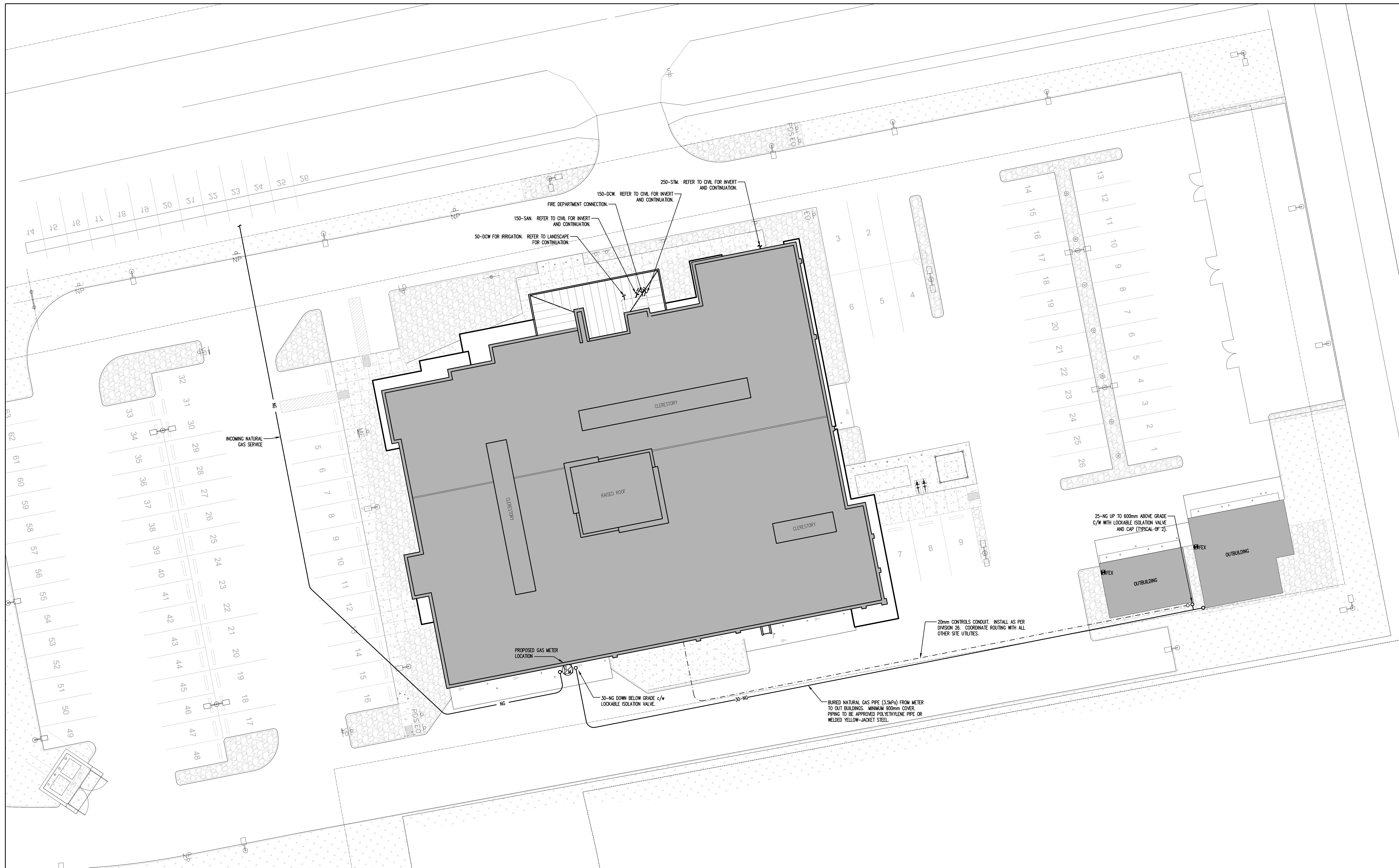
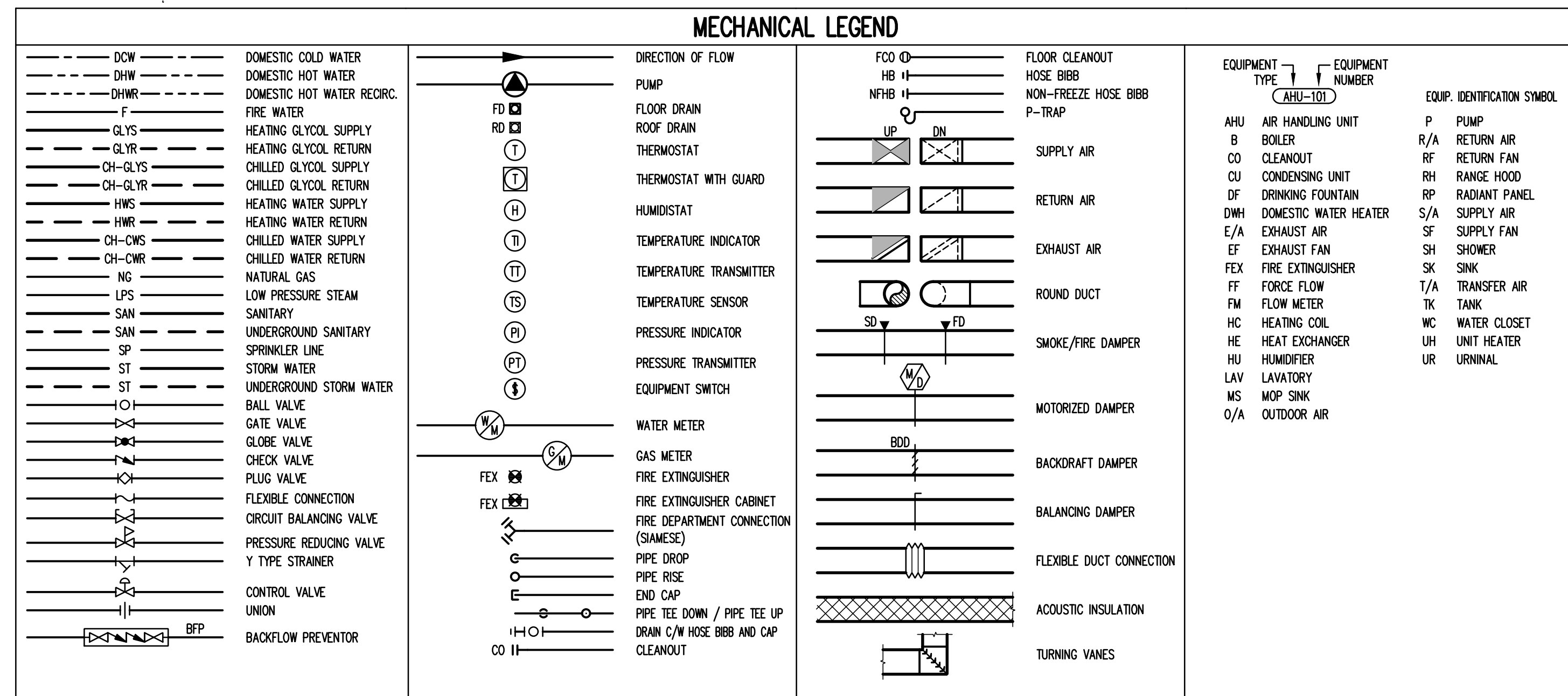


- Notes:
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MECHANICAL SITE PLAN
SCALE: 1:200



GAS LOAD INFORMATION		
EQUIPMENT	INPUT CMH (CFH)	MINIMUM DISTANCE BETWEEN GAS LINE AND UNDERGROUND SERVICES - 2 METRES (6 FEET)
BOILER B-1	11.33 (400)	MAXIMUM DISTANCE BETWEEN INCOMING GAS LINE AND MECHANICAL ROOM FLOOR: 152mm (6 INCHES)
BOILER B-2	11.33 (400)	
DOMESTIC HOT WATER DHW-1	11.33 (400)	
DOMESTIC HOT WATER DHW-2	11.33 (400)	
HUMIDIFIER HU-1	2.83 (100)	
OUTDOOR PATIO CONNECTION	1.7 (60)	
UNIT HEATER UH-1	1.84 (65)	
UNIT HEATER UH-2	1.84 (65)	
UNIT HEATER UH-3	1.84 (65)	
UNIT HEATER UH-4	1.84 (65)	
UNIT HEATER UH-5	1.84 (65)	
UNIT HEATER UH-6	1.84 (65)	
FUTURE OUT BUILDING EQUIPMENT	5.66 (200)	
TOTAL	66.55 (2350)	

FOR MECHANICAL CONTRACTOR

PRIOR TO COMMENCING INSTALLATION WITHIN THE BUILDING, THE MECHANICAL CONTRACTOR SHALL CHECK THE LOCATION AND INVERT ELEVATIONS OF ALL SERVICE LINES INCLUDING SANITARY SEWER, STORM SEWER, WATER MAINS, AND GAS MAINS WITH LOCAL AUTHORITIES TO INSURE THAT THESE SERVICES CAN BE INSTALLED AS SHOWN.

ADDITIONAL NOTES:

GAS LINES SIZING WITHIN BUILDING BASED ON GAS LOAD INFORMATION

LEGAL DESCRIPTION

LOT 93, BLOCK 1, PLAN 151 0788. 705 -19A AVENUE

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EDMONTON, ALBERTA
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The Association of Prof. Engineers
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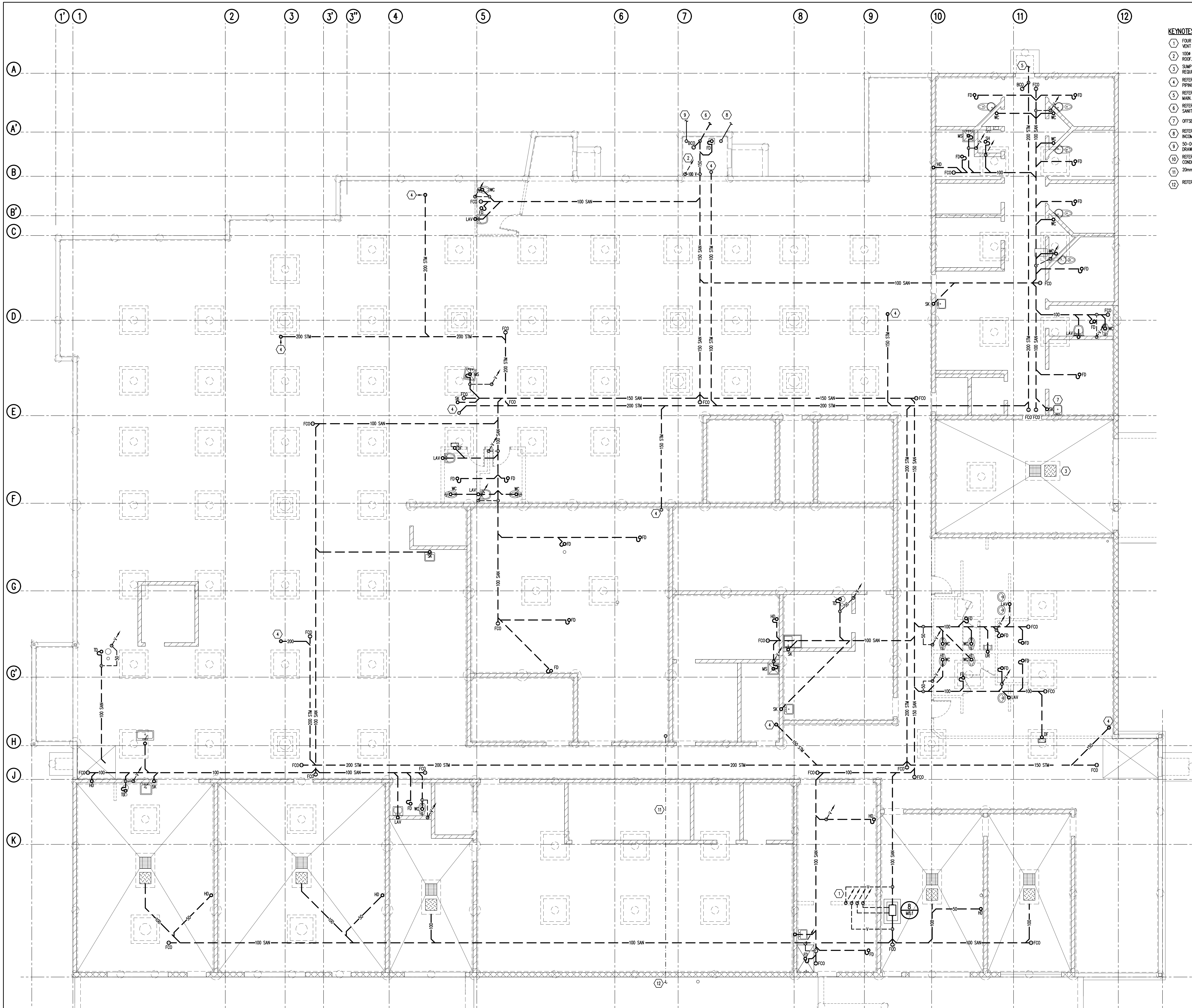
Project: **COALDALE PROTECTIVE SERVICES BUILDING**

Scale: AS NOTED	Designed By: OK
Project No.: 33966.00	Drawn By: OK
Date: 2018.11.30	Checked By: PC

Drawing Title: **MECHANICAL SITE PLAN AND LEGEND**

Drawing No.

M1.0



- KEYNOTES:**
- FOUR 50mm VENTS FROM OIL INTERCEPTOR UP TO 100' VENT TERMINAL THRU ROOF.
 - 100' BUILDING VENT TO 100' VENT TERMINAL THRU ROOF.
 - SUMP PIT TO BE MANUALLY PUMPED OUT. NO DRAINAGE REQUIRED.
 - REFER TO DRAWING M2.1 FOR CONTINUATION OF STORM PIPING LEADER.
 - REFER TO CIVIL DRAWINGS FOR CONTINUATION OF SANITARY MAIN PIPING.
 - REFER TO CIVIL DRAWINGS FOR CONTINUATION OF SANITARY MAIN PIPING.
 - OFFSET DRAIN PIPE IN WALL ABOVE TO AVOID PILE.
 - REFER TO CIVIL DRAWINGS FOR CONTINUATION OF INCOMING WATER MAIN PIPING.
 - 50-DOW PIPE FOR IRRIGATION. REFER TO LANDSCAPE DRAWINGS FOR CONTINUATION.
 - REFER TO DRAWING M2.1 FOR CONTINUATION OF CONDENSATE DRAIN FROM UH-6.
 - 20mm CONTROLS CONDUIT TO OUT BUILDINGS.
 - REFER TO MECHANICAL SITE PLAN FOR CONTINUATION.

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GENERAL NOTES:

- ALL BELOW GRADE PIPING TO BE SUSPENDED FROM MAIN FLOOR STRUCTURAL SLAB.
- ALL WORK SHALL BE AS PER NATIONAL, PROVINCIAL, AND MUNICIPAL CODES, REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
- COORDINATE UNDERGROUND SANITARY AND STORM PIPING LAYOUT WITH OTHER TRADES ON SITE PRIOR TO INSTALLATION.
- CONTRACTOR TO CONFIRM ALL INVERTS PRIOR TO INSTALLATION OF PIPING.
- SLOPE ALL UNDERGROUND SANITARY PIPING AT 2% UNLESS OTHERWISE NOTED.
- SLEEVE ALL PIPES THRU CONCRETE AND FIRE RATED WALLS.
- ALL FLOOR DRAIN AND SHOWER DRAIN TO BE CONNECTED TO TRAP PRIMERS.
- MAIN FLOOR ELEVATION = 100.00m
- VENT ALL PLUMBING AS PER THE LATEST EDITION OF THE NATIONAL PLUMBING CODE.
- THE OWNER OR A REPRESENTATIVE(S) SHALL HAVE ACCESS TO THE WORK IN PROGRESS AT ALL TIMES AND SHALL RESERVE THE RIGHT TO INSPECT THIS WORK AT ANY TIME FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE SPECIFICATION. HE OR SHE SHALL ALSO RESERVE THE RIGHT TO APPROVE EACH PHASE OF THE WORK BEFORE FURTHER WORK MAY BE DONE. TO HALT ALL WORK DEEMED TO BE IMPROPER OR NOT IN COMPLIANCE WITH THE PROJECT, AND TO REQUIRE THAT THE CONTRACTOR PROMPTLY CORRECT ALL IMPROPER PRACTICES AND DEFECTIVE OR DEFICIENT WORK.

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No.	Description	Date	By
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Project
COALDALE PROTECTIVE SERVICES BUILDING

Scale	AS NOTED	Designed By	OK
Project No.	33966.00	Drawn By	OK
Date	2019-01-09	Checked By	PC

Drawing Title

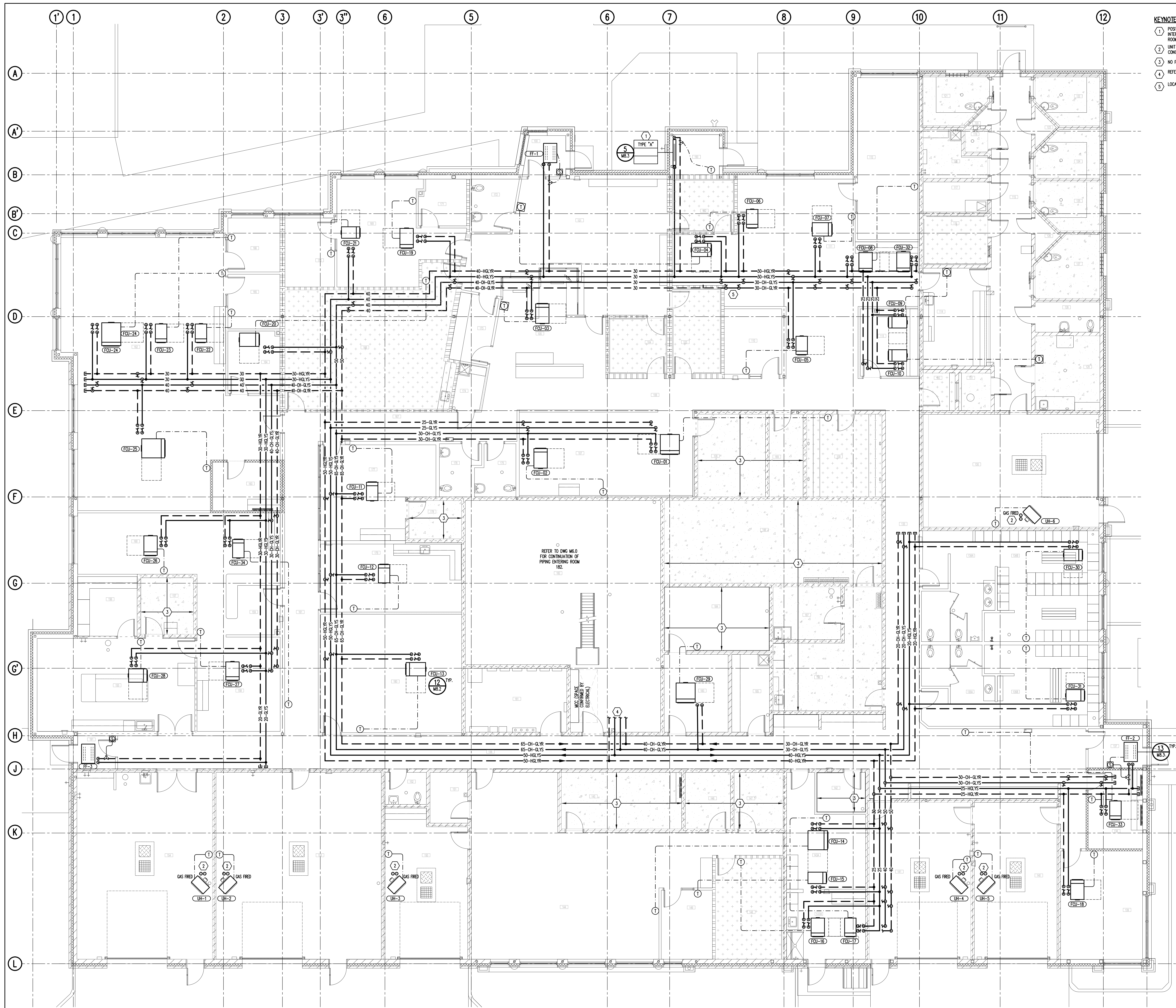
MECHANICAL FOUNDATION PIPING

Drawing No.

M2.0



M2.1



- KEYNOTES:**
- 1 POSITION RADIANT HEATING CABINET SO AS NOT TO INTERFERE WITH WATER METER AND RELATED PIPING IN ROOM.
 - 2 UNIT HEATER VENT AND COMBUSTION AIR UP TO CONCENTRIC VENT THRU ROOF.
 - 3 NO PIPING TO BE INSTALLED ABOVE THESE AREA.
 - 4 REFER TO MECHANICAL ROOM PLAN FOR CONTINUATION.
 - 5 LOCATION OF DIFFERENTIAL PRESSURE SENSORS.

STEPHENS KOZAK ACI
ARCHITECTS AND PLANNERS

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GENERAL NOTES:

1. CLEAR 3-DIMENSIONAL ZONE TO BE PRESERVED TO FACILITATE FAN COIL SERVING TO DIMENSIONS INDICATED. HEIGHT OF CLEAR ZONE TO EXTEND FROM THE UNDERSIDE OF CEILING DIRECTLY BELOW TO WITHIN 100 OF THE UNDERSIDE OF STRUCTURAL DECK.
2. NO ENCROACHMENT BY ARCHITECTURAL, STRUCTURAL, MECHANICAL, OR ELECTRICAL ELEMENT IS PERMITTED, WITHOUT EXCEPTION, UNLESS REVIEWED IN ADVANCE WITH THE PRIME CONSULTANT. THIS INCLUDED SERVICES TO THE FANCOIL WITH MUST BE CAREFULLY COORDINATED TO RESPECT THE SERVICE ZONE.
3. SUPPLY ALL ADDITIONAL MATERIALS AND LABOUR TO ENSURE COMPLIANCE, WHERE SERVICES ARE FOUND TO ENCROACH ON THESE CLEAR ZONES THEY WILL BE REQUIRED TO BE RELOCATED AT NO ADDITIONAL COST.
4. NO OVERHEAD PLUMBING IN ROOMS 108, 142, 145, 146, 147, 176, 184, 186, 187, 188, AND 189.
5. 20-HWS AND 20-HMR TO ALL TERMINAL UNITS UNLESS NOTED OTHERWISE.
6. CONTROLS CONTRACTOR SHALL INCLUDE FOR RELOCATION OF FAN COIL UNIT CONTROL BOXES FROM FAN COIL UNIT FACTORY INSTALLED LOCATIONS TO ALTERNATE LOCATIONS ON THE FAN COIL CABINETS WITHIN 1500MM OF THE ORIGINAL LOCATIONS. FAN COIL UNIT MANUFACTURERS IS TO PROVIDE 180MM OF WIRING FOR THE FAN COIL MOTOR CONTROLS AND TERMINAL INTERFACE. ALL WIRING BETWEEN FAN COIL AND FINAL CONTROL BOX LOCATION SHALL BE PLACED INSIDE OF CONDUIT BY THE CONTROL CONTRACTORS.
7. REFER TO FAN COIL INSTALLATION DETAIL 12 ON M3.2 FOR FAN COIL PIPING, CONTROL, AND VALVE DETAILS.

1. DENOTES ACOUSTIC CEILING CAP IN CEILING CAVITY WITH CEILING SPACE ABOVE AND BELOW ACOUSTIC CAP.

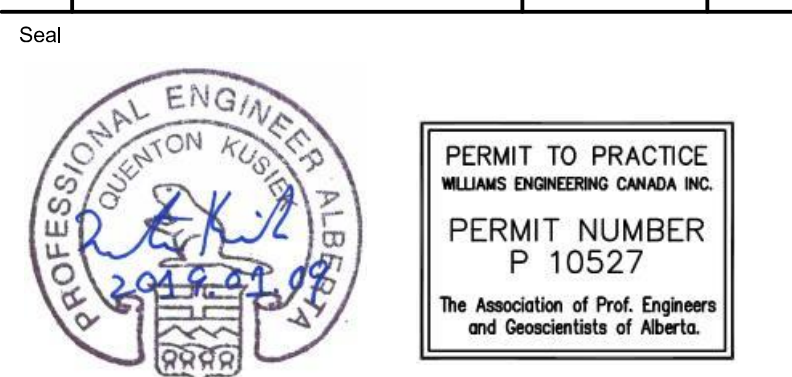
2. DENOTES CONCRETE CEILING CAP WITH CEILING SPACE ABOVE CONCRETE CAP.

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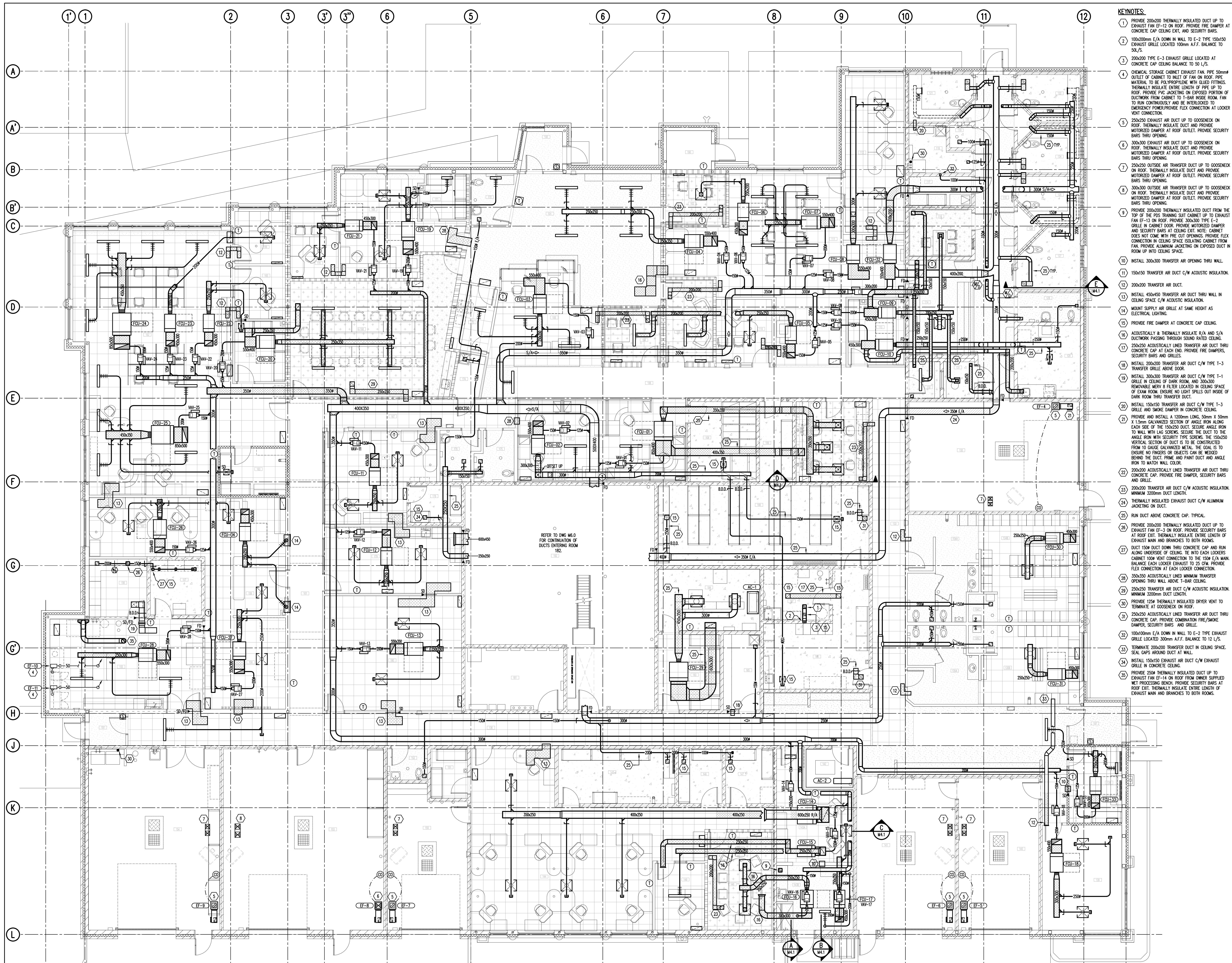
Canada
Project: **COALDALE PROTECTIVE SERVICES BUILDING**

Scale: AS NOTED	Designed By: OK
Project No.: 33966.00	Drawn By: OK
Date: 2019.01.09	Checked By: PC

Drawing Title: **MECHANICAL
MAIN FLOOR
HEATING & COOLING**

Drawing No.

