SEAMS SHALL BE SEALED AND FASTENED AND MADE AIRTIGHT IN ACCORDANCE OF CHAPTER 13 OF THE **IBC**.
- N. **RENO ONLY:** CONTRACTOR SHALL TAKE OVERALL CFM MEASUREMENTS ON ALL EXISTING DUCTWORK TO REMAIN PRIOR TO COMMENCING ANY WORK. INFORMATION OBTAINED SHALL BE UTILIZED FOR REBALANCING SYSTEM. CONTRACTOR SHALL REBALANCE ALL SYSTEMS AT THE CONCLUSION OF THE PROJECT.
- O. DUCTWORK CONNECTION TO DIFFUSER TO BE THE SAME SIZE AS THE DIFFUSER NECK SIZE.
- P. DUCTWORK SHALL BE SUPPORTED INDEPENDENT OF CEILING, CONDUIT, PIPING, ETC.
- Q. **RENO ONLY:** IN AREAS WHERE CEILINGS ARE NOT BEING REPLACED, AND CONTRACTOR HAS WORK ABOVE CEILINGS, CONTRACTOR SHALL PATCH AND REPAIR CEILINGS TO MATCH EXISTING.
- R. CONTRACTOR SHALL COORDINATE ALL REQUIRED ROOF OPENINGS FOR DUCTWORK WITH THE GENERAL CONTRACTOR.
- S. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL STEEL FRAMING AS REQUIRED TO INSTALL DUCTWORK AND EQUIPMENT SUPPORTS/CURBS.
- T. UL LISTED FIRESTOPPING SHALL BE USED AT ANY PENETRATION THROUGH A FIRE RATED ASSEMBLY. REFER TO ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR LOCATIONS OF RATED ASSEMBLIES. CONTRACTOR SHALL USE UL LISTED FIRESTOP SYSTEM METHODS FOR THROUGH-PENETRATION ASSEMBLIES. TYPICAL OF ALL FIRE RATED WALLS.



Existing Batavia High School Renovation
 1 Building Place
 Batavia, OH 45103
 Batavia Local School District
 800 Bauer Avenue Batavia, OH 45103



ISSUED	DATE
1 Bid/Permit Set	05/01/2023
1 REBID	07/19/2023

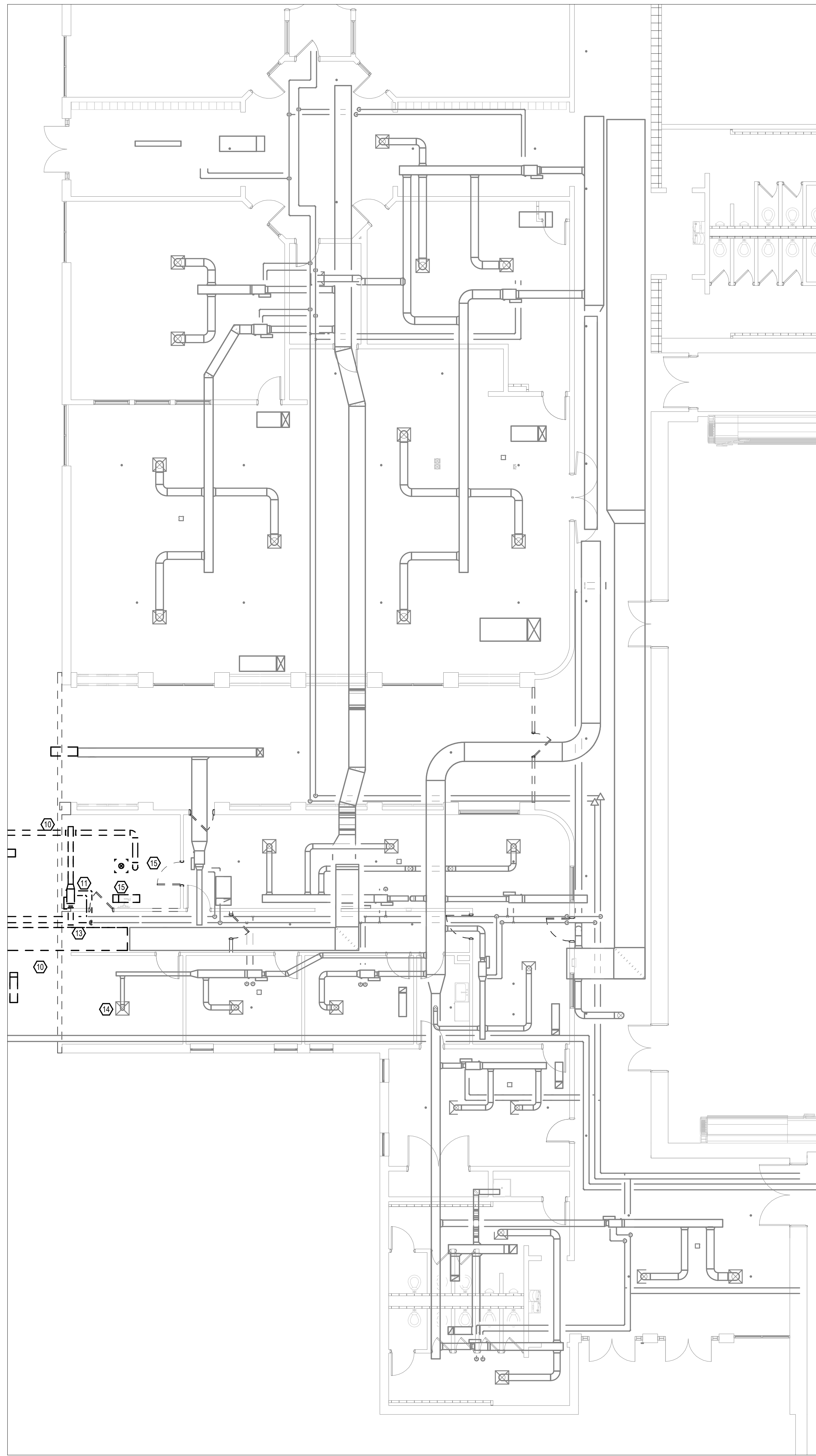
MECHANICAL LEGEND: (not all may apply)

GENERAL ABBREVIATIONS:

AAD	AUTOMATIC AIR DAMPER	CA	COMPRESSED AIR	EC	ELECTRICAL CONTRACTOR	GPH	GALLONS PER HOUR	MOCP	MAX OVERCURRENT PROTECTION	RCP	RECIRCULATION PUMP	TI	TEMPERATURE INDICATOR
AAV	AUTOMATIC AIR VENT	CAF	COMBUSTION AIR FAN	EDH	ELECTRIC DUCT HEATER	GPM	GALLONS PER MINUTE	MUW	MAKEUP WATER	RD	ROOF DRAIN	TMW	THERMOSTATIC MIXING VALVE
AB	AIR BLENDER	CCW	COUNTER CLOCKWISE	EF	EXHAUST FAN					REF	REFERENCE	TSP	TOTAL STATIC PRESSURE
AC	AIR CONDITIONING UNIT	CD	CEILING DIFFUSER	EL	ELEVATION	HORIZ	HORIZONTAL	N/A	NOT APPLICABLE	REQD	REQUIRED	TS/STAT	THERMOSTAT
ACC	AIR COOLED CONDENSER	CFM	CUBIC FEET PER MINUTE	ELEC	ELECTRICAL	HP	HORSEPOWER	NC	NORMALLY CLOSED / NOISE CRITERIA	REV	REVISED (I) (ON)	TXV	THERMAL EXPANSION VALVE
ACCU	AIR COOLED CONDENSING UNIT	CHV	CHECK VALVE	EG	EXHAUST GRILLE	HR	HOUR	NG	NATURAL GAS	RG	RETURN GRILLE	TYP	TYPICAL
AD	ACCESS DOOR	CH	CHILLER	EQ	EQUAL	HT	HEAT TRACE	NIC	NOT IN CONTRACT	RH	RELATIVE HUMIDITY	TW	TEMPERED WATER
ADFL	ADDITIONAL	CHWP	CHILLED WATER PUMP	EQUIP	EQUIPMENT	HVAC	HEATING, VENTILATING AND A/C	NO	NORMALLY OPEN	RM	ROOM		
ADJ	ADJUSTABLE	CHWR	CHILLED WATER RETURN	EQUIV	EQUIVALENT	HWP	HOT WATER PUMP	NOM	NOMINAL	RPM	REVOLUTIONS PER MINUTE	UG,UDG	UNDERGROUND UNIT HEATER
AF	AIR FILTER	CHWS	CHILLED WATER SUPPLY	ER	EXHAUST REGISTER	HWR	HOT WATER RETURN	NTS	NOT TO SCALE	RR	RETURN REGISTER	UH	UNLESS OTHERWISE NOTED
AFF	ABOVE FINISHED FLOOR	CI	CAST IRON	ERV	ENERGY RECOVERY VENTILATOR	HWS	HOT WATER SUPPLY			RTU	ROOF TOP UNIT	UNO	UNLESS NOTED OTHERWISE
AHU	AIR HANDLING FLOOR	CO	CLEANOUT	ESP	EXTERNAL STATIC PRESSURE	HX	HEAT EXCHANGER	QA	OUTSIDE AIR	RV	ROOF TOP UNIT RELIEF VENT		
ALT	ALTERNATE	COLM	COLUMN	ET	EXPANSION TANK			OAH	OUTSIDE AIR HOOD			VA	VENTILATION AIR
ALUM	ALUMINUM	CONN	CONNECTION	EWT	ENTERING WATER TEMPERATURE	IA	INSTRUMENT AIR	OAL	OUTSIDE AIR LOUVER	SA)	SUPPLY AIR	VAC	VACUUM
AMP	AMPERE	CUN	CONDENSING UNIT	EXCL	EXCLUSIONS	IE	INVERT ELEVATION	OC	ON CENTER	SCHED	SCHEDULE	VAV	VARIABLE AIR VOLUME
AP	ACCESS PANEL	CUH	CABINET UNIT HEATER	EXIST	EXISTING	IN	INCH	OCC	OCCUPANCY SENSOR	SCHWP	SECONDARY CHILLED WATER PUMP	VD	VOLUME DAMPER
APPROX	APPROXIMATE	CU FT	CUBIC FEET	OPG	OPENING	KEC	KITCHEN EQUIPMENT CONTRACTOR	OSD	OUTSIDE SCREW AND YOKE	SD	SUCTION DIFFUSER	VD	VOLUME DAMPER
ARCH	ARCHITECTURAL	CU IN	CUBIC INCH	OSBY	OUTSIDE SCREW AND YOKE	KH	KITCHEN HOOD	OSY	OUTSIDE SCREW AND YOKE	SECT	SECTION	VERT	VERTICAL
AUTO	AUTOMATIC	OW	CLOCKWISE	OZ	OUNCE	KV	KITCHEN VENT	SF	SUPPLY FAN	SF	SUPPLY FAN	VFD	VARIABLE FREQUENCY DRIVE
AVG	AVERAGE	CWP	CONDENSING WATER PUMP	EXP	EXPANSION	KW	KITCHEN WENT	SG	SUPPLY GRILLE	SG	SUPPLY GRILLE	VOL	VOLUME
BAS	BUILDING AUTOMATION SYSTEM	CWR	CONDENSING WATER RETURN	FF	FLOOR FINISHED	PC	PLUMBING CONTRACTOR	SHWP	SECONDARY HOT WATER PUMP	VRF	VARIABLE REFRIGERANT FLOW	VRAC	VARIABLE REFRIGERANT FLOW
BBD	BALANCED BACKDRAFT DAMPER			FF	FLOOR FINISHED	PCHWP	PRIMARY CHILLED WATER PUMP	SHT	SHEET	VRF	VARIABLE REFRIGERANT FLOW	VRHP	VARIABLE REFRIGERANT FLOW
BE	BOTTOM ELEVATION	DB	DRY BULB TEMPERATURE	FL	FLOOR	PERIM	PERIMETER	SL	SOUND LINING	W	WITH		
BFP	BACKFLOW PREVENTER	DDC	DIRECT DIGITAL CONTROL	FLA	FULL LOAD AMPS	PF	PRE-FILTER	SM	SURFACE MOUNT	WO	WITHOUT		
BHP	BRAKE HORSEPOWER	DET	DETAIL	FLB	FLAT ON BOTTOM	PH	PHASE	SPEC	SPECIFICATIONS	WB	WET BULB TEMPERATURE		
BLDG	BUILDING	DIA	DIAMETER	FOS	FUEL OIL RETURN	PHWP	PRIMARY HOT WATER PUMP	SPT	STATIC PRESSURE TRANSMITTER	WC	WATER COLUMN		
BLR	BOILER	DN	DOWN	FOT	FUEL OIL TANK	PI	PLUMBING	SQ FT/SF	SQUARE FOOT (FEET) SQUARE INCHES	WG	WATER GAUGE		
BO	BOTTOM OF DUCT	DPT	DEW POINT TEMPERATURE	FOT	FUEL OIL TANK	PLB	PLUMBING	SQ FT/SF	SQUARE FOOT (FEET) SQUARE INCHES	WP	WEATHER-PROOF		
BOP	BOTTOM OF PIPE	DRN	DRAIN	FOT	FUEL OIL TANK	PLG	PLUMBING	SQ FT/SF	SQUARE FOOT (FEET) SQUARE INCHES				
BP	BOOSTER PUMP	DWG	DRAWING	FOT	FUEL OIL TANK	PS	PRESSURE	SR	SUPPLY REGISTER				
BTU	BTU'S PER HOUR	EA	EACH / EXHAUST AIR	FOT	FUEL OIL TANK	PSI	PRESSURE	SS	STAINLESS STEEL				
BTU	BTU'S PER HOUR	EAL	EXHAUST AIR LOUVER	FOT	FUEL OIL TANK	PSIA	PRESSURE	STD	STANDARD				
BV	BALL VALVE	EAL	EXHAUST AIR LOUVER	FOT	FUEL OIL TANK	PSIG	PRESSURE	STD	STANDARD				
BWV	BACKWATER VALVE	EAT	ENTERING AIR TEMPERATURE	FOT	FUEL OIL TANK	PVC	POLYVINYL CHLORIDE	STL	STEEL	XP	EXPLOSION-PROOF		
								STRUCT	STRUCTURAL				
								TCC	TEMPERATURE CONTROL CONTRACTOR				
								TCV	TEMPERATURE CONTROL VALVE				
								TE	TOP ELEVATION				