M3.0

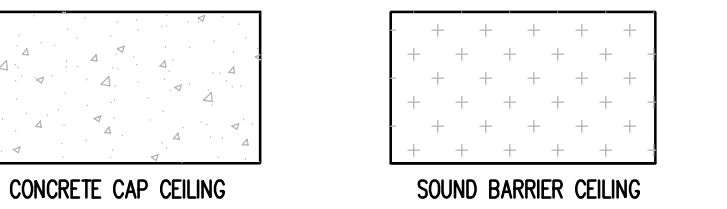


- KEYNOTES:**
1. PROVIDE 200x200 THERMALLY INSULATED DUCT UP TO EXHAUST FAN EF-12 ON ROOF. PROVIDE FIRE DAMPER AT CONCRETE CAP CEILING EXT. AND SECURITY BARS.
 2. 100x200mm E/A DOWN IN WALL TO E-2 TYPE 150x150 EXHAUST GRILLE LOCATED 100mm A.F.F. BALANCE TO 50/L/S.
 3. 200x200 TYPE E-3 EXHAUST GRILLE LOCATED AT CONCRETE CAP CEILING BALANCE TO 50 L/S.
 4. CHEMICAL STORAGE CABINET EXHAUST FAN PIPE 50mm⁴ OUTLET OF CABINET TO INLET OF FAN ON ROOF. PIPE MATERIAL TO BE POLYPROPYLENE WITH GULF FITTINGS. THERMALLY INSULATE ENTIRE LENGTH OF PIPE UP TO ROOF. PROVIDE PVC JACKING ON EXPOSED PORTION OF DUCTWORK FROM CABINET TO T-BAR INSIDE ROOM. FAN TO RUN CONTINUOUSLY AND BE INTERLOCKED TO EMERGENCY POWER. PROVIDE FLEX CONNECTION AT LOCKER VENT CONNECTION.
 5. 250x250 EXHAUST AIR DUCT UP TO GOOSENECK ON ROOF. THERMALLY INSULATE DUCT AND PROVIDE MOTORIZED DAMPER AT ROOF OUTLET. PROVIDE SECURITY BARS THRU OPENING.
 6. 300x300 EXHAUST AIR DUCT UP TO GOOSENECK ON ROOF. THERMALLY INSULATE DUCT AND PROVIDE MOTORIZED DAMPER AT ROOF OUTLET. PROVIDE SECURITY BARS THRU OPENING.
 7. 250x250 OUTSIDE AIR TRANSFER DUCT UP TO GOOSENECK ON ROOF. THERMALLY INSULATE DUCT AND PROVIDE MOTORIZED DAMPER AT ROOF OUTLET. PROVIDE SECURITY BARS THRU OPENING.
 8. 300x300 OUTSIDE AIR TRANSFER DUCT UP TO GOOSENECK ON ROOF. THERMALLY INSULATE DUCT AND PROVIDE MOTORIZED DAMPER AT ROOF OUTLET. PROVIDE SECURITY BARS THRU OPENING.
 9. PROVIDE 200x200 THERMALLY INSULATED DUCT FROM THE TOP OF THE PDS TRAINING SUIT CABINET UP TO EXHAUST FAN EF-13 ON ROOF. PROVIDE 300x300 TYPE E-2 GRILLE IN CABINET DOOR. PROVIDE MOTORIZED DAMPER AND SECURITY BARS AT CEILING EXT. NOTE: CABINET DOES NOT COME WITH PRE-OUT OPENINGS. PROVIDE FLEX CONNECTION IN CEILING SPACE ISOLATING CABINET FROM FAN. PROVIDE ALUMINUM JACKING ON EXPOSED DUCT IN ROOM UP INTO CEILING SPACE.
 10. INSTALL 300x300 TRANSFER AIR OPENING THRU WALL.
 11. 150x150 TRANSFER AIR DUCT C/W ACOUSTIC INSULATION.
 12. 200x200 TRANSFER AIR DUCT.
 13. INSTALL 450x450 TRANSFER AIR DUCT THRU WALL IN CEILING SPACE C/W ACOUSTIC INSULATION.
 14. MOUNT SUPPLY AIR GRILLE AT SAME HEIGHT AS ELECTRICAL LIGHTING.
 15. PROVIDE FIRE DAMPER AT CONCRETE CAP CEILING.
 16. ACOUSTICALLY & THERMALLY INSULATE R/A AND S/A DUCTWORK PASSING THROUGH SOUND RATED CEILING.
 17. 250x250 ACOUSTICALLY LINED TRANSFER AIR DUCT THRU CONCRETE CAP AT EACH END. PROVIDE FIRE DAMPERS, SECURITY BARS AND GRILLE ABOVE DOOR.
 18. INSTALL 200x200 TRANSFER AIR DUCT C/W TYPE T-3 TRANSFER GRILLE ABOVE DOOR.
 19. INSTALL 300x300 TRANSFER AIR DUCT C/W TYPE T-1 GRILLE IN CEILING OF DARK ROOM, AND 300x300 REMOVABLE MERV 8 FILTER LOCATED IN CEILING SPACE OF EXAM ROOM. ENSURE NO LIGHT SPLITS OUT INSIDE OF DARK ROOM THRU TRANSFER DUCT.
 20. INSTALL 150x150 TRANSFER AIR DUCT C/W TYPE T-3 GRILLE AND SMOKE DAMPER IN CONCRETE CEILING.
 21. PROVIDE AND INSTALL A 1200mm LONG, 50mm X 50mm X 1.5mm GALVANIZED SECTION OF ANGLE IRON ALONG HIGH SIDE OF THE 150x250 DUCT. SECURE ANGLE IRON TO WALL WITH LAG SCREWS. SECURE THE DUCT TO THE ANGLE IRON WITH SECURITY TYPE SCREWS. THE 150x250 VERTICAL SECTION OF DUCT TO BE CONSTRUCTED FROM 10 GAUGE GALVANIZED METAL. THE GOAL IS TO ENSURE NO FINGERS OR OBJECTS CAN BE WEDGE BEHIND THE DUCT. PRIME AND PAINT DUCT AND ANGLE IRON TO MATCH WALL COLOR.
 22. 200x200 ACOUSTICALLY LINED TRANSFER AIR DUCT THRU CONCRETE CAP. PROVIDE FIRE DAMPER, SECURITY BARS AND GRILLE.
 23. 200x200 TRANSFER AIR DUCT C/W ACOUSTIC INSULATION. MINIMUM 3200mm DUCT LENGTH.
 24. THERMALLY INSULATED EXHAUST DUCT C/W ALUMINUM JACKING ON DUCT.
 25. RUN DUCT ABOVE CONCRETE CAP. TYPICAL.
 26. PROVIDE 200x200 THERMALLY INSULATED DUCT UP TO EXHAUST FAN EF-3 ON ROOF. PROVIDE SECURITY BARS AT ROOF EXT. THERMALLY INSULATE ENTIRE LENGTH OF EXHAUST MAIN AND BRANCHES TO BOTH ROOMS.
 27. DUCT 150x DUCT DOWN THRU CONCRETE CAP AND RUN ALONG UNDERSIDE OF CEILING. TIE INTO EACH LOCKER'S CABINET 100mm VENT CONNECTION TO THE 150mm E/A MAIN. BALANCE EACH LOCKER EXHAUST TO 25 CFM. PROVIDE FLEX CONNECTION AT EACH LOCKER CONNECTION.
 28. 350x250 ACOUSTICALLY LINED MINIMUM TRANSFER OPENING THRU WALL ABOVE T-BAR CEILING.
 29. 250x250 TRANSFER AIR DUCT C/W ACOUSTIC INSULATION. MINIMUM 3200mm DUCT LENGTH.
 30. PROVIDE 125W THERMALLY INSULATED DRYER VENT TO TERMINATE AT GOOSENECK ON ROOF.
 31. 250x250 ACOUSTICALLY LINED TRANSFER AIR DUCT THRU CONCRETE CAP. PROVIDE COMBINATION FIRE/SMOKE DAMPER, SECURITY BARS AND GRILLE.
 32. 100x100mm E/A DOWN IN WALL TO E-2 TYPE EXHAUST GRILLE LOCATED 300mm A.F.F. BALANCE TO 12 L/S.
 33. TERMINATE 200x200 TRANSFER DUCT IN CEILING SPACE. SEAL GAPS AROUND DUCT AT WALL.
 34. INSTALL 150x150 EXHAUST AIR DUCT C/W EXHAUST GRILLE IN CONCRETE CEILING.
 35. PROVIDE 250W THERMALLY INSULATED DUCT UP TO EXHAUST FAN EF-14 ON ROOF FROM UNITS SUPPLIED WET PROCESSING BENCH. PROVIDE SECURITY BARS AT ROOF EXT. THERMALLY INSULATE ENTIRE LENGTH OF EXHAUST MAIN AND BRANCHES TO BOTH ROOMS.

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- GENERAL NOTES:**
1. REFER TO DRAWING M4.1 "ROOM GRILLE SCHEDULE" FOR DIFFUSER, GRILLES AND LOUVER TYPES.
 2. ACCESS PANELS FOR BOTTOM PULL OUT FILTERS FROM FAN COILS LOCATED ABOVE DRY WALL CEILINGS. TO BE LOCATED DIRECTLY BELOW FILTER SECTION. COORDINATE LOCATIONS WITH ALL DISPOSABLES. THE GOAL IS TO ENSURE MAINTENANCE STAFF CAN EASILY REMOVE FILTER.
 3. PROVIDE ACCESS PANEL FOR ACCESS TO CONTROL MODULE, VALVES, PIPING AND DRAIN PAN FOR FAN COILS LOCATED ABOVE DRY WALL CEILINGS. COORDINATE LOCATIONS WITH ALL DISPOSABLES.
 4. ENSURE ACCESS TO BOTTOM PULL OUT FILTERS FROM FAN COILS LOCATED ABOVE T-BAR CEILINGS. COORDINATE LOCATIONS WITH ALL DISPOSABLES. THE GOAL IS TO ENSURE MAINTENANCE STAFF CAN EASILY REMOVE FILTER.
 5. PROVIDE BELL MOUTH OPENINGS ON ALL OPEN ENDED RETURN / EXHAUST DUCT INLETS.
 6. COORDINATE MOUNTING HEIGHT OF FAN COILS TO ALLOW FOR GRAVITY DRAINING OF FAN COIL CONDENSATE DRAINS WHERE POSSIBLE. WHERE UNABLE, ENABLE CONDENSATE PUMP ON FAN COIL AND RUN DRAIN LINE TO NEAREST MOP SINK. COORDINATE PIPING RUNS WHERE POSSIBLE.
 7. REFER TO DRAWING M3.0 FOR THERMOSTAT LOCATIONS.
 8. CLEAR 3-DIMENSIONAL ZONE TO BE PRESERVED TO FACILITATE FAN COIL SERVING TO DIMENSIONS INDICATED. HEIGHT OF CLEAR ZONE TO EXTEND FROM THE UNDERSIDE OF CEILING DUCT BELOW TO WITHIN 100 OF THE UNDERSIDE OF STRUCTURAL DECK.
- NO ENCROACHMENT BY ARCHITECTURAL, STRUCTURAL, MECHANICAL, OR ELECTRICAL ELEMENT IS PERMITTED WITHOUT EXCEPTION, UNLESS REVIEWED IN ADVANCE WITH THE PRIME CONSULTANT. THIS INCLUDED SERVICES TO THE FANCOIL WITH MUST BE CAREFULLY COORDINATED TO RESPECT THE SERVICE ZONE.
- SUPPLY ALL ADDITIONAL MATERIALS AND LABOUR TO ENSURE COMPLIANCE. WHERE SERVICES ARE FOUND TO ENCROACH ON THESE CLEAR ZONES THEY WILL BE REQUIRED TO BE RELOCATED AT NO ADDITIONAL COST.
9. ACOUSTICALLY SEAL DUCTWORK PENETRATIONS THROUGH ACOUSTIC RATED WALLS. ROOMS 102, 103, 104, 116, 131, 132, 148, 168, 189, 170 and 171.
 10. ACOUSTICALLY LINE ALL INTAKES TO FAN FAN COIL UNITS.
 11. PROVIDE SECURITY BARS IN DUCTS PASSING THROUGH SECURE WALLS AS PER KEYNOTE LOCATIONS AND AS PER ROOM GRILLE SCHEDULE.
 12. FLUSH GRILLE INSTALLATION. NO SHARP EDGES OR CORNERS ALLOWED IN SECURE AREAS TO PREVENT PERSONAL INJURIES.
 13. SEAL AROUND ALL DUCTS PENETRATING OUR FIRE SEPARATIONS.

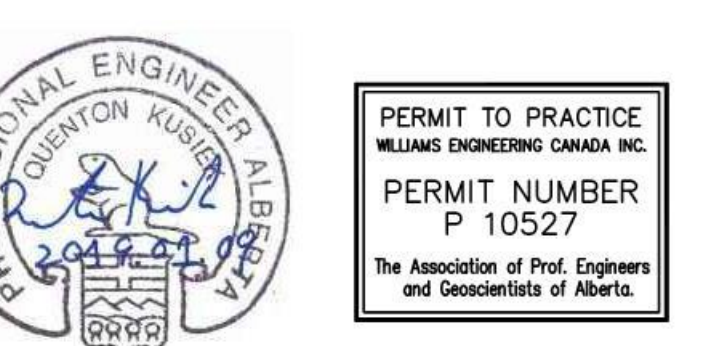


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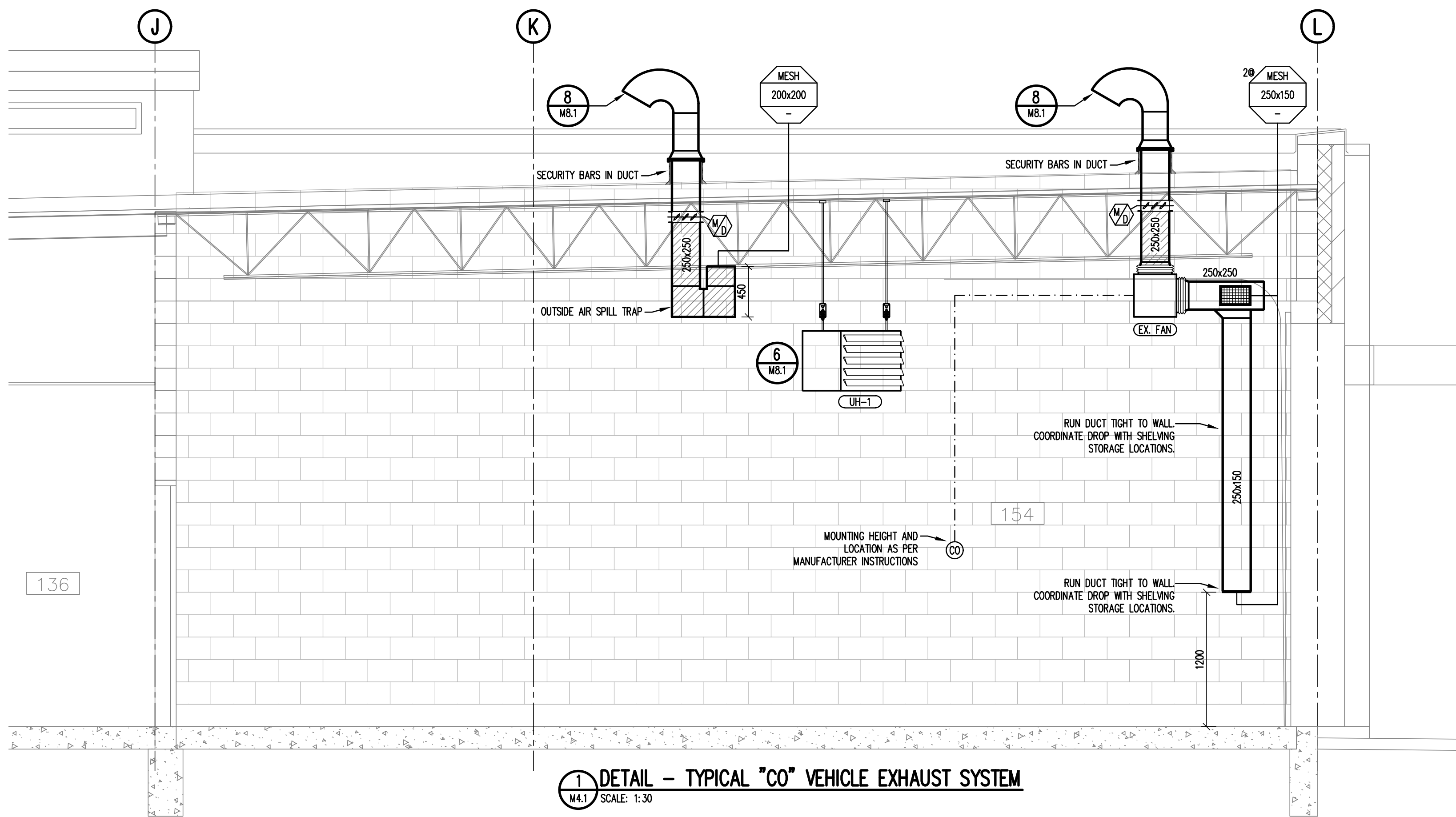
Project: **COALDALE PROTECTIVE SERVICES BUILDING**

Scale: AS NOTED	Designed By: OK
Project No.: 33966.00	Drawn By: OK
Date: 2019.01.09	Checked By: OK

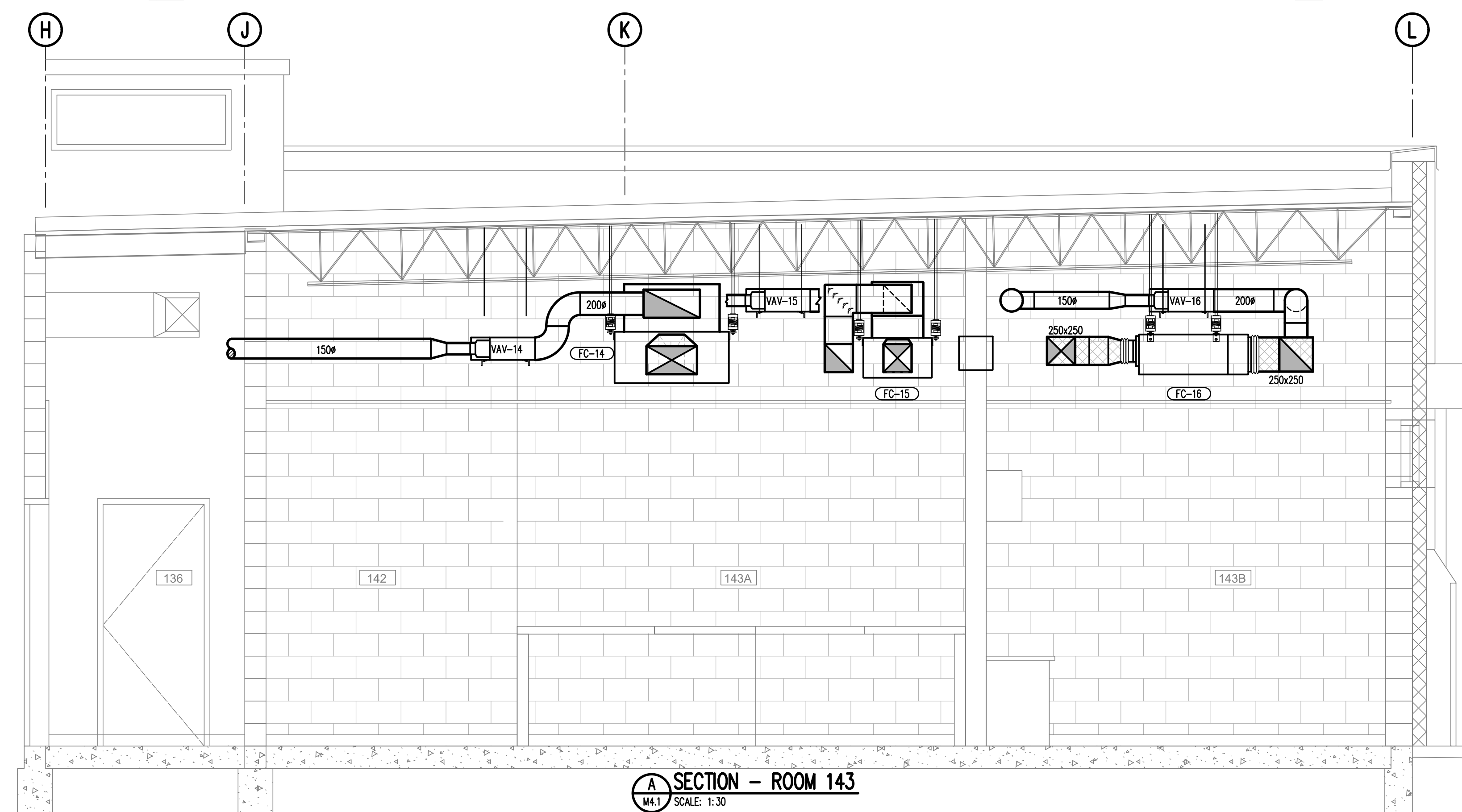
Drawing Title: **MECHANICAL MAIN FLOOR VENTILATION**

Drawing No.

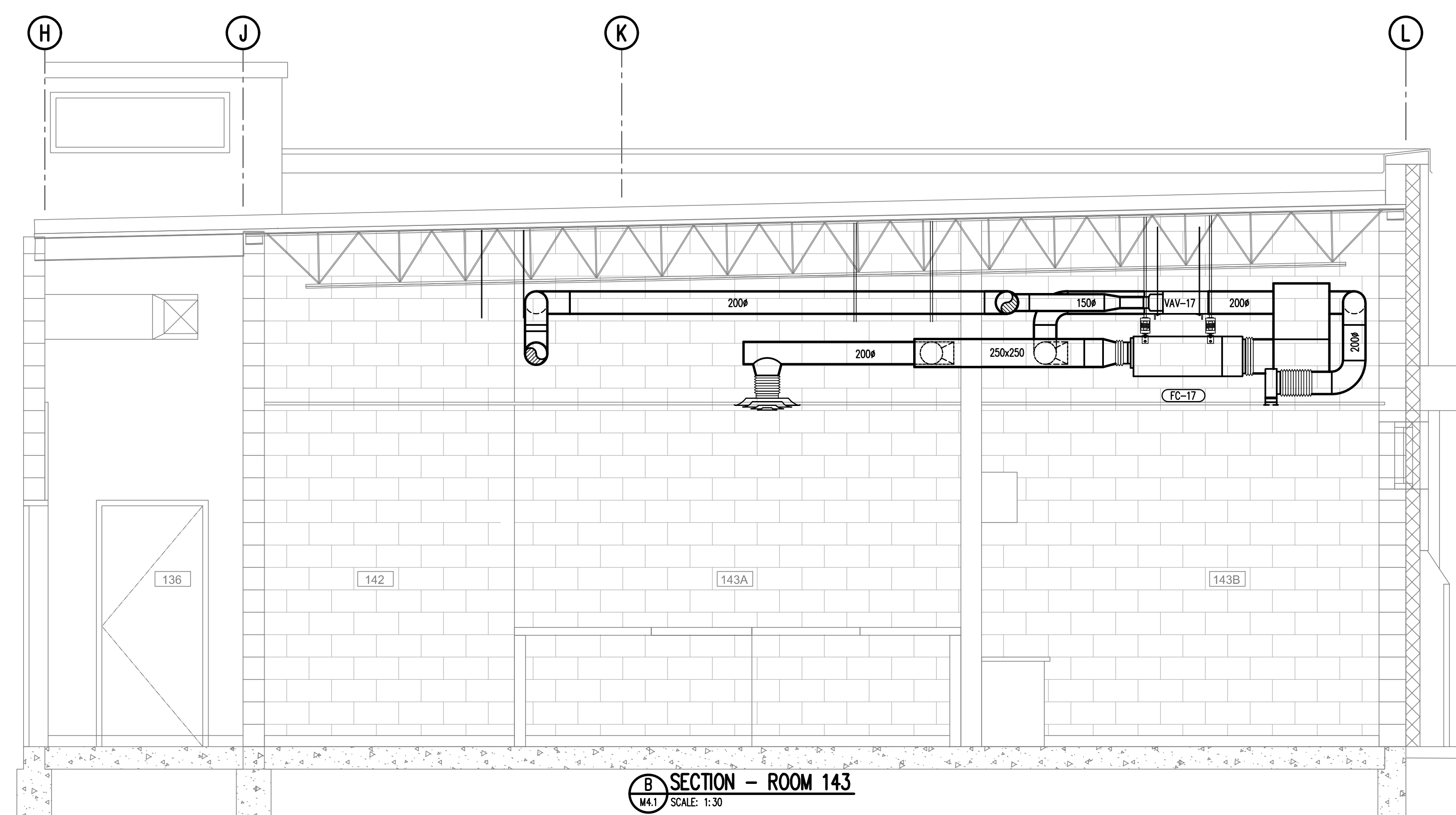
M4.0



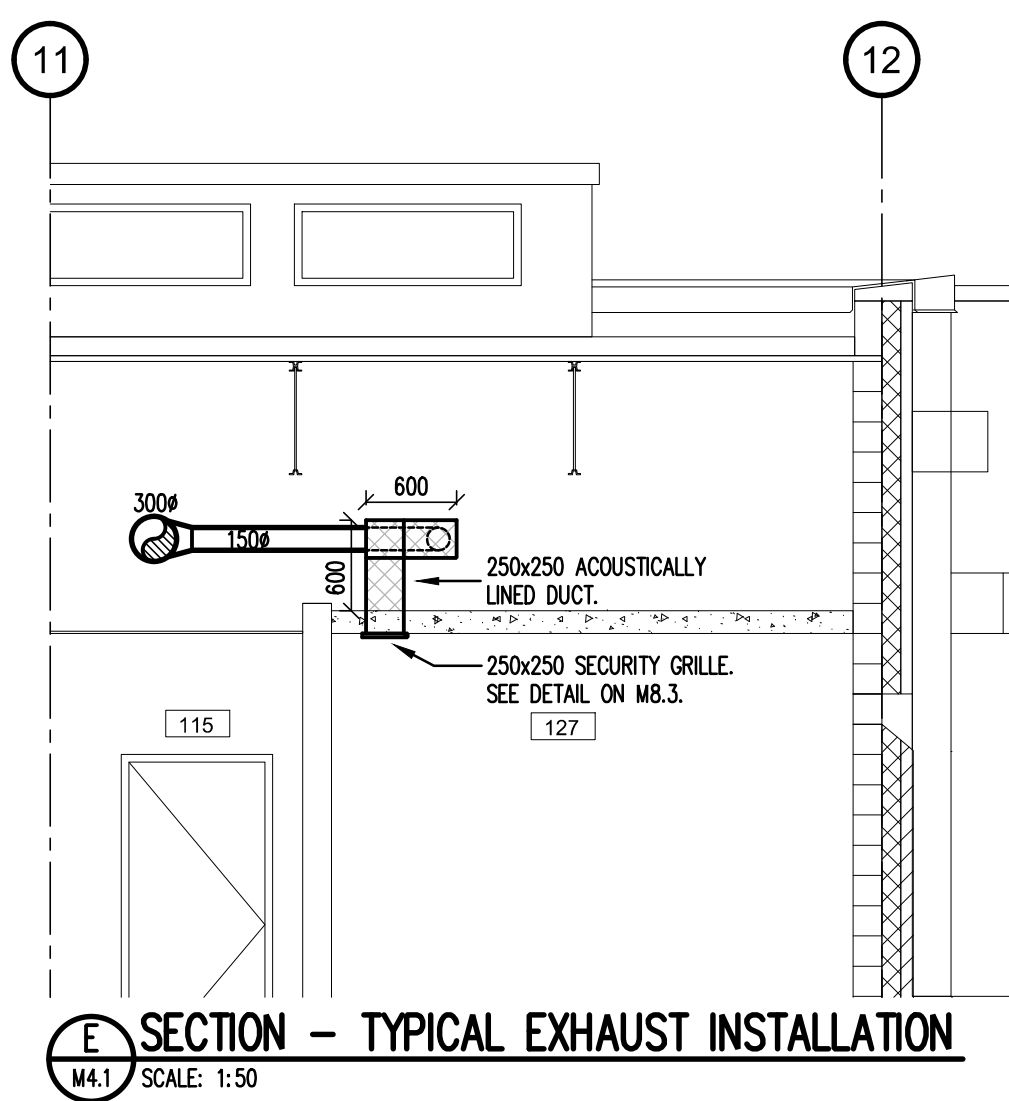
DETAIL - TYPICAL "CO" VEHICLE EXHAUST SYSTEM
M4.1 SCALE: 1:30



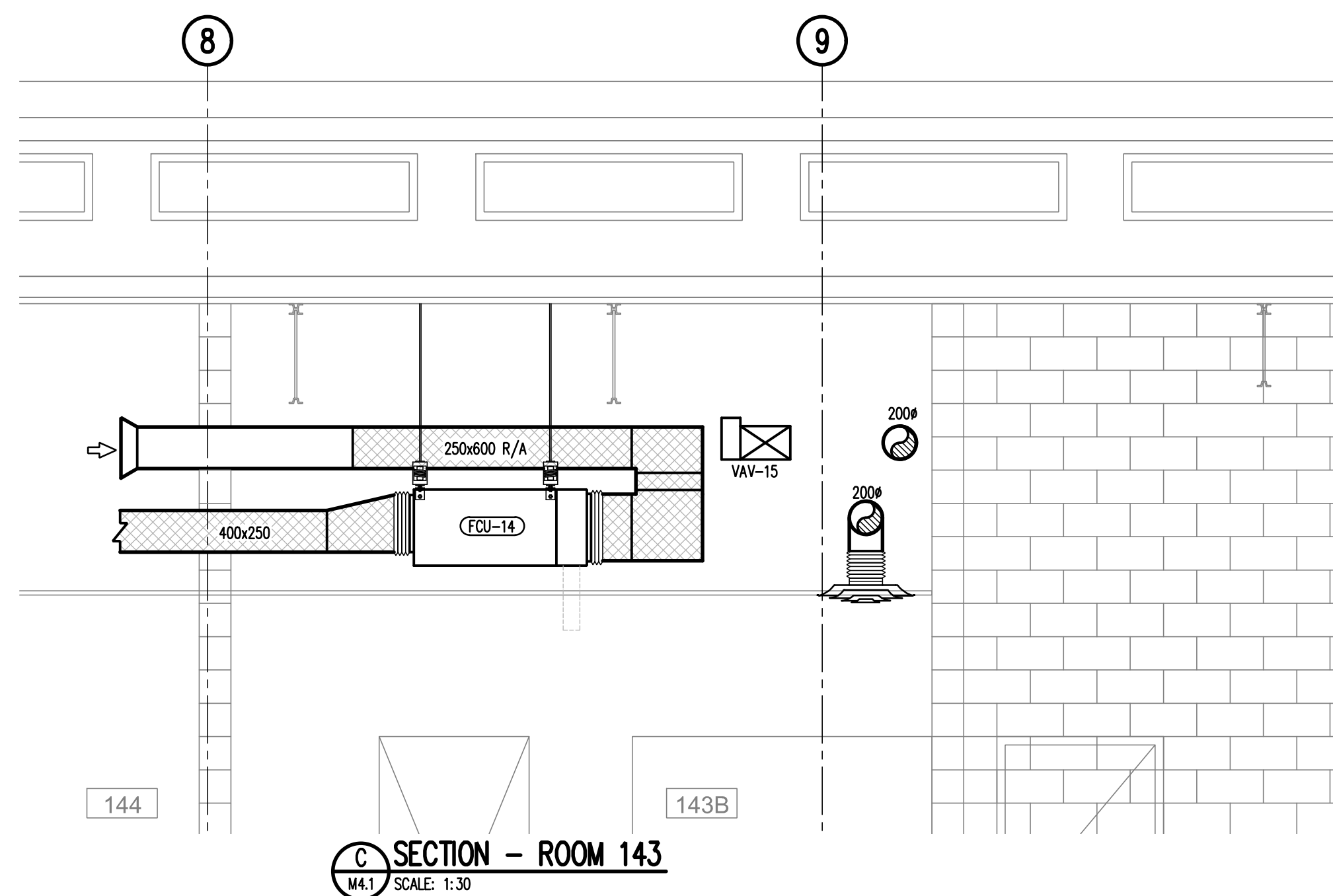
SECTION - ROOM 143
M4.1 SCALE: 1:30



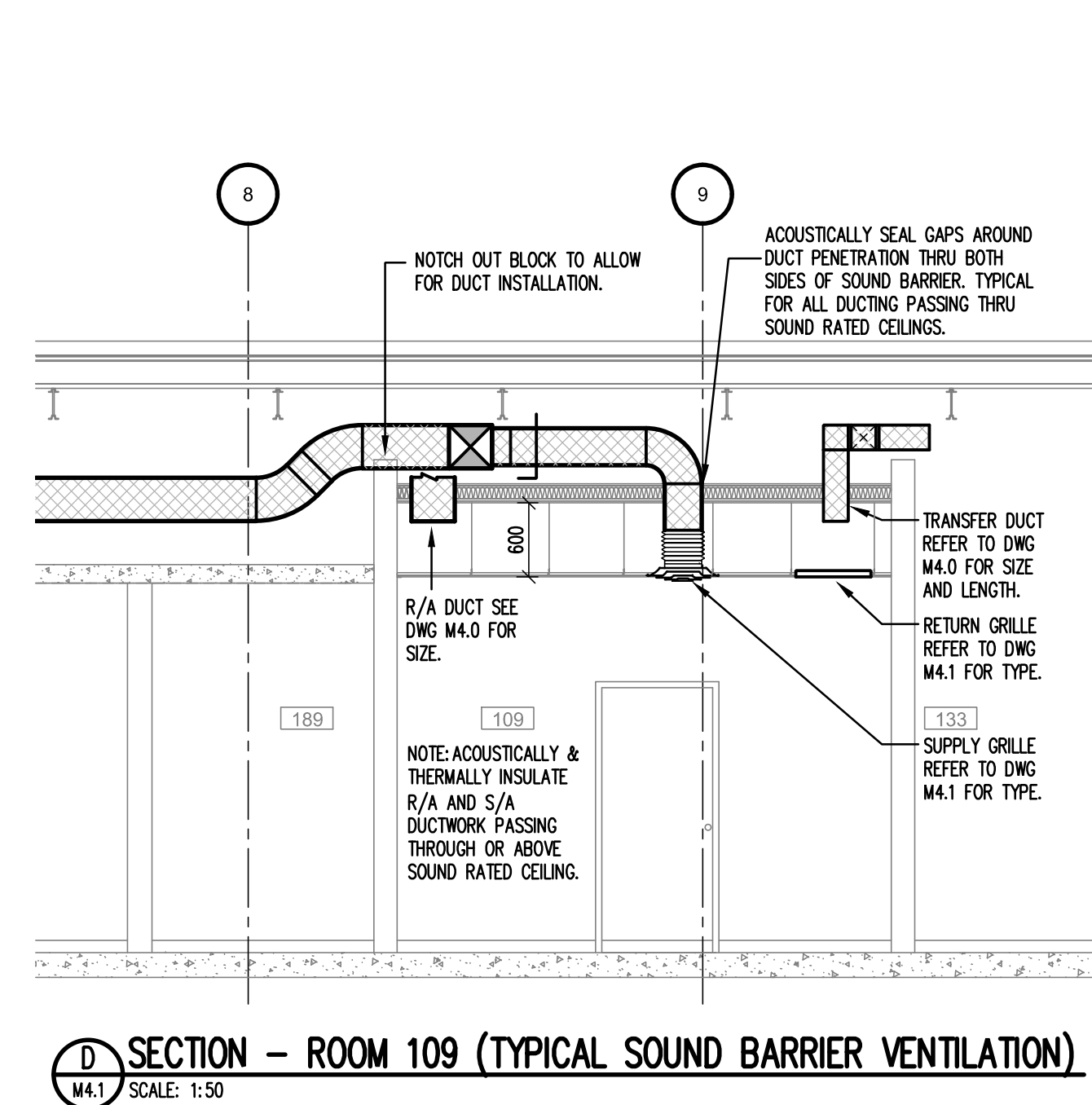
SECTION - ROOM 143
M4.1 SCALE: 1:30



SECTION - TYPICAL EXHAUST INSTALLATION
M4.1 SCALE: 1:50



SECTION - ROOM 143
M4.1 SCALE: 1:30

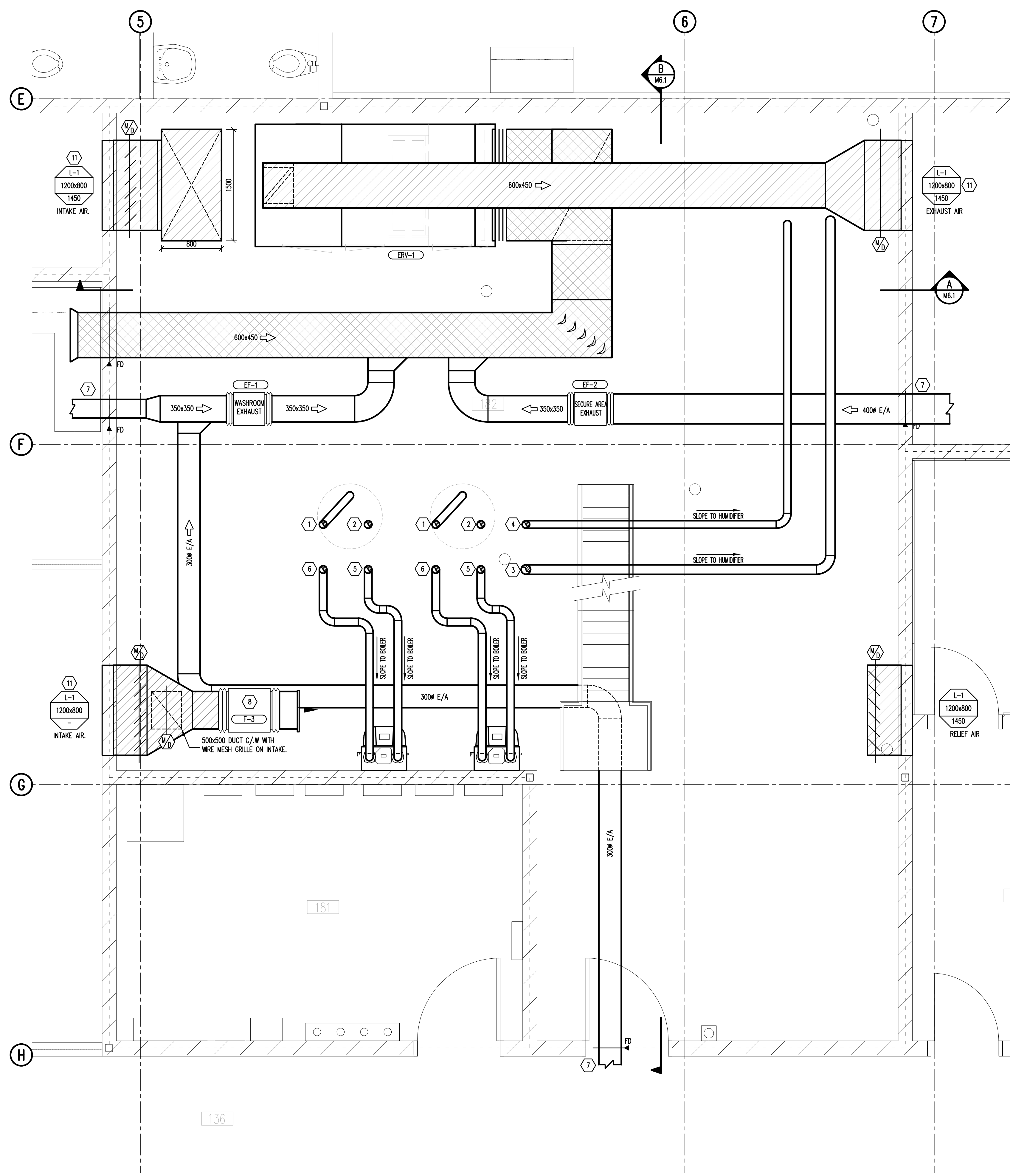
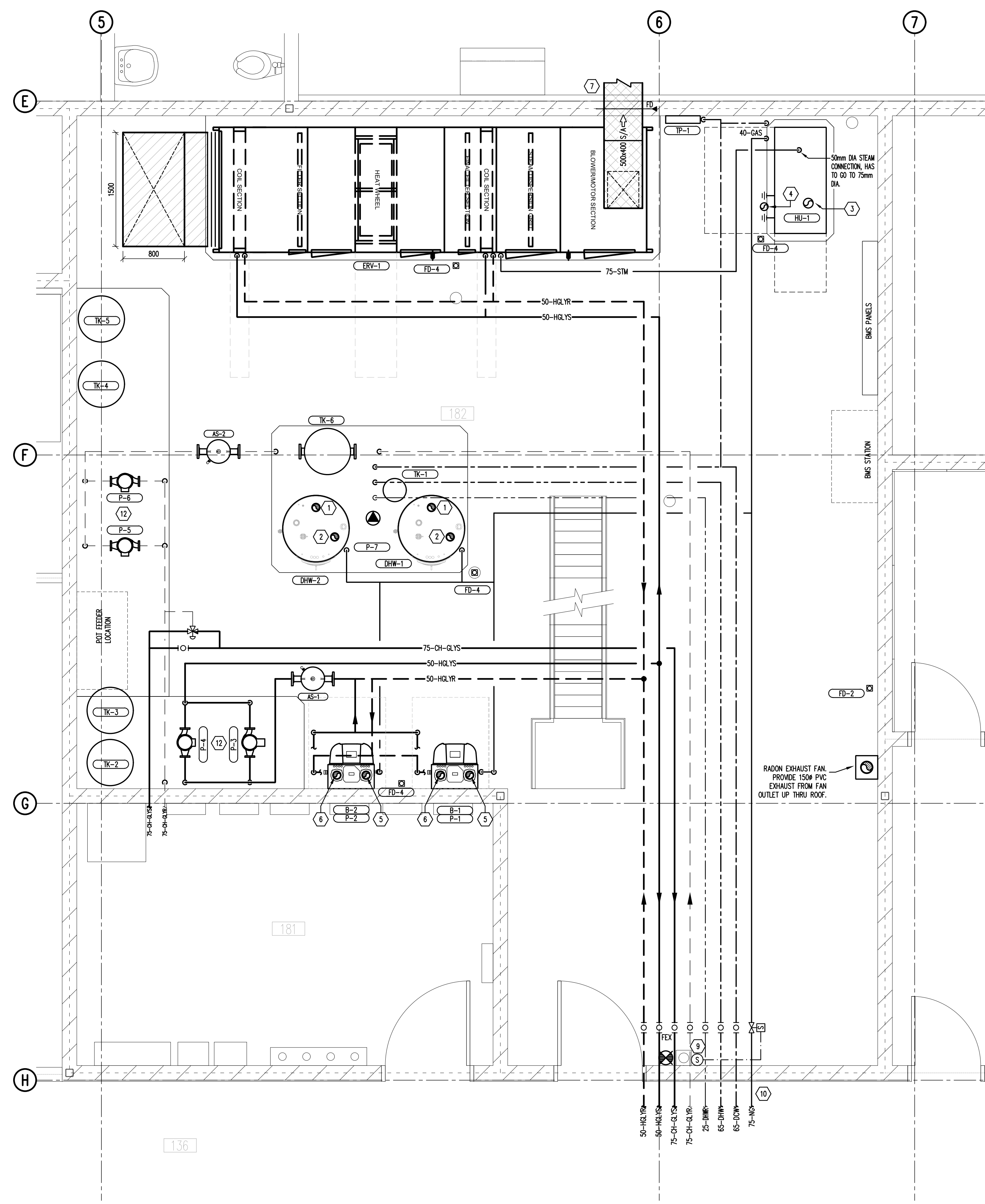


SECTION - ROOM 109 (TYPICAL SOUND BARRIER VENTILATION)
M4.1 SCALE: 1:50

ROOM GRILLE SCHEDULE																																
FAN COIL	ROOM NO.	GRILLE TYPE	SIZE	VOLUME [L/S]	QTY	NOTES		FAN COIL	ROOM NO.	GRILLE TYPE	SIZE	VOLUME [L/S]	QTY	NOTES		FAN COIL	ROOM NO.	GRILLE TYPE	SIZE	VOLUME [L/S]	QTY	NOTES		FAN COIL	ROOM NO.	GRILLE TYPE	SIZE	VOLUME [L/S]	QTY	NOTES		
FC-01	109	S-8	300x300	215	3	2		FC-19	169	S-1	250*	140	2	2			FC-20	168	S-6	200*	70	4	2		FC-21	170	S-1	250*	120	1	2	
	109	R-1	300x600	-	2	2			169	R-1	300x600	-	1	2				170	R-1	150x600	-	1	2									
									171	S-7	150*	25	1	2				172	S-7	150*	20	1	2									
FC-02	107	S-5	200*	125	2	2		FC-22	165	S-1	200*	105	1	2		FC-23	166	S-1	200*	120	1	2		FC-24	162	S-5	200*	145	5	2		
	107	R-1	200x600	-	2	2			165	R-1	150x600	-	1	2			162	R-1	300x600	1	2	2										
	108	S-3	150*	25	1	2			166	R-1	150x600	-	1	2			162	R-1	300x600	1	2	2										
	188	S-3	150x150	50	1	2		FC-25	162	S-1	200*	125	5	2		FC-26	160	S-1	250*	150	2	2		FC-27	159	S-1	200*	55	1	2		
	188	E-3	250x250	165	1	1,2			162	R-1	300x600	-	2	2			158	S-1	200*	70	1	2										
	186	S-3	150*	25	1	2			163	S-3	150*	12	1	2			158	R-1	300x600	-	1	2										
FC-03	105	S-6	200*	75	2	2		FC-28	155	S-5	200*	135	2	2		FC-29	184	S-1	300*	340	2	1,2		FC-30	134B	S-1	250*	120	1	2		
	105	R-1	300x600	-	1	2			155	R-1	300x600	-	1	2			184	R-3	450x350	-	1	1,2										
	173	S-7	200*	60	1	2			155	R-1	300x600	-	1	2			135A	S-1	250*	120	1	2										
	173	R-1	150x600	-	1	2		FC-31	135A	R-3	300x600	-	1	2		FC-32	121	S-4	250x250	50	1	1,4		FC-33	136	S-5	200*	120	1	2		
									121	E-4	250x250	50	1	1,2			136	R-1	250x600	-	2	2										
									122	S-4	250x250	50	1	1,4			138	S-7	200*	50	1	2										
FC-04	101	S-6	200*	65	4	2		FC-34	161	S-7	200*	80	2	4		ROOMS	134A	E-3	200x200	75	1	2		FC-18	139	S-1	250*	120	2	3		
	101	R-3	300x600	-	1	2				161	S-7	200*	80	2	4			135A	E-3	200x200	50	1	2									
										161	S-7	200*	80	2	4			135C	E-3	150x150	25	1	2									
FC-05	103	S-6	200*	30	1	2		FC-35	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-19	139	T-3	200x200	-	1	4		
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	104	S-6	200*	30	1	2				161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
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	110	R-1	150x600	-	1	2				161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
FC-06	102	S-8	200*	75	1	2		FC-37	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-21	139	T-3	200x200	-	1	4		
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										161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
FC-07	111	S-6	200*	60	4	2		FC-38	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-22	139	T-3	200x200	-	1	4		
	111	R-1	300x600	-	2	2				161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
										161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
FC-08	112	S-1	250*	120	2	2		FC-39	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-23	139	T-3	200x200	-	1	4		
	112	R-1	400x600	-	1	2				161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
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FC-09	114	S-1	200*	70	1	2		FC-40	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-24	139	T-3	200x200	-	1	4		
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FC-14	144	S-1	250*	155	4	2		FC-48	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-32	139	T-3	200x200	-	1	4		
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FC-16	148	S-8	200*	95	2	2		FC-50	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-34	139	T-3	200x200	-	1	4		
	148	R-1	200x600	-	1	2				161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
										161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
FC-17	143	S-1	200*	115	1	2		FC-51	161	S-7	200*	80	2	4		ROOMS	134C	E-3	150x150	25	1	2		FC-35	139	T-3	200x200	-	1	4		
	143	R-1	200x600	-	1	2				161	S-7	200*	80	2	4			134C	E-3	150x150	25	1	2									
	143B	S-7	200*	50	1	2																										



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1 MECHANICAL ROOM EQUIPMENT PLAN AND PIPING
SCALE: 1:30

2 MECHANICAL ROOM VENTILATION PLAN
SCALE: 1:30

GENERAL QUESTIONS:

- PROVIDE SWEEP OR LONG RADIUS ELBOWS FOR COMBUSTION AIR AND VENT PIPING. DON NOT USE SHORT RADIUS ELBOWS.
- ENSURE ALL VENT AND COMBUSTION AIR PIPING HAS BIRD SCREENS.
- PROVIDE SECURITY BARS ON OPENINGS LARGER THEN 150mm X 150mm THRU SECURE AREA WALLS, CEILINGS AND ROOFS.
- COORDINATE LOCATION OF EQUIPMENT WITH ELECTRICAL.

KEYNOTES:

- 100mm VENT FROM DOMESTIC HOT WATER HEATER. PROVIDE RAIN CAP AND TERMINATE 1200mm ABOVE ROOF PARAPET.
- 100mm COMBUSTION COMBUSTION AIR INTAKE FOR DOMESTIC HOT WATER HEATER. EXIT THRU MECHANICAL ROOM ROOF AND TERMINATE 1200mm ABOVE ROOF PARAPET.
- 125mm VENT FROM HUMIDIFIER HU-1. PROVIDE RAIN CAP AND TERMINATE 1200mm ABOVE ROOF PARAPET.
- 100mm COMBUSTION AIR INTAKE FOR HUMIDIFIER HU-1. EXIT THRU MECH ROOM ROOF AND TERMINATE 1200mm ABOVE ROOF PARAPET.
- 100mm COMBUSTION AIR INTAKE FOR BOILER. EXIT THRU MECH ROOM ROOF.
- 100mm VENT FROM BOILER. PROVIDE RAIN CAP AND TERMINATE 1200mm ABOVE ROOF PARAPET.
- REFER TO DRAWING M4.0 FOR CONTINUATION OF DUCTWORK.
- ROOM VENTILATION FAN. REFER TO CONTROLS SPECIFICATIONS FOR OPERATION.
- EMERGENCY GAS SHUT-DOWN SWITCH.
- REFER TO DWG M201 FOR CONTINUATION OF PIPING.
- PROVIDE SECURITY BARS ON LOUVER INLET / OUTLET.
- PROVIDE SPRING ISOLATION UPSTREAM AND DOWNSTREAM OF CEILING SUSPENDED INLINE PUMPS.

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WILLIAM KOZAK

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PERMIT NUMBER
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The Association of Prof. Engineers
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Project
**COALDALE PROTECTIVE
SERVICES BUILDING**

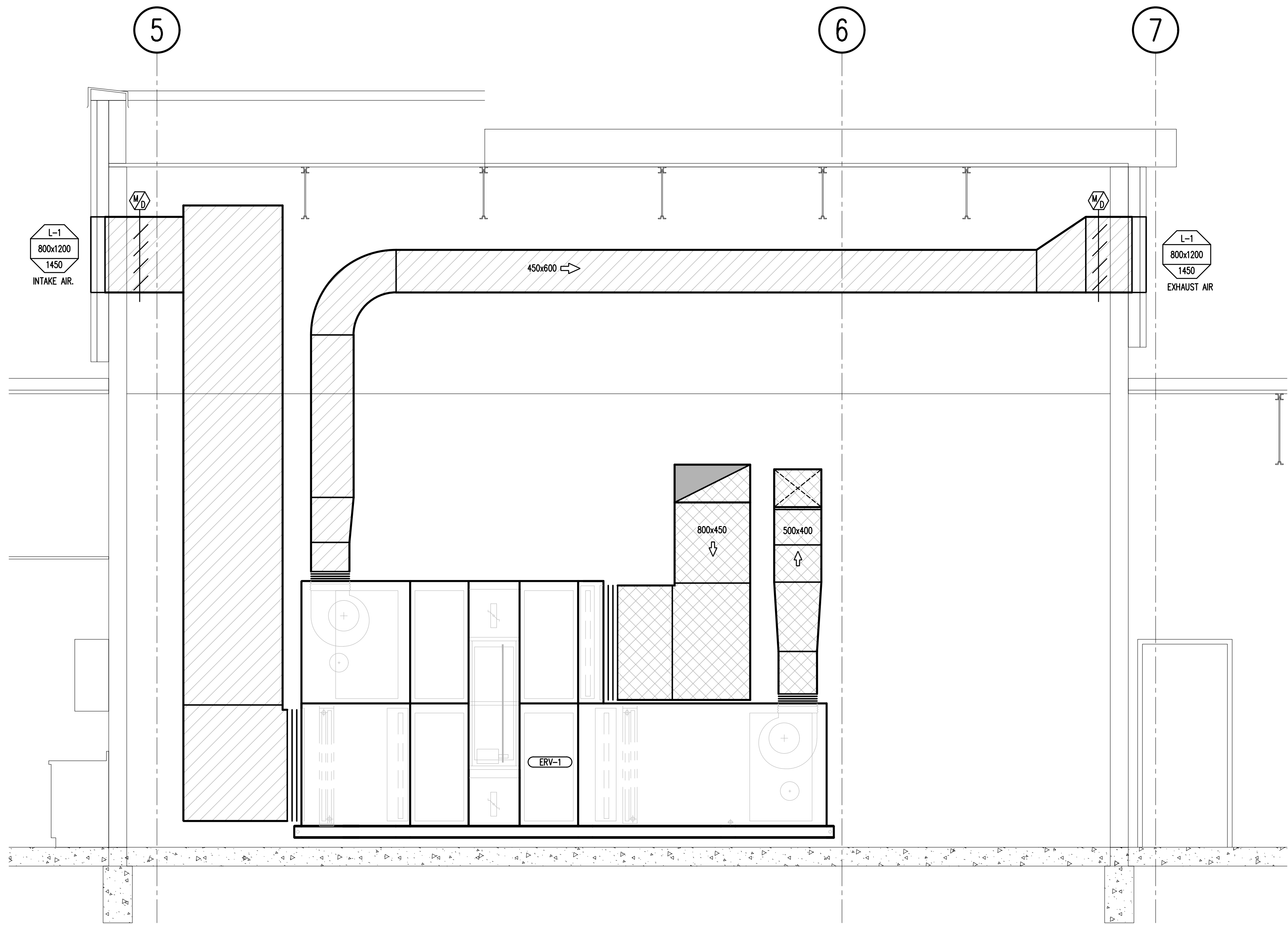
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Project No.	33966.00	Drawn By	OK
Date	2019.01.09	Checked By	PC

Drawing Title
**ROOM 182
LAYOUT**

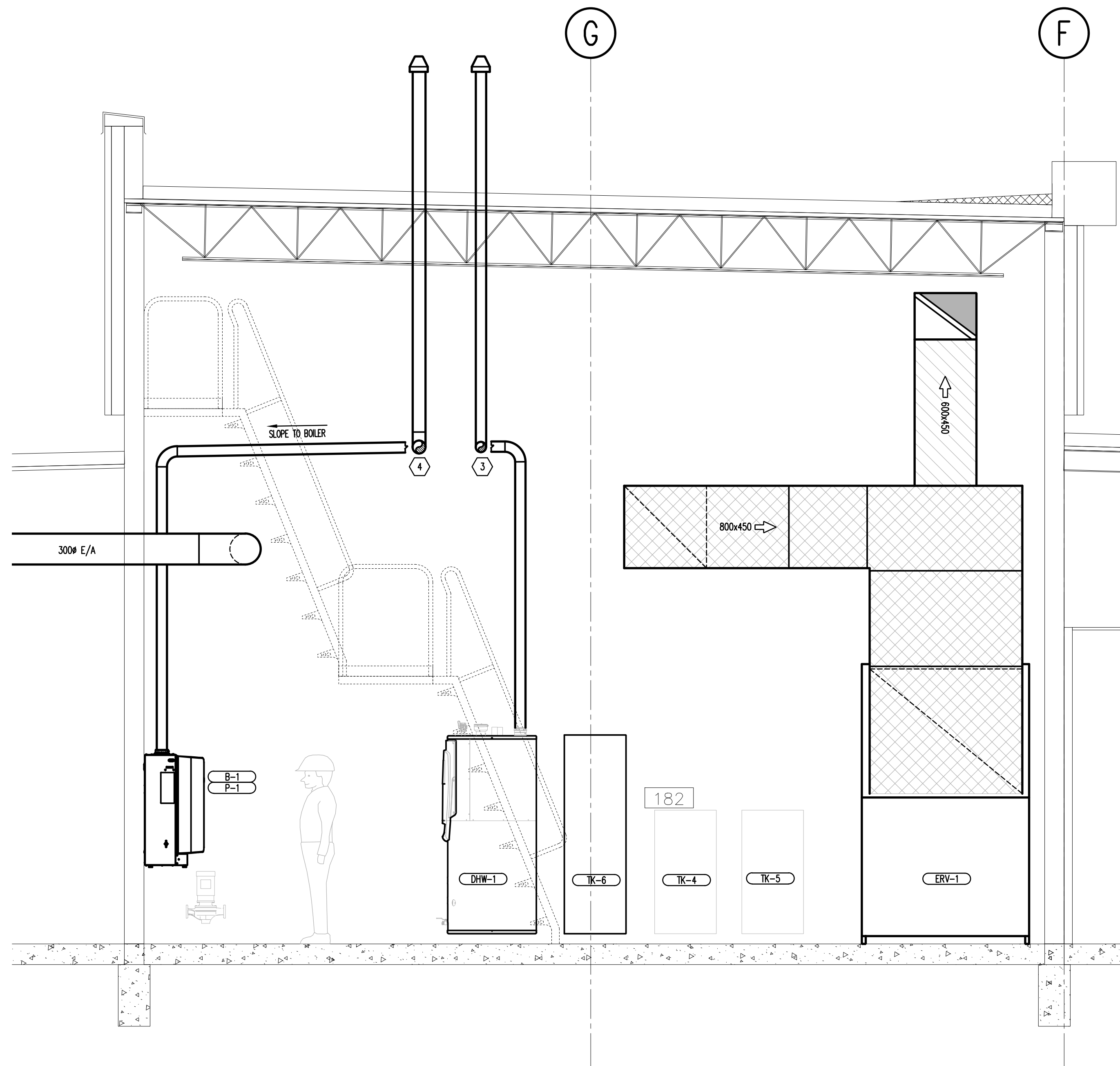
Drawing No.