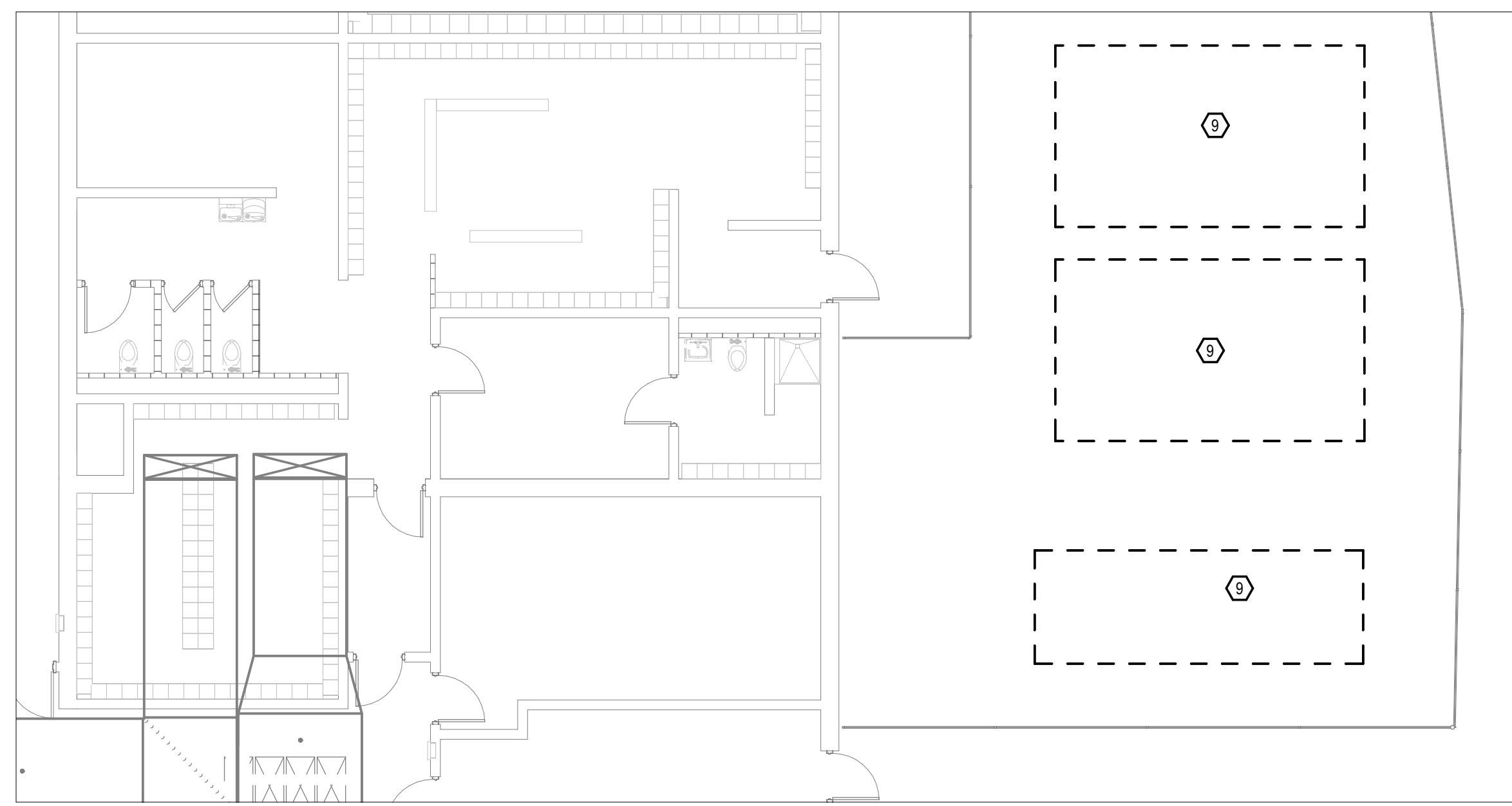
MECHANICAL SYMBOLS:

	BALANCING VALVE		END CAP		AIR FLOW DIRECTION		INSULATED DUCTWORK (DIMENSIONS INDICATED ARE SHEET METAL DIMENSIONS)
	GATE VALVE		FLANGED CONNECTION		OPPOSED BLADE DAMPER		HUMIDISTAT
	BUTTERFLY VALVE		REDUCER		PARALLEL BLADE DAMPER		CARBON MONOXIDE SENSOR
	BALL VALVE		PRESSURE-TEMPERATURE TEST STATION (PTTS)		FIRE DAMPER		CARBON DIOXIDE SENSOR
	CHECK VALVE		THERMOMETER		SMOKE DAMPER		FLEXIBLE DUCT
	GAS COCK		AIR VENT (A = AUTOMATIC, M = MANUAL)		COMBINATION FIRE / SMOKE DAMPER		FLEXIBLE PIPE
	TEMPERATURE REGULATING VALVE		DUCT SMOKE DETECTOR		TEMPERATURE TRANSMITTER		POINT OF CONNECTION / REMOVAL
	PRESSURE RELIEF VALVE		DUCT SLOPE UP IN THE DIRECTION OF AIR FLOW		AUTOMATIC BACKDRAFT DAMPER		EXISTING DUCT OR PIPING TO REMAIN
	RELIEF VALVE		DUCT SLOPE DOWN IN THE DIRECTION OF AIR FLOW		MANUAL DAMPER		EXISTING DUCT OR PIPING TO BE REMOVED
	STRAINER		STATIC PRESSURE TRANSMITTER		CONTROL SYMBOL (A = ANALOG, D = DIGITAL, I = INPUT, O = OUTPUT)		CHWR - CHILLED WATER RETURN
	3-WAY VALVE		RETURN DIFFUSER		EXHAUST DIFFUSER		HWR - HOT WATER RETURN
			PLENUM SLOT DIFFUSER		PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
			DUCT TAP		PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		ROUND DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)
					PLENUM SLOT DIFFUSER		RECTANGULAR DUCT SIZE (S = SUPPLY, R = RETURN, E = EXHAUST, OA = OUTSIDE AIR)