M6.0

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SECTION A-A: MEHCANICAL ROOM
SCALE: 1:30



SECTION B-B: MEHCANICAL ROOM
SCALE: 1:30

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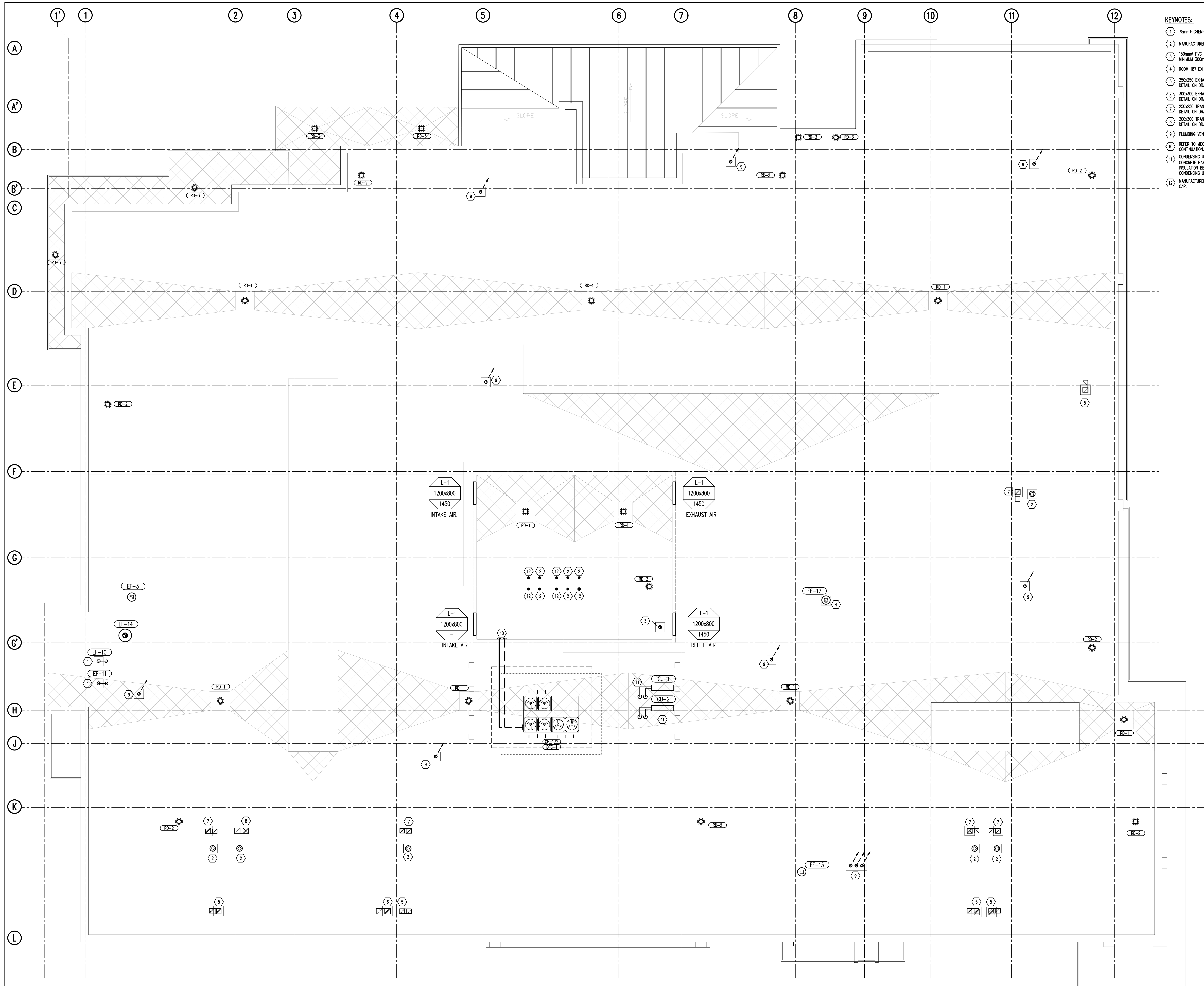
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SERVICES BUILDING**

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Drawing Title
**ROOM 182
SECTIONS**

Drawing No.

M6.1



- KEYNOTES:**
- 1 75mm# CHEMICAL STORAGE CABINET FAN VENT.
 - 2 MANUFACTURER'S 100# C/A INLET WITH CAP.
 - 3 150mm# PVC RADON EXHAUST VENT. TERMINATE MINIMUM 300mm ABOVE ROOF.
 - 4 ROOM 187 EXHAUST FAN.
 - 5 250x250 EXHAUST AIR GOOSENECK. REFER TO DETAIL ON DRAWING MB.2.
 - 6 300x300 EXHAUST AIR GOOSENECK. REFER TO DETAIL ON DRAWING MB.2.
 - 7 250x250 TRANSFER AIR GOOSENECK. REFER TO DETAIL ON DRAWING MB.2.
 - 8 300x300 TRANSFER AIR GOOSENECK. REFER TO DETAIL ON DRAWING MB.2.
 - 9 PLUMBING VENT.
 - 10 REFER TO MECHANICAL ROOMS PLAN FOR CONTINUATION.
 - 11 CONDENSING UNIT TO BE INSTALLED ON CONCRETE PAVING STONES c/w 25mm RIGID INSULATION BELOW PAVING STONE. ANCHOR CONDENSING UNIT TO PAVING STONE.
 - 12 MANUFACTURER'S 100# EQUIPMENT VENT WITH CAP.

- GENERAL NOTES:**
- COORDINATE LOCATION OF EQUIPMENT AND ROOF DRAINS WITH ARCHITECTURAL AND STRUCTURAL.
 - COORDINATE VENT TERMINATION LOCATIONS WITH ARCHITECTURAL.
 - PROVIDE SECURITY BARS IN OPENINGS THRU ROOF LARGER THAN 150mmx150mm.

- Notes:**
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Project
COALDALE PROTECTIVE
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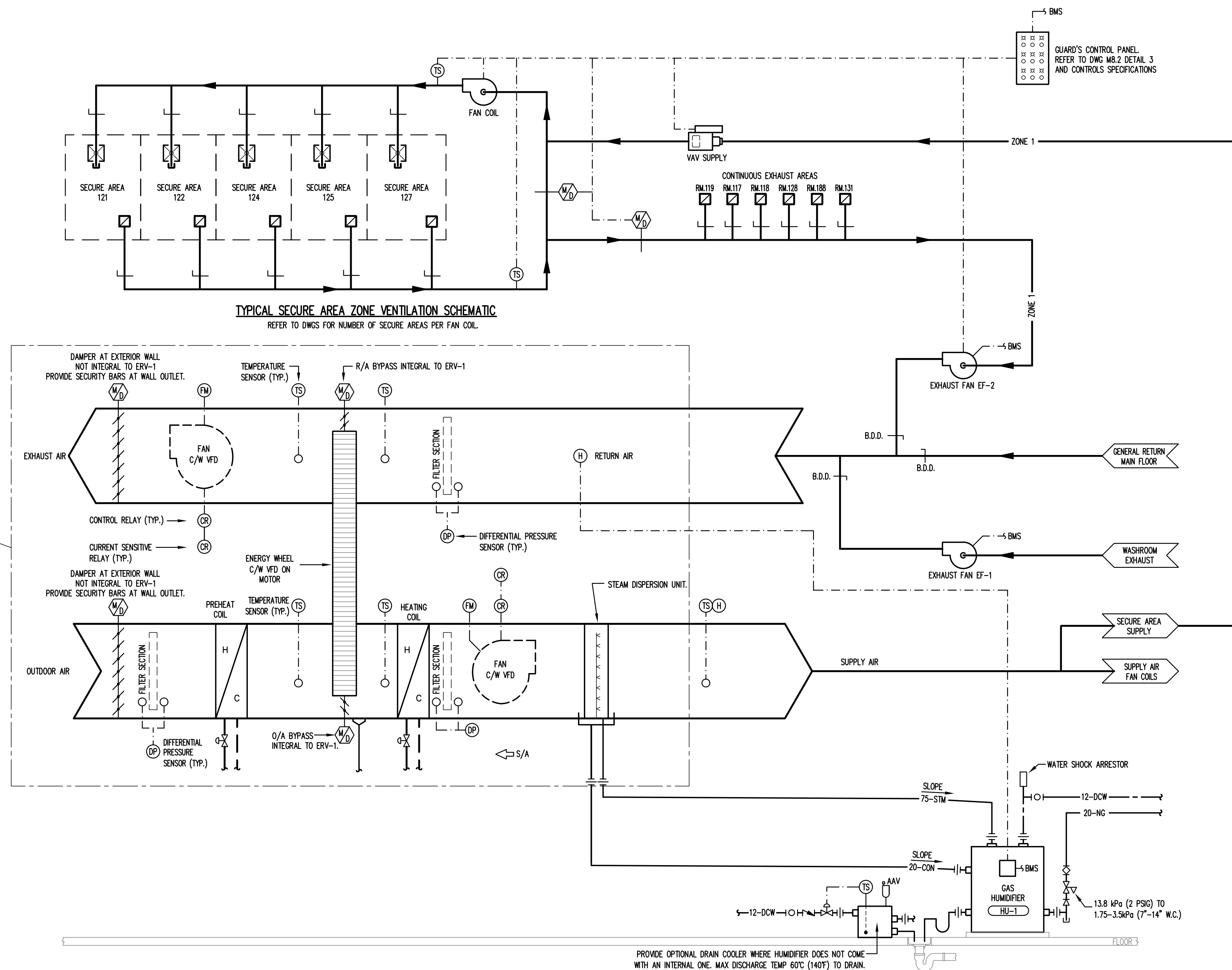
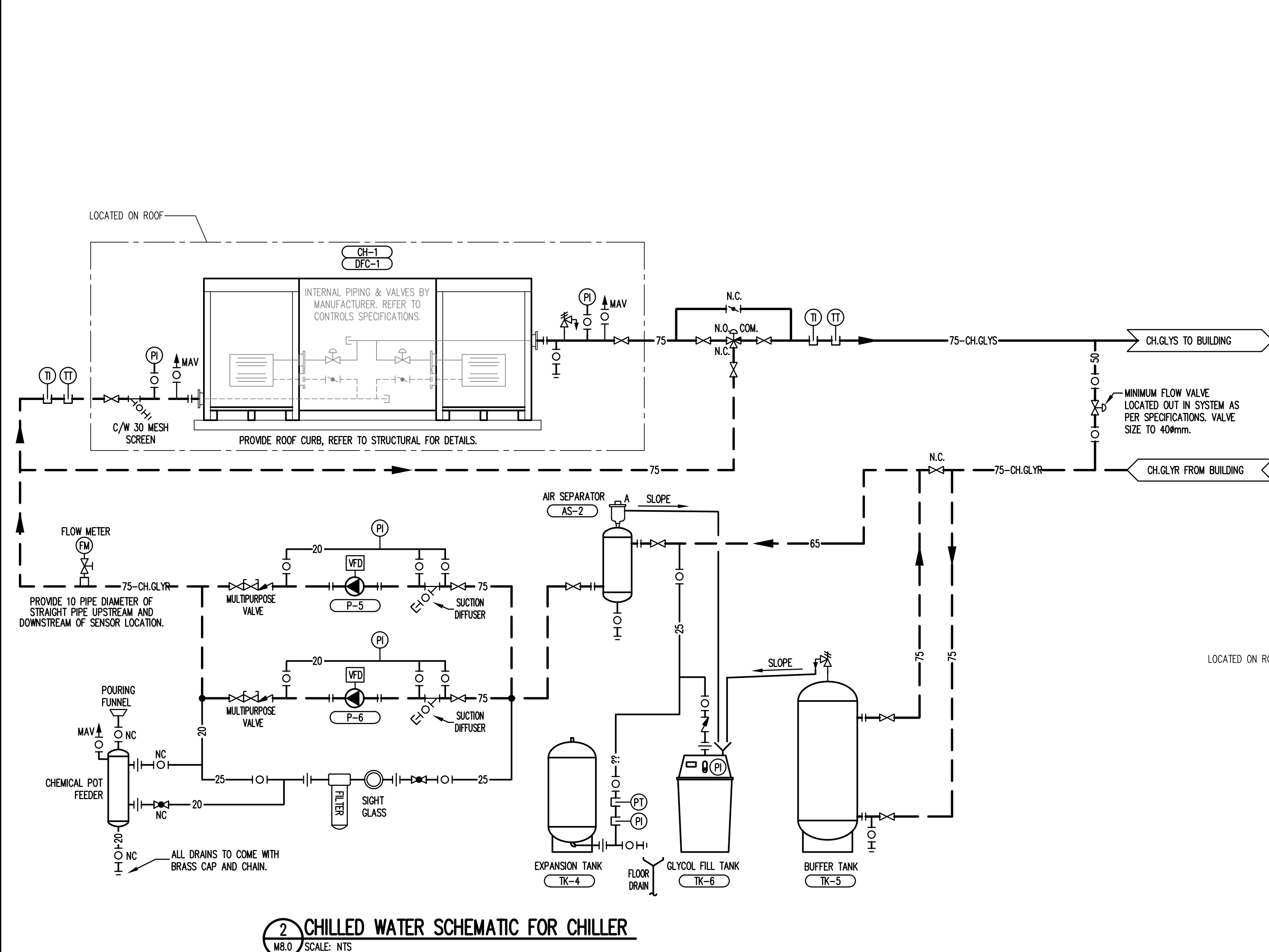
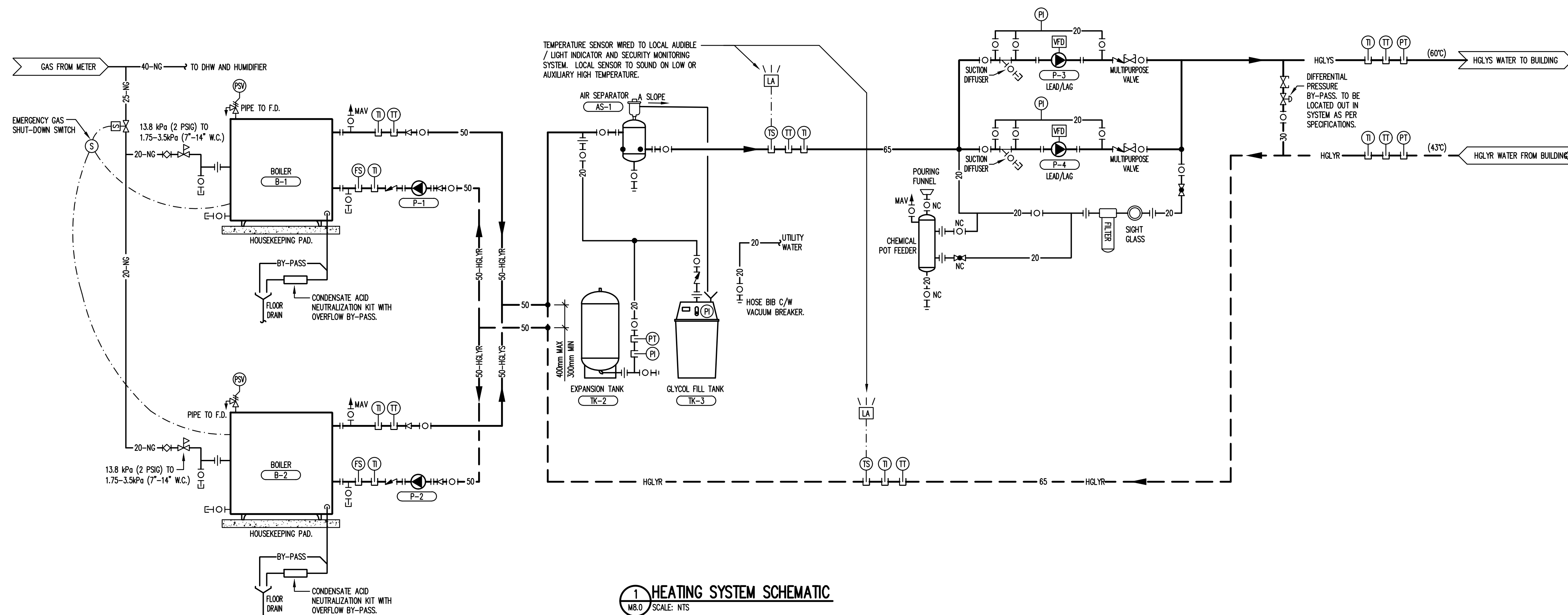
Scale	AS NOTED	Designed By	OK
Project No.	33966.00	Drawn By	OK
Date	2019.01.09	Checked By	PC

Drawing Title
**MECHANICAL
ROOF PLAN**

Drawing No.

M7.0

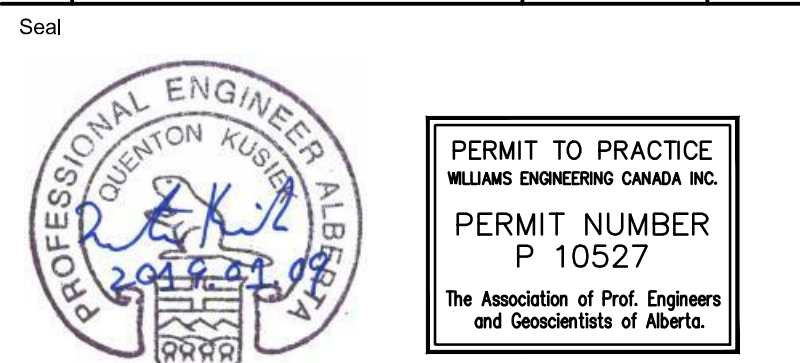
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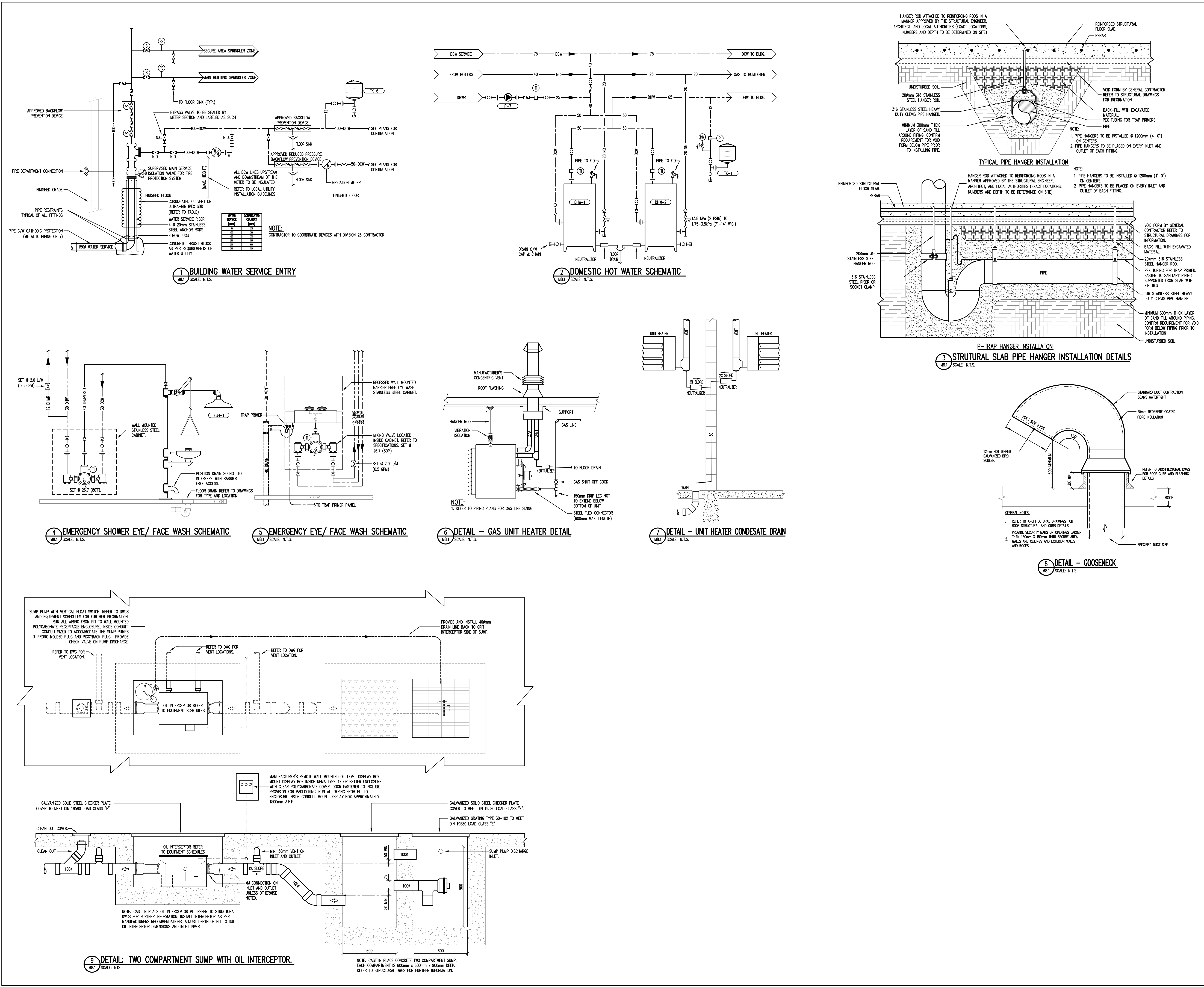
Project: COALDALE PROTECTIVE SERVICES BUILDING

Scale: AS NOTED	Designed By: OK
Project No.: 33966.00	Drawn By: OK
Date: 2019-01-09	Checked By: PC

Drawing Title: MECHANICAL SCHEMATICS

Drawing No.

M8.0



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PERMIT TO PRACTICE
WILLIAMS ENGINEERING CANADA INC.
PERMIT NUMBER
P 10527
The Association of Prof. Engineers
and Geoscientists of Alberta.

Client

Government of Canada

Gouvernement du Canada

Project

COALDALE PROTECTIVE SERVICES BUILDING

Scale	AS NOTED	Designed By	OK
Project No.	33966.00	Drawn By	OK
Date	2019-01-09	Checked By	PC

Drawing Title

MECHANICAL SCHEMATICS

Client

Government of Canada

Gouvernement du Canada

Project

COALDALE PROTECTIVE SERVICES BUILDING

Scale

AS NOTED

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OK

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33966.00

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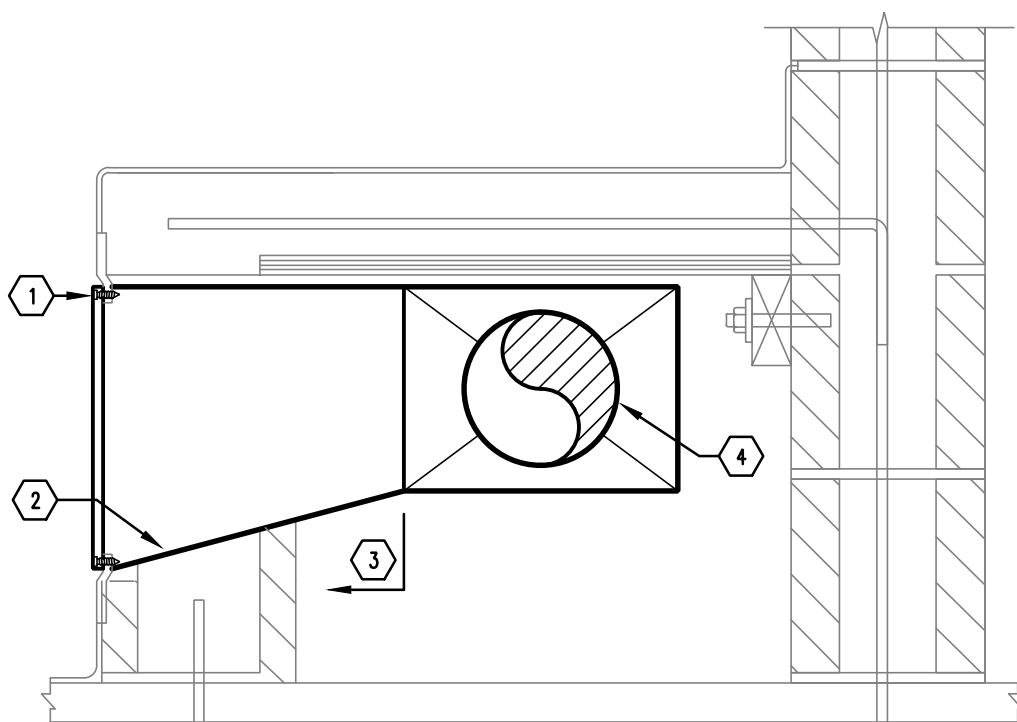
Drawing Title

MECHANICAL SCHEMATICS

Drawing No.

M8.1

- Notes:
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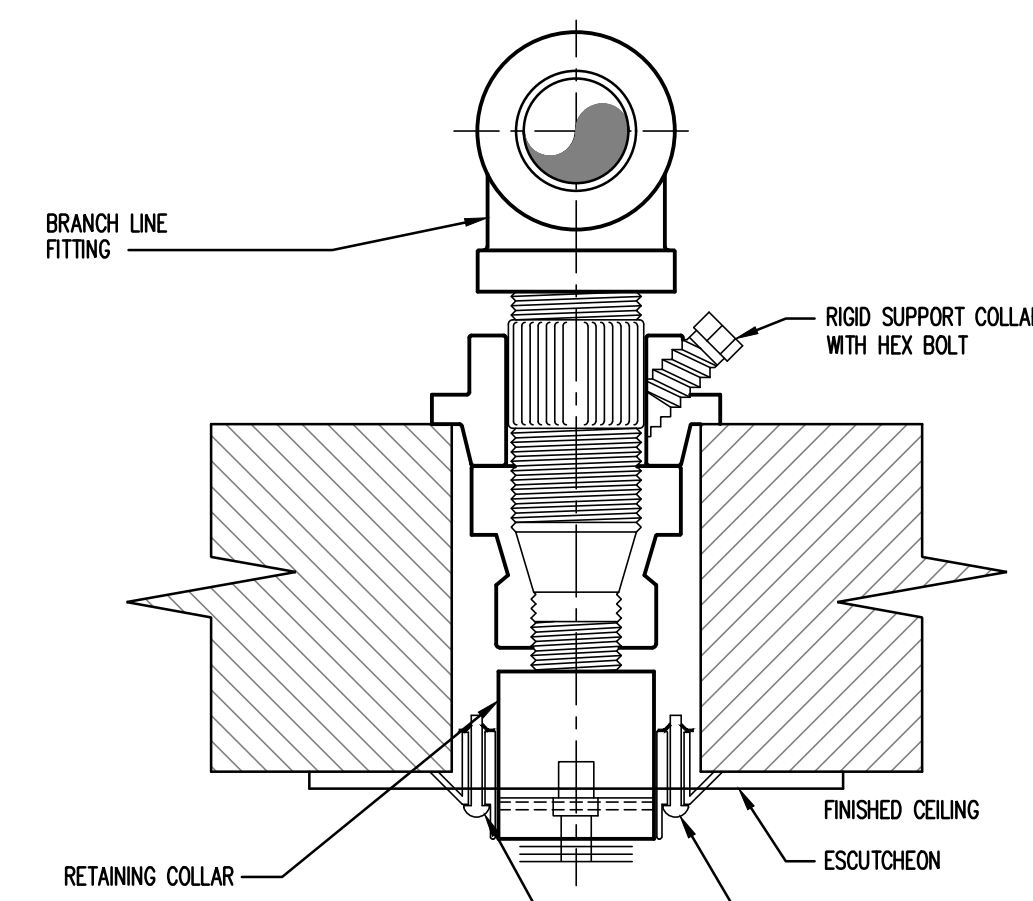


KEYNOTES:

- METAL GRILLE SECURED TO BLOCKING WITH SECURITY SCREWS (TYPICAL).
- SLOPE DUCT TOWARDS GRILLE.
- PROVIDE S.S. DUCTWORK TO GRILLE FROM THIS POINT.
- SUPPLY AIR DUCT TO TRANSITION INTO SHOP-FABRICATED GRILLE TRANSITION.

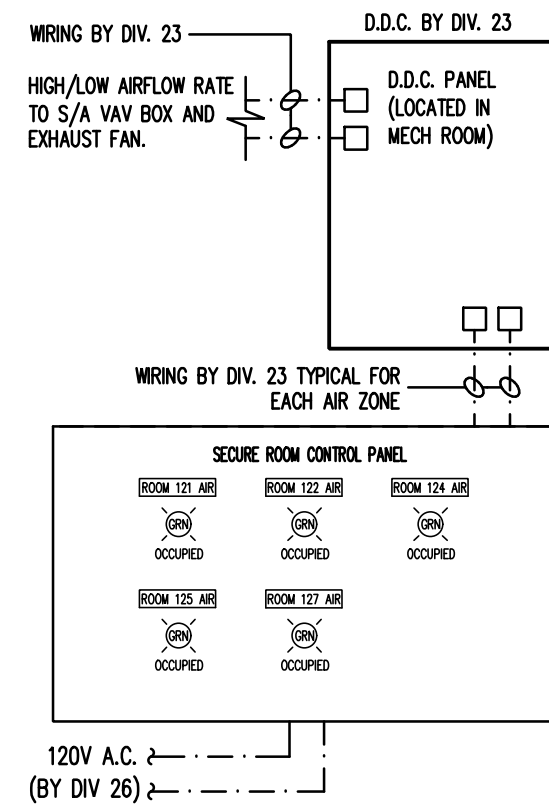
NOTE: REFER TO ARCHITECTURAL DWG DETAILS FOR FURTHER INFO.

1 SECURE AREA BUNK DETAIL (TYPICAL)
SCALE: N.T.S.



NOTE: THE SPECIAL TAMPER-PROOF SOCKET MUST BE USED FOR INSTALLATION OR REMOVAL OF THE TAMPER-RESISTANT SCREWS.

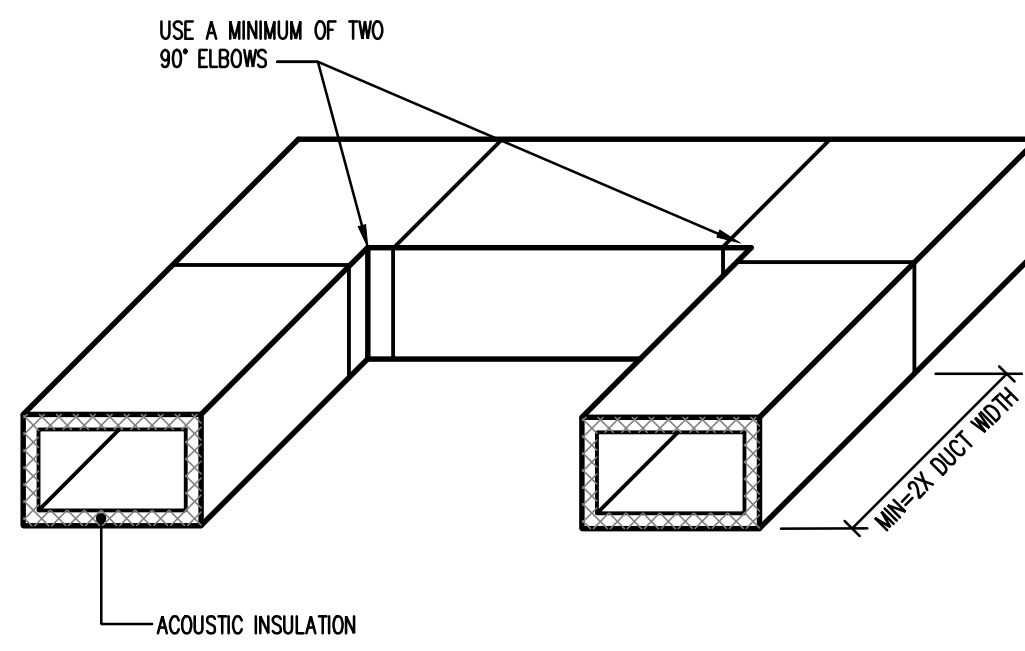
2 SECURE SPRINKLER DETAIL
SCALE: N.T.S.



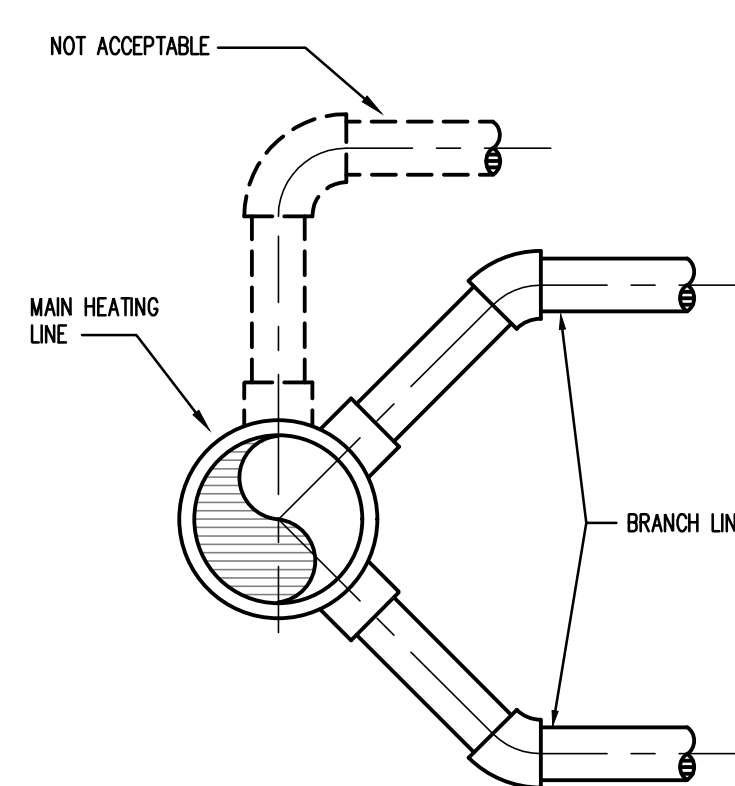
GENERAL NOTES:

- CONTROL PANEL (BY DIVISION 23) TO BE 304 STAINLESS STEEL, 14 GAUGE, SURFACE MOUNTED, NEMA 4X TYPE ENCLOSURE, C/W CONTINUOUS HINGE DOORS, SECURITY LATCHES WITH KEYS, AND ADDITIONAL HARDWARE TO HOUSE INTERIOR COMPONENTS AND MOUNT ON WALL. ALL WIRING INTO AND OUT OF PANEL TO BE RUN INSIDE CONDUIT, CONFIRM LOCATION AND WORKING HEIGHT OF CONTROL PANEL WITH OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- PROVIDE STAINLESS STEEL, ANTI VANDAL, 24V, 22MM FLUSH OPEN ILLUMINATED LED POSITION SWITCHES WITH LEGEND PLATES. LIT "FREE" IS ZONE OCCUPIED. LEGEND PLATES TO BE ALUMINUM, BLACK FIELD, SILVER BACKGROUND, BLACK ENGRAVED TEXT, LEGEND PLATE MARKING "OCCUPIED" FOR ZONE VENTILATION.
- PROVIDE AND INSTALL ALL FIELD CONTROL WIRING, C/W RELAYS AND SWITCHES, CONDUIT, JUNCTION BOXES, AND TE-MS TO BMS AND EQUIPMENT TO ENSURE AN OPERABLE SYSTEM. 120V TO 24V TRANSFORMED TO BE LOCATED INSIDE CABINET. REFER TO CONTROLS SPECIFICATIONS FOR OPERATIONS DESCRIPTION.

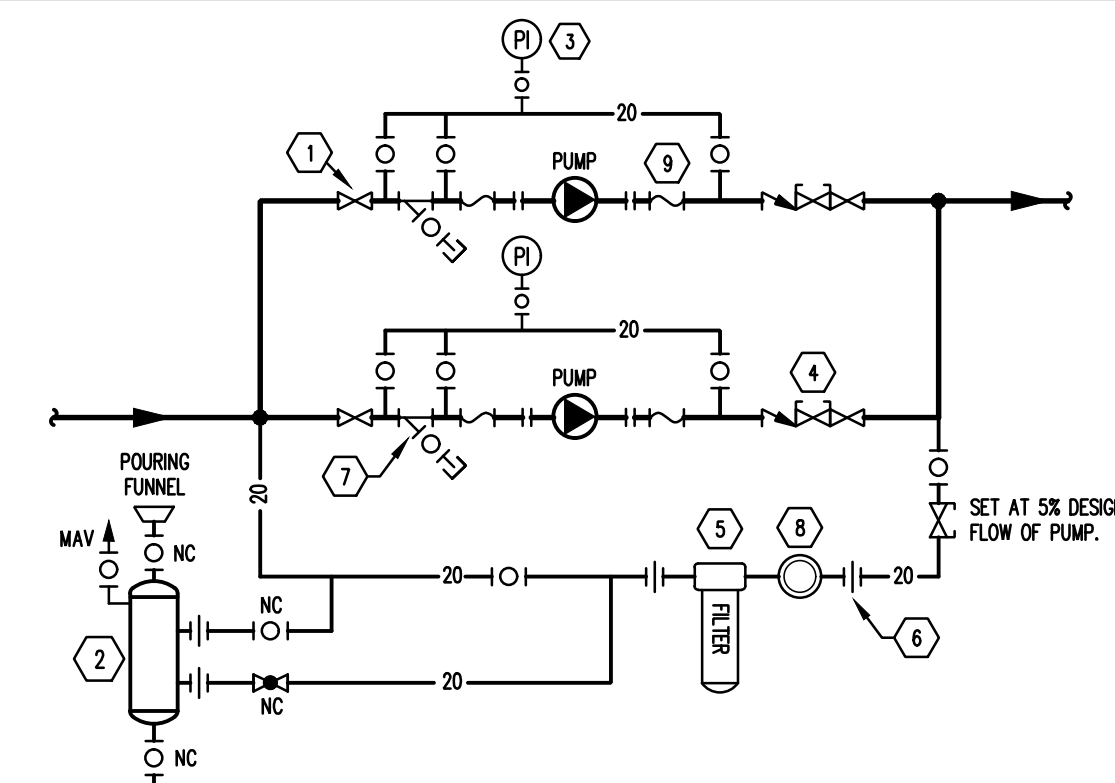
3 SECURE ROOM CONTROL PANEL
SCALE: N.T.S.



4 CROSS-TALK SILENCER DETAIL
SCALE: N.T.S.



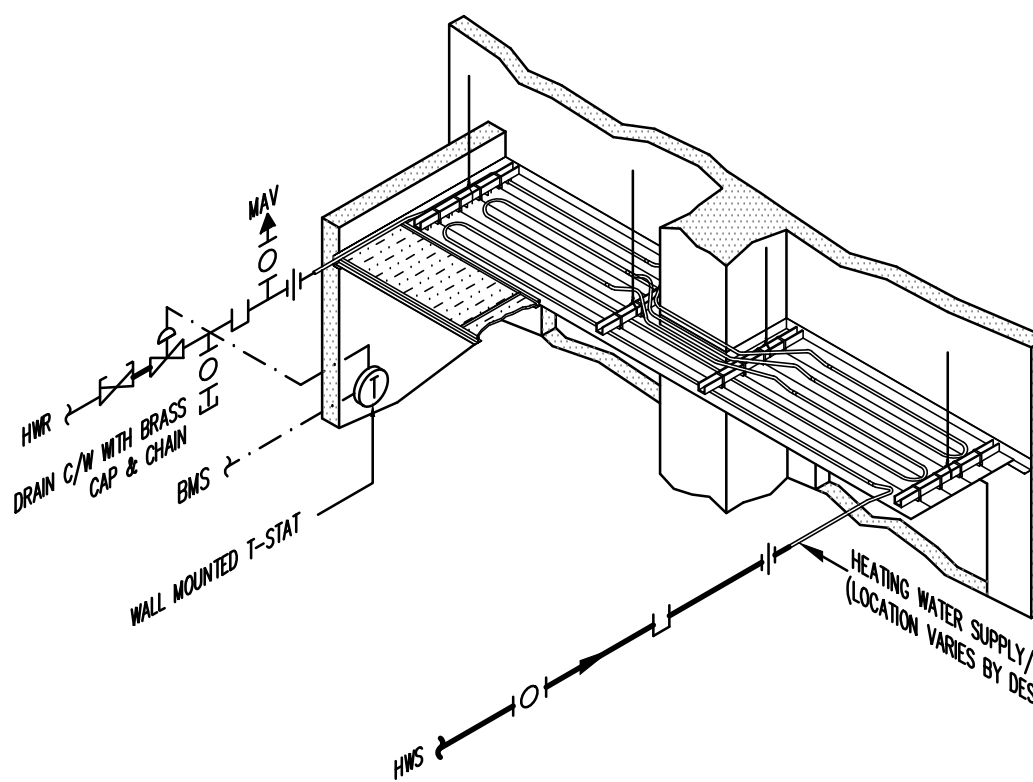
5 HEATING PIPING TAKE-OFFS FROM MAIN
SCALE: N.T.S.



KEYNOTES:

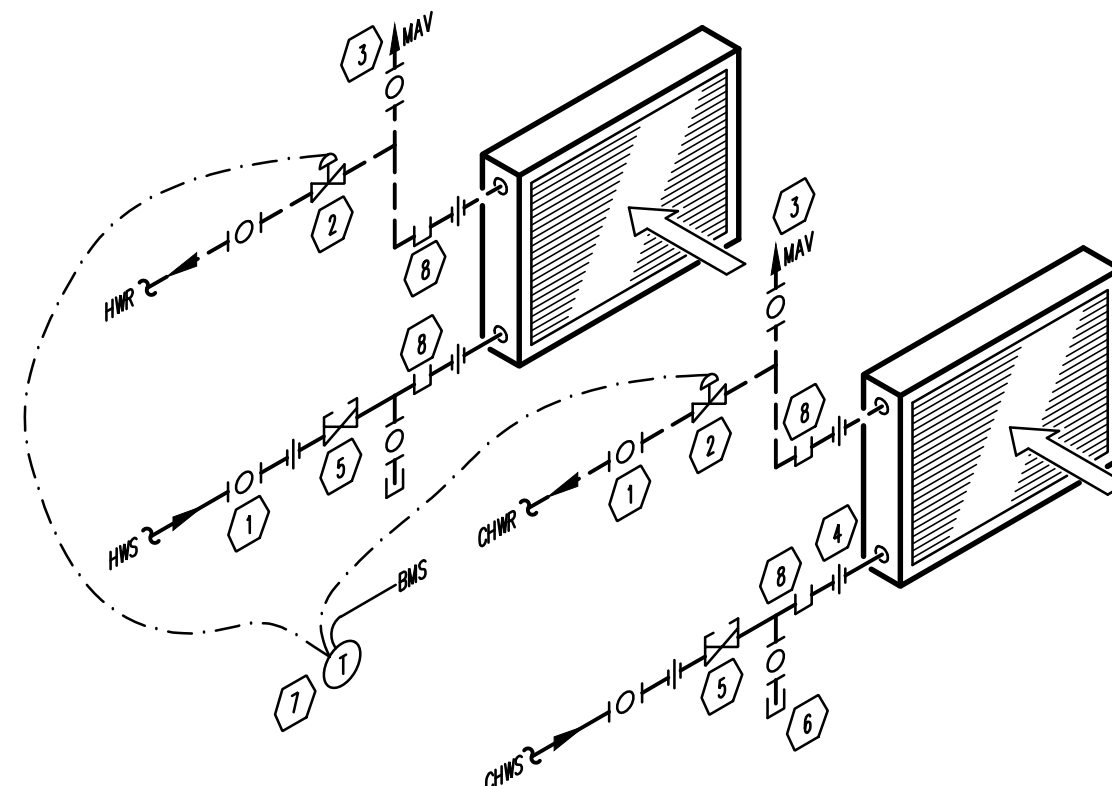
- ISOLATION VALVE
- CHEMICAL POT FEEDER
- PRESSURE INDICATOR AND ISOLATION VALVE.
- MULTIPURPOSE VALVE, COMBINATION OF (CHECK, ISOLATION AND BALANCING VALVES).
- SIDE STREAM FILTER
- FLANGE / UNION
- SUCTION DIFFUSER WITH DRAIN AND ISOLATION VALVE.
- SITE GLASS
- FLEX CONNECTION REQUIRED ON VERTICAL IN LINE OR BASE MOUNTED PUMPS.

6 PARALLEL PUMP SCHEMATIC
SCALE: N.T.S.



NOTE: WHEN CONTROL SERVICES MORE THAN ONE RADIANT PANEL, EACH RADIANT PANEL TO BE INSTALLED WITH ISOLATION VALVE ON HWS AND BALANCING VALVE ON HWR.

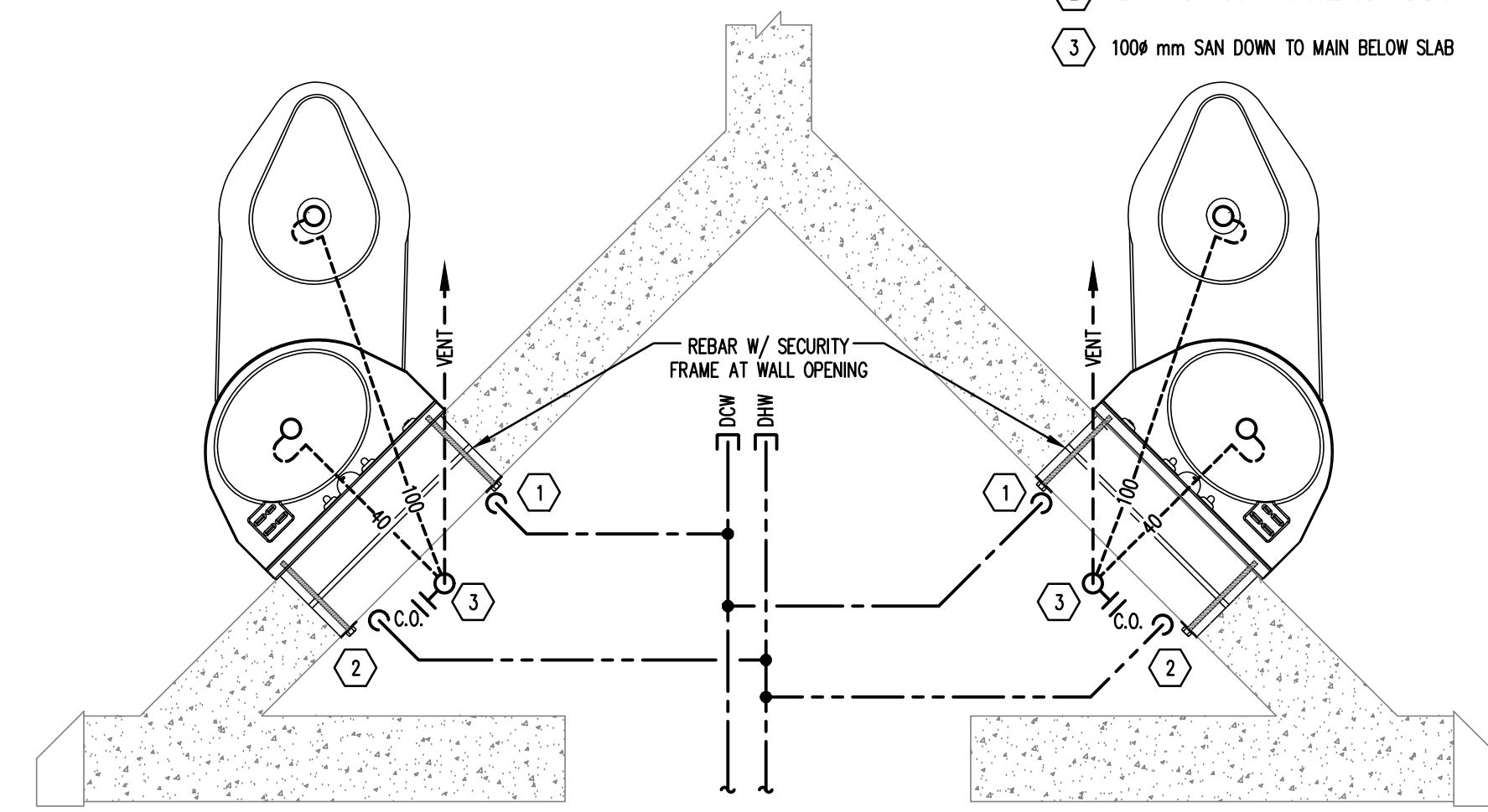
7 RADIANT PANEL SCHEMATIC
SCALE: N.T.S.



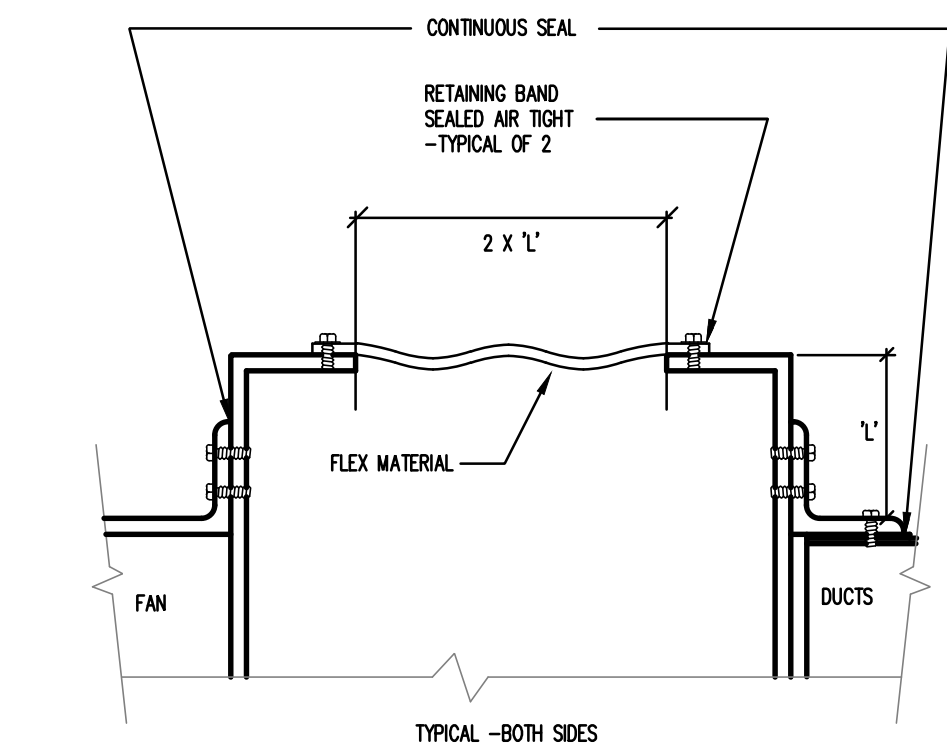
KEYNOTES:

- ISOLATION VALVE (TYPICAL)
- TWO WAY CONTROL VALVE
- MANUAL AIR VENT (TYPICAL)
- FLANGE / UNION (TYPICAL)
- BALANCING VALVE (TYPICAL)
- DRAIN VALVE WITH HOSE DR, CAP AND CHAIR.
- WALL MOUNTED T-STAT.
- PETE'S PLUG (TYPICAL)

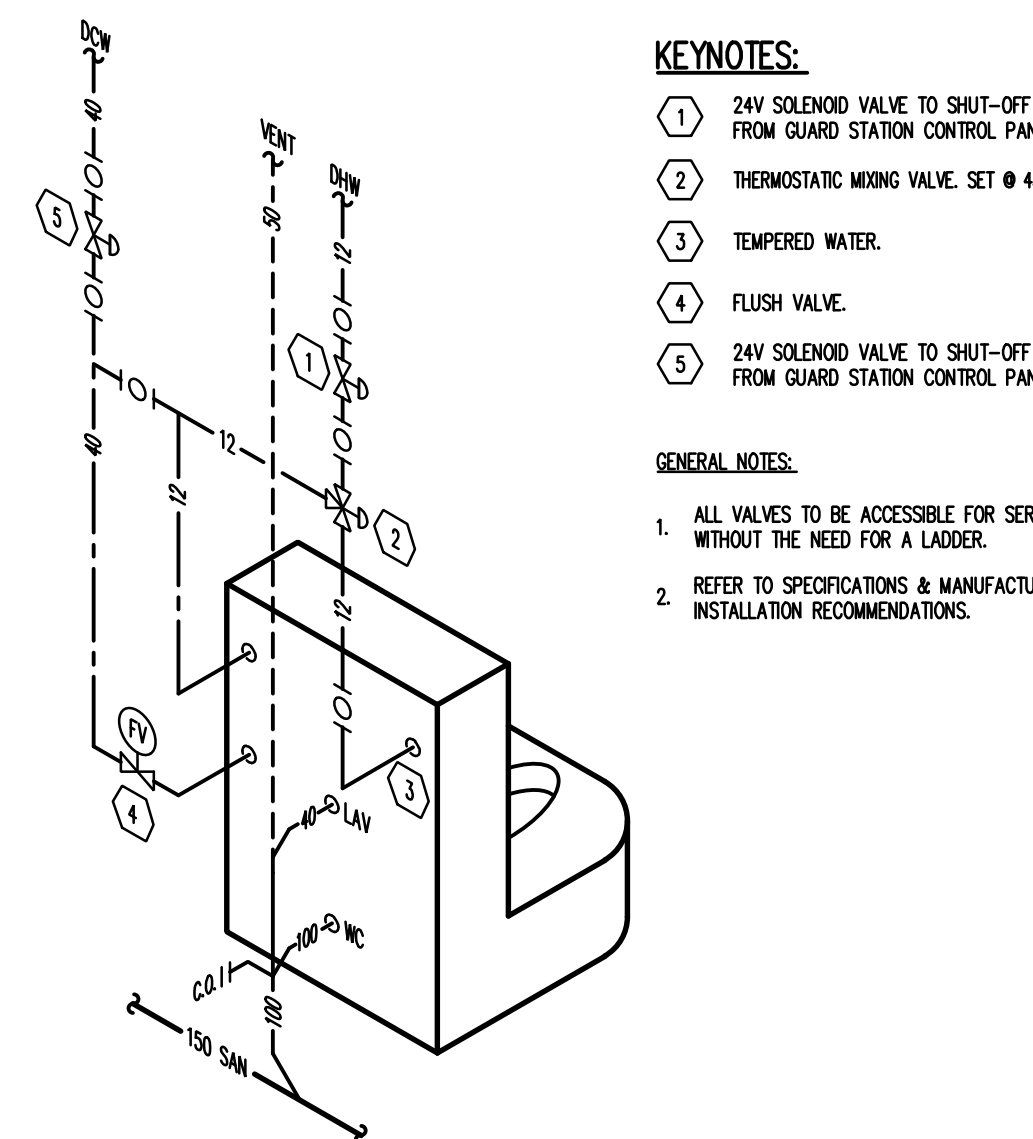
8 FAN COIL UNIT PIPING SCHEMATIC
SCALE: N.T.S.



9 SECURE ROOM PLUMBING SERVICE CLOSET PIPING SCHEMATIC
SCALE: N.T.S.



10 FAN/DUCT FLEXIBLE CONNECTION DETAIL
SCALE: N.T.S.

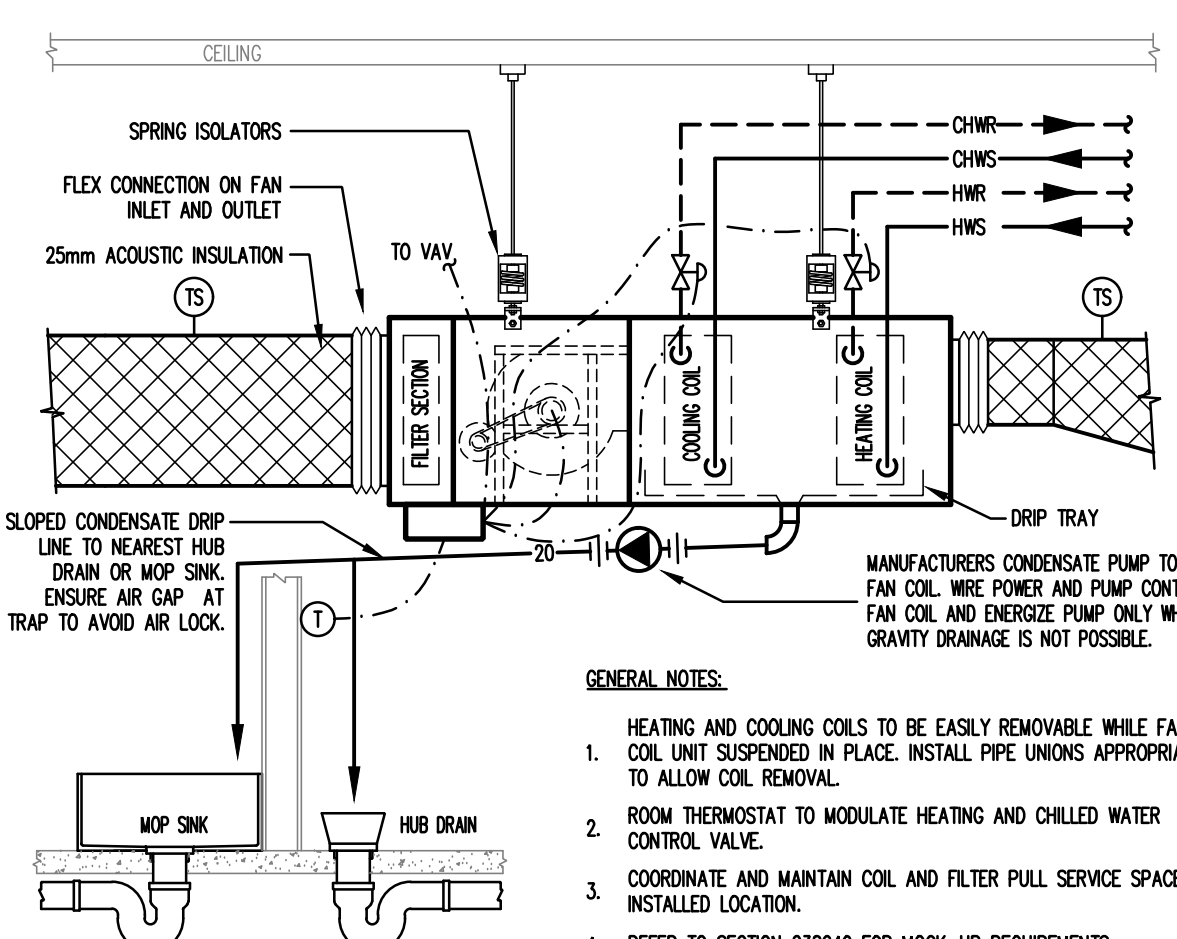


KEYNOTES:

- 24V SOLENOID VALVE TO SHUT-OFF DHW FROM GUARD STATION CONTROL PANEL.
- THERMOSTATIC MIXING VALVE, SET @ 43.3°C.
- TEMPERED WATER.
- FLUSH VALVE.
- 24V SOLENOID VALVE TO SHUT-OFF DHW FROM GUARD STATION CONTROL PANEL.