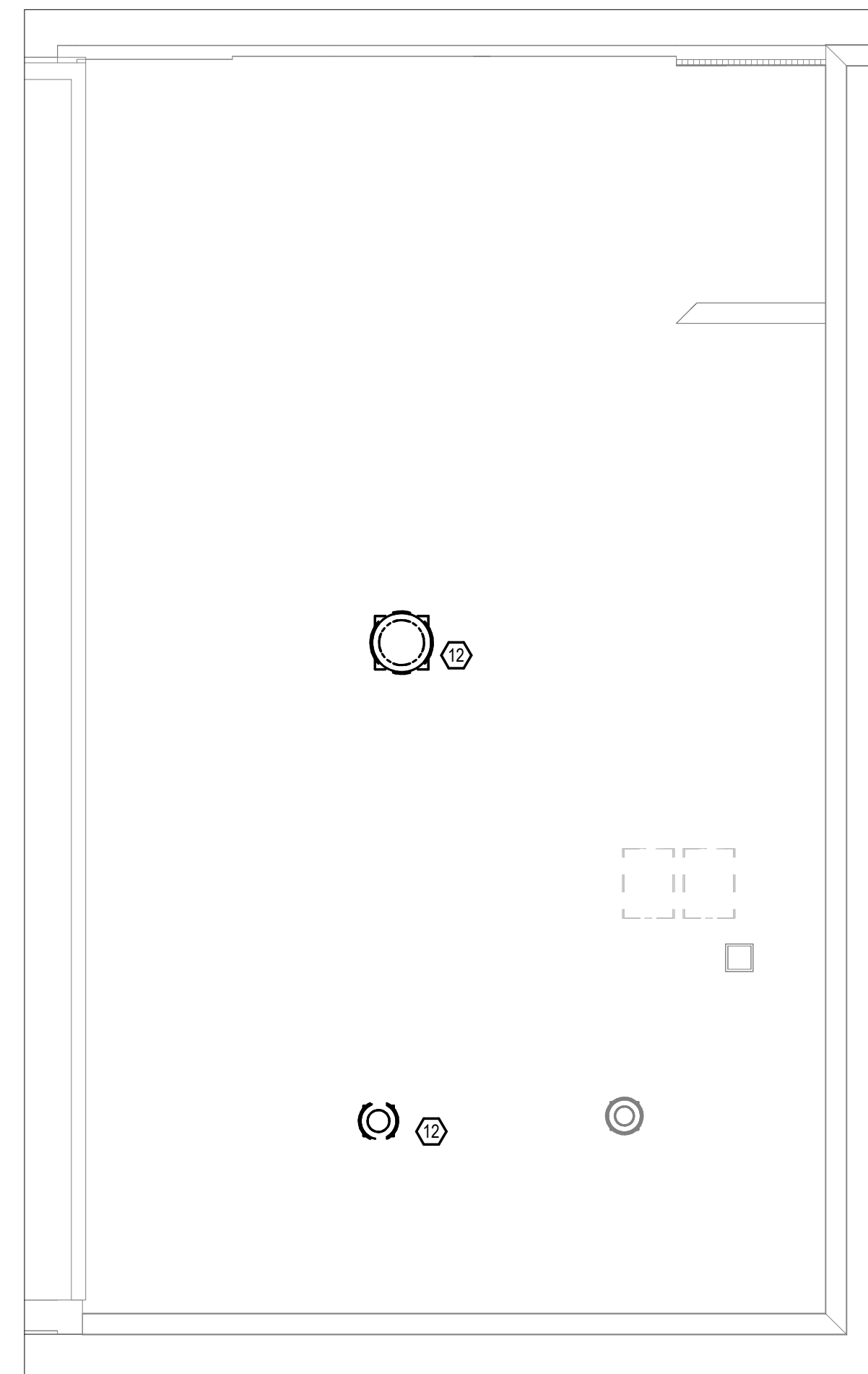
FIRST FLOOR DEMOLITION PLAN -
BOE OFFICES
1/8" = 1'-0"

2
MD111



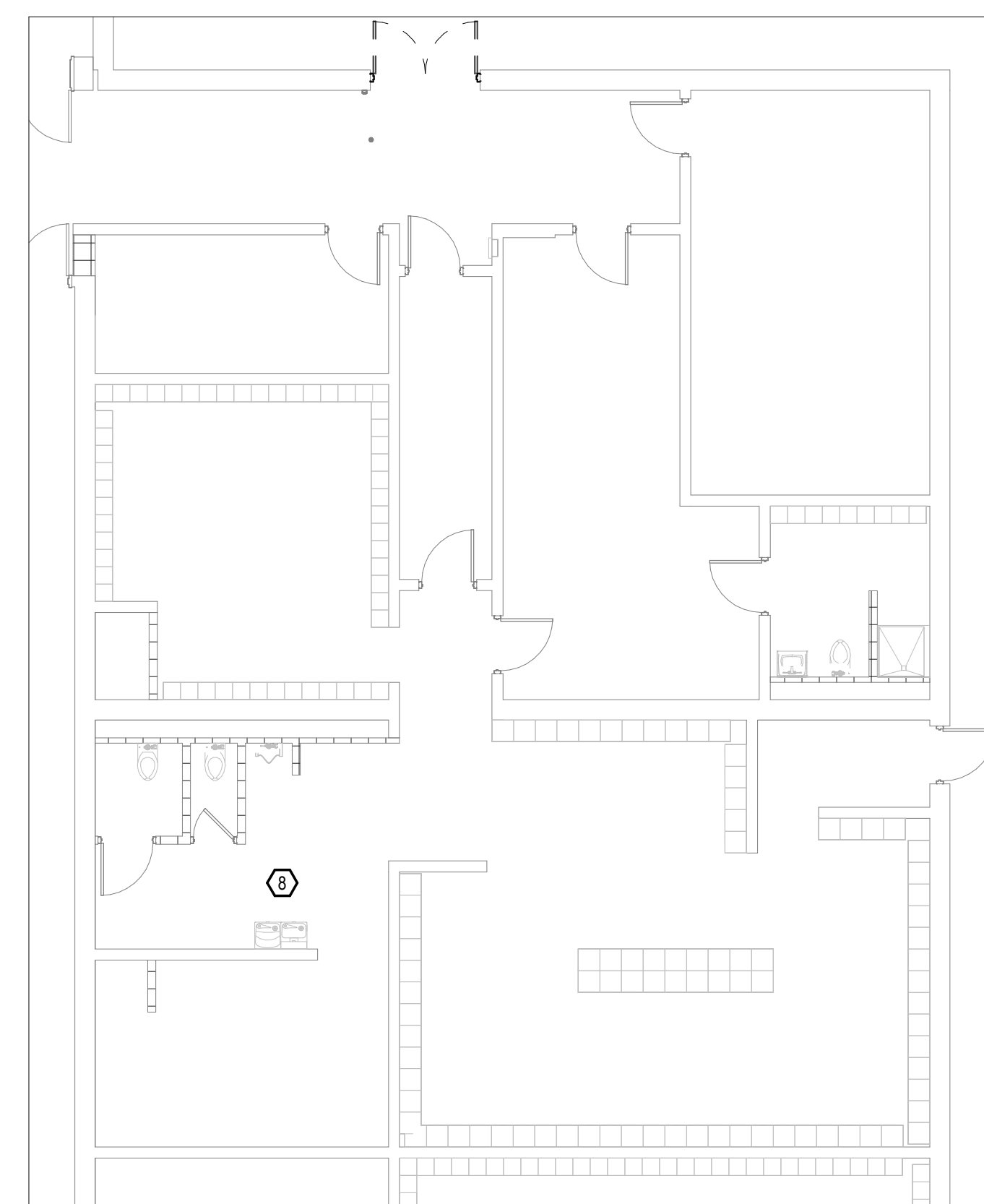
FIRST FLOOR DEMOLITION PLAN -
MECHANICAL ROOM AND
EXTERIOR EQUIPMENT
1/8" = 1'-0"

4
MD111



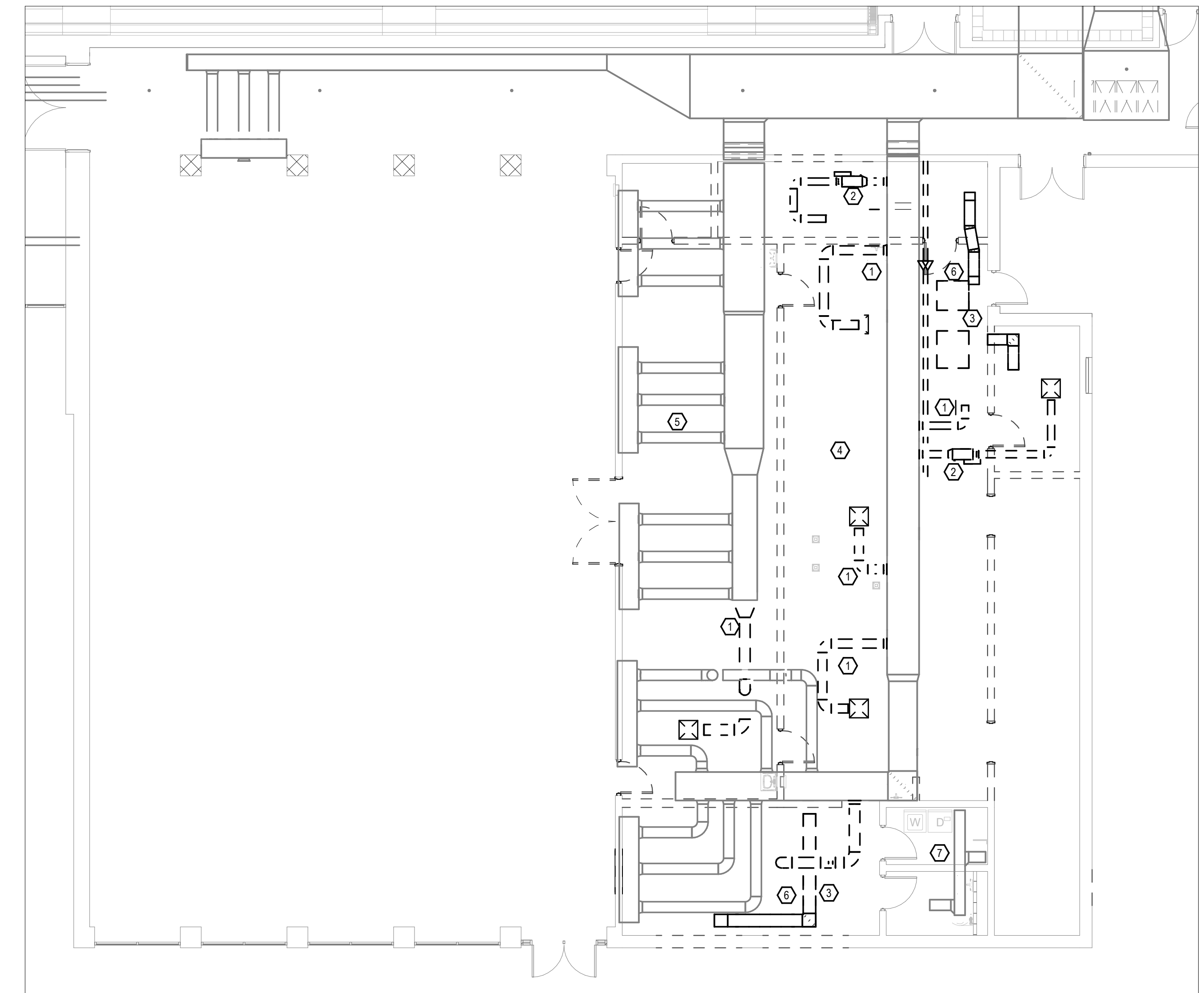
HVAC DEMOLITION PLAN - KITCHEN
ROOF
NOT TO SCALE