GENERAL NOTES:

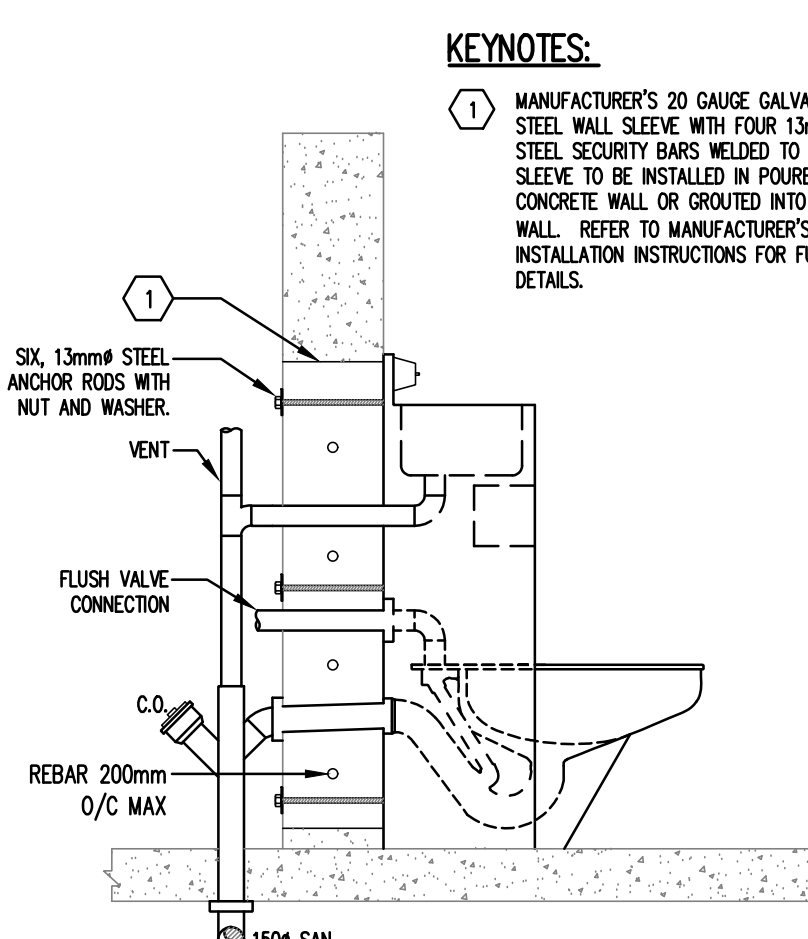
- ALL VALVES TO BE ACCESSIBLE FOR SERVICING WITHOUT THE NEED FOR A LADDER.
- REFER TO SPECIFICATIONS & MANUFACTURER'S INSTALLATION RECOMMENDATIONS.



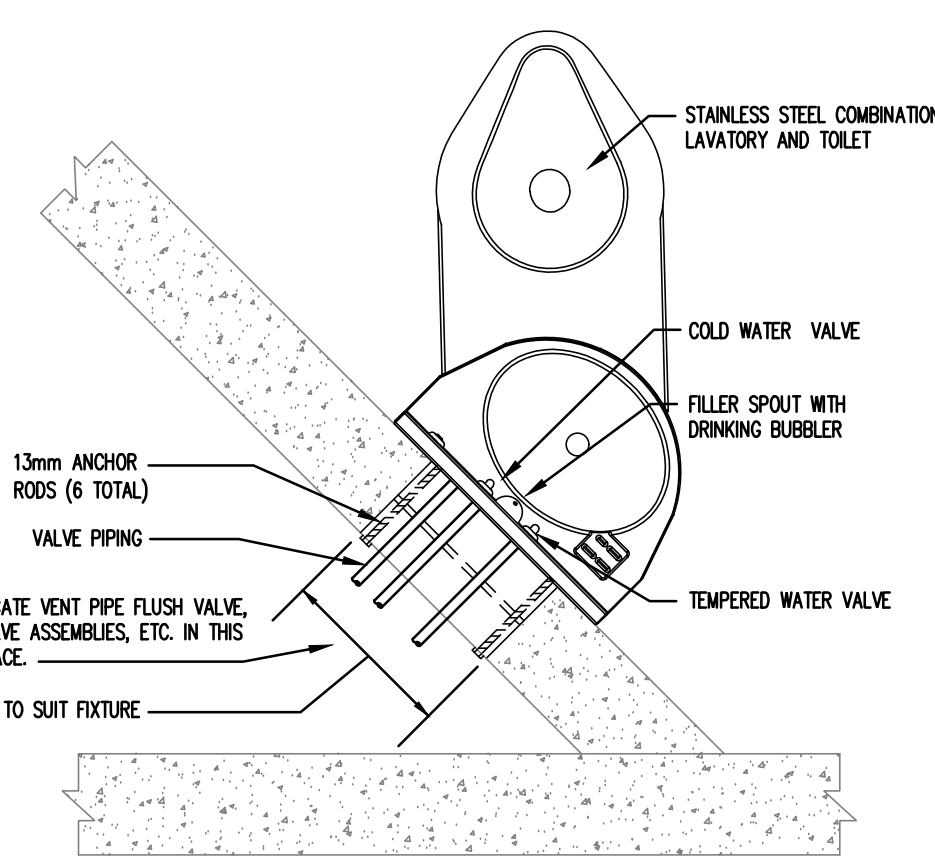
GENERAL NOTES:

- HEATING AND COOLING COILS TO BE EASILY REMOVABLE WHILE FAN COIL UNIT SUSPENDED IN PLACE. INSTALL PIPE UNIONS APPROPRIATELY TO ALLOW COIL REMOVAL.
- ROOM THERMOSTAT TO MODULATE HEATING AND CHILLED WATER CONTROL VALVE.
- COORDINATE AND MAINTAIN COIL AND FILTER PALL SERVICE SPACE AT INSTALLED LOCATION.
- REFER TO SECTION 230640 FOR MCK-UP REQUIREMENTS.
- COOLING FOU DRAINS WHERE POSSIBLE. DRAIN SIZE FROM TWO OR MORE FOU DRAINS TO BE MINIMUM 300mm.
- REFER TO "FAN COIL PIPING DETAIL" THIS DWG FOR PIPING ARRANGEMENT OF FAN COILS.
- PROVIDE MINIMUM 3000mm LENGTH ACOUSTIC INSULATION ON FAN OUTLET.

12 FAN COIL UNIT DETAIL
SCALE: N.T.S.



13 SECTION MOUNTING DETAIL SECURE ROOM COMBINATION FIXTURE
SCALE: N.T.S.



14 SECURE ROOM COMBINATION FIXTURE DETAIL
SCALE: N.T.S.

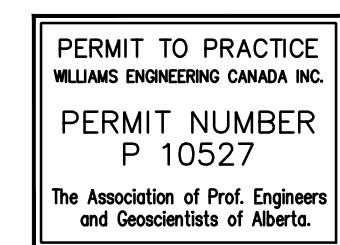
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Issues/Revisions

No.	Description	Date	By
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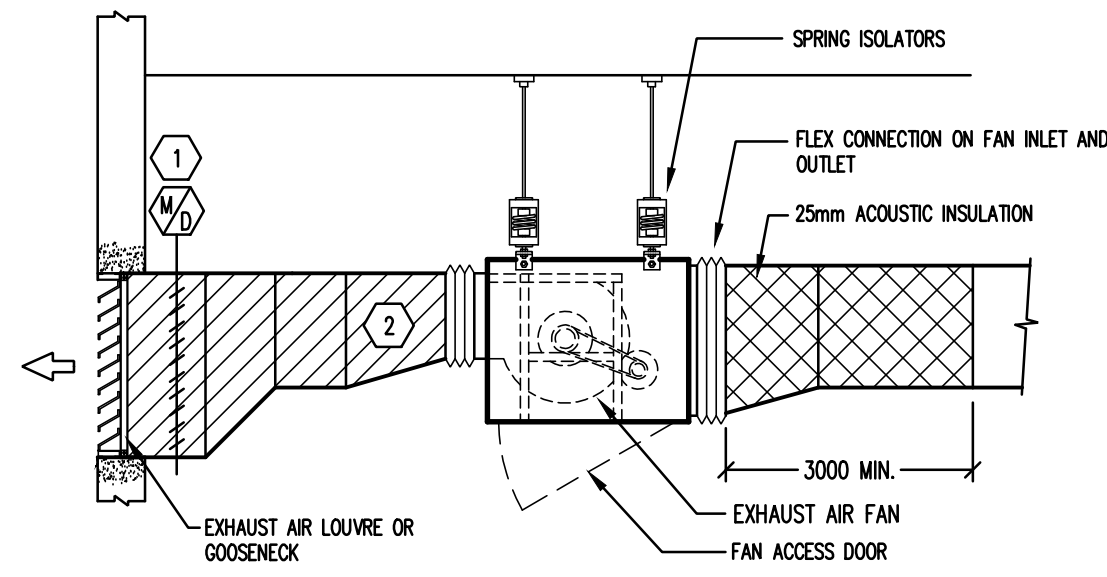
Drawing No.

M8.2

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KEYNOTES:

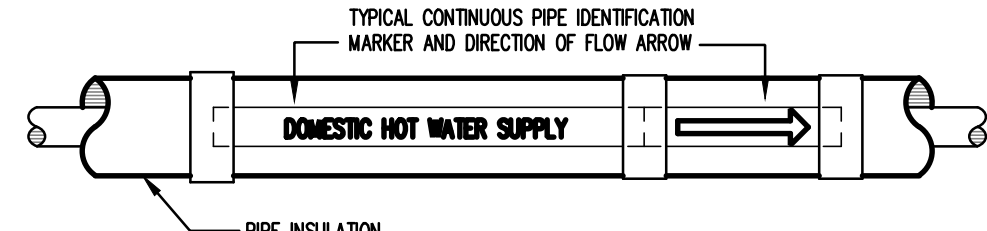
- PROVIDE AND INSTALL MOTORIZED DAMPER AT LOUVER WHERE FAN CAPACITY EXCEEDS 140 L/S (300 CFM) OR MORE INDICATED ON DWGS, ELSE INSTALL BACK DRAFT DAMPER.
- PROVIDE THERMAL DUCT INSULATION FROM FAN OUTLET TO EXTERIOR WALL LOUVER OR GOOSENECK. REFER TO SPECIFICATIONS FOR INSULATION THICKNESS AND JACKETING.



GENERAL NOTES:

- REFER TO FLOOR PLANS FOR LOCATIONS AND DUCT DIMENSIONS.
- PROVIDE SECURITY BARS ON OPENINGS LARGER THAN 150mm X 150mm THRU SECURE AREAS.

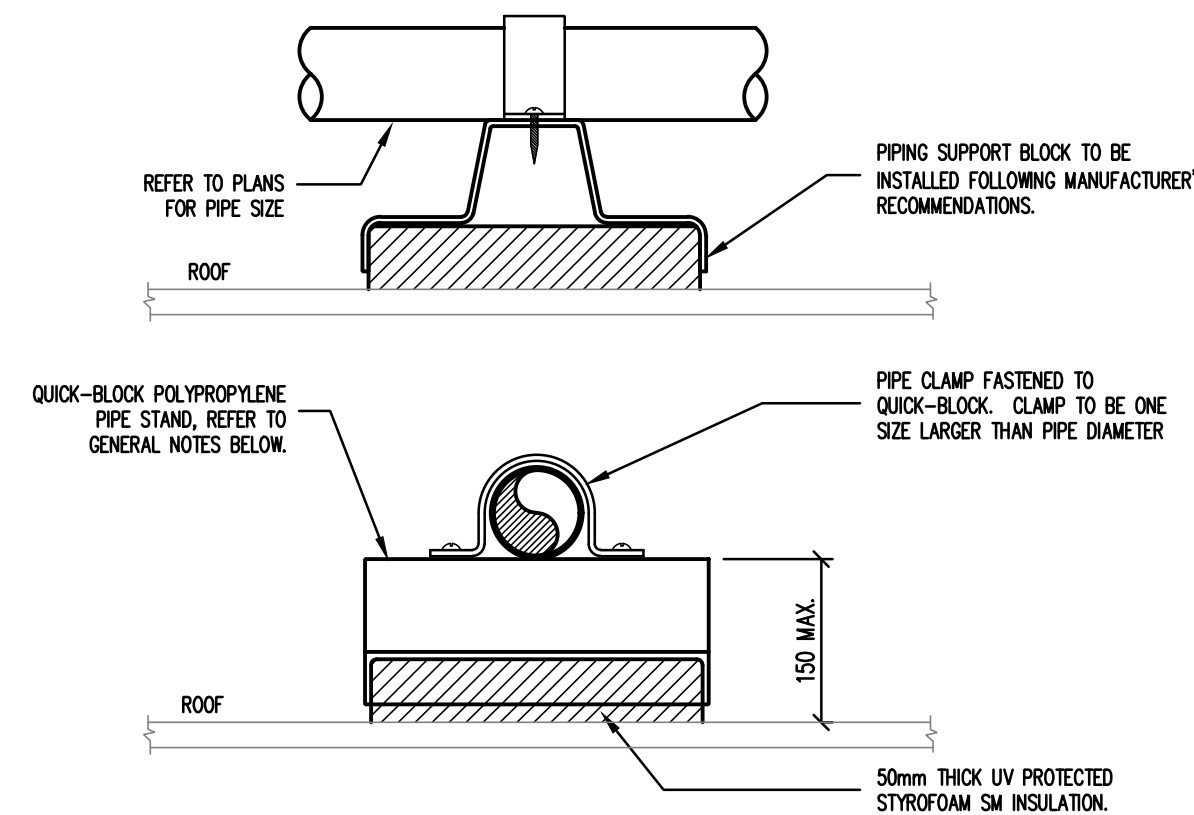
1 EXHAUST FAN DETAIL
SCALE: N.T.S.



GENERAL NOTES:

- APPLY A PRE-FORMED "SNAP AROUND-THE-PIPE" IDENTIFICATION MARKER AND DIRECTION OF FLOW ARROW
- REFER TO SPECIFICATIONS FOR COLOR CODING OF SERVICES.
- INSTALL AT 15m INTERVALS (MAXIMUM) AND AT EACH CHANGE IN DIRECTION.

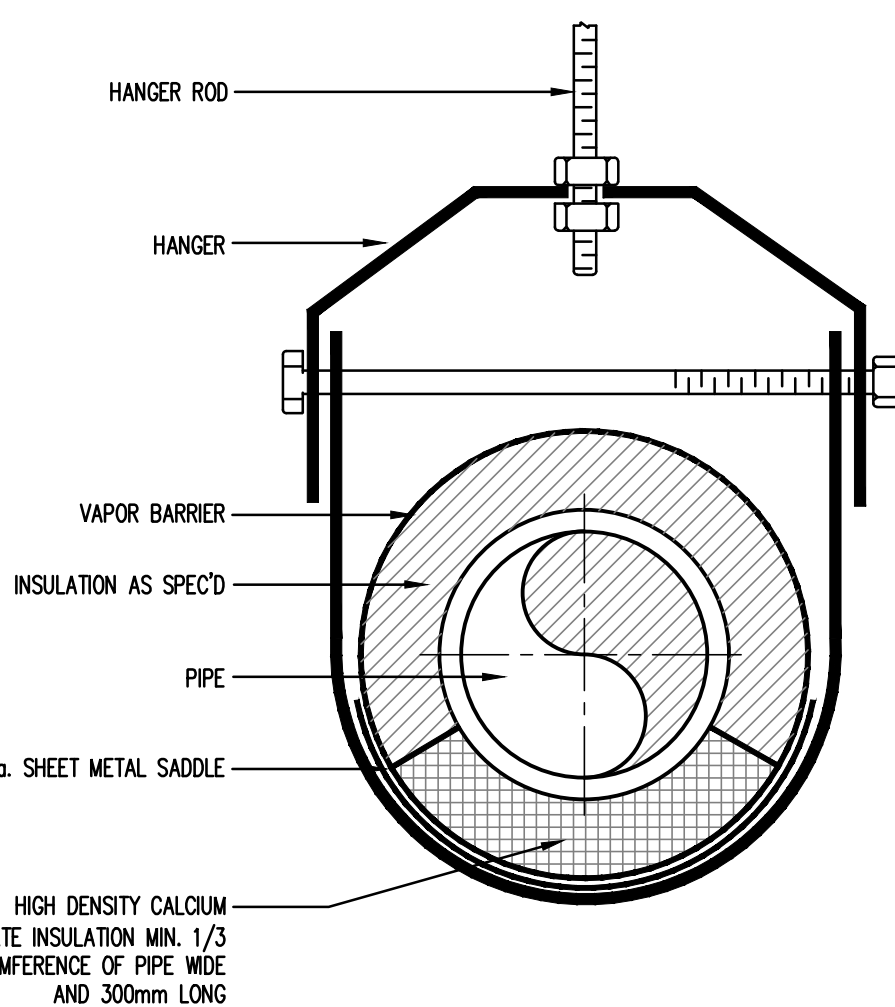
2 TYPICAL PIPE IDENTIFICATION DETAIL
SCALE: N.T.S.



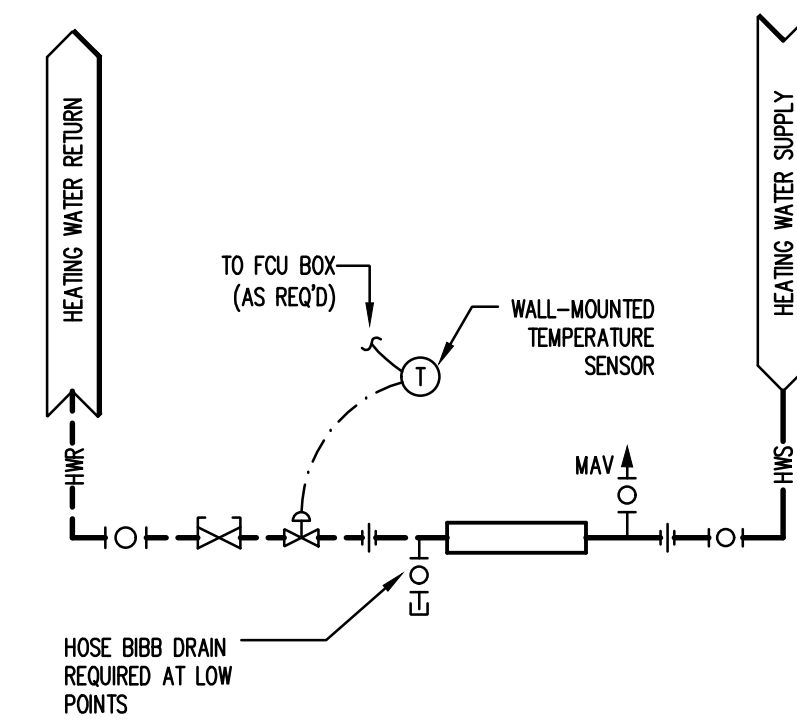
GENERAL NOTES:

- NOTE: ALL INSULATED PIPING TO BE COVERED WITH ALUMINUM JACKETING C/W A HOT DIPPED GALVANIZED LOAD DISTRIBUTION PLATE BENEATH PIPING AT EACH SUPPORT LOCATION TO PREVENT THE INSULATION FROM BEING CRUSHED.
- PROVIDE EXTENSIONS KIT(S) C/W HOT DIPPED GALVANIZED STEEL READY RODS 16mm (5/8") MIN. HOT DIPPED GALVANIZED STEEL STRUTS (12 GAUGE MIN) TO RAISE ALL INSULATED / ALUMINUM JACKED PIPING A MINIMUM 300mm ABOVE FINISHED ROOF DECK.

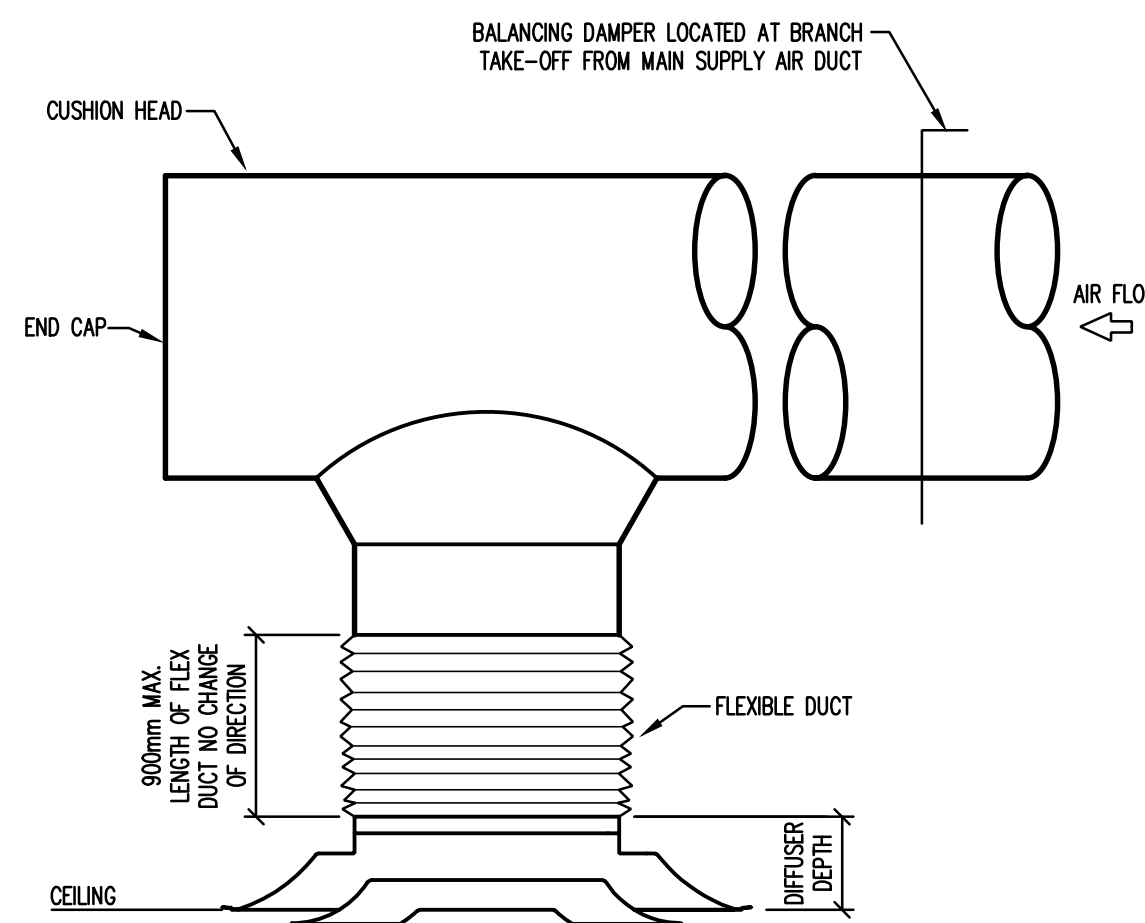
3 TYPICAL PIPING SUPPORT - ROOF
SCALE: N.T.S.



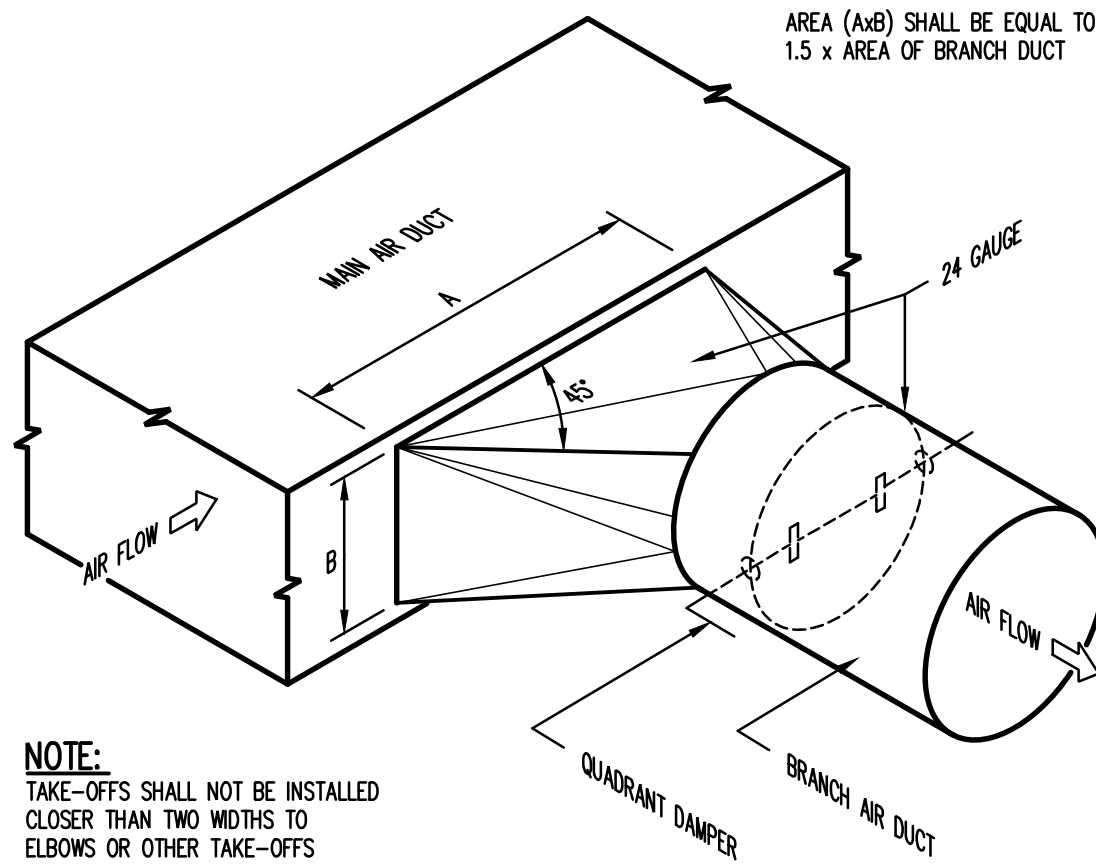
4 PIPE HANGER AND INSULATION DETAIL
SCALE: N.T.S.



5 TYPICAL RADIATION SCHEMATIC
SCALE: N.T.S.

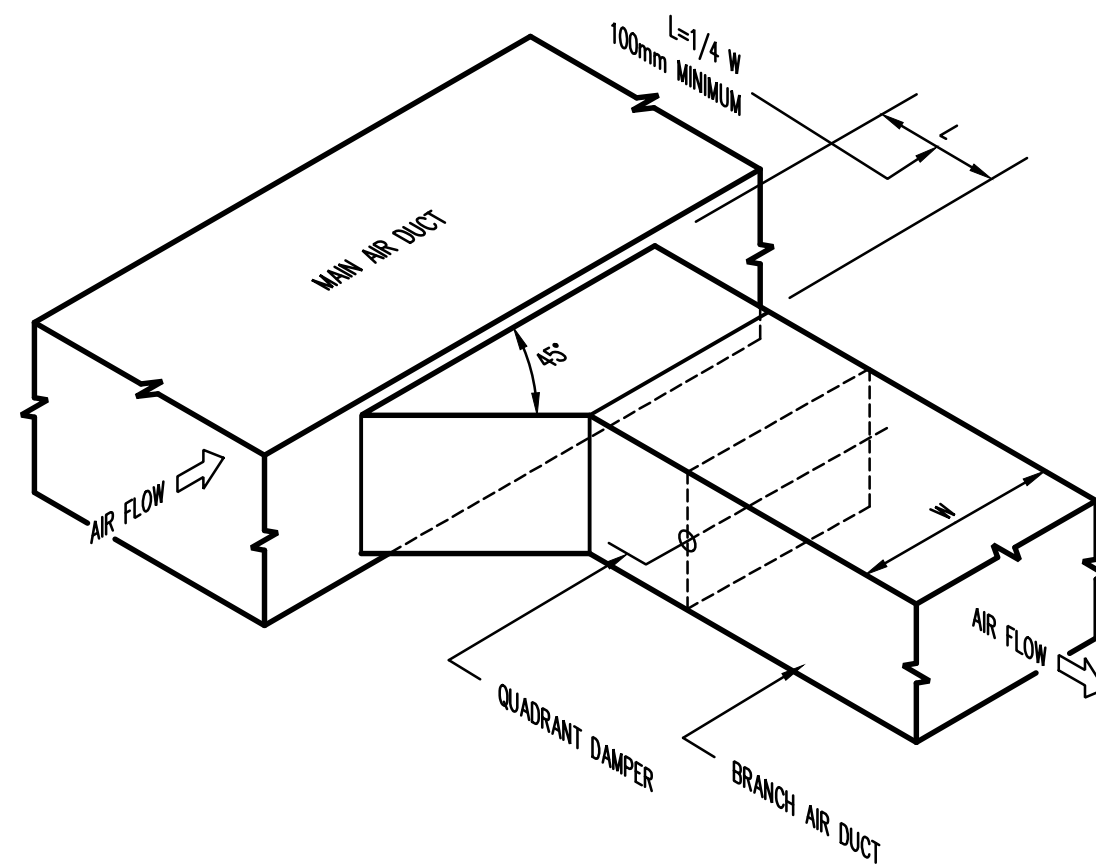


6 DIFFUSER CONNECTION DETAIL
SCALE: N.T.S.

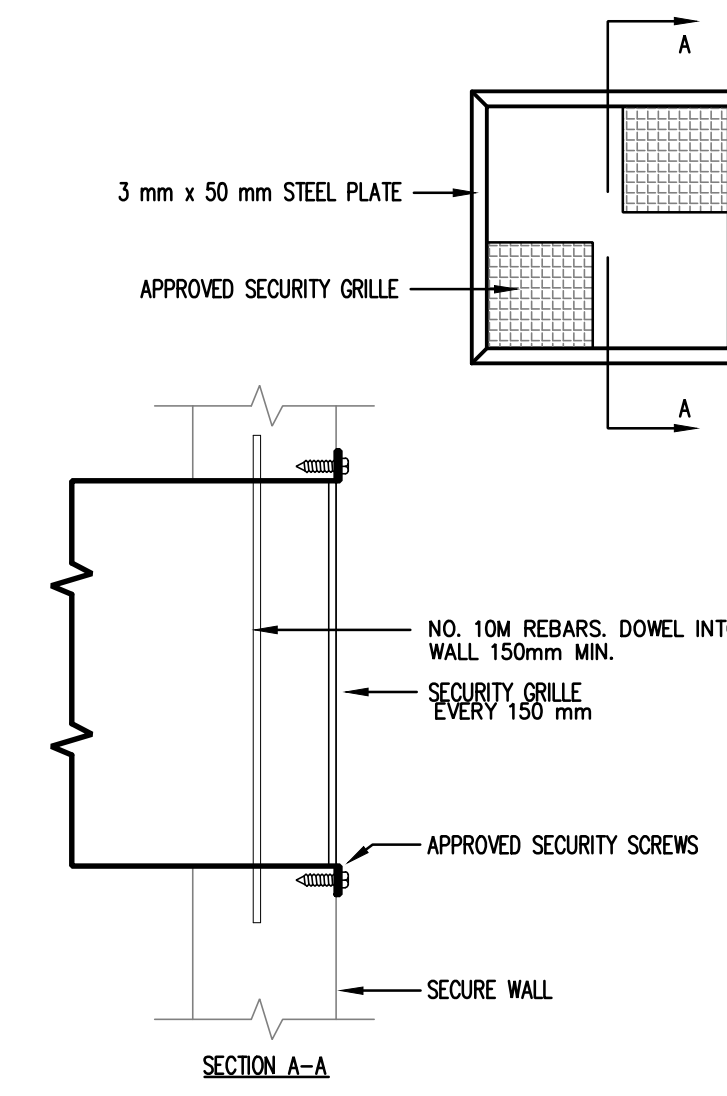


NOTE:
TAKE-OFFS SHALL NOT BE INSTALLED CLOSER THAN TWO WIDTHS TO ELBOWS OR OTHER TAKE-OFFS

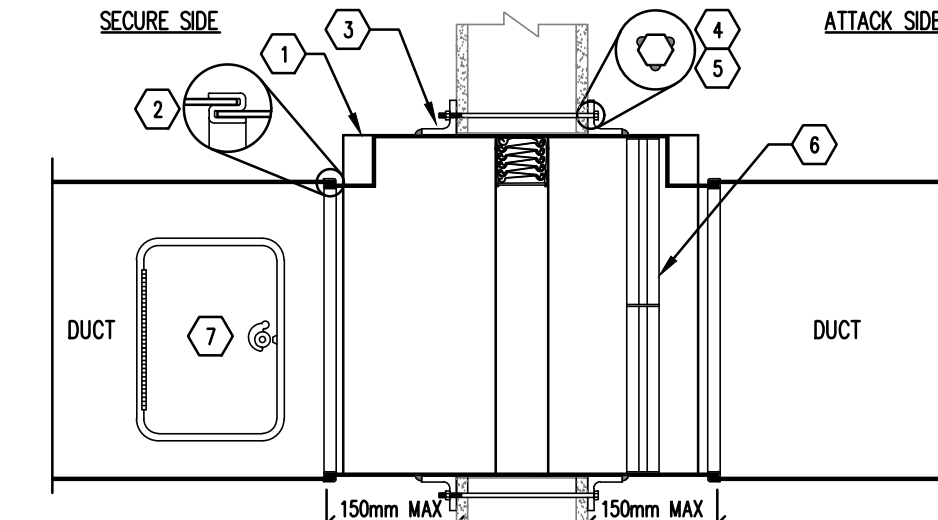
7 SQUARE TO ROUND TAKE-OFF
SCALE: N.T.S.