1
MD111



FIRST FLOOR DEMOLITION PLAN -
LOCKER ROOMS
1/8" = 1'-0"

3
MD111

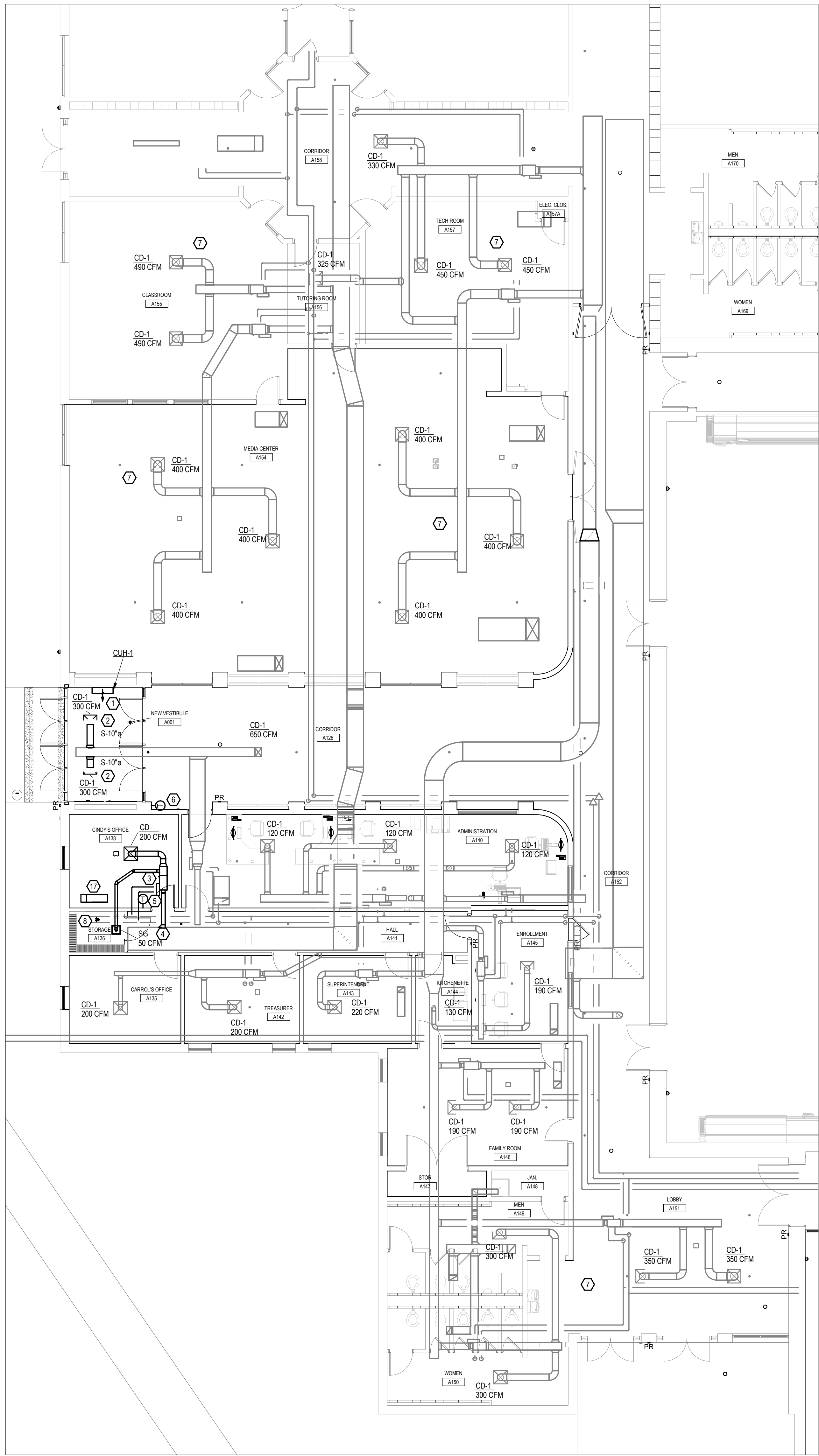


FIRST FLOOR DEMOLITION PLAN -
WRESTLING AND WEIGHT ROOMS
1/8" = 1'-0"

5
MD111

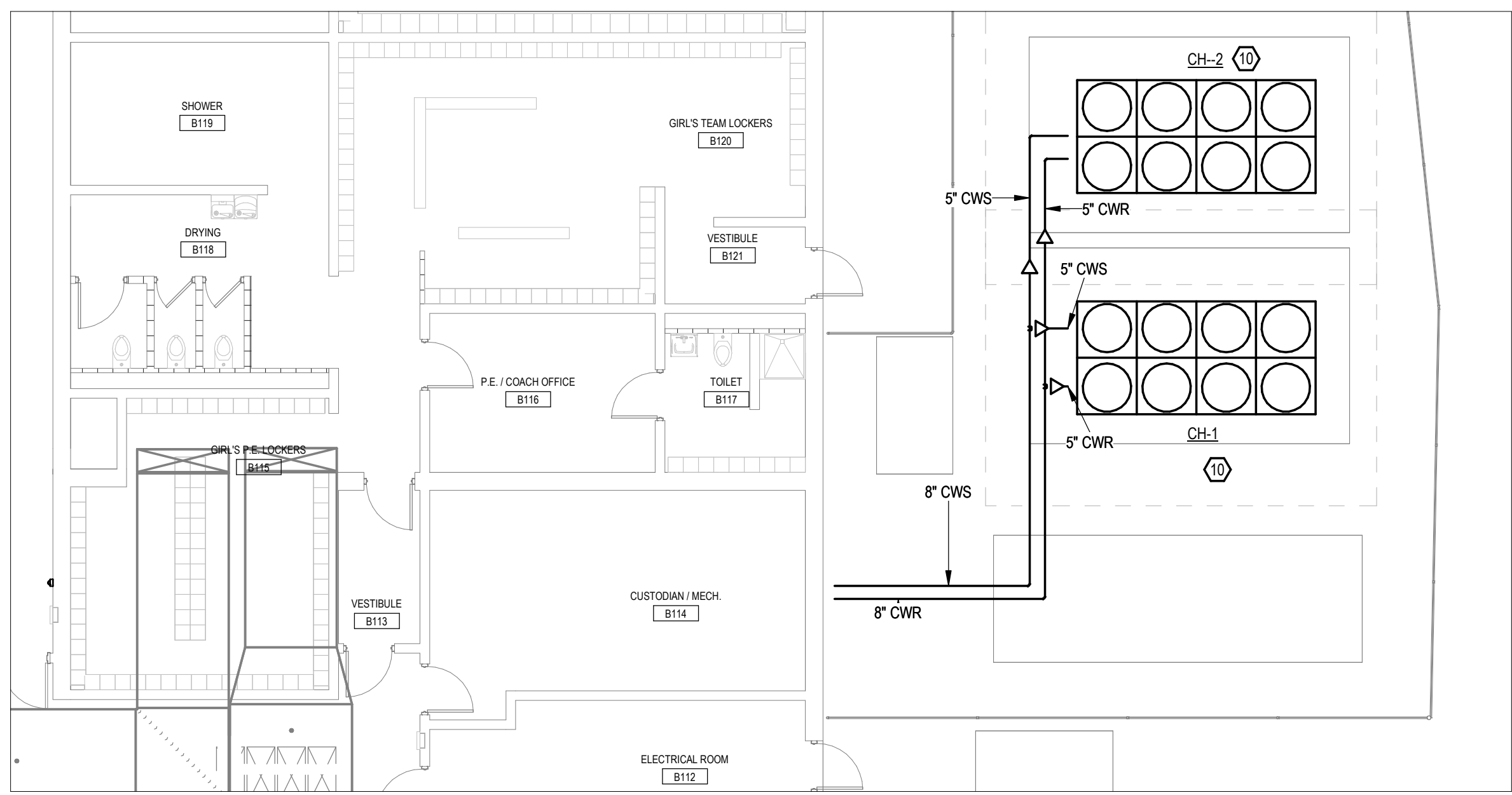
CODED NOTES:

1. REMOVE BRANCH DUCTWORK AND DIFFUSER. PATCH AND PREP EXISTING MAIN TRUNK LINE FOR PAINT.
2. REMOVE EXISTING VAV BOX AND HOT WATER PIPING BACK TO SHUT OFF CONNECTION. UPDATE CONTROL SEQUENCE AND MAIN FRAME TO SHOW REMOVAL OF BOX.
3. REMOVE ANY KITCHEN HVAC DUCTWORK ETC FOR EQUIPMENT NOT SHOWN IN THE NEW PLAN.
4. REMOVE KITCHEN HOOD, GREAS DUCT, EXHAUST FAN AND ANY OTHER ASSOCIATED ITEMS.
5. REMOVE ANY EXISTING FLEX DUCT TO GRILLES FOR WRESTLING AREA AND REPLACE WITH HARD DUCT THAT IS PREPARED FOR PAINT.
6. REMOVE ANY VARIOUS KITCHEN ITEMS THAT WILL NOT BE PART OF THE NEW DESIGN.
7. EXISTING RESTROOMS AND JANITOR ROOMS TO REMAIN AS IS.
8. REMOVE AND REPLACE EXISTING HVAC CEILING DEVICES, GRILLES, REGISTERS ETC FOR CEILING REPLACEMENT.
9. REMOVE EXISTING CHILLER, ICE STORAGE TANKS AND PIPING BACK TO BUILDING CONNECTION. REFER TO PIPING DIAGRAM.
10. REMOVE ALL EXISTING DUCT, DIFFUSER, VAV BOXES, PIPING ETC FROM WHERE WALL IS REMOVED. REMOVE ANY EXISTING VAV BOXES OFF OF CONTROL SYSTEM AND UPDATE GRAPHICS.
11. FIELD VERIFY EXISTING VAV BOX LOCATION PRIOR TO DEMOLITION. IF BOX IS IN CONFLICT WITH NEW WALL BUILD REMOVE BOX AND SALVAGE FOR REINSTALLATION IN NEW WORK PHASE. IF BOX LOCATION IS ADEQUATE CAP DUCT BRANCH TO REMOVED SECTION AND RELOCATE EXISTING DIFFUSER PER NEW GRID LAYOUT. IF BOX SHOULD BE REMOVED REFER TO NEW WORK PLAN.
12. REMOVE ALL EXHAUST FANS ON ROOM ASSOCIATED WITH KITCHEN EQUIPMENT. RESTROOM EXHAUST FAN TO REMAIN. CAP CURBS.
13. REMOVE AND CAP EXISTING HOT WATER PIPING SUPPLY AND RETURN.
14. REMOVE AND RELOCATE EXISTING DIFFUSER PER NEW CEILING GRID.
15. REMOVE AND SALVAGE FOR RELOCATION IN NEW CEILING GRID.



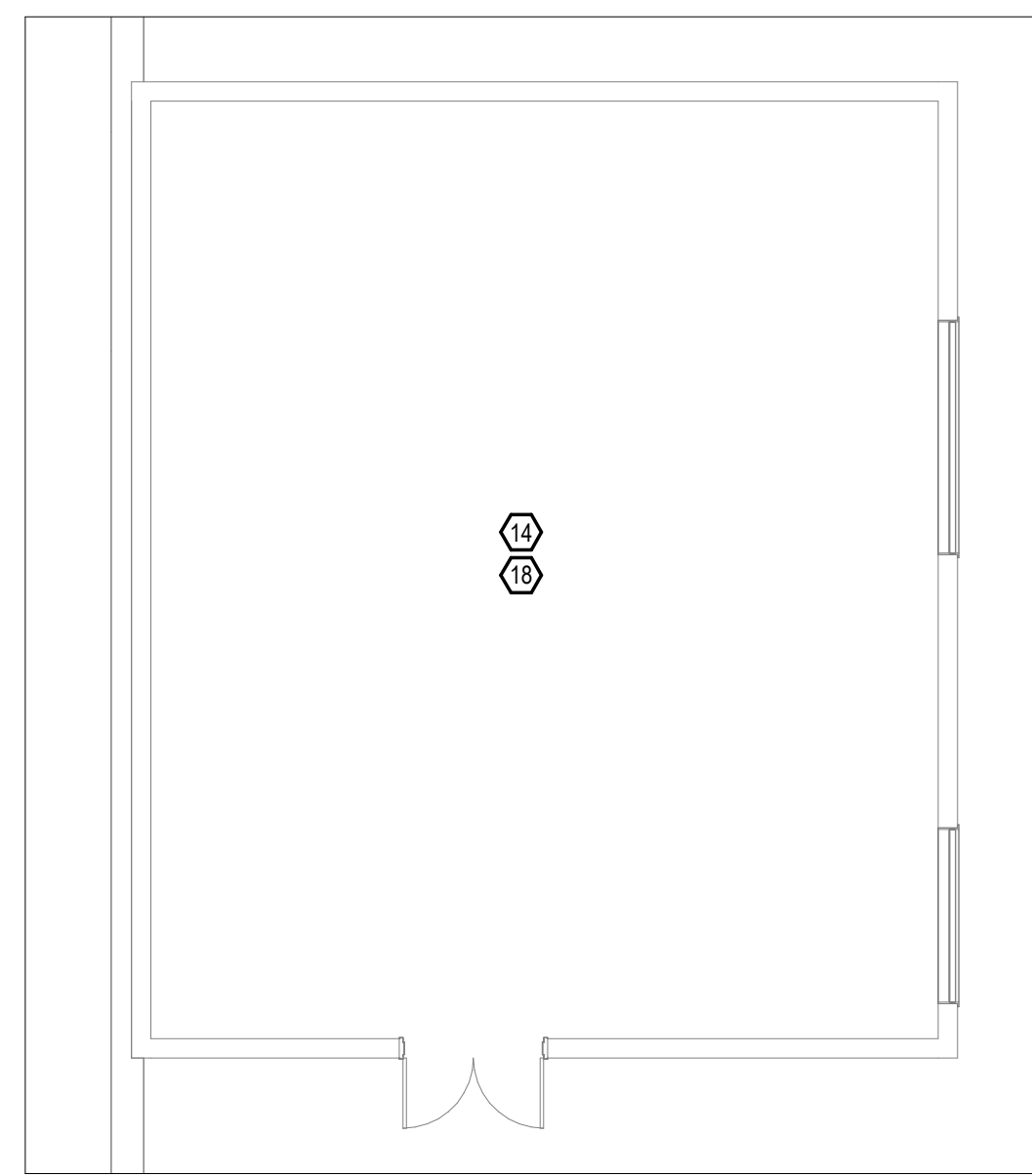
FIRST FLOOR HVAC PLAN - BOE OFFICES
1/8" = 1'-0"

2
MH111



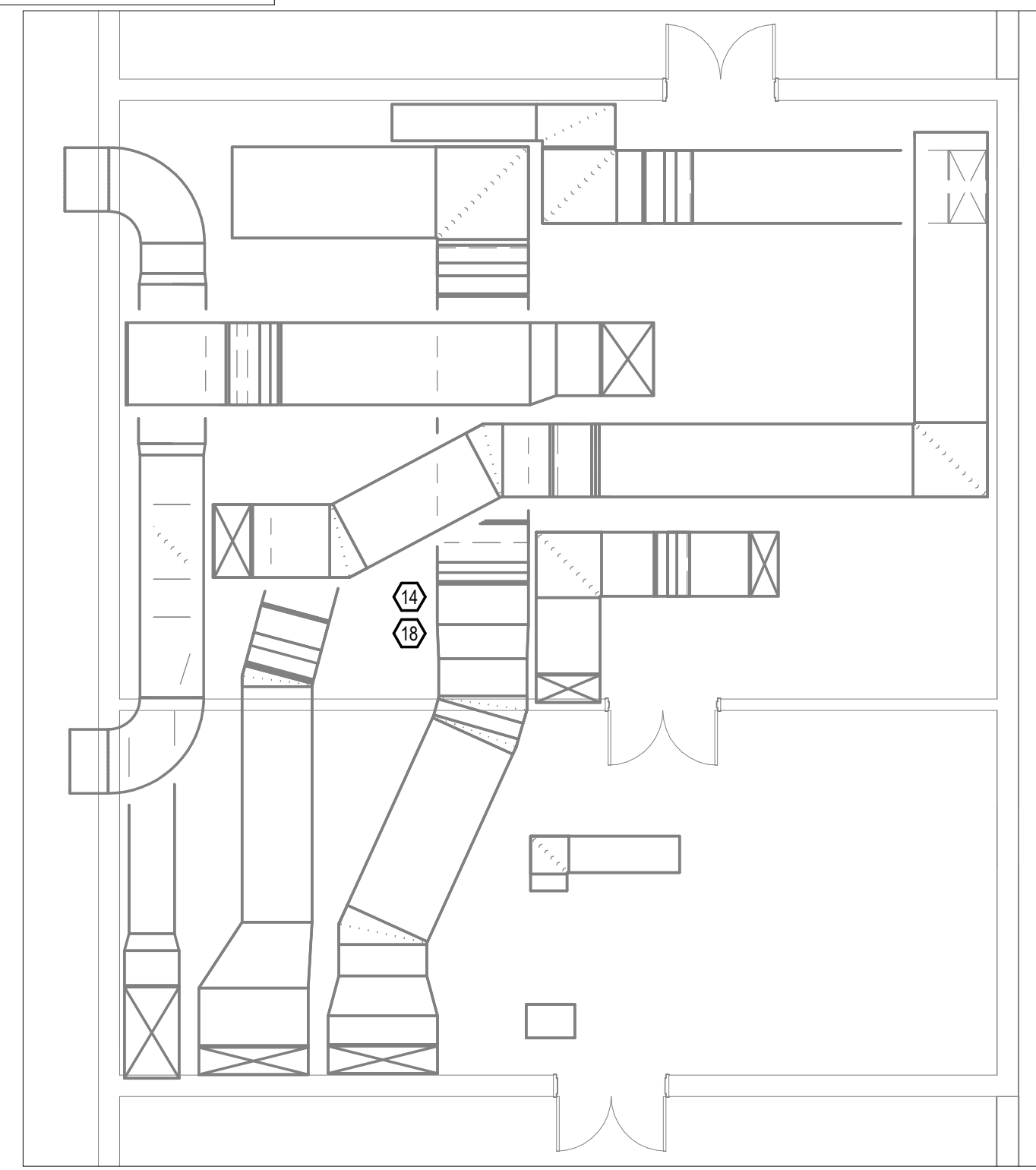
FIRST FLOOR HVAC PLAN - MECHANICAL ROOM AND EXTERIOR EQUIPMENT
1/8" = 1'-0"

4
MH111



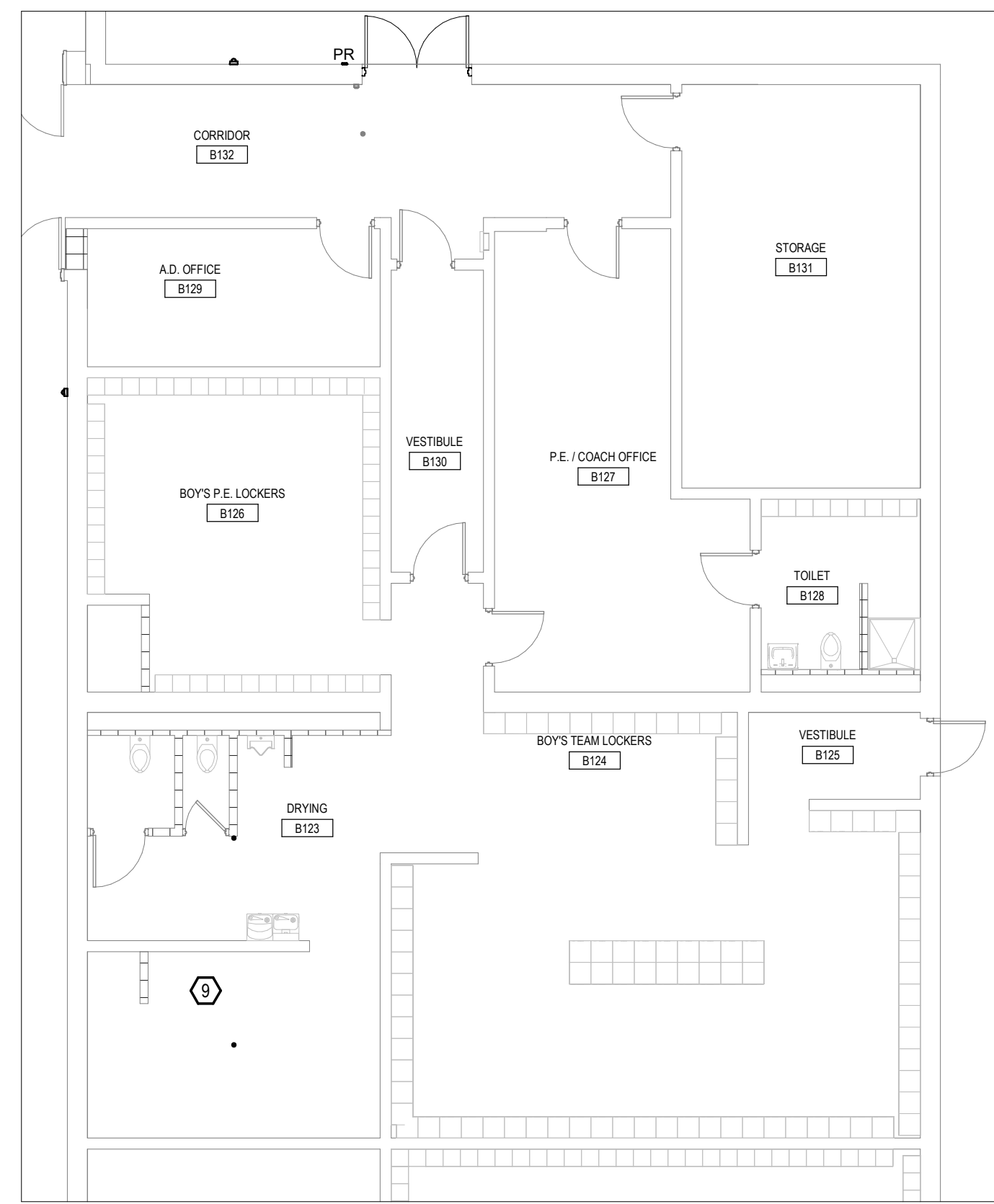
HVAC PLAN - MECHANICAL ROOM
NOT TO SCALE