8 SQUARE TO SQUARE TAKE-OFF
SCALE: N.T.S.



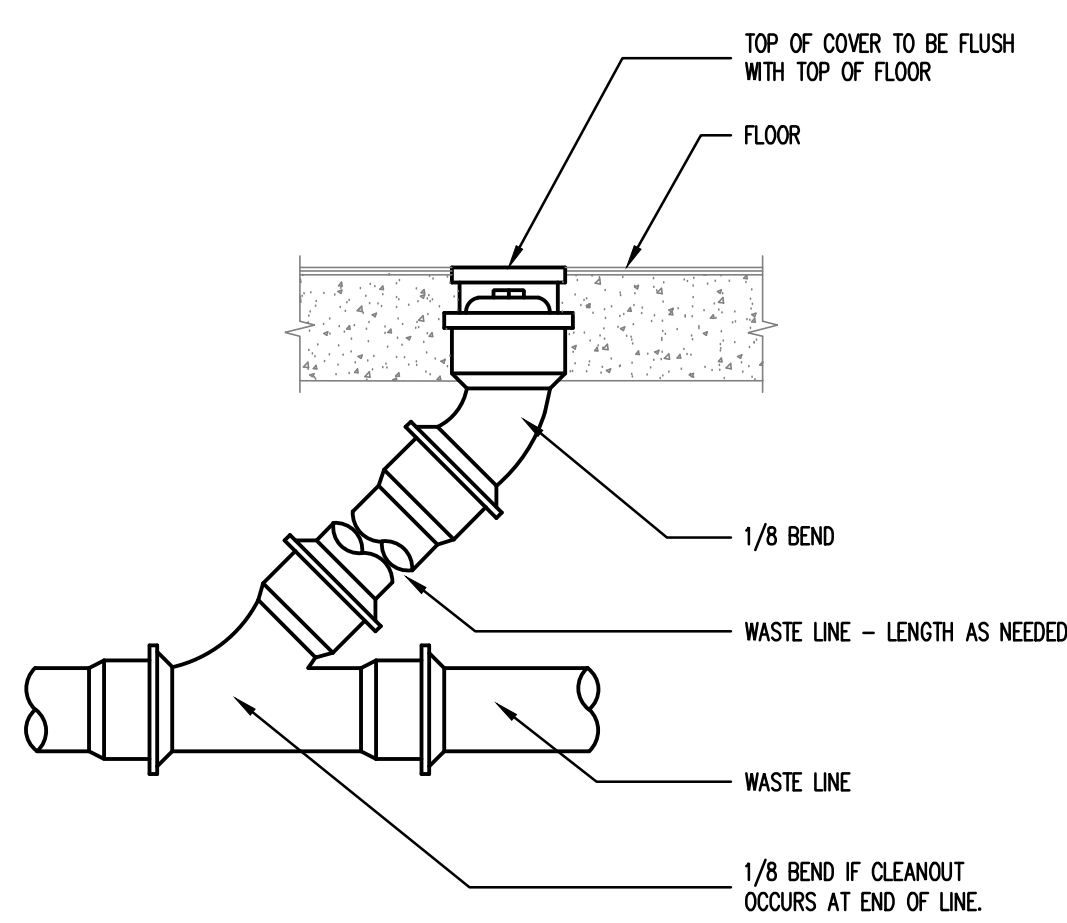
9 SECURE GRILLE DETAIL
SCALE: N.T.S.



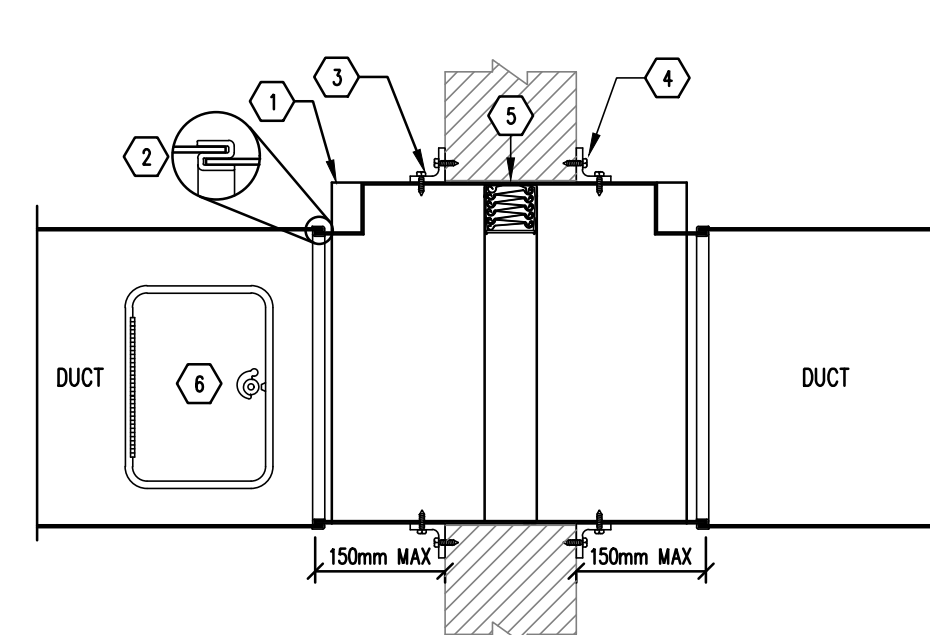
KEYNOTES:

- MINIMUM 3.4mm (10 GAUGE) GALVANIZED STEEL SLEEVE WITH TYPE "T" FIRE DAMPER SPOT ON TACK WELDED IN PLACE. PROVIDE A MINIMUM OF FOUR ATTACHMENTS, TWO ON EACH SIDE OF THE BLADE CHANNEL, FOR A MINIMUM TOTAL OF 16.
- BREAKAWAY JOINT USING "S" SLIP CONNECTION ON TOP AND BOTTOM WITH DRIVE SLIPS ON THE SIDES, OR AS PER MANUFACTURERS RECOMMENDATIONS. SEAL AIR TIGHT.
- RETAINING ANGLE FRAME ON EACH SIDE OF THE WALL. FRAME TO BE CONSTRUCTED FROM 40mm X 40mm X 3.2mm ANGLE STEEL AND WELDED ALL AROUND TO DUCT SLEEVE.
- SECURE DUCT SLEEVE FRAME TO WALL WITH 6.4mm (1/4") DIA BOLTS AND HEX NUTS AT 200mm (8") ON CENTER AROUND THE DUCT SLEEVE. BOLT LENGTH DETERMINED BY WALL THICKNESS.
- THE BOLT HEAD SHALL BE ON THE ATTACK SIDE AND BE WELDED IN AT LEAST THREE PLACES TO THE ANGLE FRAME. FRAMING AROUND DUCT SLEEVE IS REQUIRED.
- SPACE 150mm MIN. DIAMETER VERTICAL SECURITY BARS 150mm O/C. PROVIDE 50mm x 6.4mm HORIZONTAL FLAT BARS AT 300mm ON CENTER. VERTICAL BARS PASS THRU HORIZONTAL BARS. BOTH BARS TO BE WELDED INSIDE A 50mm x 6.4mm FRAME. FRAME TO BE WELDED TO DUCT SLEEVE.
- PROVIDE ACCESS PANEL ON SECURE SIDE.

10 SECURE AREA DUCT OPENING DETAIL
SCALE: N.T.S.



11 FLOOR CLEANOUT
SCALE: N.T.S.

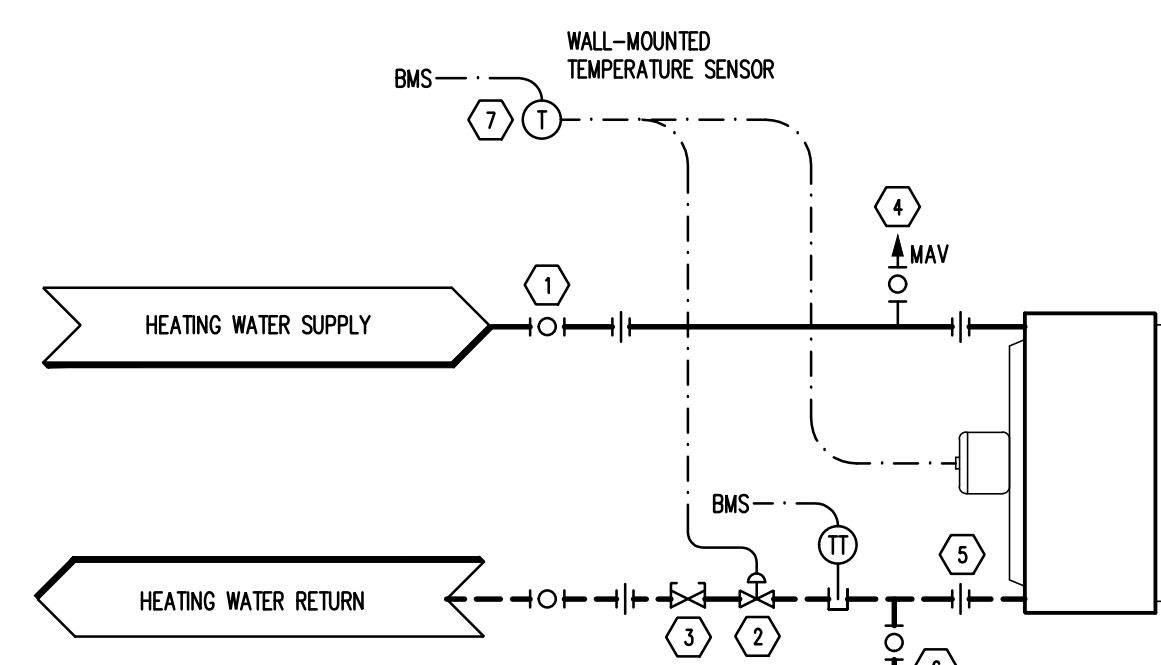


KEYNOTES:

- GALVANIZED STEEL SLEEVE WITH TYPE "T" FIRE DAMPER IN PLACE FROM MANUFACTURER. SLEEVE GAUGE SHALL NOT BE LESS THEN THE GAUGE OF THE CONNECTION DUCT. FIRE DAMPER TO BE SPOT OR TACK WELDED IN PLACE. PROVIDE A MINIMUM OF FOUR ATTACHMENTS, TWO ON EACH SIDE OF THE BLADE CHANNEL, FOR A MINIMUM TOTAL OF 16.
- BREAKAWAY JOINT -USING "S" SLIP CONNECTION ON TOP AND BOTTOM WITH DRIVE SLIPS ON THE SIDES, OR AS PER MANUFACTURERS RECOMMENDATIONS. SEAL AIR TIGHT.
- RETAINING ANGLE FRAME ON EACH SIDE OF THE WALL. FRAME TO BE CONSTRUCTED FROM 40mm X 40mm X 1.5mm ANGLE STEEL.
- SECURE DUCT SLEEVE FRAME TO WALL WITH 9.5mm LAG SCREWS OR 6.4mm (1/4") DIA BOLTS AND HEX NUTS AT 200mm (8") ON CENTER AROUND THE DUCT SLEEVE. LAG SCREW OR BOLT LENGTH DETERMINED BY WALL THICKNESS.
- ENSURE CLEARANCE BETWEEN WALL AND SLEEVE. 3mm PER LINEAL FOOT, BOTH DIMENSIONS.
- PROVIDE ACCESS PANEL ON SECURE SIDE.

NOTES: PROVIDE CEILING ACCESS PANELS WHERE REQUIRED TO ACCESS DAMPERS PER SPECIFICATION. REFER TO PLAN DWG'S FOR LOCATIONS OF FIRE DAMPERS.

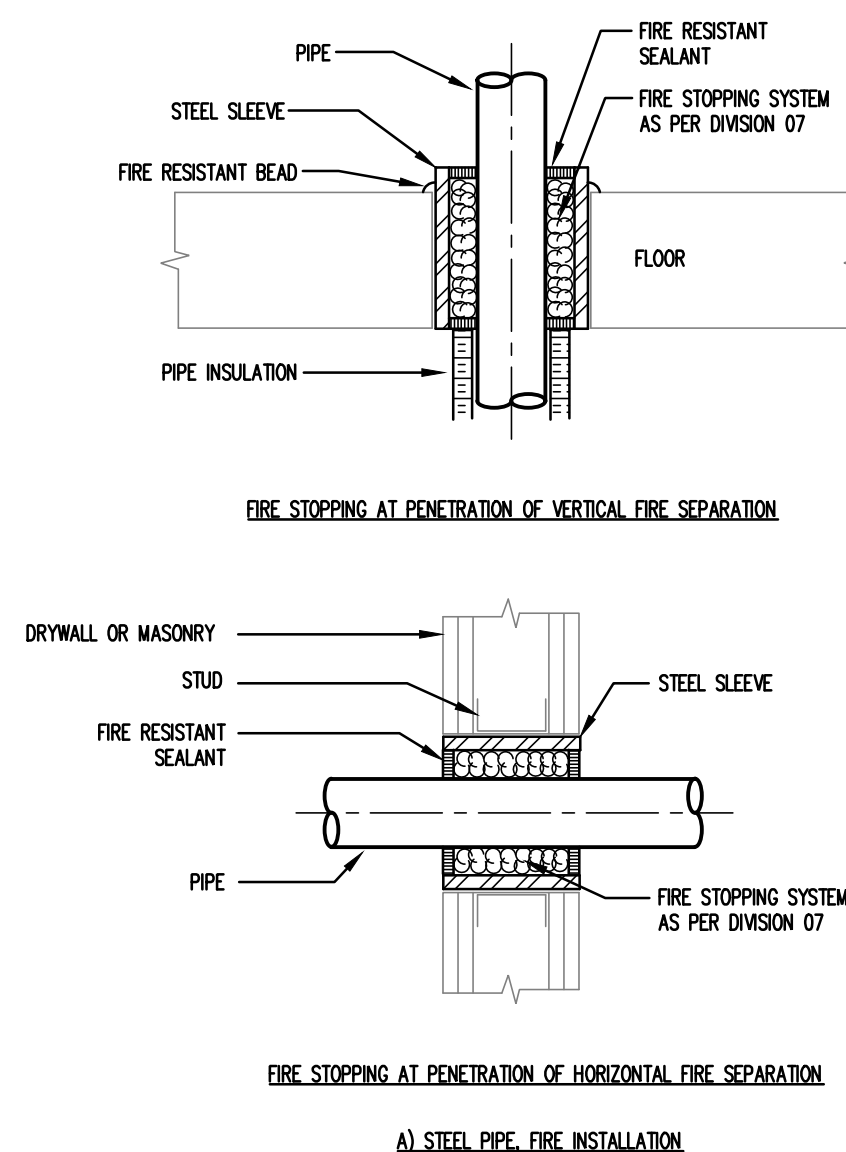
12 FIRE DAMPER INSTALLATION
SCALE: N.T.S.



KEYNOTES:

- ISOLATION VALVE (TYPICAL)
- TWO WAY CONTROL VALVE
- BALANCING VALVE
- MANUAL AIR VENT
- FLANGE / UNION (TYPICAL)
- DRAIN VALVE WITH HOSE BIB, CAP AND CHAIN
- TEMPERATURE SENSOR

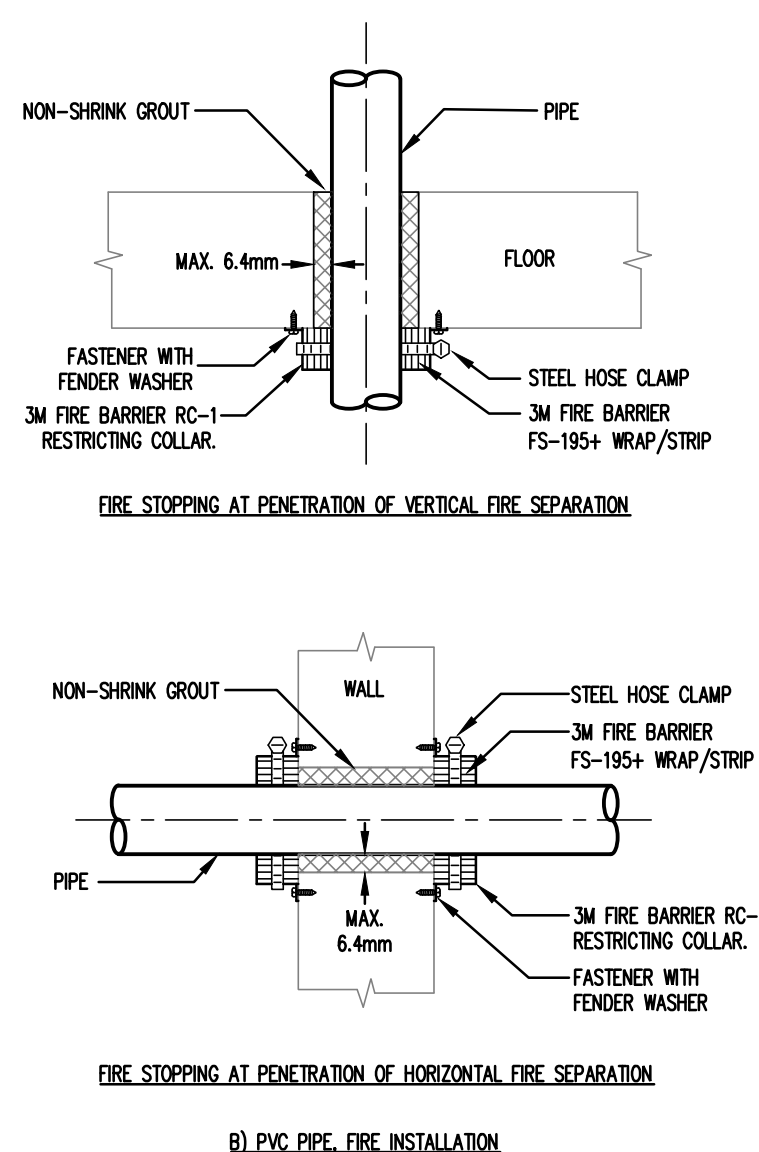
13 TYPICAL HYDRONIC FORCE FLOW / UNIT HEATER SCHEMATIC
SCALE: N.T.S.



GENERAL NOTES:

- THICKNESS OF FIRE STOPPING AND SEALANT AS REQUIRED TO MEET FIRE SEPARATION RATINGS
- FIRE STOPPING SHALL BE INSTALLED BY A QUALIFIED APPLICATION.
- FIRE RESISTANT SEALANT TO MEET LOCAL CODE REQUIREMENTS.
- REFER TO MANUFACTURER DETAIL FOR INSTALLATION.

14 FIRE SEPARATION PENETRATIONS DETAIL
SCALE: N.T.S.



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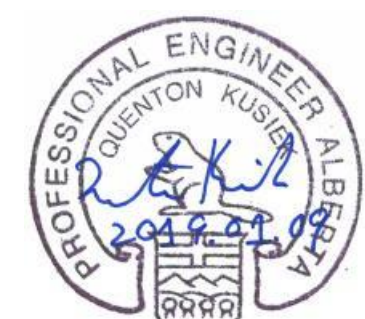
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Issues/Revisions

No.	Description	Date	By
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Seal



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**MECHANICAL
DETAILS**

Drawing No.

M8.3

BOILER SCHEDULE																			
TAG	MAKE	MODEL	TYPE	LOCATION	SERVICE	WEIGHT (kg)	DIMENSIONS (mm)			FUEL	INPUT (kW)	OUTPUT (kW)	FLUID RATE (L/s)	FLUID TEMPERATURE (°C)		PRESSURE DROP (kPa)	OPERATING PRESSURE (kPa)	ELECTRICAL (VOLT/PH/HZ)	NOTES
							DEPTH	WIDTH	HEIGHT					EWI	LWT				
B-1	WEIL MCLAIN	EVG 399	CONDENSING	ROOM 182	BUILDING HEAT	120	585	690	1150	N.GAS	116	108	1.51	43	60		207.0	120/1/60	NATURAL GAS WALL MOUNTED, SIDE WALL VENTED CONDENSING BOILER. C/W STAINLESS STEEL FIRE-TUBE HEAT EXCHANGER, 10:1 TURNDOWN RATIO, BOILER CIRCULATOR, HIGH LIMIT BOILER WATER TEMPERATURE CONTROLLER, LOW WATER CUTOFF, ASME RATED PRESSURE RELIEF VALVE SET @ 207 kPa (30 Psig), CONDENSATE ACID NEUTRALIZATION KIT WITH BY-PASS, MANUFACTURERS MAINTENANCE KIT, MANUFACTURERS SIDEWALL VENT/AIR (W-M) DIRECT VENT PLATE KIT, EVERGREEN MODBUS INTERFACE (NOTE: WHERE THE BMS USES BACNET PROTOCOL, INSTALL A BACNET CONVERTOR BETWEEN THE BMS AND THE EVERGREEN MODBUS TO BMS TERMINALS). REFER TO CONTROLS SPECIFICATIONS FOR BOILER CONTROL AND POINTS LISTS.
B-2	WEIL MCLAIN	EVG 399	CONDENSING	ROOM 182	BUILDING HEAT	120	585	690	1150	N.GAS	116	108	1.51	43	60		207.0	120/1/60	NATURAL GAS WALL MOUNTED, SIDE WALL VENTED CONDENSING BOILER. C/W STAINLESS STEEL FIRE-TUBE HEAT EXCHANGER, 10:1 TURNDOWN RATIO, BOILER CIRCULATOR, HIGH LIMIT BOILER WATER TEMPERATURE CONTROLLER, ASME RATED PRESSURE RELIEF VALVE SET @ 207 kPa (30 Psig), CONDENSATE ACID NEUTRALIZATION KIT WITH BY-PASS, MANUFACTURERS MAINTENANCE KIT, MANUFACTURERS SIDEWALL VENT/AIR (W-M) DIRECT VENT PLATE KIT, EVERGREEN MODBUS INTERFACE (NOTE: WHERE THE BMS USES BACNET PROTOCOL, INSTALL A BACNET CONVERTOR BETWEEN THE BMS AND THE EVERGREEN MODBUS TO BMS TERMINALS). REFER TO CONTROLS SPECIFICATIONS FOR BOILER CONTROL AND POINTS LISTS.

AIR-COOLED CHILLER / DRY-FLUID COOLER SCHEDULE																										
TAG	MAKE	MODEL	QTY	LOCATION	SERVICE	WEIGHT (kg)	DIMENSIONS (mm)			REFRIGERANT	AMBIENT AIR TEMP (°C)		FLUID			PRESSURE DROP (kPa)	CAPACITY PER MOD (kW)	COPR @ FULL LOAD	EER @ FULL LOAD	ELECTRICAL (VOLT/PH/HZ)	MCA (Amp)	NOISE (dB)	CONDENSER FAN		NOTES	
							LENGTH	WIDTH	HEIGHT		DRY BULB	WET BULB	TYPE	EWI (°C)	LWT (°C)								FLOW (L/s)	QUANTITY		ESP (Pa)
CH-1	MULTISTACK	ASPD15	2	ROOF	CHILLED WATER SYSTEM	2320	2940	2050	2050	R-410A	31	19	40% PROPYLENE GLYCOL	13.8	7.2	4.0	63	52 (PER MODULE) 104 (TOTAL)	3.92	13.38	208/5/60	167		2 (PER MODULE) 4 (TOTAL)	0	3-WAY VALVE TO DIVERT FLOW AROUND DRY-COOLERS, 2-WAY VALVE TO CONTROL FLOW THROUGH CHILLER MODULES, BYPASS VALVE TO PERMIT FLOW THROUGH DRY-COOLER WHILE NO FLOW THROUGH CHILLER MODULES, BACNET COMMUNICATION CARD, FACTORY PAINTED AS SELECTED BY ARCHITECT DURING SHOP DRAWING STAGE.
DFC-1	MULTISTACK	FCP2	1							—	2	1	40% PROPYLENE GLYCOL	13.8	7.2	2.5								2	0	

PUMP SCHEDULE													
TAG	MAKE	MODEL	TYPE	LOCATION	SERVICE	INLET/OUTLET (mm)	FLUID	CAPACITY (L/s)	PRESSURE (kPa)	MOTOR RPM	MOTOR (kW)	ELECTRICAL (VOLT/PH/HZ)	NOTES
P-1	GRUNDFOS	UP 26-96 F/V5	CIRCULATOR	ROOM 212	HEATING SYSTEM	40	40% PROP. GLYCOL	1.51	15	-	205 WATTS	115/1/60	CAST IRON, FLANGED CONNECTIONS, INTERLOCKED WITH ON BOARD BOILER CONTROLS. CAPABLE FOR FUTURE INTEGRATION INTO BMS. VARIABLE SPEED PUMPING. INITIALLY BALANCE PUMP TO 1.25L/s.
P-2	GRUNDFOS	UP 26-96 F/V5	CIRCULATOR	ROOM 212	HEATING SYSTEM	40	40% PROP. GLYCOL	1.51	15	-	205 WATTS	115/1/60	CAST IRON, FLANGED CONNECTIONS, INTERLOCKED WITH ON BOARD BOILER CONTROLS. CAPABLE FOR FUTURE INTEGRATION INTO BMS. VARIABLE SPEED PUMPING INITIALLY BALANCE PUMP TO 1.25L/s.
P-3	GRUNDFOS	MAGNA3 40-180	CIRCULATOR	ROOM 212	HEATING SYSTEM	40	40% PROP. GLYCOL	1.94	110	-	600 WATTS	208/1/60	C/W VFD DRIVE & CONTROL, PROVIDE ADD-ON CM MODULE FOR BMS SYSTEM.
P-4	GRUNDFOS	MAGNA3 40-180	CIRCULATOR	ROOM 212	HEATING SYSTEM	40	40% PROP. GLYCOL	1.94	110	-	600 WATTS	208/1/60	C/W VFD DRIVE & CONTROL, PROVIDE ADD-ON CM MODULE FOR BMS SYSTEM.
P-5	GRUNDFOS	TPE	VERTICAL INLINE	ROOM 212	CHILLED GLYCOL SYSTEM	40	40% PROP. GLYCOL	5.53	180	-	2.2	208/3/60	C/W VFD DRIVE & CONTROL, PROVIDE ADD-ON CM MODULE FOR BMS SYSTEM.
P-6	GRUNDFOS	TPE	VERTICAL INLINE	ROOM 212	CHILLED GLYCOL SYSTEM	40	40% PROP. GLYCOL	5.53	180	-	2.2	208/3/60	C/W VFD DRIVE & CONTROL, PROVIDE ADD-ON CM MODULE FOR BMS SYSTEM.
P-7	GRUNDFOS	MAGNA1	CIRCULATOR	ROOM 212	DOMESTIC WATER SYSTEM	25	DOMESTIC WATER	0.25	30	3250	105 WATTS	120/1/60	APPROVED FOR DOMESTIC WATER
SP-1	LITTLE GIGANT	5-ASP-LL	SUMP	ROOM 141	WASTE WATER	- / 25	WASTE WATER	1.16	15	-	380 WATTS	115/1/60Hz	CAST ALUMINUM CONSTRUCTION, WITH DIAPHRAGM SWITCH. RUN ALL WIRING FROM OIL INTERCEPTOR PIT TO WALL MOUNTED WATER RESISTANT POLYCARBONATE RECEPTACLE ENCLOSURE. INSIDE CONDUIT SIZED TO ACCOMMODATE THE PUMPS 3-PRONG MOULDED POWER PLUG AND PRODBACK PLUG. PRODBACK AND POWER CORD LENGTHS TO BE MINIMUM 5.0M IN LENGTH EACH. REFER TO DWG M6.0 DETAIL 2 - TWO COMPARTMENT SUMP WITH OIL INTERCEPTOR FOR FURTHER DETAILS.