6
MH111



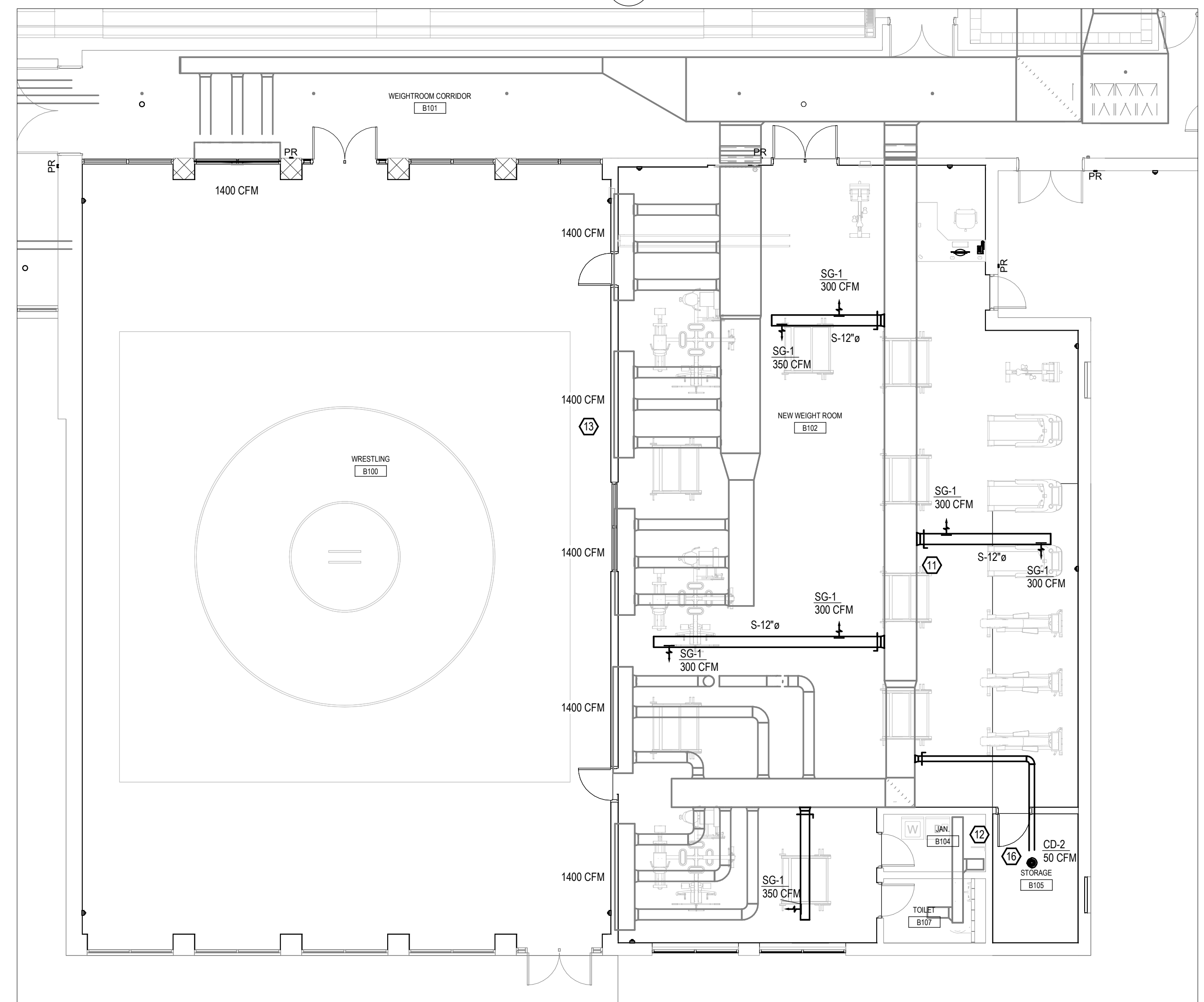
HVAC PLAN - BOILER ROOM
NOT TO SCALE

1
MH111



FIRST FLOOR HVAC PLAN - LOCKER ROOMS
1/8" = 1'-0"

3
MH111



FIRST FLOOR HVAC PLAN - WRESTLING AND WEIGHT ROOMS
1/8" = 1'-0"

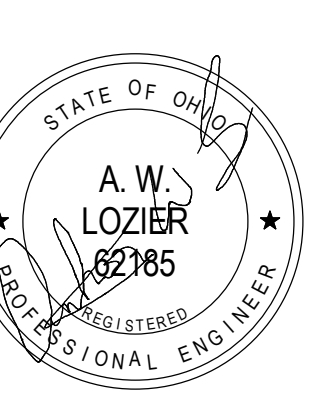
5
MH111

CODED NOTES:

1. PROVIDE NEW CABINET UNIT HEATER AS SCHEDULED. COORDINATE FINAL LOCATION WITH NEW WALL IN VESTIBULE. PROVIDE WITH INTEGRAL THERMOSTAT AND CONNECT TO BAS SYSTEM FOR MONITORING.
2. CONNECT TO EXISTING DUCTWORK. PROVIDE NEW DIFFUSER TO MATCH EXISTING DIFFUSERS IN SPACE.
3. RELOCATED VAV BOX IF REQUIRED FOR NEW WALL INSTALL. RECONNECT TO EXISTING DUCTWORK. EXTEND AND RECONNECT EXISTING HWS, HWR PIPING.
4. PROVIDE NEW DIFFUSER 12X12 EQUAL TO TITUS 300 FL OR EQUIVALENT FOR STORAGE SPACE.
5. RELOCATED THERMOSTAT.
6. CONTRACTOR TO VERIFY EXISTING BOX THERMOSTAT LOCATION. RELOCATE THERMOSTAT FOR NEW VESTIBULE IF REQUIRED.
7. SPACES ARE EXISTING TO REMAIN REBALANCE DIFFUSERS TO CFM NOTED ON PLANS.
8. PROVIDE NEW 3-WAY CONTROL VALVE. CONTRACTOR TO REFILL AND BLEED AIR OUT OF LINES. REBALANCE EXISTING HWS AND HWR PIPING AS REQUIRED.
9. RELOCATE CEILING DEVICES PER NEW CEILING LAYOUT. GRILLES, DIFFUSERS ETC.
10. PROVIDE NEW CHILLER AS SCHEDULED. PLACE ON EXISTING CONCRETE PADS. RECONNECT TO EXISTING CHILLED WATER PIPING REFER TO PIPING DIAGRAM. CONNECT TO EXISTING BAS SYSTEM.
11. PROVIDE NEW DUCTWORK WITH SIDE WALL REGISTERS. TITUS MODEL S301 WITH AIR SCOOP OR EQUIVALENT. COORDINATE FINAL LOCATION WITH EXISTING STRUCTURE AND LIGHTING.
12. RESTROOM AND JANITORS CLOSET TO REMAIN AS IS.
13. REBALANCE TO CFM NOTED ON PLANS. (TYP)
14. REMOVE EXISTING AHU CONTROLLER AND REPLACE WITH NEW CONTROLLER CAPABLE WITH NEW BAS SYSTEM TYPICAL FOR ALL REMAINING AIRHANDLERS.
15. PROVIDE NEW DUCT MOUNTED CONE DIFFUSER EQUAL TO TITUS TMR OR EQUIVALENT.
16. RELOCATED RETURN REGISTER.
17. BALANCE AHU-5 AND AHU-2 TO CFMS NOTED ON VENTILATION SCHEDULE FOR SUPPLY AND OUTDOOR AIR. RECOMMISSION EXISTING VAV BOXES AS REQUIRED.