UNIT HEATER / FORCE FLOW SCHEDULE																		
TAG	MAKE	MODEL	LOCATION	DIMENSIONS (mm)			TYPE	CAPACITY (kW) IN/OUT	AIRFLOW (L/s)	FLUID					MOTOR (W)	ELECTRICAL (VOLT/PH/HZ)	NOTES	
				LENGTH	WIDTH	HEIGHT				GAS IN (kW)	GAS OUT (kW)	FLOW (L/s)	EWI (°C)	LWT (°C)				PD (kPa)
UH-1	MOORE	EFFINITY PTC 65	ROOM 154	750	700	450	GAS (CONDENSING)	19/17.7	540	19.0	17.3	---	---	---	---	93	120/1/60	CONDENSATE NEUTRALIZATION KIT, VERTICAL CONCENTRIC VENT KIT, HIGH ALTITUDE KIT, VERTICAL DEFLECTION BLADES AND SPRING ISOLATORS.
UH-2	MOORE	EFFINITY PTC 65	ROOM 153	750	700	450	GAS (CONDENSING)	19/17.7	540	19.0	17.3	---	---	---	---	93	120/1/60	CONDENSATE NEUTRALIZATION KIT, VERTICAL CONCENTRIC VENT KIT, HIGH ALTITUDE KIT, VERTICAL DEFLECTION BLADES AND SPRING ISOLATORS.
UH-3	MOORE	EFFINITY PTC 65	ROOM 150	750	700	450	GAS (CONDENSING)	19/17.7	540	19.0	17.3	---	---	---	---	93	120/1/60	CONDENSATE NEUTRALIZATION KIT, VERTICAL CONCENTRIC VENT KIT, HIGH ALTITUDE KIT, VERTICAL DEFLECTION BLADES AND SPRING ISOLATORS.
UH-4	MOORE	EFFINITY PTC 65	ROOM 141	750	700	450	GAS (CONDENSING)	19/17.7	540	19.0	17.3	---	---	---	---	93	120/1/60	CONDENSATE NEUTRALIZATION KIT, VERTICAL CONCENTRIC VENT KIT, HIGH ALTITUDE KIT, VERTICAL DEFLECTION BLADES AND SPRING ISOLATORS.
UH-5	MOORE	EFFINITY PTC 65	ROOM 140	750	700	450	GAS (CONDENSING)	19/17.7	540	19.0	17.3	---	---	---	---	93	120/1/60	CONDENSATE NEUTRALIZATION KIT, VERTICAL CONCENTRIC VENT KIT, HIGH ALTITUDE KIT, VERTICAL DEFLECTION BLADES AND SPRING ISOLATORS.
UH-6	MOORE	EFFINITY PTC 65	ROOM 130	750	700	450	GAS (CONDENSING)	19/17.7	540	19.0	17.3	---	---	---	---	93	120/1/60	CONDENSATE NEUTRALIZATION KIT, VERTICAL CONCENTRIC VENT KIT, HIGH ALTITUDE KIT, VERTICAL DEFLECTION BLADES AND SPRING ISOLATORS.
UH-7	SIGMA	133H	ROOM 182	940	450	675	HYDRONIC	15.5	1230	---	---	0.4	60	43	1.0	125	120/1/60	---
FF-1	SIGMA	SFF06	ROOM 100	1030	715	245	HYDRONIC	7.8	280	---	---	0.2	60	43	6.0	125	120/1/60	FRONT IN/FRONT OUT, LOUVERED IN/OUT, CUSTOM STAINLESS STEEL FRONT.
FF-2	SIGMA	SFF06	ROOM 137	1030	715	245	HYDRONIC	7.8	280	---	---	0.2	60	43	6.0	125	120/1/60	FRONT IN/FRONT OUT, LOUVERED IN/OUT, CUSTOM STAINLESS STEEL FRONT.
FF-3	SIGMA	SFF06	ROOM 191	1030	715	245	HYDRONIC	7.8	280	---	---	0.2	60	43	6.0	125	120/1/60	FRONT IN/FRONT OUT, LOUVERED IN/OUT, CUSTOM STAINLESS STEEL FRONT.

OIL INTERCEPTOR									
EQUIPMENT INFO								NOTES	
TAG NO.	MFG.	MODEL	DIMENSIONS (MM)	FLOW CAPACITY	ELECTRICAL (VOLT/PH/HZ)	MOTOR (kW)	WEIGHT		
OIL-01	ZURN	Z1196	584(I) x 359(W) x 356(D)	56.8 L/M	22.5 LITRES		35 KG Dry	DURA-COATED INTERIOR AND EXTERIOR FABRICATED STEEL OIL INTERCEPTOR, WITH A ELECTRONIC OIL LEVER SENSOR, BRONZE CLEAN OUT PLUG, VISIBLE DOUBLE WALL TRAP SEAL, REMOVABLE COMBINATION PRESSURE EQUALIZING/FLOW DIFFUSING BAFFLE, SEDIMENT BUCKET, HORIZONTAL BAFFLE, VENT CONNECTIONS, SECURED CASKETED NON-SKID COVER COMPLETE WITH INTEGRAL FLOW CONTROL, FITTING, SENSOR LEVEL DISPLAY BOX C/W ONE GREEN POWER LIGHT, RED OIL LEVEL LIGHT, AUDIBLE ALARM AND JUNCTION BOX, MOUNT LEVEL SENSOR DISPLAY BOX INSIDE A SEPARATE 4X TYPE NEMA ENCLOSURE WITH CLEAR POLYCARBONATE COVER, NEMA ENCLOSURE DOOR FASTENERS TO INCLUDE PROVISION FOR IMMOBILIZING, PROVIDE AND RUN ALL WIRING FROM OIL INTERCEPTOR PIT TO NEMA ENCLOSURE INSIDE CONDUIT, MOUNT ENCLOSURE APPROXIMATELY 1500mm A.F.F. REFER TO DWG M8.1 "DETAIL 3 – TWO COMPARTMENT SUMP WITH OIL INTERCEPTOR" FOR FURTHER DETAILS. REFER TO STRUCTURAL DWGS FOR FURTHER INFORMATION ON OIL INTERCEPTOR PIT.	

DOMESTIC WATER HEATER SCHEDULE													
TAG	MAKE	MODEL	TYPE	LOCATION	DIMENSIONS (mm)			VOLUME (L)	INPUT (kW)	EFFICIENCY	RECOVERY 65°C (L/hr)	ELECTRICAL (VOLT/PH/HZ)	NOTES
					DIA	HEIGHT	WT(KG)						
DWH-1	LOCHINVAR	SHIELD SNA401-125	TANK	ROOM 212	865	1920	375	450	85	96%	1185	120/1/60	NATURAL GAS CONDENSING HOT WATER HEATER, ASME RATED, CONDENSATE ACID NEUTRALIZATION KIT WITH BY-PASS, MANUFACTURERS MAINTENANCE KIT, DIRECT VENT THRU ROOF WITH RAIN CAP (NO TURNED DOWN ELBOW), SIDEWALL COMBUSTION AIR.
DWH-2	LOCHINVAR	SHIELD SNA401-125	TANK	ROOM 212	865	1920	375	450	85	96%	1185	120/1/60	NATURAL GAS CONDENSING HOT WATER HEATER, ASME RATED, CONDENSATE ACID NEUTRALIZATION KIT WITH BY-PASS, MANUFACTURERS MAINTENANCE KIT, DIRECT VENT THRU ROOF WITH RAIN CAP (NO TURNED DOWN ELBOW), SIDEWALL COMBUSTION AIR.

TANK SCHEDULE												
TAG	MAKE	MODEL	TYPE	LOCATION	SERVICE	DIMENSIONS (mm)		WEIGHT (kg)	VOLUME (L)	ACCEPTANCE VOLUME (L)	MAX.WORKING PRESSURE (kPa)	NOTES
						DIA	HEIGHT					
TK-1	ARTINTROL	ST-30VC	DIAPHRAGM EXPANSION	ROOM 182	DHW SYSTEM	400	480	27	53	34	1034	SUITABLE FOR POTABLE WATER
TK-2	TACO	CBX-84	DIAPHRAGM EXPANSION	ROOM 182	HEATING SYSTEM	400	980	68	84	45	860	ASME RATE, PRECHARGE TO 83kPa
TK-3	TACO	CBX-84	DIAPHRAGM EXPANSION	ROOM 182	CHILLED WATER SYSTEM	400	980	68	84	45	860	ASME RATE, PRECHARGE TO 83kPa
TK-4	TACO	BTP-0125F	BUFFER TANK	ROOM 182	CHILLED WATER SYSTEM	600	1930	623	526	526	860	40mm ARMARPLEX INSULATION, FLANGED CONNECTIONS, ASME RATED.
TK-5	AXIOM	SF100	GLYCOL FILL	ROOM 182	CHILLED WATER SYSTEM	600	1245	---	208	208	345	115V/60Hz
TK-6	AXIOM	SF100	GLYCOL FILL	ROOM 182	HEATING SYSTEM	600	1245	---	208	208	345	115V/60Hz
TK-7	ARTINTROL	ST-5VC	DIAPHRAGM EXPANSION	ROOM 182	DHW SYSTEM	200	356	8	6.4	2.8	1034	SUITABLE FOR POTABLE WATER

WASH DOWN STATIONS									
TAG	MAKE	MODEL	LOCATION	DIMENSIONS (mm)			FLUID	NOTES	
				WIDTH	LENGTH	DEPTH			
WD-1	LEONARD	SW-75-EVBD	SEE DRAWINGS	250	640	75	WATER	MANUAL WATER BLENDER, 20MM HOT AND COLD WATER INLETS, TWO STOP AND CHECK VALVES WITH COLOR CODED HEAT RESISTANT HANDLES ON INLETS, (INTERNAL PARTS OF STAINLESS STEEL CONSTRUCTION), MIXING CHAMBER WITH 20MM OUTLET AND DIAL THERMOMETER (20 TO 240°F, -5 TO 115°C), VACUUM BREAKER, CHROME PLATED FINISH, HOSE CONNECTION, STAINLESS STEEL HOSE REEL, PROVIDE 15.2 METERS (50FT) OF MANUFACTURERS 20MM, HEAVY DUTY HOSE (HDH) AND RUBBER COATED N2 HOSE NOZZLE.	
WD-2	ACORN	8156	SEE DRAWINGS	250	250	100	WATER	18 GAGE, TYPE 304 STAINLESS STEEL ENCLOSURE WITH CAM CYLINDER LOCK DESIGNED FOR RECESS WALL MOUNTING, VALVE AND STOP BODY IS CAST BRASS WITH EXPOSED PARTS CHROME-PLATED, VALVE AND STOP FEATURE TAMPER RESISTANT LOCKSHIELD BONNETS AND REPLACEABLE CARTRIDGES CONTAINING ALL WEARING PARTS INCLUDING THE SEAT. SUPPLY INLETS ARE 20mm (3/4")NPT FEMALE, OUTLET IS 20mm (3/4")MALE HOSE THREAD, INCLUDED SCREWDRIVER STOPS TO ALLOW FOR SHUTTING DOWN WATER SUPPLY. UNIT TO C/W VACUUM BREAKER AND CHECK VALVES AT EACH SUPPLY INLET.	
WD-3	LEONARD	SW-75-EVBD	SEE DRAWINGS	250	640	75	WATER	MANUAL WATER BLENDER, 20MM HOT AND COLD WATER INLETS, TWO STOP AND CHECK VALVES WITH COLOR CODED HEAT RESISTANT HANDLES ON INLETS, (INTERNAL PARTS OF STAINLESS STEEL CONSTRUCTION), MIXING CHAMBER WITH 20MM OUTLET AND DIAL THERMOMETER (20 TO 240°F, -5 TO 115°C), VACUUM BREAKER, CHROME PLATED FINISH, HOSE CONNECTION.	
HR-1	NATIONAL FIRE EQUIPMENT	CS-1310-MAX	SEE DRAWINGS	750	750	300	WATER	MAXIMUM SECURITY SURFACE MOUNTED REEL HOSE REEL CABINET, C/W HIGH SECURITY MECHANICAL DEADBOLT LOCK MODEL 7010, ESCUTHEON FOR MAXIMUM SECURITY LOCK, MAXIMUM SECURITY DOOR LOCK KEY, AND H23010 HEAVY DUTY SECURITY HINGE, HRS-047-75 FIXED HOSE REEL WITH 22.9 METERS (75FT) OF LEONARD MANUFACTURERS 20MM, HEAVY DUTY HOSE (HDH) AND RUBBER COATED N2 HOSE NOZZLE.	

HUMIDIFIER SCHEDULE												
TAG	MAKE	MODEL	TYPE	LOCATION	SERVICE	INPUT (kW)	STEAM CAPACITY	WATER (L/hr)	MOTOR (kW)	ELECTRICAL (VOLT/PH/HZ)	NOTES	
HU-1	DRI-STEEM	GTS-100	NATURAL GAS	ROOM 182	ERV-1	44	WATER			120/1/60	ULTRASORB STEAM DISPERSION TUBE PANEL	

AIR SEPARATOR SCHEDULE										
TAG	MAKE	MODEL	LOCATION	SERVICE	PIPE SIZE (mm)	MAX PRESSURE (kPa)	MAX TEMP (°C)	FLOW RATE (L/s)	PRESSURE DROP (kPa)	NOTES
AS-1	TACO	4902ADR-125	ROOM 182	HEATING SYSTEM	50	860	115	1.58	6.0	304 STAINLESS STEEL RINGS, 5 MICRON FILTER
AS-2	TACO	4902ADR-125	ROOM 182	CHILLED WATER SYSTEM	75	860	115	5.53	3.0	304 STAINLESS STEEL RINGS, 5 MICRON FILTER

HEAT RECOVERY VENTILATOR SCHEDULE	
TAG	ERV-1
TYPE	INDOOR MODULAR
LOCATION	MECHANICAL ROOM
AREAS SERVED	BUILDING O/A
MANUFACTURER	ENGINEERED AIR
MODEL	
UNIT ELEVATION (m)	863
WIDTH (mm)	1650
LENGTH (mm)	5970
HEIGHT (mm)	2670
WEIGHT (kg)	2300
SUPPLY FAN	
AIRFLOW (L/s)	1600
ESP (Pa)	435
MOTOR POWER (kW)	3.73
ELECTRICAL (VOLT/PH/Hz)	208/3/60
RETURN FAN	
AIRFLOW (L/s)	1265
ESP (Pa)	125
MOTOR POWER (kW)	1.5
ELECTRICAL (VOLT/PH/Hz)	208/3/60
PREHEAT COIL	
AIRFLOW	1600
FLUID	40% PROPYLENE GLYCOL
ENTERING FLUID TEMP (°C)	60
LEAVING FLUID TEMP (°C)	38
ENTERING AIR TEMP (°C)	-38
LEAVING AIR TEMP (°C)	-4
FLUID FLOW (L/s)	0.78
FLUID PRESSURE DROP (kPa)	14.5
CAPACITY (kW)	64
HEATING COIL	
AIRFLOW	1600
FLUID	40% PROPYLENE GLYCOL
ENTERING FLUID TEMP (°C)	60
LEAVING FLUID TEMP (°C)	38
ENTERING AIR TEMP (°C)	-4
LEAVING AIR TEMP (°C)	20
FLUID FLOW (L/s)	0.59
FLUID PRESSURE DROP (kPa)	12
CAPACITY (kW)	48
FILTER SECTION	
FRESH AIR	MERV 8
EXHAUST AIR	MERV 8
ENERGY RECOVERY	
TYPE	ENTHALPY WHEEL
O/A AIRFLOW (L/s)	1600
E/A AIRFLOW (L/s)	1265
O/A ENTERING TEMP DB (°C)	-4
S/A LEAVING TEMP DB (°C)	
E/A ENTERING TEMP DB (°C)	22
E/A LEAVING TEMP DB (°C)	
O/A CORRECTION FACTOR	1.02
E/A TRANSFER RATIO	
SENS. ENERGY RECOVERY(kW)	
LATENT EFFECTIVENESS	
SENSIBLE EFFECTIVENESS	
TOTAL EFFECTIVENESS	
MOTOR POWER (kW)	
ELECTRICAL (VOLT/PH/Hz)	120/1/60
NOTES / OPTIONS	
VFDs ON SUPPLY FAN AND RETURN FAN, SINGLE POINT POWER, SEPARATE POWER FOR WARNING LIGHTS, BATTERY CARGO, BYPASS ON SUPPLY/EXHAUST FOR HEAT WHEEL DURING FREE COOLING.	

FAN COIL SCHEDULE																														
TAG	MAKE	MODEL	LOCATION	SERVICE	DIMENSIONS (mm)			AIR FLOW RATE (L/s)	HEATING COIL							HEATING CAPACITY (kW)	COOLING COIL							COOLING CAPACITY (kW)	FAN ESP (Pa)	FAN DRIVE	MOTOR POWER (W)	ELECTRICAL (VOLT/PH/Hz)	NOTES	
					LENGTH	WIDTH	HEIGHT		FLUID	FLUID FLOW RATE (L/s)	EWT (°C)	LWT (°C)	FLUID PD (kPa)	EDB (°C)	EWB (°C)		LAT (°C)	FLUID	FLOW RATE (L/s)	EWT (°C)	LWT (°C)	FLUID PD (kPa)								
FOU-01	TRANE	BOHD 36	ROOM 107	ROOM 109	1040	1020	460	640	21	24	40% PROP. GLYCOL	0.03	60	38	2.5	2.5	24	18	14.7	40% PROP. GLYCOL	0.30	7.2	13.8	33	7.5	125	DIRECT	745	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-02	TRANE	BOHD 24	ROOM 107	ROOM 107	1040	710	460	290	20	25	40% PROP. GLYCOL	0.02	60	40	2.5	1.7	25	18	13.9	40% PROP. GLYCOL	0.17	7.2	13.8	13	4.1	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-03	TRANE	BOHD 18	ROOM 105	ROOMS 105/173	975	710	360	205	21	27	40% PROP. GLYCOL	0.02	60	40	2.5	1.5	25	18	13.2	40% PROP. GLYCOL	0.14	7.2	13.8	11	3.4	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-04	TRANE	BOHD 24	ROOM 111	ROOM 101	1040	710	460	295	21	24	40% PROP. GLYCOL	0.01	60	40	2.5	1.0	25	18	14.8	40% PROP. GLYCOL	0.14	7.2	13.8	17	3.4	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-05	TRANE	BOHD 12	ROOM 111	ROOMS 103/104/110	975	610	360	100	20	27	40% PROP. GLYCOL	0.01	60	43	2.5	0.82	25	18	12.9	40% PROP. GLYCOL	0.08	7.2	13.8	8	1.8	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-06	TRANE	BOHD 12	ROOM 111	ROOM 102	975	610	360	100	21	28	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	13.1	40% PROP. GLYCOL	0.07	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-07	TRANE	BOHD 24	ROOM 111	ROOM 111	1040	710	460	400	21	25	40% PROP. GLYCOL	0.03	60	42	2.5	1.9	25	18	14.6	40% PROP. GLYCOL	0.20	7.2	13.8	16	4.9	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-08	TRANE	BOHD 24	ROOM 111	ROOM 112	1040	710	460	220	21	27	40% PROP. GLYCOL	0.02	60	41	2.5	1.6	25	18	13.4	40% PROP. GLYCOL	0.14	7.2	13.8	11	3.6	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-09	TRANE	BOHD 12	ROOM 113	ROOMS 114/116/131/132	975	610	360	175	21	25	40% PROP. GLYCOL	0.01	60	43	2.5	0.91	25	18	14.1	40% PROP. GLYCOL	0.10	7.2	13.8	10	2.4	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-10	TRANE	BOHD 12	ROOM 113	ROOMS 128/129	975	610	360	100	21	28	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	13.1	40% PROP. GLYCOL	0.07	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-11	TRANE	BOHD 18	ROOM 177	ROOM 177	975	710	360	155	21	26	40% PROP. GLYCOL	0.01	60	41	2.5	0.98	25	18	13.5	40% PROP. GLYCOL	0.10	7.2	13.8	12	2.5	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-12	TRANE	BOHD 18	ROOM 179	ROOM 179	975	710	360	280	21	24	40% PROP. GLYCOL	0.01	60	40	2.5	1.02	25	18	14.7	40% PROP. GLYCOL	0.13	7.2	13.8	17	3.4	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-13	TRANE	BOHD 24	ROOM 180	ROOM 180	1040	710	460	240	21	25	40% PROP. GLYCOL	0.02	60	44	2.5	1.2	25	18	14.4	40% PROP. GLYCOL	0.12	7.2	13.8	15	3.1	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-14	TRANE	BOHD 36	ROOM 143	ROOM 144	1040	1020	460	600	21	28	40% PROP. GLYCOL	0.21	60	54	2.5	4.9	25	18	14.1	40% PROP. GLYCOL	0.32	7.2	13.8	6	8.1	125	DIRECT	745	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-15	TRANE	BOHD 12	ROOM 143	ROOM 149	975	610	360	100	20	28	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	13.1	40% PROP. GLYCOL	0.07	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-16	TRANE	BOHD 12	ROOM 143	ROOM 148	975	610	360	185	21	25	40% PROP. GLYCOL	0.01	60	41	2.5	1.0	25	18	13.7	40% PROP. GLYCOL	0.11	7.2	13.8	14	2.8	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-17	TRANE	BOHD 12	ROOM 143	ROOM 143	975	610	360	185	21	25	40% PROP. GLYCOL	0.01	60	43	2.5	0.9	25	18	14.3	40% PROP. GLYCOL	0.10	7.2	13.8	11	2.4	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-18	TRANE	BOHD 24	ROOM 139	ROOM 139	1040	710	460	375	21	25	40% PROP. GLYCOL	0.02	60	40	2.5	1.7	25	18	14.5	40% PROP. GLYCOL	0.19	7.2	13.8	15	4.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-19	TRANE	BOHD 24	ROOM 169	ROOMS 169/171/172	1040	710	460	355	21	26	40% PROP. GLYCOL	0.03	60	43	2.5	1.9	24	18	14.4	40% PROP. GLYCOL	0.18	7.2	13.8	15	4.5	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-20	TRANE	BOHD 24	ROOM 168	ROOM 168	1040	710	460	355	21	25	40% PROP. GLYCOL	0.03	60	44	2.5	2.1	25	18	14.1	40% PROP. GLYCOL	0.19	7.2	13.8	16	4.8	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-21	TRANE	BOHD 12	ROOM 169	ROOM 170	975	610	360	105	21	27	40% PROP. GLYCOL	0.01	60	41	2.5	0.75	25	18	13.2	40% PROP. GLYCOL	0.08	7.2	13.8	8	1.8	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-22	TRANE	BOHD 12	ROOM 162	ROOMS 164/165	975	610	360	100	21	28	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	13.1	40% PROP. GLYCOL	0.07	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-23	TRANE	BOHD 12	ROOM 162	ROOM 166	975	610	360	100	21	28	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	13.1	40% PROP. GLYCOL	0.07	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-24	TRANE	BOHD 54	ROOM 162	ROOM 162	1220	1020	560	600	21	26	40% PROP. GLYCOL	0.04	60	42	2.5	2.9	24	18	14.5	40% PROP. GLYCOL	0.29	7.2	13.8	33	7.4	125	DIRECT	745	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-25	TRANE	BOHD 54	ROOM 162	ROOMS 162/163	1220	1020	560	600	21	26	40% PROP. GLYCOL	0.02	60	41	2.5	5.1	25	18	14.1	40% PROP. GLYCOL	0.17	7.2	13.8	14	4.2	125	DIRECT	745	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-26	TRANE	BOHD 24	ROOM 160	ROOM 160	1040	710	460	310	21	29	40% PROP. GLYCOL	0.22	60	54	2.5	1.7	25	18	14.0	40% PROP. GLYCOL	0.31	7.2	13.8	6	7.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-27	TRANE	BOHD 18	ROOM 158	ROOMS 136/158/159	975	710	360	280	21	26	40% PROP. GLYCOL	0.03	60	42	2.5	1.9	25	18	14.5	40% PROP. GLYCOL	0.19	7.2	13.8	15	4.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-28	TRANE	BOHD 18	ROOM 155	ROOMS 155/156	975	710	360	280	21	26	40% PROP. GLYCOL	0.04	60	42	2.5	2.9	24	18	14.3	40% PROP. GLYCOL	0.29	7.2	13.8	31	7.0	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-29	TRANE	BOHD 36	ROOM 183	ROOM 184	1040	1020	460	640	---	---	---	---	---	---	---	---	---	---	---	40% PROP. GLYCOL	0.30	7.2	13.8	33	7.4	125	DIRECT	745	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-30	TRANE	BOHD 12	ROOM 134	ROOM 134	975	610	360	100	22	25	40% PROP. GLYCOL	0.01	60	41	2.5	1.0	24	18	14.9	40% PROP. GLYCOL	0.12	7.2	13.8	16	3.2	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-31	TRANE	BOHD 12	ROOM 135	ROOM 135	975	610	360	100	22	25	40% PROP. GLYCOL	0.01	60	41	2.5	1.0	24	18	14.9	40% PROP. GLYCOL	0.12	7.2	13.8	16	3.2	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-32	TRANE	BOHD 24	ROOM 111	ROOMS 121/122/124/125/127	1040	710	460	250	21	25	40% PROP. GLYCOL	0.02	60	44	2.5	1.2	25	18	13.1	40% PROP. GLYCOL	0.08	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-33	TRANE	BOHD 12	ROOM 138	ROOMS 136/138	975	610	360	100	21	25	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	14.5	40% PROP. GLYCOL	0.08	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER
FOU-34	TRANE	BOHD 12	ROOM 159	ROOM 161	975	610	360	100	21	25	40% PROP. GLYCOL	0.01	60	44	2.5	0.84	25	18	14.5	40% PROP. GLYCOL	0.08	7.2	13.8	8	1.7	125	DIRECT	375	120/1/60	EC MOTOR, DIRECT DRIVE, MERV 13 FILTER

VARIABLE AIR VOLUME (VAV) BOX SCHEDULE								
TAG	MAKE	MODEL	SERVICE	INLET SIZE (mm)	OPERATING DESIGN RANGE			NOTES
					UNOCCUPIED FLOW (L/s)	DESIGN FLOW (L/s)	MAX FLOW (L/s)	
VAV-01	PRICE	SDV	FCU-01	100	0	20	30	---
VAV-02	PRICE	SDV	FCU-02	100	0	30	40	---
VAV-03	PRICE	SDV	FCU-03	100	0	25	35	---
VAV-04	PRICE	SDV	FCU-04	100	0	30	40	---
VAV-05	PRICE	SDV	FCU-05	100	0	30	40	---
VAV-06	PRICE	SDV	FCU-06	100	0	10	20	---
VAV-07	PRICE	SDV	FCU-07	100	0	35	50	---
VAV-08	PRICE	SDV	FCU-08	100	0	25	35	---
VAV-09	PRICE	SDV	FCU-09	100	0	55	75	---
VAV-10	PRICE	SDV	FCU-10	100	0	20	30	---
VAV-11	PRICE	SDV	FCU-11	100	0	20	30	---
VAV-12	PRICE	SDV	FCU-12	100	0	20	30	---
VAV-13	PRICE	SDV	FCU-13	100	0	60	80	---
VAV-14	PRICE	SDV	FCU-14	100	0	50	65	---
VAV-15	PRICE	SDV	FCU-15	100	0	10	15	---
VAV-16	PRICE	SDV	FCU-16	100	0	30	40	---
VAV-17	PRICE	SDV	FCU-17	100	0	45	60	---
VAV-18	PRICE	SDV	FCU-18	100	0	40	55	---
VAV-19	PRICE	SDV	FCU-19	100	0	35	50	---
VAV-20	PRICE	SDV	FCU-20	100	0	70	90	---
VAV-21	PRICE	SDV	FCU-21	100	0	10	15	---
VAV-22	PRICE	SDV	FCU-22	100	0	10	15	---
VAV-23	PRICE	SDV	FCU-23	100	0	10	15	---
VAV-24	PRICE	SDV	FCU-24	125	0	30	85	---
VAV-25	PRICE	SDV	FCU-25	125	0	40	110	---
VAV-26	PRICE	SDV	FCU-26	100	0	20	50	---
VAV-27	PRICE	SDV	FCU-27	125	0	35	85	---
VAV-28	PRICE	SDV	FCU-28	125	0	50	120	---
VAV-32	PRICE	SDV	FCU-32	200	0	240	240	---
VAV-33	PRICE	SDV	FCU-33	100	0	35	50	---
VAV-34	PRICE	SDV	FCU-34	100	0	20	35	---