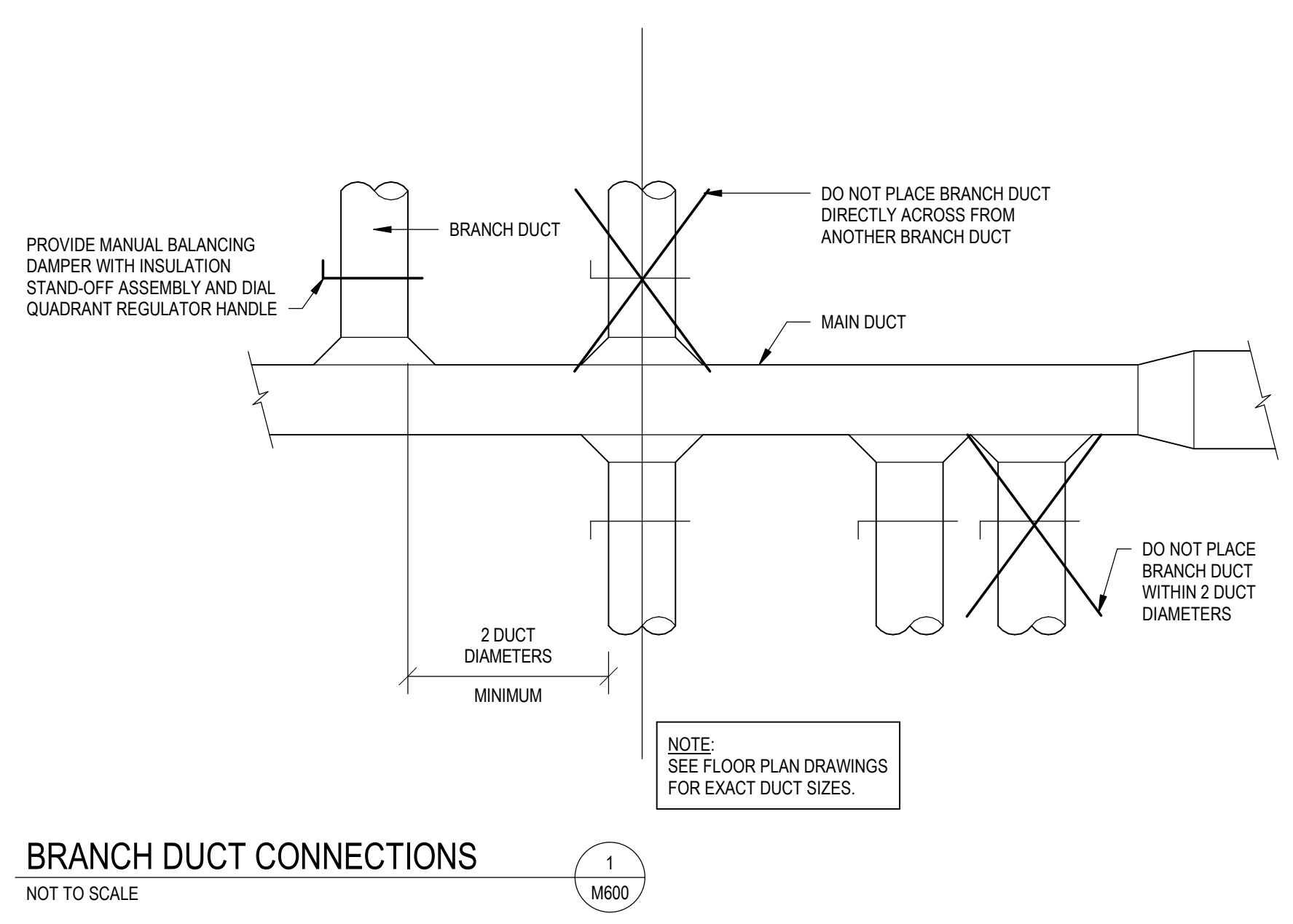
Existing Batavia High School Renovation
1 Building Place
Batavia, OH 45103
Batavia Local School District
800 Bauer Avenue Batavia, OH 45103



ISSUED	DATE
1 Bid/Permit Set	05/01/2023
11 REBID	07/19/2023

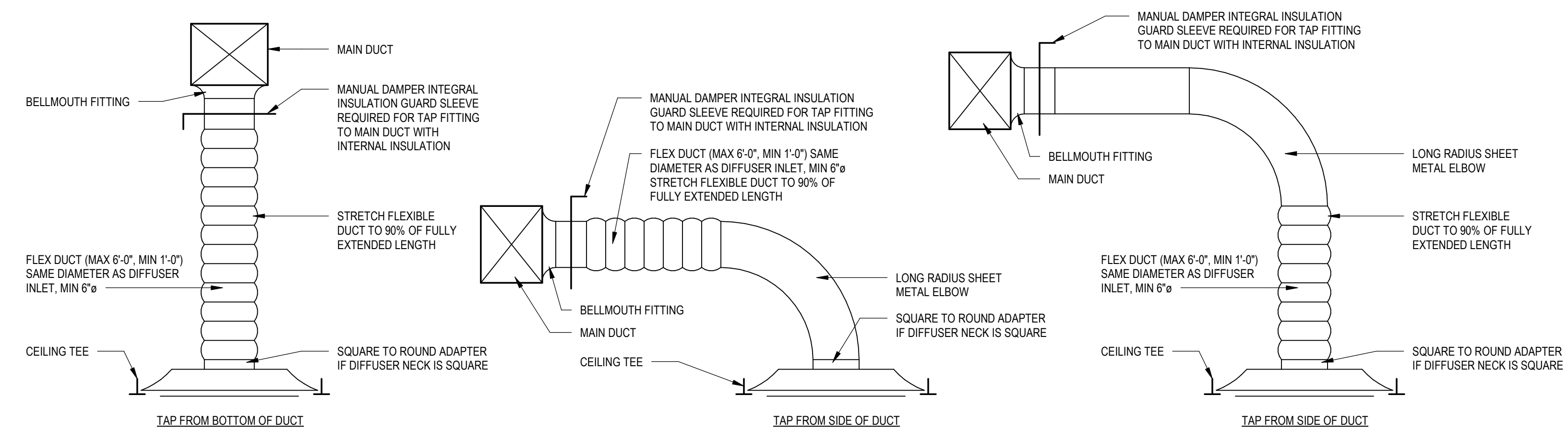
SHEET TITLE	
HVAC NEW WORK PLANS	
SCALE	COMM No.
1/8" = 1'-0"	1000
DRAWN BY	DATE
Author	05/01/2023
SHEET No.	
MH111	

ISSUED	DATE
Bid/Permit Set	05/01/2023
1 Addendum 02	06/13/2023
2 Addendum 03	06/15/2023
3 REBID	07/19/2023



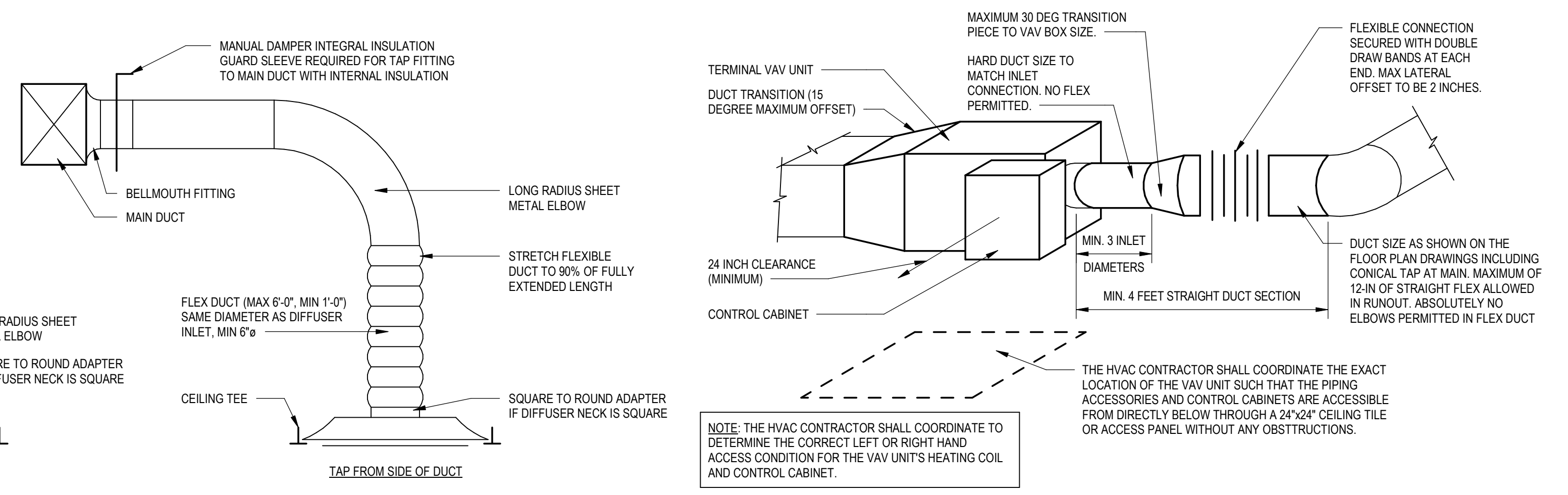
BRANCH DUCT CONNECTIONS
NOT TO SCALE

1
M600



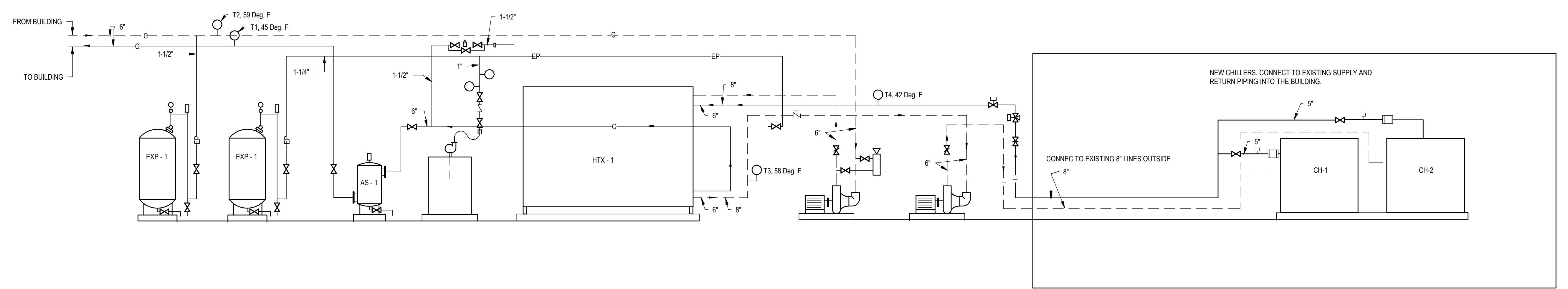
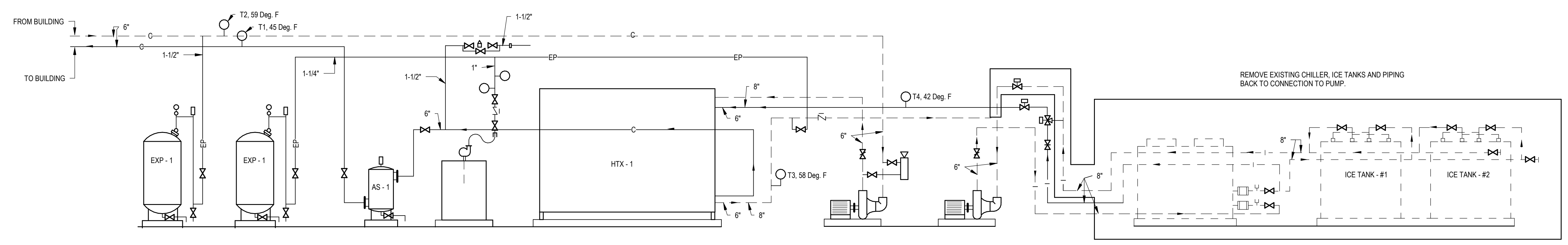
CEILING DIFFUSER CONNECTIONS
NOT TO SCALE

2
M600



VAV UNIT INSTALLATION
NOT TO SCALE

4
M600



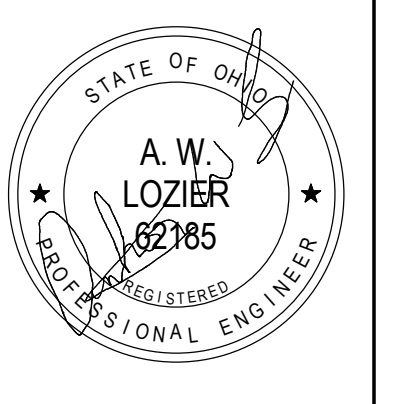
CHILLED WATER SCHEMATICS
NOT TO SCALE

3
M600

CHILLER SCHEDULE															
DESIGNATION	MFG	BASIS OF DESIGN		CAPACITY (TONS)	EER (BTU/W.H)	NPLV (BTU/W.H)	POWER (V/PH)	RLA	MCA	MOCP	EVAPORATOR			NOTES	
		MODEL	YORK								FLOW (GPM)	ENT LWT (°F)	PO (°F)		FT-H2O
CH-1	YORK	YLA01555E46XFB	YORK	141.2	9.505	17.76	460/3	53 A	315 A	350 A	228	58	42	10.80	30% ETHYLENE GLYCOL
CH-2	YORK	YLA01555E46XFB	YORK	141.2	9.505	17.76	460/3	53 A	315 A	350 A	228	58	42	10.80	30% ETHYLENE GLYCOL

UNIT HEATER SCHEDULE											
DESIGNATION	AREA SERVED	UNIT TYPE	AIR FLOW		CAPACITY DATA		ELECTRICAL DATA		BASIS OF DESIGN		ACCESSORIES
			CFM	BTUH	BTUH	WOLTS / PH / HZ	FLA	MFR	MODEL NO.		
CUH-1	NEW VESTIBULE A001	RECESSED	250	6,824	208/1/60	10.72	MARKEL	6333			PROVIDE INTEGRAL THERMOSTAT WITH GAS CONNECTION FOR MONITORING AND ALARMS.

- 1.1 OUTDOOR, ABOVEGROUND PIPING INSULATION SCHEDULE
A. Chilled Water and Brine:
1. All Pipe Sizes: Insulation shall be the following:
a. Flexible Elastomeric: 3 inches thick.
1.2 OUTDOOR, FIELD-APPLIED JACKET SCHEDULE
A. Install jacket over insulation material. For insulation with factory-applied jacket, install the field-applied jacket over the factory-applied jacket.
B. If more than one material is listed, selection from materials listed is Contractor's option.
C. Piping, Coped:
1. PVC, 20 mils thick.



ISSUED	DATE
1 Bid/Permit Set	05/01/2023
1 REBID	07/19/2023

VENTILATION SCHEDULE - (VAV SYSTEM)-AHU-5																					
ROOM NAME	ROOM NUMBER	VAV #	AREA (SF)	OCCUPANCY CATEGORY	MAX. NUMBER OF OCCUPANTS (PER 1000 SF)	OUTDOOR AIR PER OCC. (CFM)	OUTDOOR AIR PER FL AREA (CFM/SF)	DESIGN NUMBER OF PEOPLE	ACTUAL NUMBER OF PEOPLE	BREATHING ZONE OUTDOOR AIRFLOW (CFM) (Equation 6-1)	ZONE AIR DISTRIBUTION EFFECTIVENESS (Table 6-4)	MINIMUM PRIMARY AIRFLOW (CFM) (Equations 6-2 & 9)	ACTUAL MINIMUM AIRFLOW (CFM)	DESIGN SUPPLY AIR (CFM)	ACTUAL OA (CFM)	EXHAUST REQUIREMENTS					
																NO. OF FIXTURES	EA PER FIXTURE	EA PER SF	REQUIRED EA (CFM)	ACTUAL EA (CFM)	CONTINUOUS EXHAUST
WRESTLING	B100	AHU-5	3,510	Gym Play Area (62.1)	7	20	0.16	26	25	1132	80%	2122	5760	6000	1953	0	0	0	0	0	No
WEIGHTROOM CORRIDOR	B101	AHU-5	1,096	Corridor	0	0	0.06	0	0	66	80%	123	268	400	99	0	0	0	0	0	No
NEW WEIGHT ROOM	B102	AHU-5	2,740	Health Club/Weight Room	10	20	0.06	27	27	704	80%	1321	1570	2180	532	0	0	0	0	0	No
JAN.	B104	AHU-5	51	Janitor Closet, Trash, Recycling (Dry Materials)	2	5	0.06	0	0	3	80%	6	7	10	2	0	0	1	51	0	No
STORAGE	B105	AHU-5	96	Storage Room	0	0	0.12	0	0	12	80%	22	36	50	12	0	0	0	0	0	No
TOILET	B107	AHU-5	49	Toilet Room - Public	0	0	0.00	0	0	0	80%	0	7	10	2	1	70	0	70	0	No
TOTALS:			7,543					52	52				7668	10660	2600				121	0	

SUM OF PEAK OCCUPANCIES	PEAK SYSTEM OCCUPANCY	SYSTEM OCCUPANT DIVERSITY (Equation 6-6)	SYSTEM VENTILATION EFFICIENCY (Equations 6-7 & 8)	UNCORRECTED OUTDOOR AIR INTAKE FLOW (Equation 6-9)	REQUIRED OUTDOOR AIR INTAKE FLOW (Equation 6-10)	SPECIFIED SYSTEM OUTDOOR AIRFLOW	SPECIFIED SYSTEM SUPPLY AIRFLOW	SYSTEM OUTDOOR AIR %
52	52	100%	0.75	1,917 CFM	2,555 CFM	2,600 CFM	10,660 CFM	24.4%

VENTILATION SCHEDULE - (VAV SYSTEM)-AHU-2																					
ROOM NAME	ROOM NUMBER	VAV #	AREA (SF)	OCCUPANCY CATEGORY	MAX. NUMBER OF OCCUPANTS (PER 1000 SF)	OUTDOOR AIR PER OCC. (CFM)	OUTDOOR AIR PER FL AREA (CFM/SF)	DESIGN NUMBER OF PEOPLE	ACTUAL NUMBER OF PEOPLE	BREATHING ZONE OUTDOOR AIRFLOW (CFM) (Equation 6-1)	ZONE AIR DISTRIBUTION EFFECTIVENESS (Table 6-4)	MINIMUM PRIMARY AIRFLOW (CFM) (Equations 6-2 & 9)	ACTUAL MINIMUM AIRFLOW (CFM)	DESIGN SUPPLY AIR (CFM)	ACTUAL OA (CFM)	EXHAUST REQUIREMENTS					
																NO. OF FIXTURES	EA PER FIXTURE	EA PER SF	REQUIRED EA (CFM)	ACTUAL EA (CFM)	CONTINUOUS EXHAUST
NEW VESTIBULE	A001	AHU-2	143	Main Entry Lobby - Offices	10	5	0.06	1	1	14	80%	25	390	600	98	0	0	0	0	0	No
CORRIDOR	A126	AHU-2	803	Corridor	0	0	0.06	0	0	48	80%	90	423	650	107	0	0	0	0	0	No
CARRIOL'S OFFICE-1	A135-1	AHU-2	170	Office Space	5	5	0.06	1	1	15	80%	29	130	200	33	0	0	0	0	0	No
STORAGE-2	A135-2	AHU-2	35	Storage Room	0	0	0.12	0	0	4	80%	8	33	50	8	0	0	0	0	0	No
CINDY'S OFFICE	A138	AHU-2	176	Office Space	5	5	0.06	1	0	11	80%	20	130	200	33	0	0	0	0	0	No
ADMINISTRATION	A140	AHU-2	617	Office Space	5	5	0.06	3	3	52	80%	98	202	310	51	0	0	0	0	0	No
HALL	A141	AHU-2	239	Corridor	0	0	0.06	0	0	14	80%	27	33	50	8	0	0	0	0	0	No
TREASURER	A142	AHU-2	176	Office Space	5	5	0.06	1	1	16	80%	29	130	200	33	0	0	0	0	0	No
SUPERINTENDENT	A143	AHU-2	165	Office Space	5	5	0.06	1	1	15	80%	28	143	220	36	0	0	0	0	0	No
KITCHENETTE	A144	AHU-2	78	Office Space	5	5	0.06	0	1	10	80%	18	85	130	21	0	0	0	0	0	No
ENROLLMENT	A145	AHU-2	220	Office Space	5	5	0.06	1	1	18	80%	34	124	190	31	0	0	0	0	0	No
FAMILY ROOM	A146	AHU-2	364	Office Space	5	5	0.06	2	2	32	80%	60	234	360	59	0	0	0	0	0	No
STOR	A147	AHU-2	44	Storage Room	0	0	0.12	0	0	5	80%	10	13	20	3	0	0	0	0	0	No
JAN.	A148	AHU-2	34	Storage Room	0	0	0.12	0	0	4	80%	8	13	20	3	0	0	0	0	0	No
MEN	A149	AHU-2	280	Toilet Room - Public	0	0	0.00	0	0	0	80%	0	182	280	46	5	70	0	350	0	No
WOMEN	A150	AHU-2	191	Toilet Room - Public	0	0	0.00	0	0	0	80%	0	195	300	49	5	70	0	350	0	No
LOBBY	A151	AHU-2	650	Main Entry Lobby - Offices	10	5	0.06	6	6	69	80%	129	455	700	115	0	0	0	0	0	No
CORRIDOR	A152	AHU-2	1,255	Corridor	0	0	0.06	0	0	75	80%	141	423	650	107	0	0	0	0	0	No
BOARD ROOM	A154	AHU-2	2,514	Office Space	5	5	0.06	13	25	276	80%	517	1560	2400	393	0	0	0	0	0	No
CLASSROOM	A155	AHU-2	712	Classrooms (Age 9 Plus)	35	10	0.12	25	25	335	80%	629	637	980	161	0	0	0	0	0	No
TUTORING ROOM	A156	AHU-2	123	Office Space	5	5	0.06	1	13	72	80%	136	211	325	53	0	0	0	0	0	No
TECH ROOM	A157	AHU-2	525	Office Space	5	5	0.06	3	3	46	80%	87	585	900	148	0	0	0	0	0	No
CORRIDOR	A158	AHU-2	969	Corridor	0	0	0.06	0	0	58	80%	109	215	330	54	0	0	0	0	0	No
TOTALS:			10,465					89	83				6542	10065	1650				700	0	

SUM OF PEAK OCCUPANCIES	PEAK SYSTEM OCCUPANCY	SYSTEM OCCUPANT DIVERSITY (Equation 6-6)	SYSTEM VENTILATION EFFICIENCY (Equations 6-7 & 8)	UNCORRECTED OUTDOOR AIR INTAKE FLOW (Equation 6-9)	REQUIRED OUTDOOR AIR INTAKE FLOW (Equation 6-10)	SPECIFIED SYSTEM OUTDOOR AIRFLOW	SPECIFIED SYSTEM SUPPLY AIRFLOW	SYSTEM OUTDOOR AIR %
83	83	100%	0.75	1,190 CFM	1,587 CFM	1,650 CFM	10,065 CFM	16.4%